<u>Recirculated</u>
Draft Environmental Impact Report

SCH# 2009051005

Volume 1

Chapters 1 through 10

99 HOUGHTON INDUSTRIAL PARK PROJECT
By McIntosh & Associates

General Plan Amendment 1, 143-07;
Zone Change Case 2, Map 143-07;
Conditional Use Permit 5, Map 143-07;
Ag Preserve No. 13 – Excl.

Kern County
Planning and Natural Resources Department
Bakersfield, California

October 2019

Lorelei H. Oviatt, AICP, Director
2700 "M" Street, Suite 100
Bakersfield, CA 93301-2323
Phone: (661) 862-8600
Fax: (661) 862-8601 TTY Relay 1-800-735-2929
Email: planning@co.kern.ca.us
Web Address: http://pcd.kerndsa.com/

PLANNING AND NATURAL RESOURCES DEPARTMENT

Planning
Community Development
Administrative Operations

November 1, 2019

File: GPA 1, ZCC 2, Map 143-07;
CUP 5, Map 143-07;
Ag Preserve No. 13 – Excl.

ADDRESSEE LIST (See Distribution List)

Re: Recirculated Draft Environmental Impact Report for the 99 Houghton Industrial Park Project by McIntosh & Associates (PP16132)

Dear Interested Party:

The 99 Houghton Industrial Park Project Environmental Impact Report was originally circulated for public comment from February 13, 2018, with a comment closing date of April 2, 2018, by the Kern County Planning Department acting as the lead agency. On March 13, 2018, prior to the end of the original comment period, the project was formally withdrawn from circulation. The County has received and considered written comments that were received after the close of the public comment period. County staff has determined that changes should be made in the Draft EIR that was originally circulated for public comment. In some cases changes have been made to the project and in some cases new or revised information or analysis has been included in the Recirculated Draft EIR.

The Guidelines adopted by the Governor's Office of Planning and Research for the California Environmental Quality Act (Guidelines) provide that a lead agency is required to recirculate an environmental impact report when *significant new information* is added to an EIR after public review of the Draft EIR has begun. New information can include changes in the project description, changes in the environmental setting, as well as other additional data or information. This information may relate to new environmental impacts, severity of such impacts, alternatives or mitigation. Recirculation of an EIR is covered by CEQA Guidelines Section 15088.5.

As mandated by State law, the minimum public review period for this document is 45 days. CEQA Guidelines Section 15088.5 (f) (1) provides that when an Environmental Impact Report (EIR) is substantially revised and the entire EIR is circulated, Kern County, as lead agency, may require that reviewers submit new comments, and the lead agency need not respond to those comments received during the earlier circulation period. Kern County will therefore respond in the Final Recirculated EIR only to new comments received regarding this Recirculated Draft EIR received during this comment period

The Recirculated Draft Environmental Impact Report (RDEIR) was prepared for the above-noted land use applications to allow for the development of an industrial park on approximately 314 acres in unincorporated Kern County. The proposed project requires a General Plan Amendment (GPA) to the Land Use Element; a Zone Change (ZCC); a Conditional Use Permit (CUP); and a petition for Exclusion from the County's Agricultural Preserve No. 13. The project site is generally bounded by South Union Avenue on the east, State Route 99 on the west, DiGiorgio Road to the north, and Houghton Road to the south.

The Kern County Planning and Natural Resources Department, as Lead Agency, has determined that preparation of an Environmental Impact Report would be appropriate for the referenced project. Enclosed is a copy of the Recirculated Draft EIR.

If we have not received a reply from you by **December 16, 2019, at 5:00 P.M.**, we will assume that you have no comments regarding this Draft EIR.

Should you have any questions regarding this project, please do not hesitate to contact me at (661) 862-5015 or via email at CRojas@kerncounty.com

Sincerely,

Carlos E. Rojas, Planner III
Advanced Planning Division

GPA # 1 Map # 143-07
ZCC # 2 Map # 143-07
CUP # 5 & 6 Map # 143-07
es (10/10/2019)
I:\Planning\WORKGRPS\WP\LABELS\14
7-07gpa1zcc2cup5cup6_Agencies.docx

AGENCIES

City of Arvin
P.O. Box 548
Arvin, CA 93203

Bakersfield City Planning Dept
1715 Chester Avenue
Bakersfield, CA 93301

Bakersfield City Public Works Dept
1501 Truxtun Avenue
Bakersfield, CA 93301

California City Planning Dept
21000 Hacienda Blvd.
California City, CA 93515

Delano City Planning Dept
P.O. Box 3010
Delano, CA 93216

City of Maricopa
P.O. Box 548
Maricopa, CA 93252

City of McFarland
401 West Kern Avenue
McFarland, CA 93250

City of Ridgecrest
100 West California Avenue
Ridgecrest, CA 93555

City of Shafter
336 Pacific Avenue
Shafter, CA 93263

City of Taft
Planning & Building
209 East Kern Street
Taft, CA 93268

City of Tehachapi
Attn: John Schlosser
115 South Robinson Street
Tehachapi, CA 93561-1722

City of Wasco
764 E Street
Wasco, CA 93280

Inyo County Planning Dept
P.O. Drawer "L"
Independence, CA 93526

Kings County Planning Agency
1400 West Lacey Blvd, Bldg 6
Hanford, CA 93230

Los Angeles Co Reg Planning Dept
320 West Temple Street
Los Angeles, CA 90012

San Bernardino Co Planning Dept
385 North Arrowhead Avenue, 1st Floor
San Bernardino, CA 92415-0182

San Luis Obispo Co Planning Dept
Planning and Building
976 Osos Street
San Luis Obispo, CA 93408

Santa Barbara Co Resource Mgt Dept
123 East Anapamu Street
Santa Barbara, CA 93101

Tulare County Planning & Dev Dept
5961 South Mooney Boulevard
Visalia, CA 93291

Ventura County RMA Planning Div
800 South Victoria Avenue, L1740
Ventura, CA 93009-1740

U.S. Bureau of Land Management
Caliente/Bakersfield
3801 Pegasus Drive
Bakersfield, CA 93308-6837

U. S. Fish & Wildlife Service
Division of Ecological Services
2800 Cottage Way #W-2605
Sacramento, CA 95825-1846

Environmental Protection Agency
Region IX Office
75 Hawthorn Street
San Francisco, CA 94105

U.S. Dept of Agriculture/NRCS
5080 California Avenue, Ste 150
Bakersfield, CA 93309-0711

State Air Resources Board
Stationary Resource Division
P.O. Box 2815
Sacramento, CA 95812

So. San Joaquin Valley Arch Info Ctr
California State University of Bkfd
9001 Stockdale Highway
Bakersfield, CA 93311

Caltrans/Dist 6
Planning/Land Bank Bldg.
P.O. Box 12616
Fresno, CA 93778

State Clearinghouse
Office of Planning and Research
1400 - 10th Street, Room 222
Sacramento, CA 95814

State Dept of Conservation
Director's Office
801 "K" Street, MS 24-01
Sacramento, CA 95814-3528

State Dept of Conservation
Division of Oil & Gas
4800 Stockdale Highway, Ste 108
Bakersfield, CA 93309

State Dept of Conservation
Division of Oil & Gas
801 "K" Street, MS 20-20
Sacramento, CA 95814-3530

State Dept of Conservation
Office of Land Conservation
801 "K" Street, MS 18-01
Sacramento, CA 95814

California State University
Bakersfield - Library
9001 Stockdale Highway
Bakersfield, CA 93309

California Fish & Wildlife
1234 East Shaw Avenue
Fresno, CA 93710

State Dept of Food & Agriculture
1220 "N" Street
Sacramento, CA 95814

California Highway Patrol
Planning & Analysis Division
P.O. Box 942898
Sacramento, CA 94298-0001

Integrated Waste Management
P.O. Box 4025, MS #15
Sacramento, CA 95812-4025

California Regional Water Quality Control Board/Central Valley Region
1685 E Street
Fresno, CA 93706-2020

CalRecycle
Dept of Resources, Recycling, and Recovery
1001 "I" Street
Sacramento, CA 95812

Kern County
Agriculture Department

Kern County Administrative Officer

Kern County Public Works Department/
Building & Development/Floodplain

Kern County Public Works Department/
Building & Development/Survey

Kern County
Env Health Services Department

Kern County Fire Dept
David Witt, Interim Fire Chief

Kern County Fire Dept
Cary Wright, Fire Marshall

Kern County Library/Beale
Local History Room

Kern County Library/Beale
Andie Sullivan

Kern County Parks & Recreation

Kern County Sheriff's Dept
Administration

Kern County Public Works Department/
Building & Development/Development Review

Kern County Public Works Department/Operations & Maintenance/Regulatory Monitoring & Reporting

Gulf Oil Expl & Prod Co
P.O. Box 1392
Bakersfield, CA 93302

Kern High School Dist
5801 Sundale Avenue
Bakersfield, CA 93309

General Shafter School Dist
1825 Shafter Road
Bakersfield, CA 93313

Panama-Buena Vista School Dist
4200 Ashe Road
Bakersfield, CA 93313

Kern County Superintendent of Schools
Attention Mary Baker
1300 17th Street
Bakersfield, CA 93301

KernCOG
1401 19th Street - Suite 300
Bakersfield, CA 93301

Local Agency Formation
Comm/LAFCO
5300 Lennox Avenue, Suite 303
Bakersfield, CA 93309

San Joaquin Valley
Air Pollution Control District
1990 East Gettysburg Avenue
Fresno, CA 93726

AT&T California
OSP Engineering/Right-of-Way
4540 California Avenue, 4th Floor
Bakersfield, CA 93309

Boron Chamber of Commerce
27217 Carmichael Street
Boron, CA 93516

Defenders of Wildlife/
Kim Delfino, California Dir
980 - 9th Street, Suite 1730
Sacramento, CA 95814

Sierra Club/Kern Kaweah Chapter
P.O. Box 3357
Bakersfield, CA 93385

Southern California Gas Co
Transportation Dept
9400 Oakdale Avenue
Chatsworth, CA 91313-6511

David Laughing Horse Robinson
P.O. Box 20849
Bakersfield, CA 93390

Santa Rosa Rancheria
Ruben Barrios, Chairperson
P.O. Box 8
Lemoore, CA 93245

Tubatulabals of Kern County
Attn: Robert Gomez, Chairperson
P.O. Box 226
Lake Isabella, CA 93240

Kern Delta Water Dist
501 Taft Highway
Bakersfield, CA 93307

Kern Mosquito Abatement Dist
4705 Allen Road
Bakersfield, CA 93314

Kern Audubon Society
Attn: Harry Love, President
13500 Powder River Avenue
Bakersfield, CA 93314

Center on Race, Poverty
& the Environment
Attn: Marissa Alexander
1999 Harrison Street – Suite 650
San Francisco, CA 94612

California Farm Bureau
2300 River Plaza Drive, NRED
Sacramento, CA 95833

Southern California Edison
2244 Walnut Grove, Ave, GO-1
Quad 2C
Rosemead, CA 91770

Verizon California, Inc.
Attention Engineering Department
520 South China Lake Boulevard
Ridgecrest, CA 93555

Kern Valley Indian Council
Attn: Robert Robinson,
Chairperson
P.O. Box 401
Weldon, CA 93283

Tejon Indian Tribe
Kathy Morgan, Chairperson
1731 Hasti-acres Drive, Suite 108
Bakersfield, CA 93309

Tule River Indian Tribe
Neal Peyron, Chairperson
P.O. Box 589
Porterville, CA 93258

Kern County Water Agency
P.O. Box 58
Bakersfield, CA 93302-0058

Adams, Broadwell, Joseph &
Cardozo
Attention: Janet M. Laurain
601 Gateway Boulevard, Suite 1000
South San Francisco, CA 94080

Los Angeles Audubon
926 Citrus Avenue
Los Angeles, CA 90036-4929

Center on Race, Poverty
& the Environmental/
CA Rural Legal Assistance
Foundation
1012 Jefferson Street

Pacific Gas & Electric Co
Matt Coleman, Land Mgt
1918 "H" Street
Bakersfield, CA 93301-4319

Southern California Gas Co
1510 North Chester Avenue
Bakersfield, CA 93308

Chumash Council of Bakersfield
2421 "O" Street
Bakersfield, CA 93301-2441

Kern Valley Indian Council
Historic Preservation Office
P.O. Box 401
Weldon, CA 93283

Kitanemuk & Yowlumne Tejon
Indians
Chairperson
115 Radio Street
Bakersfield, CA 93305

San Fernando Band of Mission
Indians
Attn: John Valenzuela, Chairperson
P.O. Box 221838
Newhall, CA 91322

Carol Bender
13340 Smoke Creek Avenue
Bakersfield, CA 93314-9025

Janice Armstrong
24121 Rand Court
Tehachapi, CA 93561

Joyce LoBasso
P.O. Box 6003
Bakersfield, CA 93386

LIUNA
Attn: Danny Zaragoza
2201 "H" Street
Bakersfield, CA 93301

Nature Conservancy West Reg Office
201 Mission Street, 4th Floor
San Francisco, CA 94105

A E Corporation
Planning Department
901 Via Piemonte, 5th Floor
Ontario, CA 91764

Vestas
1417 NW Everett Street
Portland, OR 97209

Smart Growth – Tehachapi Valleys
P.O. Box 1894
Tehachapi, CA 93581

Lozeau Drury LLP
1939 Harrison Street, Suite 150
Oakland, CA 94612

Kern River Groundwater Sustainability Agency
1600 Truxtun Avenue
Bakersfield, CA 93301

California Department of Public Health
Drinking Water Field Operations
P.O. Box 100

Southern California Edison
P.O. Box 410
Long Beach, CA 90801

RECIRCULATED
DRAFT ENVIRONMENTAL IMPACT REPORT
NOTICE OF AVAILABILITY FOR PUBLIC REVIEW

This is to advise that the Kern County Planning and Natural Resources Department has prepared an Environmental Impact Report (EIR) for the project identified below. As mandated by State law, the minimum public review period for this document is 45 days. CEQA Guidelines Section 15088.5 (f) (1) provides that when an Environmental Impact Report (EIR) is substantially revised and the entire EIR is circulated, Kern County, as lead agency, may require that reviewers submit new comments, and the lead agency need not respond to those comments received during the earlier circulation period. Kern County will therefore respond in the Final Recirculated EIR only to new comments received regarding this Recirculated Draft EIR received during this comment period. The document and documents referenced in the Recirculated Draft EIR are available for review at the Planning and Natural Resources Department, 2700 "M" Street, Suite 100, Bakersfield, CA 93301 or on the Departmental website **(https://kernplanning.com/planning/environmental-documents/).**

A public hearing has been scheduled with the Kern County Planning Commission to receive comments on the document on: **February 27, 2020** at 7:00 p.m. or soon thereafter, Chambers of the Board of Supervisors, First Floor, Kern County Administrative Center, 1115 Truxtun Avenue, Bakersfield, California.

The comment period for this document closes on **December 12, 2019**. Testimony at future public hearings may be limited to those issues raised during the public review period either orally or submitted in writing by 5:00 p.m. the day the comment period closes.

Project Title: 99 Houghton Industrial Park Project; General Plan Amendment No. 1, Map 143-07; Zone Change Case No. 2, Map 143-07; Conditional Use Permit No. 5, Map 143-07; Ag Preserve No. 13 – Excl.

Project Location: Bounded by South Union Avenue on the east, State Route 99 on the west, DiGiorgio Road to the north, and Houghton Road to the south.

Project Description: The project proponent is requesting: (a) one (1) General Plan Amendment from map code designation R-IA (Resource – Intensive Agriculture) to LI (Light Industrial) on 108 acres, SI (Service Industrial) on 159 acres, HC (Highway Commercial) on 9.01 acres, GC (General Commercial) on 22 acres of the proposed site; (b) one (1) change in zone classification from the existing A (Exclusive Agriculture) to M-1 PD (Light Industrial Precise Development Combining) on 108 acres, M-2 PD (Medium Industrial) on 159 acres, CH PD (Highway Commercial) on 25 acres and C-2 PD (General Commercial) on 22 acres of the proposed site; (c) One Conditional Use Permit for the construction of a Sewage Treatment Plant (19.38.030.H) in an M-2 (Medium Industrial) District; (d) an exclusion of 257.57 acres from the boundaries of Agricultural Preserve No. 13. The propose project would allow the development of an industrial park with a maximum of 4,613,004 square feet of net building area.

Anticipated Significant Impacts on Environment: Agricultural Resources, Air Quality, Greenhouse Gases, Noise and Transportation

Document can be viewed online at: https://kernplanning.com/planning/environmental-documents/

For further information, please contact: Carlos E. Rojas, Planner 3 ((661) 862-5015) or email CRojas@kerncounty.com

LORELEI OVIATT, AICP, Director
Planning and Natural Resources Department

To be published once only on <u>next available date and as soon as possible</u>

<u>BAKERSFIELD CALIFORNIAN</u>

CER:sc (02/01/18)

cc: County Clerk (2) (with fee) California Native Plant Society/Kern Chapter

Environmental Status Board
Sierra Club/Kern Kaweah Chapter
LiUNA/Arthur Izzo
Supervisorial District No. 4
Kern County Archaeological Society
Native American Heritage Pres. Council/Kern County
Center on Race, Poverty and Environment (2)

GPA # 1 Map # 143-07
ZCC # 2 Map # 143-07
CUP # 5 & 6 Map # 143-07
es (10/10/2019)
I:\Planning\WORKGRPS\WP\LABELS\147-07gpa1zcc2cup5cup6_Property Owners.docx

PROPERTY OWNERS

18538107007
AYON ALFREDO
14201 COSTAJO RD
BAKERSFIELD CA 933139500

18516005000
BALL FAMILYS TRUST
12825 S UNION AV
BAKERSFIELD CA 933079025

18518016008 **DUP**
BALL FAMILYS TRUST
12825 S UNION AV
BAKERSFIELD CA 933079025

18415070008
BUGNI JIMMY R FAMILY TRUST
3053 CURNOW RD
BAKERSFIELD CA 93313

18519002000
CABRERA MARIO & ROSA
12043 S UNION AV
BAKERSFIELD CA 933079023

18415046009
CALDERON CHRISTY SHAFFER
2843 LANGHORN DR
FREMONT CA 94555

18518027000
CALI ESTATES LLC
117 MUGSY AV
BAKERSFIELD CA 933078710

18519005009
CANTU GLORIA
8502 BALLINA ST
BAKERSFIELD CA 933134247

18538112001
DEVIN SKYLER D & DANNON A
13080 THOROUGHBRED ST
BAKERSFIELD CA 933139604

18538105001
HARARI ENTERPRISES LLC
9024 W OLYMPIC BL
BEVERLY HILLS CA 902113564

18538111008
HAYCOCK DUSTIN N & STEPHANIE
13031 THOROUGHBRED ST
BAKERSFIELD CA 933139604

18518031001
HOOLEY REBECCA
11509 MARAZZON HILL CT
BAKERSFIELD CA 93311

18538124006
HYLTON JEANNE C
13162 THOROUGHBRED ST
BAKERSFIELD CA 933139604

18518010000
LAMB DAN E & SUSAN A LAMB TRUST
12336 S UNION AV
BAKERSFIELD CA 933079023

18518022005
LAMB DAN E & SUSAN A LAMB TRUST
409 LAMB AV
BAKERSFIELD CA 933078812

18518038002 **DUP**
LAMB DAN E & SUSAN A REVOCABLE TRUST
409 LAMB AV
BAKERSFIELD CA 933078812

18518021002
LAMB LEWIS KEITH & MICKEY SUE TRUST
315 LAMB AV
BAKERSFIELD CA 933078812

18515004004
MADRUGA FAMILY TRUST
9037 EL ORO PLAZA DR
ELK GROVE CA 956242647

18502005009
MAVEN GRAPES LLC
PO BOX 9389
AVON CO 816209303

18502023001 **DUP**
MAVEN GRAPES LLC
PO BOX 9389
AVON CO 816209303

18514008003 **SITE**
MITCHELL PROPERTY MANAGEMENT LP
16420 JOHNSON RD
BAKERSFIELD CA 93314

18516008009 **DUP**
MITCHELL PROPERTY MANAGEMENT LP
16420 JOHNSON RD
BAKERSFIELD CA 93314

18518029006
MOLINA SANTANA & NORMA
PO BOX 1322
LEBEC CA 932431322

18519001007
MURPHY LUCILA
12063 S UNION AV
BAKERSFIELD CA 93307

18516003004
PACIFIC GAS & ELECTRIC CO
1 MARKET PZ STE 400
SAN FRANCISCO CA 941051004

18515001005
PACIFIC TEL & TEL CO
140 NEW MONTGOMERY ST # 818
SAN FRANCISCO CA 941053705

18538101009
PANAMA M U LLC
1470 W HERNDON # 100
FRESNO CA 93711

18514005004
PINHEIRO FAMILY L P
5021 E BEAR MOUNTAIN BL
BAKERSFIELD CA 933079760

18538108000 **DUP**
PINHEIRO FAMILY L P
5021 E BEAR MOUNTAIN BL
BAKERSFIELD CA 933079760

18539029007
SAMORA HELEN ORDONEZ TR
13041 S UNION AV
BAKERSFIELD CA 93307

18517019004
UNION AVE GRAPE VINEYARDS LLC
4200 TRUXTUN AV STE 101
BAKERSFIELD CA 933090668

18517018001
WANG LIAN XIANG & SUN GUANG JI
9916 DUTCHMAN PEAK LN
BAKERSFIELD CA 933118770

18518032004
PRICE DISPOSAL INC
8665 S UNION AV
BAKERSFIELD CA 93307

18519003003
SANCHEZ JUAN A S & SANTIAGO FRANCISCA IRENE
12051 S UNION AV
BAKERSFIELD CA 933079023

18518036006 **DUP**
UNION AVE GRAPE VINEYARDS LLC
4200 TRUXTUN AV # 101
BAKERSFIELD CA 933090668

18539005007
ANGONE RODOLF A & BARBARA S FAMILY TRUST 201
3112 FORTUNE ST
BAKERSFIELD CA 933133710

18516004007
ROBINSON CALF RANCH
P O BOX 78350
BAKERSFIELD CA 93383

18518011003
THOMAS BILLY RAY & ELIZABETH ANN
12724 S UNION AV
BAKERSFIELD CA 93307

18518040007 **DUP**
UNION AVE GRAPE VINEYARDS LLC
4200 TRUXTUN AV # 101
BAKERSFIELD CA 933090668

18538110005
AULD JERRY & COLLINS JACKIE
4021 S FAIRFAX RD
BAKERSFIELD CA 933078912

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P. O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH # 2009051005

Project Title: 99 Houghton Industrial Park Project by McIntosh & Associates

Lead Agency: Kern County Planning Department
Contact Person: Carlos E. Rojas
Mailing Address: 2700 "M" Street Suite 100
Phone: (661) 862-5015
City: Bakersfield
Zip: 93301-2323
County: Kern

Project Location: County: Kern
City/Nearest Community: City of Bakersfield
Cross Streets: South Union and DiGiorgio
Zip Code: 93307
Lat. / Long.: 35° 14′ 39″ N / 119° 0’ 44″ W
Total Acres: 314.31
Assessor's Parcel No.: 185-140-08
Section: 7
Twp.: 31S
Range: 28E
Base: MDB&M
Within 2 Miles: State Hwy #: 99
Waterways: N/A
Airports: N/A
Railways: N/A
Schools: General Shafter Elem

Document Type:

CEQA:
- ☐ NOP
- ☐ Early Cons
- ☐ Neg Dec
- ☐ Mit Neg Dec
- ☒ Draft EIR
- ☐ Supplement/Subsequent EIR (Prior SCH No.) ____
- Other ____

NEPA:
- ☐ NOI
- ☐ EA
- ☐ Draft EIS
- ☐ FONSI

Other:
- ☐ Joint Document
- ☐ Final Document
- ☐ Other ____

Local Action Type:

- ☐ General Plan Update
- ☒ General Plan Amendment
- ☐ General Plan Element
- ☐ Community Plan
- ☐ Specific Plan
- ☐ Master Plan
- ☐ Planned Unit Development
- ☐ Site Plan
- ☒ Rezone
- ☐ Prezone
- ☒ Use Permit
- ☐ Land Division (Subdivision, etc.)
- ☐ Annexation
- ☐ Redevelopment
- ☐ Coastal Permit
- ☒ Ag Preserve No. Excl.

Development Type:

- ☐ Residential: Units ____ Acres ____
- ☐ Office: Sq.ft. ____ Acres ____ Employees ____
- ☐ Commercial: Sq.ft. ____ Acres ____ Employees ____
- ☒ Industrial: Sq.ft. 4,613,004 Acres 314 Employees ____
- ☐ Educational ____
- ☐ Recreational ____
- ☐ Water Facilities: Type ____ MGD ____
- ☐ Transportation: Type ____
- ☐ Mining: Mineral ____
- ☐ Power: Type ____ MW ____
- ☐ Waste Treatment: Type ____ MGD ____
- ☐ Hazardous Waste: Type ____
- ☐ Other: ____

Project Issues Discussed in Document:

- ☒ Aesthetic/Visual
- ☒ Agricultural Land
- ☒ Air Quality
- ☒ Archeological/Historical
- ☒ Biological Resources
- ☐ Coastal Zone
- ☒ Drainage/Absorption
- ☒ Economic/Jobs
- ☒ Fiscal
- ☒ Flood Plain/Flooding
- ☒ Forest Land/Fire Hazard
- ☒ Geologic/Seismic
- ☒ Minerals
- ☒ Noise
- ☒ Population/Housing Balance
- ☒ Public Services/Facilities
- ☒ Recreation/Parks
- ☒ Schools/Universities
- ☒ Septic Systems
- ☒ Sewer Capacity
- ☒ Soil Erosion/Compaction/Grading
- ☒ Solid Waste
- ☒ Toxic/Hazardous
- ☒ Traffic/Circulation
- ☒ Vegetation
- ☒ Water Quality
- ☒ Water Supply/Groundwater
- ☐ Wetland/Riparian
- ☒ Wildlife
- ☒ Growth Inducing
- ☒ Land Use
- ☒ Cumulative Effects
- ☐ Other ____

Present Land Use/Zoning/General Plan Designation:

Agriculture**.** *Zoning:* A (Exclusive Agriculture); *Kern County General Plan:* R-IA (Resource-Intensive Agriculture) and HC (Highway Commercial) 4.3

Project Description: *(please use a separate page if necessary)* The project proponent is requesting: (a) One General Plan Amendment from map code designation R-IA (Resource – Intensive Agriculture) to LI (Light Industrial) on 108 acres, SI (Service Industrial) on 159 acres, HC (Highway Commercial) on 9.01 acres, GC (General Commercial) on 22 acres of the proposed site; (b) one change in zone classification from the existing A (Exclusive Agriculture) to M-1 PD (Light Industrial Precise Development Combining) on 108 acres, M-2 PD (Medium Industrial) on 159 acres, CH PD (Highway Commercial) on 25 acres and C-2 PD (General Commercial) on 22 acres of the proposed site; (c) One Conditional Use Permit for the construction of a Sewage Treatment Plant (19.38.030.H) in an M-2 (Medium Industrial) District; (d) an exclusion of 257.57 acres from the boundaries of Agricultural Preserve No. 13. The propose project would allow the development of an industrial park with a maximum of 4,613,004 square feet of net building area.

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "**X**".
If you have already sent your document to the agency please denote that with an "**S**".

_____ Air Resources Board
_____ Boating & Waterways, Department of
__S__ California Highway Patrol
_____ CalFire
__S__ Caltrans District # 6 & 9
_____ Caltrans Division of Aeronautics
_____ Caltrans Planning (Headquarters)
_____ Central Valley Flood Protection Board
_____ Coachella Valley Mountains Conservancy
_____ Coastal Commission
_____ Colorado River Board
_____ Conservation, Department of
_____ Corrections, Department of
_____ Delta Protection Commission
_____ Education, Department of
_____ Energy Commission
__S__ Fish & Game Region # Fresno
_____ Food & Agriculture, Department of
_____ General Services, Department of
_____ Health Services, Department of
_____ Housing & Community Development
_____ Integrated Waste Management Board
__S__ Native American Heritage Commission

_____ Office of Emergency Services
_____ Office of Historic Preservation
_____ Office of Public School Construction
_____ Parks & Recreation
_____ Pesticide Regulation, Department of
_____ Public Utilities Commission
__S__ Regional WQCB # _____
_____ Resources Agency
_____ S.F. Bay Conservation & Development Commission
_____ San Gabriel & Lower L.A. Rivers and Mtns Conservancy
_____ San Joaquin River Conservancy
_____ Santa Monica Mountains Conservancy
_____ State Lands Commission
_____ SWRCB: Clean Water Grants
_____ SWRCB: Water Quality
_____ SWRCB: Water Rights
_____ Tahoe Regional Planning Agency
_____ Toxic Substances Control, Department of
_____ Water Resources, Department of

_____ Other _____
_____ Other _____

Local Public Review Period (to be filled in by lead agency)

Starting Date October 28, 2019 Ending Date December 12, 2019

Lead Agency (Complete if applicable):

Consulting Firm: _____
Address: _____
City/State/Zip: _____
Contact: _____
Phone: _____

Applicant: _____
Address: _____
City/State/Zip: _____
Phone: _____

Signature of Lead Agency Representative: /S/ **Date:** 10/28/19

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

<u>Recirculated</u>
Draft Environmental Impact Report

SCH# 2009051005

Volume 1

99 HOUGHTON INDUSTRIAL PARK PROJECT
By McIntosh & Associates

General Plan Amendment 1, 143-07;
Zone Change Case 2, Map 143-07;
Conditional Use Permit 5, Map 143-07;
Ag Preserve No. 13 – Excl.

Kern County Planning and Natural Resources Department
2700 M Street, Suite 100
Bakersfield, CA 93301-2370
(661) 862-8600

Technical Assistance by:

Kimley-Horn and Associated
555 Capitol Mall, Suite 300
Sacramento, CA 95814
(916) 858-5800

October 2019

NOTE TO REVIEWER OF ELECTRONIC FILES:

To assist you in reviewing this electronic document, "bookmarks" and/or "links" have been provided for easier navigation between sections. When available, bookmarks are located in the panel to the left. Links are highlighted in BLUE in the Table of Contents. Clicking on either the bookmarks or links will take you to the selected item. This document may consist of multiple linked PDF files. If saving this document to your computer, you must save all corresponding files to a directory on your hard drive to maintain the manner in which these PDF documents are linked.

VOLUME 1

Table of Contents

Table of Contents, continued

Table of Contents, continued

Table of Contents, continued

Tables

Tables, continued

Tables, continued

Figures

Figures, continued

VOLUME 2

Appendices

VOLUME 3

Appendices

VOLUME 4

Appendices

This Page Intentionally Left Blank

Chapter 1

Executive Summary

Chapter 1
Executive Summary

1.1 Introduction

This Recirculated Draft Environmental Impact Report (RDEIR) has been prepared to identify and evaluate the potential environmental impacts associated with the implementation of the 99 Houghton Industrial Park Project (proposed Project), an industrial development of 314.30 acres of land within the unincorporated area of Kern County, California County (Figure 1-1, *Regional Vicinity*). The proposed Project encompasses approximately 314 acres, and is located north of Houghton Road, east of State Route 99 (SR-99), west of South Union Avenue, and south of DiGiorgio Road, in Kern County (Figure 1-2, *Project Vicinity*) The proposed Project would allow for development of a light to medium industrial park containing approximately 4,613,004 square feet (net building area) of warehousing, distribution, and retail showroom uses. A private package sewer treatment plant is proposed to provide sewer services for the Project site.

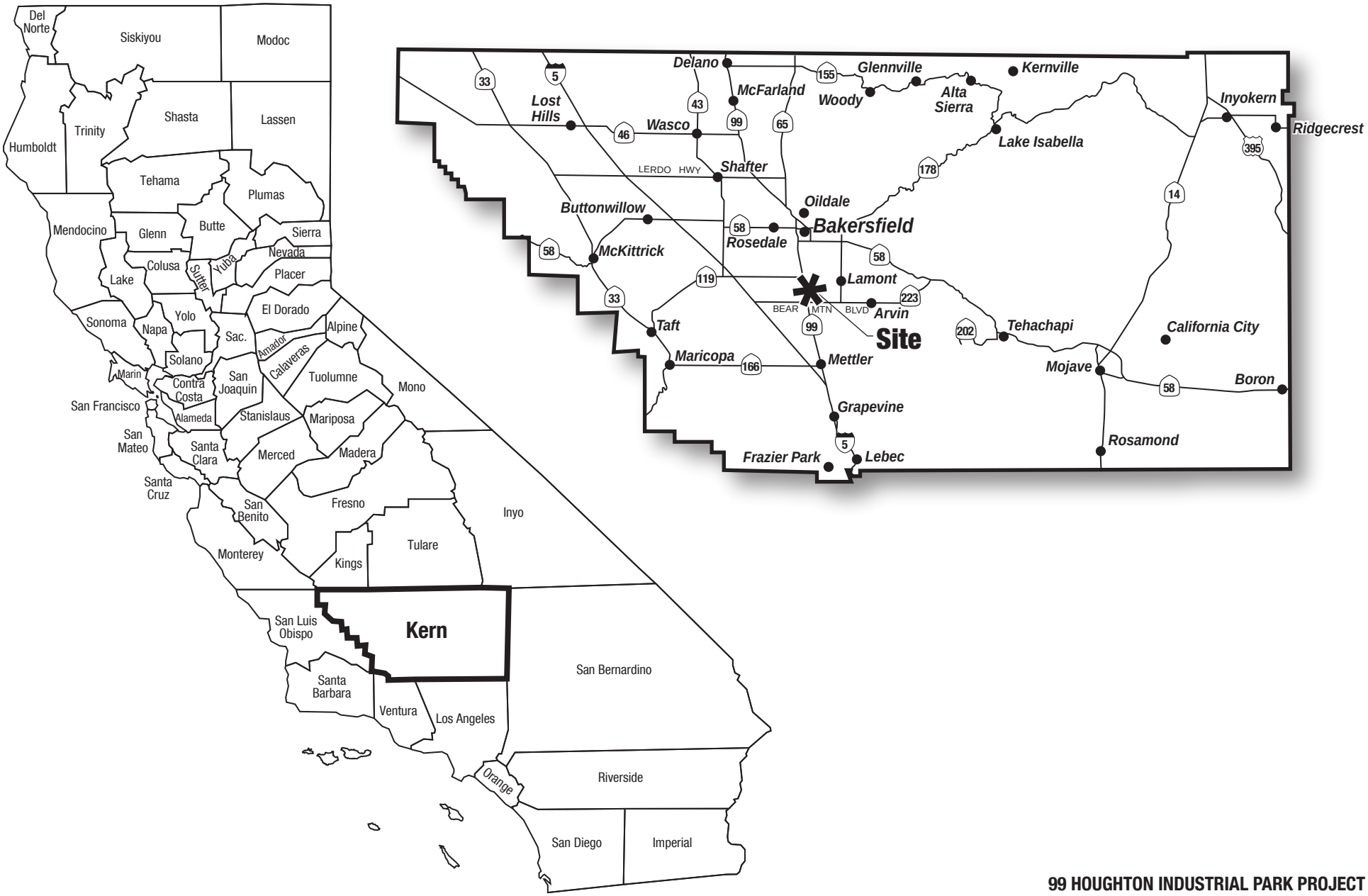
This Recirculated Draft Environmental Impact Report (RDEIR) has been prepared by Kern County as the Lead Agency under the California Environmental Quality Act (CEQA). The RDEIR provides information about the environmental setting and impacts of the project and alternatives. It informs the public about the project and its impacts and provides information to meet the needs of local, State, and federal permitting agencies that are required to consider the project. The RDEIR will be used by Kern County to determine whether to approve the general plan amendment (GPA), zone change (ZCC), conditional use permit (CUP), and Agricultural Preserve Exclusion for the project.

This Executive Summary summarizes the requirements of the CEQA Statutes and Guidelines, provides an overview of the project and alternatives, identifies the purpose of the RDEIR, outlines the potential impacts of the project and the recommended mitigation measures, and discloses areas of controversy and issues to be resolved.

Project Summary

The proposed Project consists of medium to light industrial development of 314.30 acres of land within the unincorporated area of Kern County, California. The proposed Project includes a GPA to modify the existing Metropolitan Bakersfield General Plan land use designations, a change in zone classification and the Exclusion from Agricultural Preserve No. 13. The RDEIR, once certified, will be used to satisfy the CEQA requirements for the following discretionary and ministerial approvals by the County:

1. Consideration and certification of a final Environmental Impact Report (FEIR) with appropriate State CEQA Guidelines Sections 15091 Findings, 15093 Statement of Overriding Considerations, and the mitigation measures monitoring reporting program by the Kern County Planning Commission and Kern County Board of Supervisors;



not to scale

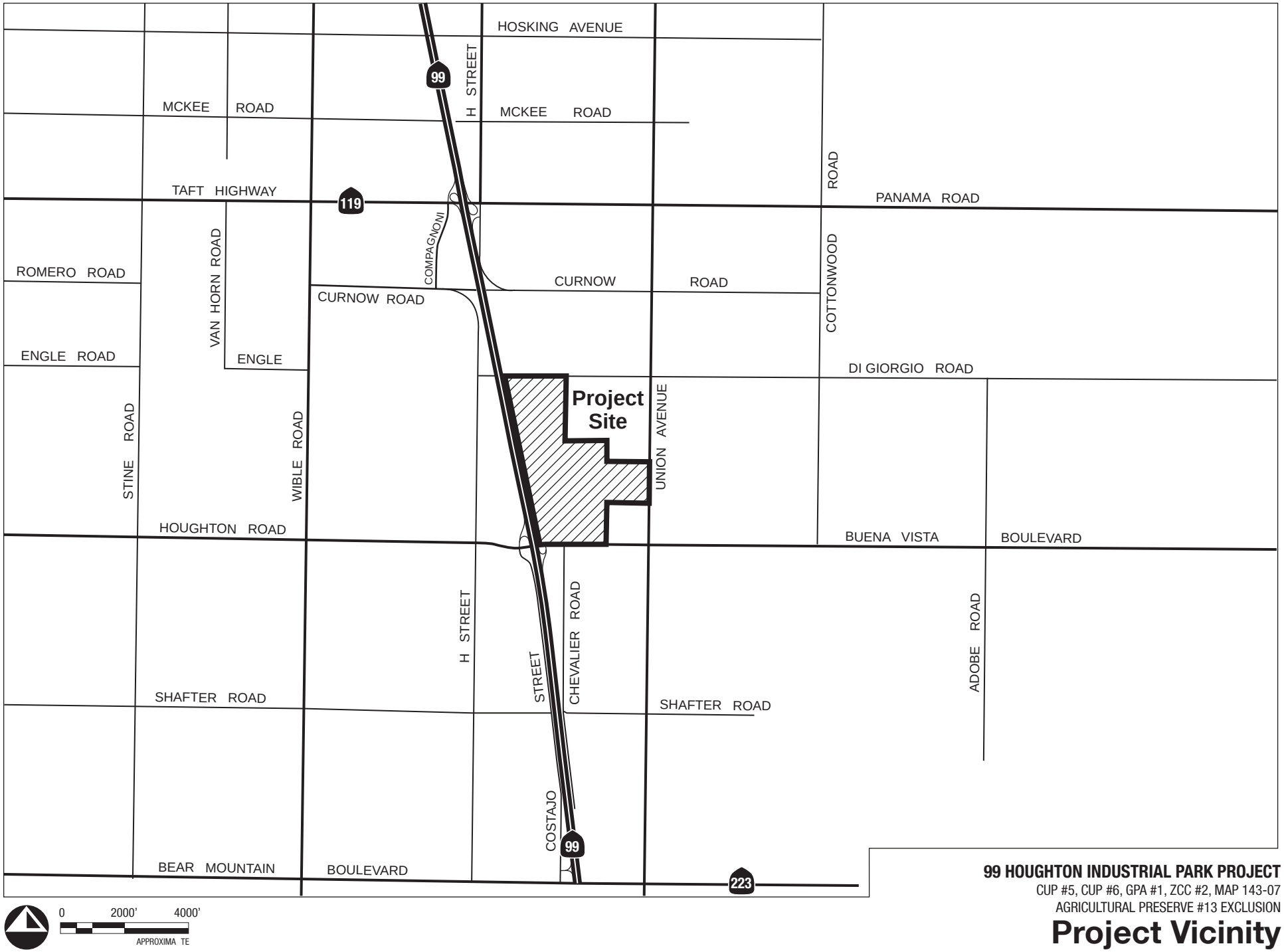
99 HOUGHTON INDUSTRIAL PARK PROJECT

CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07

AGRICULTURAL PRESERVE #13 EXCLUSION

Regional Vicinity

Figure 1-1



99 HOUGHTON INDUSTRIAL PARK PROJECT

CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07

AGRICULTURAL PRESERVE #13 EXCLUSION

Project Vicinity

Figure 1-2

2. Approval by the Kern County Board of Supervisors for a general plan amendment for the proposed Project site, to amend the existing land use designation from R-IA (Resource – Intensive Agriculture) to LI (Light Industrial), SI (Service Industrial), HC (Highway Commercial), and GC (General Commercial);

3. Approval by the Kern County Board of Supervisors for a zone change (ZCC) for the Project site, to remove the existing A (Exclusive Agriculture) zoning classification and rezone the Project site M-1PD (Light Industrial, Precise Development Combining), M-2 PD (Medium Industrial, Precise Development Combining), CH PD (Highway Commercial Precise Development Combining), and C-2 PD (General Commercial Precise Development Combining);

4. Approval by the Kern County Board of Supervisors for a conditional use permit (CUP) for a Sewer Treatment Plant;

~~5. Approval by the Kern County Board of Supervisors for a conditional use permit (CUP) for a Water Treatment Plant;~~

5. Exclusion of the Project site from Agricultural Preserve No. 13;

~~6. Approval by the Kern County Board of Supervisors and processing of a parcel map(s);~~

~~7. Kern County Public Works Department – construction, grading, and building permits;~~

~~8. Kern County Environmental Health Services Division – Water well permits, if applicable;~~

~~9. Kern County Fire Department – Fire Safety Plan; and~~

~~10. Kern County Permit for Occupancy.~~

1.3 Purpose and Use of the Recirculated Draft EIR

This document is the Recirculated DEIR for the 99 Houghton Industrial Park. The 99 Houghton Industrial Park Project Environmental Impact Report was originally circulated for public comment from February 13, 2018, with a comment closing date of April 2, 2018, by the Kern County Planning Department acting as the lead agency. On March 13, 2018, prior to the end of the original comment period, the project was formally withdrawn from circulation. The County has received and considered written comments that were received after the close of the public comment period.

County staff has determined that changes should be made in the Draft EIR that was originally circulated for public comment. In some cases changes have been made to the project and in some cases new or revised information or analysis has been included in the Recirculated Draft EIR.

The Guidelines adopted by the Governor's Office of Planning and Research for the California Environmental Quality Act (Guidelines) provide that a lead agency is required to recirculate an environmental impact report when *significant new information* is added to an EIR after public

review of the Draft EIR has begun. New information can include changes in the project description, changes in the environmental setting, as well as other additional data or information. This information may relate to new environmental impacts, severity of such impacts, alternatives or mitigation. Recirculation of an EIR is covered by CEQA Guidelines Section 15088.5.

As mandated by State law, the minimum public review period for this document is 45 days. CEQA Guidelines Section 15088.5 (f) (1) provides that when an Environmental Impact Report (EIR) is substantially revised and the entire EIR is circulated, Kern County, as lead agency, may require that reviewers submit new comments, and the lead agency need not respond to those comments received during the earlier circulation period. Kern County will therefore respond in the Final Recirculated EIR only to new comments received regarding this Recirculated Draft EIR received during this comment period

~~This Draft EIR was prepared to evaluate the potential environmental impacts associated with the proposed Project. This report also identifies mitigation measures and alternatives to the proposed Project that may reduce or eliminate impacts. This Draft EIR has been prepared pursuant to CEQA.~~

1.4 Project Overview

Local and Regional Setting

The proposed Project is situated in the southern San Joaquin Valley in Kern County, California. Kern County is California's third-largest county in land area encompassing approximately 8,202 square miles. The geography of the county is diverse, containing mountainous areas, agricultural lands, and desert areas. The dominant land uses within the county are related to agricultural and resource extraction, although over the last few decades, urban development has occurred in and around the County's 11 incorporated cities. Bakersfield is the county's largest city, with an estimated population of 389,211 [California Department of Finance (CDOF) 2019].

The Project site is located within the sphere of influence to the City, in southeast Metropolitan Bakersfield, governed by the Metropolitan Bakersfield General Plan. The proposed Project is generally located north of Houghton Road, east of State Route 99 (SR-99), west of South Union Avenue, and south of DiGiorgio Road. South Union Avenue, Houghton Road, and the DiGiorgio Road alignment provide the primary access to and from the proposed Project. The proposed Project is located within a portion of Section 7, Township 31 South, Range 28 East, Mount Diablo Base and Meridian (MDBM). In general, the Project site is surrounded by vacant land, actively cultivated and fallow agricultural land, and limited residential uses.

Surrounding Land Uses

The general area of the proposed Project site is surrounded by cultivated and fallow agricultural land and limited residential, commercial and industrial land uses.

Project Objectives

The CEQA Guidelines (Section 15124[b]) require that the project description contain a statement of objectives that includes the underlying purpose of the project. The applicant's objectives for the proposed Project are as follows:

- Facilitate quality development that is consistent with and implements the goals of the Kern County General Plan and Metropolitan Bakersfield General Plan.
- To develop the site consistent with the provisions of the Kern County Zoning Ordinance, Land Division Ordinance, and Development Standards.
- Assure adequate planning for all community facilities including circulation improvements, drainage facilities, water, and wastewater facilities.
- Ensure that the project, in and of itself, does not contribute to the conversion of adjacent agricultural areas.
- Cluster commercial retail uses that provide goods and services near an interchange with SR-99 to accommodate interstate freight and reduce traffic congestion and air emissions.
- Accommodate new development that channels land uses in a phased, orderly manner and is coordinated with the provision of infrastructure and public improvements.
- Address community circulation, both vehicular and pedestrian, utilizing available capacity with the existing circulation system, and provide fair-share system improvements to deficient intersections or road segments.
- Facilitate a planned development and related in-line tenants consistent with the market objectives of the applicant and its tenants.
- Accommodate growth within the proposed project while balancing environmental considerations.
- Provide an industrial center at the Houghton Road and SR-99 interchange in the southern metropolitan area adjacent to the City that would provide a broad range of goods and services that serve the regional market area.
- Allow for the development of a variety of commercial and industrial centers which are differentiated by their function, intended users and level of intensity.
- Provide new industrial development that captures the economic demands generated by the marketplace.
- Provide new development that will assist the County of Kern in obtaining fiscal balance in the years and decades ahead.

Proposed Project Characteristics

The Project site would be developed with approximately 4,613,004 square feet (net building area) of warehousing, distribution, and retail showroom uses. A private package sewer treatment plant is proposed to provide sewer services for the Project site.

Proposed General Plan Amendment

The Project proposes to amend the MBGP land use designations from R-IA (Resource-Intensive Agriculture) and HC (Highway Commercial), to LI (Light Industrial), SI (Service Industrial), HC (Highway Commercial), and GC (General Commercial) (refer to Figure 1-3, *Existing General Plan Land Use Designations* and Figure 1-4, *Proposed General Plan Land Use Designations*). Approximately 108 acres would be amended to LI, approximately 159 acres would be amended to SI, approximately 9.01 acres would be amended to HC (Highway Commercial), and approximately 22 acres would be amended to GC (General Commercial). The Project site contains 15.99 acres of HC (Highway Commercial) that would remain unchanged. The LI designation is characterized by unobtrusive industrial activities that can be located in close proximity to residential and commercial uses with a minimum of environmental conflicts. The SI designation is characterized by industrial activities which involve outdoor storage or use of heavy equipment (MBGP 2007).

Proposed Zone Change

The Project proposes a Zone Change from A (Exclusive Agriculture) to M-1 PD (Light Industrial, Precise Development Combining), M-2 PD (Medium Industrial, Precise Development Combining), CH PD (Highway Commercial, Precise Development Combining), and C-2 PD (General Commercial, Precise Development Combining). Approximately 108 acres would be amended to M-1 PD, approximately 159 acres would be amended to M-2 PD, approximately 22 acres would be amended to C-2 PD, and approximately 25 acres would be amended to CH PD; refer to Figure 1-5, *Existing Zoning*, and Figure 1-6, *Proposed Zoning*, for a graphical representation of the proposed Project zone changes. As discussed in further detail below, all zones would be amended to contain the PD (Precise Development) Combining District overlay. The C-2 zoning classification is typically characterized by regional shopping centers and heavy commercial uses while CH zoning classification is typically characterized by gas stations, restaurants, and motels. The purpose of the M-1 zoning classification is to designate areas for wholesale commercial, storage, trucking, assembly-type manufacturing, and other similar industrial uses. The M-2 zoning designation is typically characterized by general manufacturing, processing, and assembly activities. The purpose of the PD Combining District is to designate areas with unique site characteristics or environmental conditions or areas surrounded by sensitive land uses to ensure that development in such areas is compatible with such constraints.

Precise Development Plans

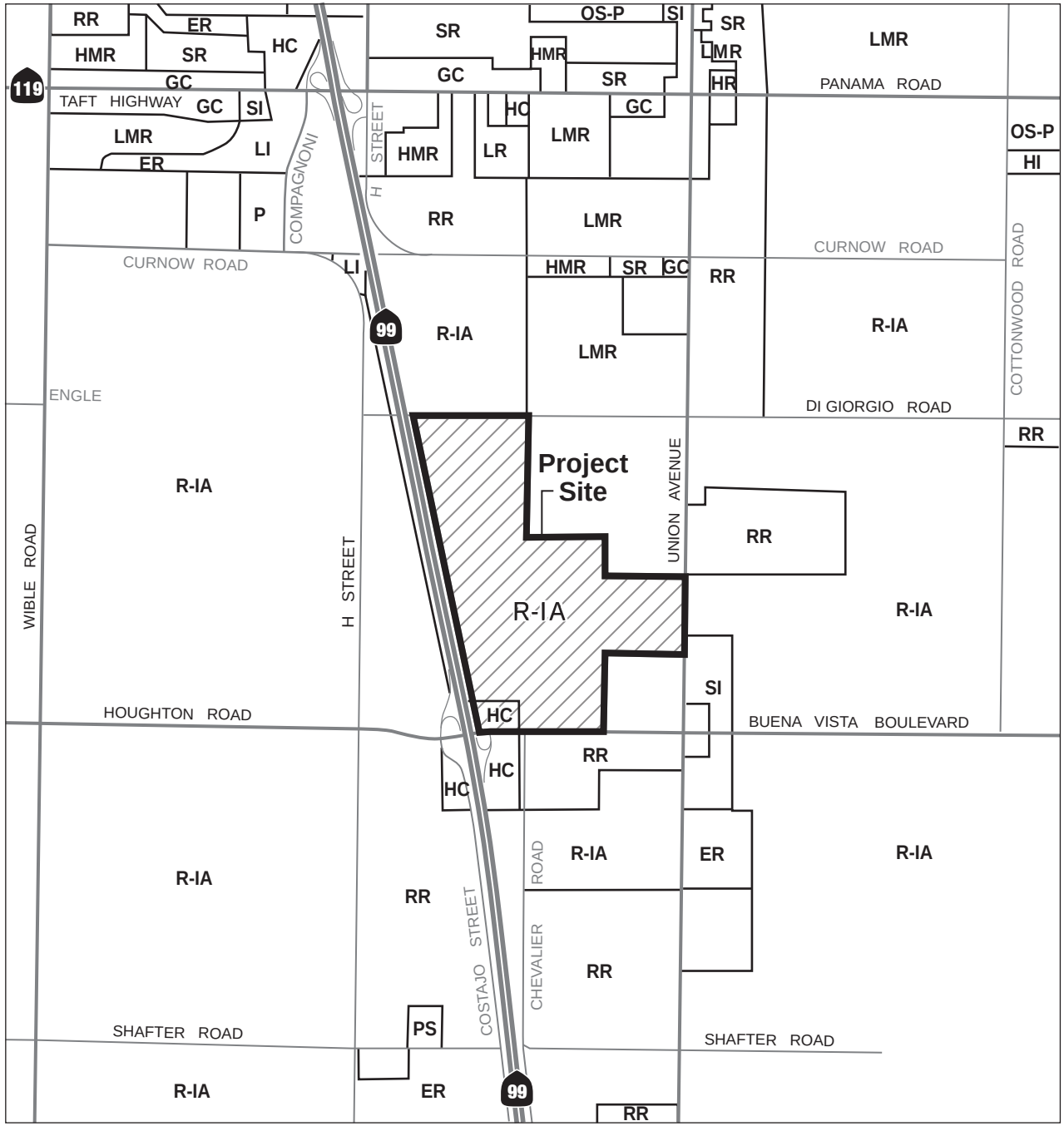
Included with the proposed zone change to C-2, CH, M-1, and M-2 is the Precise Development (PD) Combining District. The purpose of the Precise Development (PD) Combining District is to designate areas with unique site characteristics or environmental conditions or areas surrounded by sensitive land uses to ensure that development in such areas is compatible with such constraints.

All development in the PD Combining District shall be subject as a minimum to Special Development Standards as specified in Chapter 19.80 of the Kern County Zoning Ordinance; however, a Special Development Standard Plan Review shall not be required. The regulations established by the PD District shall be in addition to the regulations of the base district with which the PD District is combined.

Given the uncertainty regarding the specific use to be developed on site at this time, the PD Combining District is being included in the proposed zone change request. Implementation of the PD Combining District will ensure that as development of the site moves forward, the Kern County Planning and Natural Resources Department and the community at large will have the opportunity to publicly review site specific proposals to ensure compliance with the environmental impact report, the specific development standards and overall compatibility with the surrounding uses. Implementation of the site is expected to be processed under a Master Precise Development Plan.

Agricultural Preserve – Exclusion

An agricultural preserve defines the boundary of an area within the County that meets the criteria for property owners to enter into Williamson Act Land Use Contracts and Farmland Security Zone Contracts. Only land within an agricultural preserve is eligible for such contracts. The Kern County Board of Supervisor policy has established the criteria for inclusion into a preserve as land having a General Plan resource designation (RI–A) and having a zoning designation of A (Exclusive Agriculture). If approved, the requested MBGP designations of LI and SI would require the exclusion of approximately 257.57 acres from Agricultural Preserve No. 13 (refer to Figure 1-7, *Agricultural Preserve No. 13 Map*).



not to scale

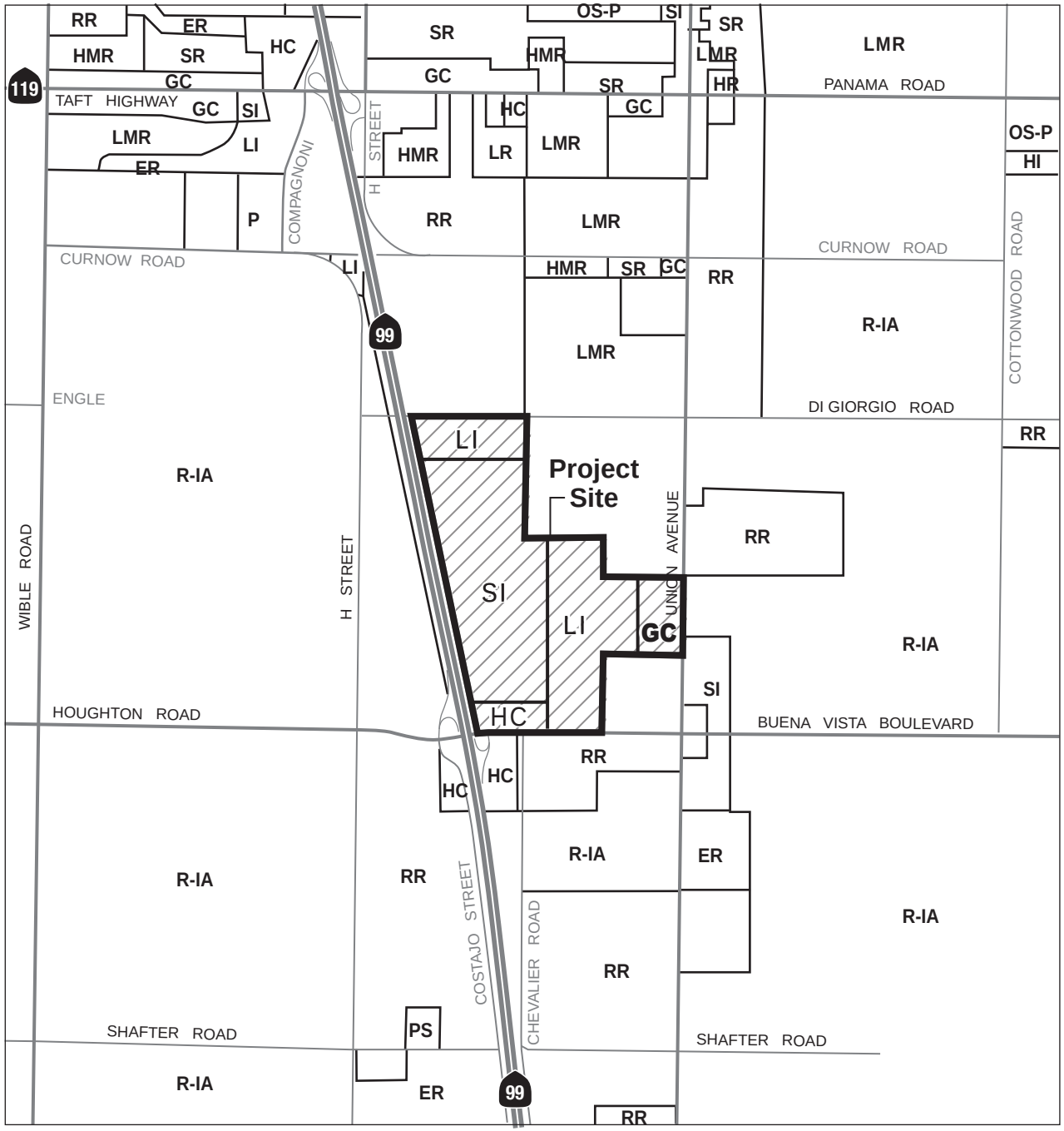
Land Use Designations

R-IA	Resource - Intensive Agriculture
LMR	Low Medium Residential
HMR	High Medium Residential
RR	Rural Residential
ER	Estate Residential
SR	Suburban Residential
GC	General Commercial
HC	Highway Commercial
LI	Light Industrial
SI	Service Industrial
HI	Heavy Industrial
OS-P	Parks and Recreation Facilities
PS	Public and Private Schools
P	Publicly Owned Facilities

99 HOUGHTON INDUSTRIAL PARK PROJECT
CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07
AGRICULTURAL PRESERVE #13 EXCLUSION

Existing General Plan Land Use Designations

Figure 1-3



not to scale

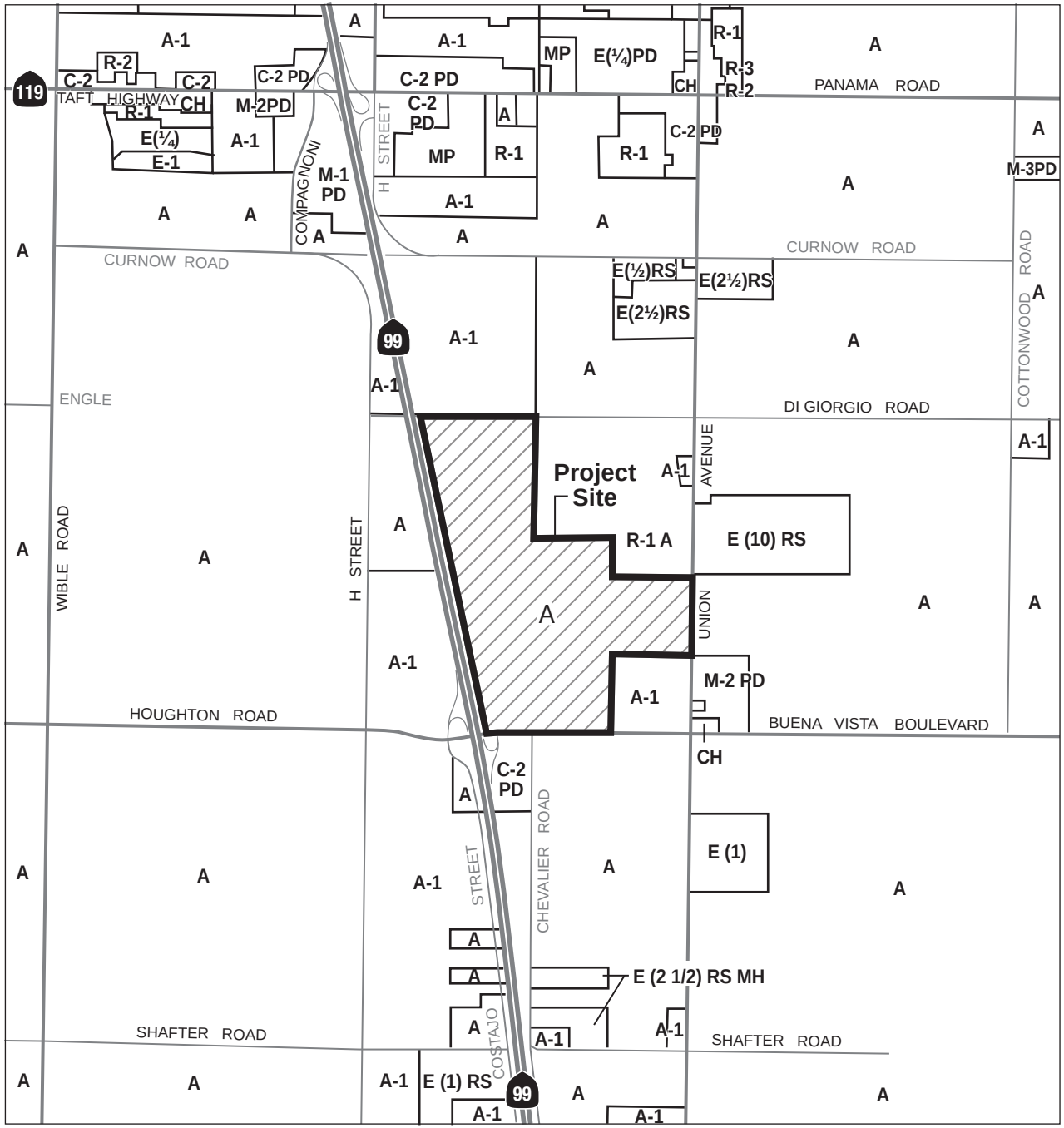
Land Use Designations

R-IA	Resource - Intensive Agriculture
LMR	Low Medium Residential
HMR	High Medium Residential
RR	Rural Residential
ER	Estate Residential
SR	Suburban Residential
GC	General Commercial
HC	Highway Commercial
LI	Light Industrial
SI	Service Industrial
HI	Heavy Industrial
OS-P	Parks and Recreation Facilities
PS	Public and Private Schools
P	Publicly Owned Facilities

99 HOUGHTON INDUSTRIAL PARK PROJECT
CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07
AGRICULTURAL PRESERVE #13 EXCLUSION

Proposed General Plan Land Use Designations

Figure 1-4



not to scale

Zoning Districts

A	Exclusive Agriculture
A-1	Limited Agriculture
C-2 PD	General Commercial, Precise Development Combining
C-2	General Commercial
CH	Highway Commercial
E (1/4)	Estate .25 Acres
E (1/2) RS	Estate .5 Acres, Residential Suburban Combining
E (1)	Estate 1 Acre
E (10) RS	Estate 10 Acres, Residential Suburban Combining
E (2 1/2) RS	Estate 2.5 Acre, Residential Suburban Combining
M-2 PD	Medium Industrial, Precise Development Combining
M-3 PD	Heavy Industrial, Precise Development Combining
MP	Mobile Home Park
R-1	Low Density Residential

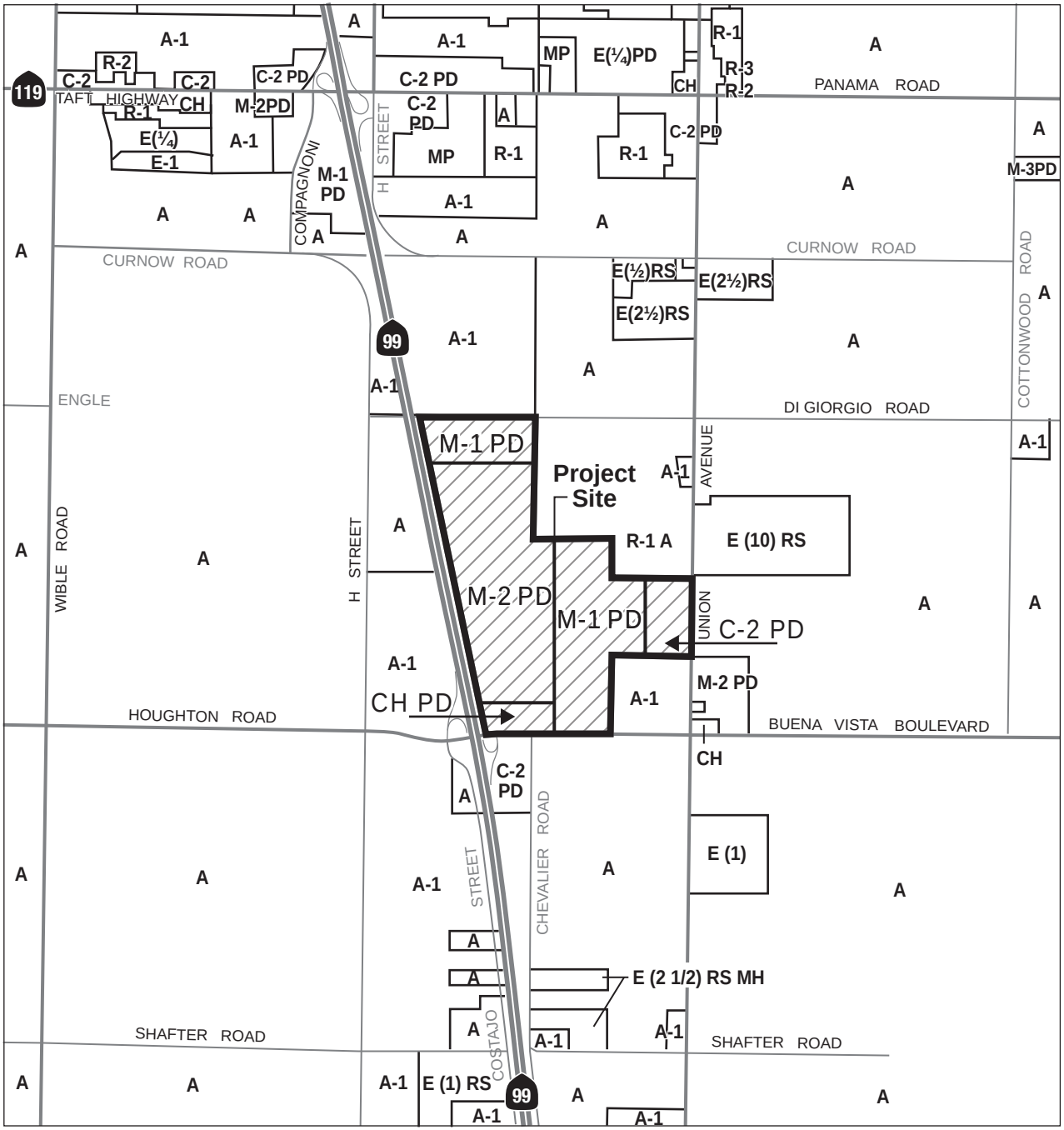
99 HOUGHTON INDUSTRIAL PARK PROJECT

CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07

AGRICULTURAL PRESERVE #13 EXCLUSION

Existing Zoning

Figure 1-5



not to scale

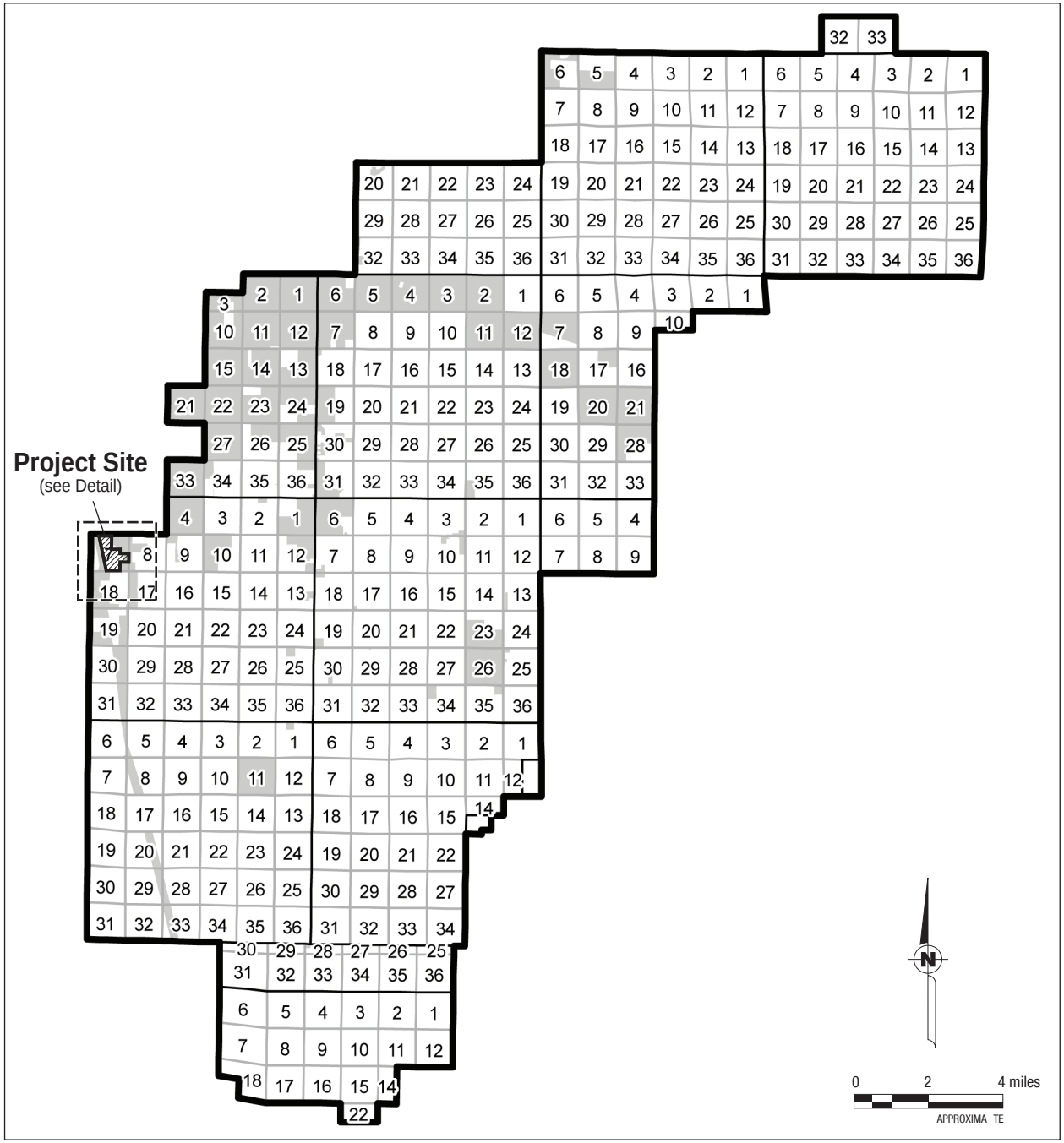
Zoning Districts

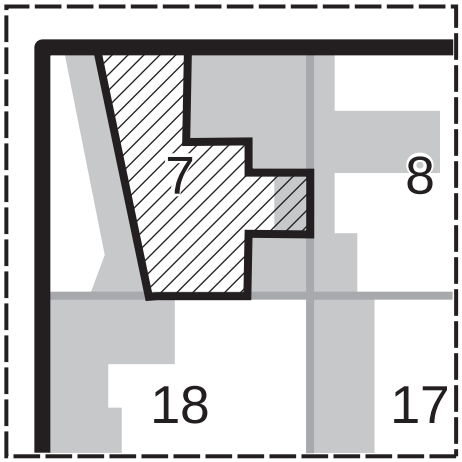
A	Exclusive Agriculture
A-1	Limited Agriculture
C-2 PD	General Commercial, Precise Development Combining
C-2	General Commercial
C-2 PD	General Commercial Precise Development Combining
CH	Highway Commercial
CH PD	Highway Commercial Precise Development Combining
E (1/4)	Estate .25 Acres
E (1/2) RS	Estate .5 Acres, Residential Suburban Combining
E (1)	Estate 1 Acre
E (10) RS	Estate 10 Acres, Residential Suburban Combining
E (2 1/2) RS	Estate 2.5 Acre, Residential Suburban Combining
M-1	Light Industrial
M-1 PD	Light Industrial, Precise Development Combining
M-2	Medium Industrial
M-2 PD	Medium Industrial, Precise Development Combining
M-3 PD	Heavy Industrial, Precise Development Combining
MP	Mobile Home Park
R-1	Low Density Residential

99 HOUGHTON INDUSTRIAL PARK PROJECT
CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07
AGRICULTURAL PRESERVE #13 EXCLUSION

Proposed Zoning

Figure 1-6





Project Site Detail

LEGEND

- 99 Houghton Project Site
- Agricultural Preserve 13
- Townships
- PLSS Sections
- Portion Excluded From Agricultural Preserve

99 HOUGHTON INDUSTRIAL PARK PROJECT
CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07
AGRICULTURAL PRESERVE #13 EXCLUSION

Agricultural Preserve No. 13 Map

Figure 1-7

Proposed Discretionary Action and Required Approvals

This Recirculated Draft EIR, once certified, will be used to satisfy the CEQA requirements for the following discretionary and ministerial approvals:

Kern County:

- Consideration and Certification of a Final Environmental Impact Report (FEIR) with appropriate findings State CEQA Guidelines Section 15091 Findings, 15093 Statement of Overriding Considerations, and the mitigation measures monitoring reporting program by the Kern County Planning Commission and Kern County Board of Supervisors
- Approval by the Kern County Board of Supervisors for a GPA for the proposed Project site, to amend the existing land use designation from R-IA (Resource – Intensive Agriculture) to LI (Light Industrial), SI (Service Industrial), HC (Highway Commercial), and GC (General Commercial)
- Approval by the Kern County Board of Supervisors for a ZCC for the Project site, to remove the existing A (Exclusive Agriculture) zoning classification and rezone the Project site M-1 PD (Light Industrial, Precise Development Combining), M-2 PD (Medium Industrial, Precise Development Combining), CH PD (Highway Commercial, Precise Development Combining), and C-2 PD (General Commercial, Precise Development Combining)
- Approval by the Kern County Board of Supervisors for a CUP for a Sewer Treatment Plant
- ~~Approval by the Kern County Board of Supervisors for a CUP for a Water Treatment Plant~~
- Exclusion of the Project site from Agricultural Preserve No. 13

1.5 Environmental Impacts

Section 15128 of the State CEQA Guidelines requires that an EIR contain a statement briefly indicating the reasons that various, possible new significant effects of a project were determined not to be significant and were therefore not discussed in detail in the RDEIR. The County has engaged the public and sought community participation in the scoping process for the environmental document. Comments received during scoping have been considered in the process of identifying issue areas that should receive attention in the EIR. The contents of this Recirculated Draft EIR were established based on the Notice of Preparation/Initial Study (NOP/IS) prepared in accordance with the State CEQA Guidelines, as well as public and agency input received during the scoping process.

Impacts Not Further Considered

Those specific issues that are found to have no impact or less-than-significant impacts during preparation of the NOP/IS do not need to be addressed further in this RDEIR. The findings of the NOP/IS and the results of scoping were the basis of the determination that this Recirculated Draft EIR would contain a comprehensive analysis of all environmental issues identified in the Kern

County CEQA Implementation Document. No issues have been eliminated from discussion in this Recirculated Draft EIR.

Impacts of the Proposed Project

Sections 4.1 through 4.16 provide a detailed discussion of the environmental setting, impacts associated with the proposed Project, and mitigation measures designed to reduce significant impacts to less-than-significant levels, when feasible. The impacts, mitigation measures, and residual impacts for the proposed Project are summarized in Table 1-2 at the end of this chapter and are discussed further below.

Less Than Significant Impacts (Including Significant Impacts That Can Be Mitigated, Avoided, or Substantially Lessened).

The analysis of the impacts of the proposed Project documents that the impacts would be less than significant or less than significant after mitigation is implemented on the following resources:

- Aesthetics,
- Biological Resources,
- Cultural Resources,
- Energy
- Geologic and Seismic Hazards,
- Hazards and Hazardous Materials,
- Hydrology and Water Quality,
- Land Use and Planning,
- Mineral Resources,
- Population and Housing,
- Public Services,
- Utilities, and
- Wildfire

Significant and Unavoidable Impacts

Section 15126.2(b) of the CEQA Guidelines requires that the EIR describe any significant impacts, including those that can be mitigated but not reduced to less-than-significant levels. Potential environmental effects of the proposed Project and proposed mitigation measures are discussed in detail in Chapter 4 of this RDEIR. The following environmental impacts were determined to be significant and unavoidable impacts (refer to Table 1-1, *Summary of Significant Impacts of the Proposed Project*).

Table 1-1. Summary of Significant Impacts of the Proposed Project

Resources	Project Impacts	Cumulative Impacts
Agricultural Resources	The conversion of approximately 314.30 acres of agricultural farmland is considered **significant and unavoidable.**	Although the Metropolitan Bakersfield General Plan has various Land Use policies that direct development to encourage site compatibility with surrounding uses, the cumulative loss of agricultural land results in a significant and unavoidable impact. Notwithstanding this conclusion, Project implementation, when combined with the potential loss of other agricultural lands within the Planning area, over time, would remain a **significant and unavoidable** cumulative impact.
Air Quality	Surrounding sensitive receptors could potentially be exposed to substantial ROG pollutant concentrations from the proposed Project. In addition, operational impacts would result in **significant and unavoidable** impacts of ROG, NO_x, CO, and PM_{10} emissions.	While all feasible and reasonable mitigation has been included, however, the proposed mitigation measures do not result in a reduction of ROG, NO_x, CO, and PM_{10}, below the thresholds. Therefore, the remaining unmitigated emissions and related health effects are considered **cumulatively significant and unavoidable.**
Greenhouse Gases	Project-related greenhouse gases impacts would be reduced to **less than significant** levels with incorporation of mitigation measures.	The cumulative impacts of the proposed Project on global climate change are not known with certainty; therefore, cumulative impacts on global climate change and associated health effects are considered **significant and unavoidable.**
Noise	Given a specific Project use is not currently proposed, and the fact that permitted uses within the M-1 PD and M-2 PD Zone Districts allow for operations to be conducted outside of a fully enclosed building, the proposed Project may result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies. Impacts are considered **significant and unavoidable.**	While all feasible and reasonable mitigation has been included, noise levels at 14 roadway segments a result of the proposed Project and at 15 roadway segments considering the project with past, present and reasonable, would be significant. In addition, noise levels at one residence in proximity to the proposed Project would exceed thresholds. Therefore, even with the implementation of all feasible mitigation, impacts would be both **significant and unavoidable and cumulatively significant and unavoidable**
Transportation and Traffic	Project-related transportation and traffic impacts would be reduced to **less than significant** levels with incorporation of mitigation measures.	Given the uncertainty of the timing and/or ultimate implementation of the recommended improvements which require pro-rata, fair share funding from various sources, along with those improvements necessary within Metropolitan Bakersfield, the proposed Project's contribution would result in **significant and unavoidable impacts.**

Significant Cumulative Impacts

According to Section 15355 of the CEQA Guidelines, the term cumulative impacts "...refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Individual effects that may contribute to a cumulative impact may be from a single project or a number of separate projects. Individually, the impacts of a project may be relatively minor, but when considered along with impacts of other closely related

or nearby projects, including newly proposed projects, the effects could be cumulatively considerable. This RDEIR has considered the potential cumulative effects of the proposed project along with other current and reasonably foreseeable projects. Impacts for the following have been found to be cumulatively considerable:

- Agriculture,
- Air Quality,
- Greenhouse Gases,
- Noise, and
- Transportation and Traffic

Growth Inducement

The Metropolitan Bakersfield General Plan recognizes that certain forms of growth are beneficial, both economically and socially. CEQA associates development of new utilities and other infrastructure and public services with growth inducement. These facilities will be provided as an accommodation to proposed growth, and growth is expected to occur in the region. A project could induce population growth in an area either directly or indirectly. More specifically, the development of new homes or businesses could induce population growth directly, whereas the extension of roads or other infrastructure could induce population growth indirectly.

This Project would not directly increase population or the housing stock. The Project proposes to amend the Metropolitan Bakersfield General Plan to allow for service industrial and light industrial uses. This allows for additional employment opportunities, which can lead to the relocation of people to jobs and ultimately an increase in population. However, the size of the labor force within Kern County and the current unemployment rates are considered to be sufficient for the current County population to accommodate jobs generated by the proposed Project. Additionally, the proposed Project site is in the vicinity of a Metropolitan Bakersfield General Plan designation for "intensified activity center," and anticipates development of the southern activity center and surrounding areas. Therefore, the introduction of industrial uses on the Project site would not create a growth-inducing impact.

Irreversible Impacts

Section 15126.2(c) of the CEQA Guidelines defines the nature of an irreversible impact as an impact that uses nonrenewable resources during the initial and continued phases of the project. Irreversible impacts can also result from damage caused by environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to ensure that such consumption is justified. Buildout of the proposed Project would commit nonrenewable resources during construction and ongoing utility services. During the operations of the proposed Project, oil, gas, and other nonrenewable resources would be consumed. Therefore, an irreversible commitment of nonrenewable resources would occur as a result of long-term operation under the proposed Project. However, assuming that those commitments occur in accordance with the adopted goals, policies, and implementation measures of the Metropolitan Bakersfield General Plan, as a matter of public policy, those commitments have been determined to be acceptable. The Metropolitan Bakersfield General Plan ensures that any irreversible environmental changes associated with those commitments will be minimized.

1.6 Alternatives to the Proposed Project

CEQA states that an EIR must address "a range of reasonable alternatives to the project, or to the location of the project, which are ostensibly feasible and could attain the basic objectives of the project and evaluate the comparative merits of the alternatives." Please refer to Chapter 6, *Alternatives*, for a more detailed analysis and discussion.

Alternatives Considered in this RDEIR

In accordance with State CEQA Guidelines Section 15126.6, Section 6.0, *Alternatives*, describes a range of reasonable alternatives to the proposed Project that could feasibly attain the basic objectives of the proposed Project and evaluates the comparative merits of each Alternative. The analysis focuses on Alternatives capable of eliminating significant adverse environmental effects or reducing them to less than significant levels, even if these Alternatives would impede, to some degree, the attainment of the Project objectives. Potential environmental impacts are compared to impacts from the proposed Project. The following is a description of each of the Alternatives evaluated in Section 6.0.

Alternative A – "No Project/No Development"

The "No Project/No Development" Alternative assumes that the proposed GPA, ZCC and subsequent development would not be implemented. Under this scenario, the General Plan Land Use Designation on the Project site would remain R-IA (Resource-Intensive Agriculture) and HC (Highway Commercial); the zoning would remain A (Exclusive Agriculture). Additionally, this Alternative assumes that existing land uses on the Project site would remain unchanged, and, as such, would remain under agricultural production. Because the Project site would remain unchanged, few or no environmental impacts would occur. This Alternative serves as the baseline against which to evaluate the effects of the proposed Project and other Project Alternatives presented below.

This Alternative would reduce impacts compared to the proposed Project in all categories. However, this Alternative was rejected because it does not fulfill 9 of the 13 objectives of the proposed Project described in Section 6.2, *Applicant Project Objectives*.

Alternative B – "Buildout Existing General Plan Designation"

Under Alternative B, the "Buildout Existing General Plan Designation" Alternative, the Project site would be developed to the maximum intensity allowed under the existing General Plan land use designation. Implementation of this Alternative would consist of development on the 314.30-acre Project site under the current land use designation of R-IA (Resource – Intensive Agriculture) and HC (Highway Commercial). The R-IA designation allows the development of dwelling units at a density of one unit per 20 acres. The HC designation allows the development of 7.6 acres for commercial uses. Therefore, this Alternative would yield 15 single-family dwelling units and approximately 132,422 square feet of highway commercial facilities. This number is based on the allowable Floor Area Ratio (FAR) of 0.4; therefore, 7.6 acres = 331,056 square feet. The maximum allowable building square footage would be 132,422 square feet (331,056 x 0.4 = 132,422).

This Alternative would reduce impacts compared to the proposed Project in the categories of aesthetics, agriculture, air quality, biological resources, energy, greenhouse gases, land use and relevant planning, noise, public services, utilities and traffic and circulation; and would have equivalent impacts in the categories of cultural resources, geologic and seismic hazards, hazards/hazardous materials, hydrology and water quality mineral resources, and wildfire. However, there would still have significant and unavoidable impacts on cumulative air quality. This Alternative would only partially satisfy the Project objectives, as no industrial land uses would be developed.

Alternative C – "Reduced Density" Alternative

Under Alternative C, the "Reduced Density" Alternative, the Project site would be developed under the LI (Light Industrial) and SI (Service Industrial) land use designation; however, the industrial facilities would be reduced in area. This Alternative would develop the entire 314.30-acre Project site; however, the square footage of industrial facilities would be reduced by approximately 25 percent. This results in the development of approximately 3,459,753 square feet of light and medium industrial facilities. The Project site would continue to require a GPA, ZCC, annexation, and exclusion from Agricultural Preserve Number 13.

This Alternative would reduce impacts compared to the proposed Project in the categories of air quality, energy, and noise~~ and traffic and circulation~~; and would have equivalent impacts in the categories of aesthetics, agriculture, biological resources cultural resources, geologic and seismic hazards, greenhouse gases, hazards/hazardous materials, hydrology and water quality, land use and relevant planning, mineral resources, population and housing, public services and utilities, traffic and circulation, and wildfire. This Alternative would satisfy the Project objectives.

Alternative D – "Reduced Project Size" Alternative

Under Alternative D, the "Reduced Project Size" Alternative, the Project site size would be reduced by 50 percent and the square footage size would be reduced accordingly. Therefore, Alternative D would develop the 159-acre portion of the Project site designated to be SI (Service Industrial) with 2,306,502 square feet of medium industrial facilities, as identified in the proposed Project. The approximately 22-acre parcel on the east, the 9.01-acre Highway Commercial parcel, and the approximately 107.72-acres on the east and north of the Project site to be designated LI (Light Industrial) would not be developed. Additionally, this Alternative would not provide access to any public road. Therefore, this Alternative assumes that existing land uses on the northern and eastern portions of the site would remain unchanged and would remain under their current state as fallow and cultivated land. This Alternative would continue to require the GPA, ZCC, annexation, and Agricultural Preserve Exclusion.

This Alternative would reduce the impacts compared to the proposed Project in the categories of air quality, noise, energy, and traffic and circulation; and would have equivalent impacts in the categories of aesthetics, agriculture, biological resources, cultural resources, geologic and seismic hazards, greenhouse gases, hazards/hazardous materials, hydrology and water quality, land use and relevant planning, mineral resources, noise, population and housing, public services and utilities, traffic and circulation, and wildfire. This Alternative would satisfy the Project objectives.

Environmentally Superior Alternative

An EIR must identify the environmentally superior alternative to the proposed Project. Alternative A, the "No Project/No Development Alternative would be environmentally superior to the proposed Project on the basis of the minimization or avoidance of physical environmental impacts. CEQA Section 15126(d)(2) indicates that, if the "No Project/No Development" Alternative is the "Environmentally Superior" Alternative, then the EIR shall also identify an Environmentally Superior Alternative among the other Alternatives. Among those alternatives that propose development, Alternative D, the "Reduced Project Size" Alternative, is the environmentally superior Alternative because it significantly reduces the amount of agricultural land impacted, while reducing other Project specific impacts.

1.7 Areas of Controversy

Written agency and public comments received during the public review period for the NOP/IS are provided in Appendix A. Also see Appendix A for further details on areas of controversy. In summary, the following key issues were identified during scoping as being controversial due to their potentially significant impacts or the need for mitigation to avoid significant impact.

- The EIR should address the following issues: incompatibility with the Metropolitan Bakersfield General Plan, need for the proposed Project, farmland conversion, air quality, biological resources, global warming, water supplies, energy and solar photovoltaics, traffic, aesthetics and light pollution, alternatives, and cumulative impacts.
- The EIR should address issues involving compatibility with industrial uses and the scope of impact upon the surrounding agricultural properties.
- When the traffic impact study for the proposed Project is submitted to the County, the Roads Department would like a copy for review and comment.
- The proposed Project is located outside the administrative boundaries of any oil or gas field, and there is one plugged and abandoned oil well within the Project boundaries. The abandoned well will need to be addressed if structures, roads, or parking lots are planned in proximity to it.
- The proposed Project is located in an area that Tejon Indian Tribe ancestors used in the past; however, the Tribe has no information or concerns at this time.
- The NAHC, as the state trustee agency, recommended various actions in order to adequately assess the proposed Project-related impacts on historical resources.
- A traffic impact study is needed for the proposed Project. An encroachment permit may be needed for the proposed Project, for any work in the State right-of-way.
- The EIR should include a quantitative emissions analysis, a discussion of greenhouse gas emissions generated by the proposed Project and the effect they will have (if any) on global climate change, a discussion of potential odors/sensitive receptors, potential health impact of Toxic Air Contaminants (if any), existing District regulations, feasible mitigation measures that will reduce air quality impacts.

- The Kern County Superintendent of Schools office represents the Greenfield Union and Kern High School Districts with regard to the imposition of developer fees. The collection of statutory fees shall be collected at the time that building permits are issued. Currently, these fees are set at $0.56 per square foot, an amount subject to adjustment ever two years.

1.8 Issues to Be Resolved

Section 15123(b)(3) of the State CEQA Guidelines requires that an EIR contain issues to be resolved, which includes the choices among alternatives and whether or how to mitigate significant impacts. The major issues to be resolved regarding the proposed Project include decisions by the lead agency as to whether or not:

- the Recirculated Draft EIR adequately describes the environmental impacts of the proposed Project,
- the recommended mitigation measures should be adopted or modified, or
- additional mitigation measures need to be applied.

1.9 Summary of Environmental Impacts and Mitigation

The following is a summary of the environmental impacts of the proposed Project, mitigation measures, and unavoidable significant impacts identified and analyzed in Chapter 4.0 of this RDEIR. Refer to the appropriate RDEIR section for additional information.

This Page Intentionally Left Blank

Table 1-2. Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation			
Impact	**Level of Significance Before Mitigation**	**Mitigation Measures**	**Level of Significance After Mitigation**
4.1 AESTHETICS			
4.1-1: The Project Would Have a Substantial Adverse Effect on a Scenic Vista.	Less than significant	No mitigation measures are required.	Less than significant
4.1-2: The Project Would Substantially Alter or Damage Scenic Resources, Including but not Limited to, Trees, Rock outcroppings, and Historic Buildings Within a State Scenic Highway.	Less than significant	No mitigation measures are required.	Less than significant
4.1-3: The Project Would Substantially Degrade the Existing Visual Character or Quality of the Proposed Project Site and Its Surroundings.	Potentially ~~Less than~~ significant	**MM 4.1-1:** Prior to the issuance of building permits, the project operator shall demonstrate compliance with ~~one of~~ the following: a. The project proponent shall present a plan to color treat the proposed warehouse and office buildings to blend in with the colors found in the surrounding natural landscape while not producing reflection, as approved by the Kern County Planning and Natural Resources Department; **MM 4.1-2:** The following aesthetic features shall be required in site plans and building permits for commercial buildings located within 1,000 feet of the State Route 99 corridor: a. Rooftop screening features shall be installed to create a visual screen for rooftop mechanical equipment, such as a parapet or screening material. b. Reflective metal exteriors shall not be used as exterior architectural elements in buildings immediately adjacent to State Route 99. **MM 4.1-3:** Prior to the issuance of building permits for any facilities on the project site, the project applicant shall submit to the Kern County Planning and Natural Resources Department for approval, a landscape plan that will effectively buffer foreground views of the proposed project site from State Route 99. This landscape plan shall include, but is not limited to, landscape structural elements (such as fencing), and planting materials consistent with current Kern County landscape requirements and shall be cleared of trash and debris at least monthly during the year. The plan shall also include:	Less than significant

Table 1-2. Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation

Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		a. Preparation by a licensed Landscape Architect and approval by the Kern County Planning and Natural Resources Department Director prior to buffer planting; b. The plan shall include California native, drought-tolerant plants. c. The plan shall provide for an irrigation plan as required under the Kern County Zoning Ordinance 19.86.070. d. Should perimeter fencing be proposed, fencing materials shall be constructed of any materials commonly used in the construction of fences and walls such as wood, stone, rock, tubular steel, wrought iron, or brick, or other durable materials. Masonry block walls shall be decorative and not bare masonry blocks. Decorative materials can include a façade, colored masonry blocks, or other materials. Fencing proposed around sumps may be chain-link with view obscuring slats. Barbed wire is not permitted. e. A 20-foot wide perimeter buffer along any visible boundary from the State Route 99 frontage and shall be included as part of the landscape plan. This buffer shall consist of live ground cover, shrubs, or grass, and: 1) One (1) tree having a minimum planting height of six (6) feet for every 50 lineal feet of buffer; 2) Shrubs which reach a minimum height of four (4) to six (6) feet. 3) Live ground cover consisting of low-height plants, or shrubs, or grass shall be planted in the portion of the landscaped area not occupied by trees or evergreen shrubs. 4) Bare gravel, rock, bark or other similar materials may be used, but are not a substitute for ground cover plantings, and shall be limited to no more than 25 percent of the required landscape area. 5) Landscaping shall be installed prior to final occupancy.	
4.1-4: The Project Would Create a New Source of Substantial Light and Glare That Would Adversely Affect Daytime or Nighttime Views of the Area.	Potentially significant	**MM 4.1-4:** The project shall continuously comply with the following: project facility lighting shall comply with the applicable provisions of the Dark Skies Ordinance (Chapter 19.81 of the Kern County Zoning Ordinance), and shall be designed to provide the minimum illumination needed to achieve safety and security objectives. All lighting shall be directed downward and shielded to focus illumination on the desired areas only	Less than significant

Table 1-2. Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation			
Impact	**Level of Significance Before Mitigation**	**Mitigation Measures**	**Level of Significance After Mitigation**
		and avoid light trespass into adjacent areas. Lenses and bulbs shall not extend below the shields. **MM 4.1-5:** Prior to the issuance of building permits for any facilities on the project site, the project applicant shall submit, and the Kern County Planning and Natural Resources Department shall have approved, plans verifying all outdoor lighting is designed so that all direct lighting is confined to the project site property lines and that adjacent properties and roadways are protected from spillover light and glare.	
Cumulative Impact	Potentially significant	Implement Mitigation Measures MM 4.1-1 through MM 4.1-5, above.	Less than significant
4.2 AGRICULTURAL RESOURCES			
4.2-1: The Project Would Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as Shown on the Maps Prepared Pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to Nonagricultural Use.	Significant and unavoidable	**MM 4.2-1:** Prior to issuance of a grading or building permit, whichever occurs first, the project proponent shall provide written evidence of completion of one or more of the following measures to mitigate the loss 314.30 acres of agricultural land before conversion, at a one-to-one ratio. Funding and/or purchase of agricultural conservation easements (will be managed and maintained by an appropriate entity); Purchase of credits from an established agricultural farmland mitigation bank; Contribution of agricultural land or equivalent funding to an organization that provides for the preservation of farmland in California; or Participation in any agricultural land mitigation programs adopted by Kern County that provides equal or more effective mitigation than the measures listed above. Mitigation land shall meet the definition of prime farmland or farmland of statewide importance established by the State Department of Conservation. Completion of the selected measure(s), or with the Planning Director's approval, a combination of the selected mitigation measures, can be on qualifying agricultural land within the San Joaquin Valley (San Joaquin, Stanislaus, Merced, Fresno, Madera, Kings, Tulare, Kern Counties) or outside the San Joaquin Valley with written evidence that the same or equivalent crops can be produced on the mitigation land.	Significant and unavoidable

Table 1-2. Summary of Impacts, Mitigation Measures, and Level of Impacts after Mitigation			
Impact	**Level of Significance Before Mitigation**	**Mitigation Measures**	**Level of Significance After Mitigation**
4.2-2: The Project Would Conflict with Existing Zoning for Agricultural Use, or a Williamson Act Contract.	Less than significant	No mitigation measures are required.	Less than significant
4.2-3: The Project Would Conflict with Existing Zoning for, or Cause Rezoning of, Forest Land (as Defined in Public Resources Code Section 12220(g)) or Timberland (as Defined in Public Resources Code Section 4526).	No Impact	No mitigation measures are required.	No impact
4.2-4: The Project Would Result in the Loss of Forest Land or Conversion of Forest Land to Non-Forest Use.	No Impact	No mitigation measures are required.	No impact
4.2-5: The Project Would Involve Other Changes in the Existing Environment Which, Due to Their Location or Nature, Could Result in Conversion of Farmland, to Non-Agricultural Use or Conversion of Forest Land to Non-Forest Use.	Significant and unavoidable	Implement MM 4.2-1.	Significant and unavoidable
4.2-6: The Project Would Result in the Cancellation of an Open Space Contract Made Pursuant to the California Land Conservation Act of 1965 or Farmland Security Zone Contract for Any Parcel of 100 or More Acres (Section 1526(b)(3) Public Resources Code.	Potentially significant	Implement MM 4.2-1.	Less than significant
Cumulative Impacts	Significant and unavoidable	Implement MM 4.2-1.	Significant and unavoidable

4.3 AIR QUALITY			
4.3-1: The Project Would Not Be Consistent with the Air Quality Attainment Plan.	Less than significant	No mitigation measures are required.	Less than significant
4.3-2: The Project Would Violate Any Air Quality Standard as Adopted or Established by EPA or Air District or Contribute Substantially to an Existing or Projected Air Quality Violation.	Less than significant	**MM 4.3-1:** Air Quality. To minimize personnel and public exposure to potential Valley Fever–containing dust both on- and off-site, the following additional control measures shall be included in the DCP to be prepared for this project: Equipment, vehicles, and other items shall be thoroughly cleaned of dust before they are moved off-site to other work locations. Wherever possible, grading and trenching work shall be phased so that earth-moving equipment is working well ahead or down-wind of workers on the ground. The area immediately behind grading or trenching equipment shall be sprayed with water before ground workers move into the area. In the event that a water truck runs out of water before dust is sufficiently dampened, ground workers being exposed to dust are to leave the area until a full truck resumes water spraying. All heavy-duty earth-moving vehicles shall be closed-cab and equipped with a HEPA-filtered air system. **MM 4.3-2:** Valley Fever Training. On-site personnel shall be trained on the proper use of personal protective equipment, including respiratory equipment. National Institute for Occupational Safety and Health (NIOSH)-approved respirators shall be provided to on-site personal, upon request. Evidence of training shall be provided to the Kern County Planning and Natural Resources Department within 24 hours of the training session. Valley Fever informational handout shall be provided to all on-site construction personnel. The handout shall, at a minimum, provide information regarding the symptoms, health effects, preventative measures, and treatment. Additional information and handouts can be obtained by contacting the Kern County Public Health Services Department. **MM 4.3-3:** Valley Fever Education Fees. One-time payment of $3,200.00 shall be made to the Kern County Public Health Services Department for the specific purposes of continued Valley Fever education and outreach.	Less than significant for construction related impacts and operational SOx PM10, and PM2.5. Significant and Unavoidable Impact of ROG, NOx, and CO operational emissions.

		MM 4.3-4: All required landscaping along major and arterial roadways will be designed with native drought-resistant species (plants, trees, and bushes) to reduce demand for gas-powered landscape maintenance equipment. **MM 4.3-5:** Prior to issuance of building permit, the applicant shall submit evidence, verified by the Air District, that the development has total Project construction and operations emissions mitigated baseline below 2 tons per year for NOx (total Project construction and operations) and mitigated baseline below 2 tons per year for PM10 emissions (total Project constructions and operations). Required reductions can be achieved from any combination of Project design, compliance with the Indirect Source Review (ISR) and/or a Development Mitigation Contract. If a Development Mitigation Contract is utilized, a copy of the executed agreement and implementing reports will be provided to the Planning Department to substantiate compliance. As there still would be unmitigated emissions of ROG participation in any air mitigation program adopted by Kern County that provides equal or more effective mitigation than this mitigation measure can be utilized as a replacement for the requirements of this mitigation measure.	
4.3-3: The Project Would Violate Standards for CO Concentrations.	Less than significant	No mitigation measures are required.	Less than significant
4.3-4: The Project Would Result in A Cumulatively Considerable Net Increase of Any Criteria Pollutant For Which The Project Region Is Nonattainment Under an Applicable Federal Or State Ambient Air Quality Standard.	Potentially significant	Implement Mitigation Measures MM 4.3-1 through MM 4.3-5.	Significant and Unavoidable
4.3-5: The Project Would Expose Sensitive Receptors To Substantial Pollutant Concentrations.	Significant and unavoidable	Implement mitigation measures MM 4.3-1 through MM 4.3-5.	Significant and Unavoidable impact of ROG, NOx, and CO operation emissions. Less than significant after mitigation for Project contribution of all other emissions. Less than significant for

			construction emissions.
4.3-6: The Project Would Create Odor Impacts.	Less than significant	No mitigation measures are required.	Less than significant
Cumulative Impacts			
Total Cumulative Project Emissions	Significant and unavoidable	**Implement Mitigation Measures MM 4.3-1 through MM 4.3-5.**	Significant and unavoidable
Hazardous Air Pollutants.	Less than significant	No mitigation measures are required.	Less than significant
4.4 BIOLOGICAL RESOURCES			
4.4-1: The Project Will Have a Substantial Adverse Effect, Either Directly or Through Habitat Modifications, on Any Species Identified as a Candidate, Sensitive or Special Status Species in Local or Regional Plans, Policies or Regulations, or by the CDFG or USFWS.	Potentially Significant	**MM 4.4-1: Biological Monitoring.** Prior to initiation of any site preparation and/or construction activities, the project proponent shall retain a Lead Biologist who shall be approved prior to conducting pre-construction surveys by the Kern County Planning and Natural Resources Department with a submitted resume. The Lead Biologist will have oversight over implementation of all necessary avoidance and minimization efforts and will have the authority to stop construction activities, if any of the requirements associated with these measures are not being fulfilled. If the biologist has requested work activities stop due to take of any listed species, the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife will be notified within 1 day via email and telephone. In addition to the Lead Biologist, all other qualified biologists or monitors working on site, conducting evaluations, etc., shall submit resumes for approval to the Kern County Planning and Natural Resources Department. **MM 4.4-2: Environmental Awareness Training and Education Program.** Prior to the issuance of grading or building permits and for the duration of construction activities, all new construction workers at the project site shall attend an Environmental Awareness Training and Education Program, developed and presented by the Lead Biologist. Any employee responsible for the operations and maintenance or decommissioning of the project facilities shall also attend the Environmental Awareness Training and Education Program. The Training Program shall include, but not be limited to, information on the life history of species including the blunt-nosed leopard lizard, San Joaquin whipsnake, coast horned lizard, burrowing owl, Swainson's hawk, prairie falcon, Le Conte's thresher, Nelson's antelope squirrel, giant kangaroo rat, short-nosed kangaroo rat, Tipton kangaroo rat, Tulare grasshopper mouse, San Joaquin pocket mouse, American badger, nesting birds, and San Joaquin kit fox, as well as other wildlife and plant	Less than significant

		species that may be encountered during construction activities, their legal protections, the definition of "take" under the Endangered Species Act, measures to protect the species, reporting requirements, specific measures that each worker shall employ to avoid take of wildlife species, and penalties for violation of the Act. To ensure employees and contractors understand their roles and responsibilities, training may be conducted in languages other than English. An acknowledgement form signed by each worker indicating that Environmental Awareness Training and Education Program has been completed would be kept on record; A sticker shall be placed on hard hats indicating that the worker has completed the Environmental Awareness Training and Education Program. Construction workers shall not be permitted to operate equipment within the construction areas unless they have attended the Environmental Awareness Training and Education Program and are wearing hard hats with the required sticker; A copy of the training transcript and/or training video, as well as a list of the names of all personnel who attended the Environmental Awareness Training and Education Program and copies of the signed acknowledgement forms shall be submitted to the Kern County Planning and Natural Resources Department; and, The construction crews and contractor(s) shall be responsible for unauthorized impacts from construction activities to sensitive biological resources that are outside the areas defined as subject to impacts by project permits. An Operation and Maintenance-phase version of the WEAP will be maintained within the on-site O&M facility for review as may be necessary during the life of the project. All vehicles will be directed to exercise caution when commuting within the project area. A 15-mile per hour speed limit will be enforced on unpaved roads. Project employees will be provided with written guidance governing vehicle use, speed limits on unpaved roads, fire prevention, and other hazards. A litter control program shall be instituted at the project site. All workers shall ensure their food scraps, paper wrappers, food containers, cans, bottles, and other trash from the project area are deposited in covered or closed trash containers. The trash containers shall be removed from the project area at the end of each working day. No canine or feline pets or firearms (except for federal, state, or local law enforcement officers and security personnel) shall be permitted on construction sites to avoid harassment, killing, or injuring of listed species.	

		Maintenance and construction excavations greater than 2 feet deep shall be covered, filled in at the end of each working day, or have earthen escape ramps no greater than 200 feet apart provided to prevent entrapment of listed species. All construction activities shall be confined within the project construction area, which may include temporary access roads, haul roads, and staging areas specifically designated and marked for these purposes. At no time shall equipment or personnel be allowed to adversely affect areas outside the project site. Because dusk and dawn are often the times when listed species are most actively foraging, all construction activities will cease 0.5 hour before sunset and will not begin prior to 0.5 hour before sunrise. Except when necessary for driver or pedestrian safety, lighting of the project site by artificial lighting during nighttime hours is prohibited. Tightly woven fiber netting or similar material shall be used for erosion control or other purposes at the project site to ensure that special-status species do not get trapped. This limitation will be communicated to the contractor through use of Special Provisions included in the bid solicitation package. Use of rodenticides and herbicides at the project site shall be avoided to the maximum extent feasible. If use is unavoidable, rodenticides and/or herbicides shall be utilized in such a manner to prevent primary or secondary poisoning of special-status species and depletion of prey populations on which they depend. All uses of such compounds shall observe labels and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Pesticide Regulation, and other appropriate state and federal regulations as well as additional project-related restrictions deemed necessary by the U.S. Fish and Wildlife Service or California Department of Fish and Wildlife. **MM 4.4-3: Preconstruction Surveys.** A pre-construction survey by a qualified biologist or monitor shall be conducted no more than 30 days and no less than 14 days prior to the commencement of any site preparation, ground disturbance, and/or construction activities in previously undisturbed areas of the project site. If any evidence of occupation of that portion of the project site by listed or other special-status plant or animal species is observed, a buffer shall be established by a qualified biologist that results in sufficient avoidance to comply with applicable regulations. If sufficient avoidance cannot be established, the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife shall be contacted for further guidance and consultation on additional measures. The project proponent or operator shall obtain any required permits from the appropriate wildlife agency. Copies of the pre-construction survey and results, as well as all permits and evidence of compliance with applicable regulations, shall be submitted to the Kern County Planning and Natural Resources Department.	

		The following buffer distances shall be established prior to commencement of any site preparation and/or construction activities, if any listed or other special status plant or animal species is observed: a. San Joaquin kit fox or American badger potential den: 50 feet; b. San Joaquin kit fox or American badger known den: 100 feet; c. San Joaquin kit fox or American badger pupping den: contact the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife; d. Burrowing owl burrow outside of breeding season: as recommended by the California Department of Fish and Wildlife Staff Report 2012; e. Burrowing owl burrow during breeding season: as recommended by the California Department of Fish and Wildlife Staff Report 2012; f. Swainson's hawk nest during breeding season: 0.5 mile; g. Other protected raptor nests during the breeding season: as recommended by a qualified biologist; h. Other protected nesting migratory bird nests during the breeding season: as recommended by a qualified biologist; and i. Coast horned lizard, San Joaquin whipsnake, and other special-status wildlife species: as recommended by a qualified biologist. **MM 4.4-4**: If construction activities are conducted during the typical nesting bird season (February 15 through September 15), pre-construction surveys shall be conducted by a qualified biologist prior to any site preparation and/or construction activity to identify potential nesting bird activity. The survey area shall include a 500-foot buffer surrounding the property. If no active nests are found within the survey area, no further mitigation is required. If nesting activity is identified during the pre-construction survey process, the following measures will be implemented: a. If active nest sites of bird species protected under the Migratory Bird Treaty Act and/or California Fish and Game Code are observed within the project site, then the project will be modified and/or delayed as necessary to avoid direct take of the identified nests, eggs, and/or young; b. If active nest sites of raptors and/or bird species of special concern are observed within the vicinity of the project site, then the appropriate buffer around the nest site (typically 250 feet for passerines and 500 feet for raptors) will be established.	

		Construction activities in the buffer zone will be prohibited until the young have fledged the nest and achieved independence; and, c. Active nests shall be documented by a qualified biologist, and a letter report shall be submitted to the Kern County Planning and Natural Resources Department documenting project compliance with the Migratory Bird Treaty Act and California Fish and Game Code. **MM 4.4-5:** Within 6 months prior to commencement of site preparation and/or construction activities, the project proponent shall ensure that a U.S. Fish and Wildlife Service-approved biologist conducts a protocol survey for blunt-nosed leopard lizard in accordance with the guidelines published by the California Department of Fish and Wildlife, Region 4, Fresno Office (CDFW 2004). If blunt-nosed leopard lizards are located within the action area, the U.S. Fish and Wildlife Service will be contacted to discuss methods for proceeding with the project in a manner which will avoid take. **MM 4.4-6: Burrowing Owl.** The project proponent shall implement the following measures, based on the recently updated California Department of Fish and Game (now California Department of Fish and Wildlife) 2012 Staff Report on Burrowing Owl Mitigation, to ensure potential impacts to burrowing owl resulting from project implementation will be avoided and minimized to less-than-significant levels: A qualified wildlife biologist (i.e., a wildlife biologist with previous burrowing owl survey experience) shall conduct pre-construction surveys of the permanent and temporary impacts areas, plus an ISO-meter (approximately 492-foot) buffer, to locate active breeding or wintering burrowing owl burrows no less than 14 days prior to construction. The survey methodology will be consistent with the methods outlined in the Staff Report and will consist of walking parallel transects 7 to 20 meters apart, adjusting for vegetation height and density as needed, and noting any potential burrows with fresh burrowing owl sign or presence of burrowing. As each burrow is investigated, biologists will also look for signs of American badger and kit fox. Copies of the survey results shall be submitted to the California Department of Fish and Wildlife and Kern County Planning and Natural Resources Department. If burrowing owls are detected, no ground-disturbing activities, such as road construction or ancillary facilities, shall be permitted within the distances listed below in the table titled “Burrowing Owl Burrow Buffers,” unless otherwise authorized by California Department of Fish and Wildlife. Burrowing owls shall not be moved or excluded from burrows during the breeding season. If avoidance of active burrows is infeasible, the owls can be passively displaced from their burrows according to recommendations made in the 2012 Staff Report on	

		Burrowing Owl Mitigation. Burrowing owls should not be excluded from burrows unless or until: Occupied burrows shall not be disturbed during the nesting season unless a qualified biologist meeting the Biologist Qualifications set forth in the May 2012 California Department of Fish and Wildlife Staff Report, verifies through noninvasive methods that either: (1) the owls have not begun egg-laying and incubation; or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. Burrowing owls will not be moved or excluded from burrows during the breeding season. A Burrowing Owl Exclusion Plan is developed and approved by the applicable local California Department of Fish and Wildlife office and submitted to the Kern County Planning and Natural Resources Department. The plan shall include, at a minimum: Confirm by site surveillance that the burrow(s) is empty of burrowing owls and other species preceding burrow scoping; Type of scope and appropriate timing of scoping to avoid impacts; Occupancy factors to look for and what will guide determination of vacancy and excavation timing (one-way doors should be left in place 48 hours to ensure burrowing owls have left the burrow before excavation, visited twice daily, and monitored for evidence that owls are inside and can't escape, i.e., look for sign immediately inside the door); How the burrow(s) will be excavated. Excavation using hand tools with refilling to prevent reoccupation is preferable whenever possible (may include using piping to stabilize the burrow to prevent collapsing until the entire burrow has been excavated and it can be determined that owls reside the burrow); Removal of other potential owl burrow surrogates or refugia on-site; Photographing the excavation and closure of the burrow to demonstrate success and sufficiency; Monitoring of the site to evaluate success and, if needed, to implement remedial measures to prevent subsequent owl use to avoid take; How the impacted site will continually be made inhospitable to burrowing owls and fossorial mammals (e.g., by allowing vegetation to grow tall, heavy disking, or immediate and continuous grading) until development is complete. Permanent loss of occupied burrow(s) and habitat is mitigated in accordance with the measures described below.	

		Temporary exclusion is mitigated in accordance with the measures described below. Site monitoring is conducted prior to, during, and after exclusion of burrowing owls from their burrows sufficient to ensure take is avoided. Conduct daily monitoring for 1 week to confirm young of the year have fledged if the exclusion will occur immediately after the end of the breeding season. Excluded burrowing owls are documented using artificial or natural burrows on an adjoining mitigation site (if able to confirm by band re-sight). In accordance with the Burrowing Owl Exclusion Plan, a qualified wildlife biologist shall excavate burrows using hand tools. Sections of flexible plastic pipe or burlap bag shall be inserted into the tunnels during excavation to maintain an escape route for any animals inside the burrow. One-way doors shall be installed at the entrance to the active burrow and other potentially active burrows within 160 feet of the active burrow. The one-way doors can be removed 48 hours after installation, and ground-disturbing activities can proceed. Alternatively, burrows can be filled to prevent reoccupation. During construction activities, monthly and final compliance reports shall be provided to the California Department of Fish and Wildlife, Kern County Planning and Natural Resources Department, and other applicable resources agencies documenting the effectiveness of mitigation measures and the level of burrowing owl take associated with the proposed project. Should burrowing owls be found on-site, compensatory mitigation for lost breeding and/or wintering habitat shall be implemented on-site or off-site in accordance with Burrowing Owl Staff Report guidance and in consultation with the California Department of Fish and Wildlife. At a minimum, the following recommendations shall be implemented: Temporarily disturbed habitat shall be restored, if feasible, to pre-project conditions, including decompacting soil and revegetating. If restoration is not feasible, then the project proponent shall implement (2) below. Permanent impacts to nesting, occupied, and satellite burrows and/or burrowing owl habitat will be mitigated such that the habitat acreage, number of burrows, and burrowing owls impacted are replaced based on a site-specific analysis and shall include: Permanent conservation of similar vegetation communities (grassland, scrublands, desert, urban, and agriculture) to provide for burrowing owl nesting, foraging, wintering, and dispersal (i.e., during breeding and non-breeding seasons) comparable to or better than that of the impact area, and with sufficiently large acreage, and presence of	

		fossorial mammals. Conversation shall occur in areas that support burrowing owl habitat and can be enhanced to support more burrowing owls. Permanently protect mitigation land through a conservation easement deeded to a nonprofit conservation organization or public agency with a conservation mission. If the project is located within the service area of a California Department of Fish and Wildlife-approved burrowing owl conservation bank, the project operator may purchase available burrowing owl conservation bank credits. Develop and implement a mitigation land management plan in accordance with Burrowing Owl Staff Report guidelines to address long-term ecological sustainability and maintenance of the site for burrowing owls. Fund the maintenance and management of mitigation land through the establishment of a long-term funding mechanism such as an endowment. Habitat shall not be altered or destroyed, and burrowing owls shall not be excluded from burrows, until mitigation lands have been legally secured, are managed for the benefit of burrowing owls according to California Department of Fish and Wildlife-approved management, monitoring and reporting plans, and the endowment or other long-term funding mechanism is in place or security is provided until these measures are completed. Mitigation lands should be on, adjacent to, or in proximity to the impact site, where feasible, and where habitat is sufficient to support burrowing owls. Consult with the California Department of Fish and Wildlife when determining off-site mitigation acreages. **MM 4.4-7: Burrowing Owl Buffers.** The project proponent shall continuously comply with the following: If any burrowing owl burrows are observed during the pre-construction survey, avoidance measures shall be consistent with those included in the California Department of Fish and Wildlife staff report on burrowing owl mitigation (CDFG, 2012). If occupied burrowing owl burrows are observed outside of the breeding season, a passive relocation effort may be instituted in accordance with the guidelines established by the California Burrowing Owl Consortium (1993) and the California Department of Fish and Wildlife (CDFG, 2012) (Table 1). During the breeding season, a buffer zone, as noted in Table 1, shall be maintained unless a qualified biologist verifies through noninvasive methods that either the birds have not begun egg laying and incubation or that juveniles from the occupied burrows are foraging independently and are capable of independent survival. Buffer zones may be reduced in size through consultation with	

appropriate agencies and the project biologist to determine if avoidance would still be achieved. The Kern County Planning and Natural Resources Department shall be kept apprised of meetings and correspondence for any consultation.

Table 1: Burrowing Owl Burrow Buffers (CDFG Staff Report, 2012)

Location	Time of Year	Level of Disturbance		
		Low	Medium	High
Nesting Sites	April 1-Aug 15	656 ft	1,640 ft	1,640 ft
Nesting Sites	Aug 16-Oct 15	656 ft	656 ft	1,640 ft
Any Occupied Burrow	Oct 16-Mar 31	164 ft	328 ft	1,640 ft

MM 4.4-8: Trash Abatement. Prior to issuance of grading or building permits, a long-term trash abatement program shall be established for construction, operations and maintenance. Trash and food items shall be contained in closed containers and removed daily.

MM 4.4-9: Trash Abatement and Trench Monitoring Requirements. Prior to and during construction activities, the project proponent shall ensure the project complies with the following:

a. Any pipe, culvert, or similar structure with a diameter of 4 inches or greater, stored on-site for one or more nights shall be inspected to ensure kit foxes or other wildlife have not become entrapped or buried in the pipes. If the pipes, culverts, or similar structures with a diameter of 4 inches or greater are not capped or otherwise covered, they shall be inspected twice daily, in the morning and evening, and prior to burial or closure, to ensure no kit foxes or other wildlife become entrapped or buried in the pipes.

b. All food, garbage, and plastic shall be disposed of in closed containers and regularly removed from the site to minimize attracting ranging kit fox, or other wildlife to the site where they may be harmed. All trash shall be removed and disposed of regularly in accordance with state and local laws and regulations.

		MM 4.4-10: San Joaquin kit fox. Prior to and during construction activities: a. If any San Joaquin kit fox dens are found during pre-construction surveys, the status of the dens shall be evaluated no more than 14 days prior to project ground disturbance. Provided that no evidence of kit fox occupation is observed, potential dens shall be marked and a 50-foot avoidance buffer delineated using stakes and flagging or other similar material to prevent inadvertent damage to the potential den. If a potential den cannot be avoided, it may be hand-excavated following United States Fish and Wildlife Service standardized recommendations for protection of the San Joaquin kit fox prior to or during ground disturbance by the lead biologist. If kit fox activity is observed at a den, the den status shall change to "known" per United States Fish and Wildlife Service guidelines (1999), and the buffer distance shall be increased to 100 feet. Absolutely no excavation of San Joaquin kit fox known or pupping dens shall occur without prior authorization from the United States Fish and Wildlife Service and California Department of Fish and Wildlife. b. To enable kit foxes and other wildlife (e.g., American badger) to pass through the project site during construction, the perimeter security fence shall leave a 5-inch opening between the fence mesh and the ground or the fence shall be raised 5 inches above the ground. The bottom of the fence fabric shall be knuckled (wrapped back to form a smooth edge) to protect wildlife that passes under the fence. c. All pipes, culverts, or similar structures with a diameter of four inches or more that are stored at a construction site for one or more overnight periods shall be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe shall not be moved until the United States Fish and Wildlife Service has been consulted. If necessary, under the direct supervision of the biologist, the pipe may be moved once to remove it from the path of construction activity until the fox has escaped. d. To prevent inadvertent entrapment of San Joaquin kit foxes, badgers, or other animals during construction, all excavated, steep-walled holes or trenches more than two feet deep shall be covered with plywood or similar materials at the close of each working day, or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If trapped animals are observed, escape ramps or structures shall be installed immediately to allow escape. If listed species	

		are trapped, the United States Fish and Wildlife Service and California Department of Fish and Wildlife shall be contacted. e. All vertical tubes used in project construction, such as chain link fencing poles shall be temporarily or permanently capped at the time they are installed to avoid the entrapment and death of special-status birds. **MM 4.4-11: Nesting Birds.** A pre-construction protocol-level surveys by a qualified biologist for nesting birds shall be required if construction activities are scheduled to occur during the breeding season for raptors and other migratory birds (February 1–August 31), to reduce potential impacts to nesting birds and raptors. The survey shall be conducted within 30 days of ground disturbance activities. a. If any nesting birds/raptors are observed, a qualified biologist shall determine buffer distances and/or the timing of project activities so that the proposed project does not cause nest abandonment or destruction of eggs or young. This measure shall be implemented so that the proposed project remains in compliance with the Migratory Bird Treaty Act and applicable State regulations. **MM 4.4-12:** Prior to any vegetation removal during site preparation, the areas required for construction shall be surveyed for actively nesting birds. If any wildlife is encountered during the course of construction, the wildlife shall be allowed to leave the construction area unharmed. Should any active bird nests be identified, the vegetation shall not be removed in areas that contain actively nesting birds. A biological monitor shall survey the areas of vegetation slated for removal, a report shall be submitted to the Kern County Planning and Natural Resources Department for review prior to site preparation. **MM 4.4-13:** The measures below shall be implemented throughout construction and operation of the project: a. Project-related vehicles shall observe a 15 mile-per-hour speed limit in all project areas, except on county roads and State and federal highways. Construction after sundown shall be prohibited. Off-road traffic outside of designated project areas shall be prohibited. b. No pets shall be allowed in project areas, except for trained canine animals related to security and operation of the facility. c. All uses of such herbicidal and rodenticide compounds shall observe label and other restrictions mandated by the United States Environmental Protection Agency, California Department of Food and Agriculture, and federal and State legislation as well as additional project-related restrictions deemed necessary by	

		the California Department of Fish and Wildlife and/or the United States Fish and Wildlife Service. d. No plants or wildlife shall be collected, taken, or removed from the construction areas or areas of off-site improvements, except as necessary for project-related vegetation removal or wildlife relocation. Salvage of native vegetation to be removed from construction areas is encouraged, but shall only be performed by qualified biologists and with written approval from the California Department of Fish and Wildlife. e. If San Joaquin kit fox known or pupping dens are observed in project areas, the project proponent shall contact the United States Fish and Wildlife Service and California Department of Fish and Wildlife to discuss appropriate actions.	
4.4-2: The Project Would Have a Substantial Adverse Effect on any Riparian Habitat or Other Sensitive Natural Community Identified in Local or Regional Plans, Policies, Regulations, or by the CDFG or USFWS.	Less than significant	No mitigation measures are required.	Less than significant
4.4-3: The Project Would Have a Substantial Adverse Effect on Federally Protected Wetlands, as Defined by Section 404 of the CWA (Including, But Not Limited to, Marsh, Vernal Pool, Coastal, etc.) Through Direct Removal, Filling, Hydrological Interruption or Other Means.	Less than significant	No mitigation measures are required.	Less than significant
4.4-4: The Project Would Interfere Substantially with the Movement of Any Native or Migratory Fish or Wildlife Species or With Established Native Resident or Migratory Wildlife Corridors or Impede the Use of Native Wildlife Nursery Sites.	Potentially Significant	Implement Mitigation Measures MM 4.4-1 through MM 4.4-12, above.	Less than significant
4.4-5: The Project Would Conflict With Any Local Policies or Ordinances	Less than significant	No mitigation measures are required.	Less than significant

Protecting Biological Resources, Such as a Tree Preservation Policy or Ordinance.			
4.4-6: The Project Would Conflict With the Provisions of an Adopted Habitat Conservation Plan, Natural Community Conservation Plan or Other Approved Local, Regional or State Habitat Conservation Plan.	Less than significant	No mitigation measures are required.	Less than significant
Cumulative Impacts			
Ecological Communities Previously Occurring within the Metropolitan Bakersfield General Plan Area	Less than significant	Implement Mitigation Measures MM 4.4-1 through MM 4.4-12.	Less than significant
Species of Concern Occurring within the Metropolitan Bakersfield General Plan Area	Potentially significant	Implement Mitigation Measures MM 4.4-1 through MM 4.4-12.	Less than significant
4.5 CULTURAL RESOURCES			
4.5-1: The Project Would Cause a Substantial Adverse Change in the Significance of a Historical or Archaeological Resource.	Potentially Significant	**MM 4.5-1: Archaeological Resources.** Prior to ground disturbance, or the issuance of grading or building permits, the project proponent shall retain a qualified lead archaeologist to carry out all mitigation measures related to archaeological resources. The approved monitor shall monitor all initial ground-disturbing activities (such as site preparation and initial grading) and excavations on the project site. If archaeological resources are encountered during implementation of the project, ground-disturbing activities will cease within the immediate vicinity of the find. The lead archaeologist shall establish a buffer area around the find and make an evaluation of the find to determine appropriate treatment that may include the development and implementation of a data recovery investigation or preservation in place. All cultural resources recovered will be documented on California Department of Parks and Recreation Site Forms to be filed with the California Historic Resources Information System (CHRIS). The archaeologist will prepare a final report about the find to be filed with the Applicant/landowner and the CHRIS. The report will include documentation and interpretation of resources recovered. Interpretation will include full evaluation of the eligibility with respect to the National Register of Historic Places and California Register of Historical Resources and CEQA. The developer, in consultation with the Lead	Less than significant

		Agency and Project Archaeologist, will designate repositories in the event that resources are recovered. **MM 4.5-2: Paleontological Resources.** During project construction, if a paleontological resource is found, the project contractor shall cease ground-disturbing activities within 50 feet of the find. A qualified paleontologist shall be obtained to evaluate the significance of the resource(s) and recommend appropriate treatment measures. Any fossils encountered and recovered shall be catalogued and donated to a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County. Accompanying notes, maps, and photographs shall also be filed at the repository. **MM 4.5-3: Historical Resources.** Prior to the issuance of grading or building permits, the project proponent shall ensure the following measures are implemented for resources, which are discretionarily considered historical resources for the purposes of this project: The construction zone shall be narrowed or otherwise altered to avoid resources. All avoidance areas delineated on the site plan shall be coordinated through the lead archeologist and submitted to the Kern County Planning and Natural Resources Department for approval. In coordination with the qualified archaeologist avoidance shall be ensured by the delineation of environmentally sensitive areas. Protective fencing shall not identify the protected area as a cultural resource area in order to discourage unauthorized disturbance or collection of artifacts. Consistent with Mitigation Measure 4.5-1 (above) a qualified archaeological monitor and Native American Monitor, shall monitor all project-related ground disturbing activities within 150 feet of the environmentally sensitive areas, in order to ensure avoidance. If avoidance is demonstrated to be infeasible, the resource shall be collected and curated at an appropriate curatorial facility. Or if avoidance is demonstrated to be infeasible, a detailed Cultural Resources Treatment Plan shall be prepared and implemented by a qualified archaeologist. The Cultural Resources Treatment Plan shall include a research design and a scope of work for data recovery of the portion(s) to be impacted by the project. Treatment may consist of (but would not be limited to): a sufficient avoidance buffer to protect the resource until data recovery and/or removal is completed; sample excavation;	

		surface artifact collection; site documentation; and, historical research, with the aim to target the recovery of important scientific data contained in the portion of the significant resource to be impacted by the project. The Cultural Resources Treatment Plan shall also include provisions for analysis of data in a regional context, reporting of results within a timely manner, and curation of artifacts and data at an approved facility. The reports documenting the implementation of the Cultural Resources Treatment Plan shall be submitted to and approved by the Kern County Planning and Natural Resources Director and shall also be submitted to the Southern San Joaquin Valley Information Center at California State University, Bakersfield.	
4.5-2: The Project Would Directly or Indirectly Destroy a Unique Paleontological Resource or Site or Unique Geologic Feature.	Potentially significant	**MM 4.5-4: Found Paleontological Resource.** During implementation of the proposed project, if a paleontological resource is found, the project contractor shall cease ground-disturbing activities within 50 feet of the find. A qualified paleontologist shall evaluate the significance of the resource(s) and recommend appropriate treatment measures. At each fossil locality, field data forms shall be used to record pertinent geologic data, stratigraphic sections shall be measured, and appropriate sediment samples shall be collected and submitted for analysis. Any fossils encountered and recovered shall be catalogued and donated to a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County. Accompanying notes, maps, and photographs shall also be filed at the repository.	Less than significant
4.5-3: The Project Would Disturb Any Human Remains, Including Those Interred Outside of Formal Cemeteries.	Potentially significant	**MM 4.5-5: Found Human Remains.** If human remains are uncovered during project construction, the project proponent shall immediately halt work, contact the Kern County Coroner to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.4 (e)(1) of the California Environmental Quality Act Guidelines. If the County Coroner determines the remains are Native American, the coroner shall contact the Native American Heritage Commission, in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 (as amended by Assembly Bill 2641). The Native American Heritage Commission shall designate a Most Likely Descendent (MLD) for the remains per Public Resources Code 5097.98. Per Public Resources Code 5097.98, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further	Less than significant

		development activity until the landowner has discussed and conferred with the most likely descendent regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. If the remains are determined to be neither of forensic value to the Coroner, nor of Native American origin, provisions of the California Health and Safety Code (7100 et. seq.) directing identification of the next-of-kin will apply. The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.	
Cumulative Impacts	Potentially significant	Implement Mitigation Measures MM 4.5-1 through MM 4.5-5, above.	Less than significant
4.6 ENERGY			
4.6-1: The Project Would Result in Potentially Significant Environmental Impact Due to Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources, During Project Construction or Operation	Potentially significant	**MM 4.6-1**: The proposed Project, shall to the extent feasible and to the satisfaction of the Kern County Planning Department incorporate the following energy conservation and design features to reduce the level of energy consumption of the proposed Project. The following list is non-inclusive of all potential mitigation that may be included and may be added to at the discretion of Kern County as new technologies become available and feasible to be incorporated: Solar photovoltaics (PV) mounted on proposed structure's roofs to provide a portion of the future electrical demand and offset emissions from fossil fuel fired power plants. Encourage green building measures that contribute to reducing energy use to 25% less than Title 24 requirements; Solar water heating to provide non-industrial water heating; Ground mounted solar PV arrays to provide a portion of the estimated electrical demand for the proposed Wastewater Treatment and Recycle Facility; Commercial buildings shall be designed to meet LEED Silver standards; Roofs on all buildings shall be of a light color to reduce heat generation; Portions of parking lots (drive aisles) may be paved with concrete versus asphalt to reduce initial solar reflectance; Depending on the usage, portions of parking lots may be covered, and the parking lot roofs contain solar PV; Use LED lighting fixtures on all public streets and site lighting;	Less than significant

		Include dedicated EV parking at a rate more than required by current codes; Include EV charging facilities to encourage the usage of electric vehicles; Encourage the utilization of electric forklifts and other material handling vehicles to reduce usage of fossil fuels; Design circulation features into the public street improvements to include bus stops and/or other public transportation; Include bicycle friendly features to reduce Vehicle Miles Traveled (VMT) and to encourage non-vehicular transportation; Encourage the usage of high efficiency electric motors for the industrial uses and the wastewater treatment plant.	
4.6-2: The Project Would Conflict with or Obstruct State or Local Plan for Renewable Energy or Energy Efficiency	Potentially significant	Implement Mitigation Measures MM 4.3-1, and; MM 4.6-1.	Less than significant
4.7 GEOLOGIC AND SEISMIC HAZARDS			
4.7-1: The Project Would Expose People or Structures to Expose People or Structures to Substantial Adverse Effects, Including the Risk of Loss, Injury, or Death Involving the Rupture of a Known Earthquake Fault.	Less than significant	No mitigation measures are required.	Less than significant
4.7-2: The Project Would Expose People or Structures to Adverse Effects, Including the Risk of Loss, Injury, or Death Involving Strong Seismic Ground Shaking Including That Would Result in Potential Substantial Adverse Effects.	Potentially significant	**MM 4.7-1: Phased Grading.** The project proponent shall limit grading to the minimum area necessary for construction. Prior to the initiation of construction, the project proponent shall retain a California registered professional engineer to approve the final grading earthwork and foundation plans prior to construction. **MM 4.7-2: Geotechnical Study.** Prior to the issuance of building or grading permits for the project, the Project proponent shall conduct a full geotechnical study to evaluate soil conditions on the Project site and submit it to the Kern County Public Works Department for review and approval. The geotechnical study must be signed by a California-registered professional engineer and must identify the following: Maximum considered earthquake and associated ground acceleration;	Less than significant

		Potential for seismically induced liquefaction, landslides, differential settlement, and mudflows; Stability of any existing or proposed cut-and-fill slopes; Collapsible or expansive soils; Foundation material type; Recommendations for placement and design of facilities, foundations, and remediation of unstable ground. The project proponent shall determine the final siting of project facilities based on the results of the geotechnical study and implement recommended measures to minimize geologic hazards. The project proponent shall not locate project facilities on or immediately adjacent to a fault trace. All structures shall be offset at least 100-feet from any mapped fault trace. Alternatively, a detailed fault trenching investigation may be performed to accurately locate the fault trace(s) to avoid sighting improvements on or close to these fault structures and to evaluate the risk of fault rupture. After locating the fault, accurate setback distances can be proposed. The Kern County Public Works Department shall evaluate any final facility siting design developed prior to the issuance of any building or grading permits to verify that geological constraints have been avoided. **MM 4.7-3: Seismic Design on Site.** Prior to the issuance of grading permits, the project proponent shall retain a California registered engineer to design the project facilities to withstand probable seismically induced ground shaking at the site. All grading and construction on-site shall adhere to the specifications, procedures, and site conditions contained in the final design plans, which shall be fully compliant with the seismic recommendations of the California-registered professional engineer. The procedures and site conditions shall encompass site preparation, foundation specifications, and protection measures for buried metal. The final structural design shall be subject to approval and follow-up inspection by the Kern County Building Inspection Department. Final design requirements shall be provided to the on-site construction supervisor and the Kern County Building Inspector to ensure compliance. **MM 4.7-4:** Building locations shall be stabilized against the occurrence of liquefaction by dynamic compaction, or other accepted soil stabilization method approved by the County Building official. **MM 4.7-5: Geotechnical Evaluation.** Prior to the issuance of grading permits, a geotechnical evaluation, consisting of field exploration (drilling and soil sampling),	

		laboratory testing of soil samples, and engineering analysis, shall be prepared to determine soil properties related, but not limited, to ground-motion acceleration parameters, the amplification properties of the subsurface units at the specific site, the potential for hydrocompaction to affect the proposed facilities, and the potential for collapsible, subsiding, or expansive soils to affect the proposed facilities. These studies shall be used to determine the appropriate engineering for foundations and support structures as well as building requirements to minimize geotechnical hazard impacts. Copies of all analyses shall be submitted to the Kern County Public Works Department for review and approval. An approved copy of the evaluation shall be submitted to the Kern County Planning and Natural Resources Department. **MM 4.7-6: Minimizing Erosion.** The project proponent shall continuously comply with the following: The project proponent shall use existing roads to the greatest extent feasible to minimize erosion. Prior to approval of the grading permit, final plans shall be reviewed and approved by the Kern County Public Works Department to confirm existing roads were used to the greatest extent feasible. **MM 4.7-7: Minimizing Grading.** The project proponent shall continuously comply with the following: The project proponent shall limit grading to the minimum area necessary for construction and operation of the project. Final grading plans shall include best management practices (BMPs) to limit on-site and off-site erosion, a water plan to treat disturbed areas during construction and reduce dust, and a plan for the disposal of drainage waters originating on-site and from adjacent rights-of-ways (if required). The plans shall be submitted to the Kern County Public Works Department for review and approval.	
4.7-3: The Project Would Result in Substantial Soil Erosion or Loss of Topsoil.	Potentially significant	**MM 4.7-8: Soil Erosion and Sedimentation Control Plan.** The project proponent shall prepare a Soil Erosion and Sedimentation Control Plan to mitigate potential loss of soil and erosion. The plan shall be prepared by a California registered civil engineer or other professional approved to prepare said Plan and submitted for review and approval by the Kern County Public Works Department. The Soil Erosion and Sedimentation Control Plan shall include, but is not limited to, the following: 1. Best Management Practices to minimize soil erosion consistent with Kern County grading requirements and the California Regional Water Quality Control Board	Less than significant

		requirements pertaining to the preparation and approval of a Stormwater Pollution Prevention Plan (Best Management Practices recommended by the Kern County Public Works Department shall be reviewed for applicability); 2. Sediment collection facilities as may be required by the Kern County Public Works Department; 3. A timetable for full implementation, estimated costs, and a surety bond or other security as approved by the County; and 4. Other measures required by the County during permitting, including long-term monitoring (post-construction) of erosion control measures until site stabilization is achieved. Provisions to comply with local and state codes relating to drainage and runoff, including use of pervious pavements, and/or other methods to the extent feasible, to increase stormwater infiltration and reduce runoff onto agricultural lands.	
4.7-4: The Project Would be Located on an Unstable Geologic Unit or Soil That Would Result in On-site or Off-site Landslide, Lateral Spreading, Subsidence, Liquefaction, or Collapse, Liquefaction, or Collapse.	Less than significant	No mitigation measures are required.	Less than significant
4.7-5: The Project Would Result in Adverse Impacts to People or Structures Resulting in a Risk of Loss, Injury or Death Including Flooding, as a Result of the Failure of a Levee or a Dam.	Less than significant	No mitigation measures are required.	Less than significant
4.7-6: The Project Would Result in Impacts from Being Located on Expansive Soil, as Defined in Section 1803.5.3 of the CBC (2016) Creating Substantial Risks to Life or Property.	Less than significant	No mitigation measures are required.	Less than significant
4.7-7: The Project Would Be Constructed on Soils Incapable of Adequately Supporting the Use of Septic Tanks or Alternative Wastewater Disposal Systems Where Sewers Are	Potentially significant	**MM 4.7-9: Septic Design Plans.** Prior to the issuance of permits, the project proponent shall provide evidence to the Kern County Planning and Natural Resources Department that the siting, design and construction of proposed septic system(s) and leach field disposal system(s) comply with the 2016 Kern County On-site Systems Manual as authorized by the California Water Board Local Agency Management Program (LAMP) and administered locally by the Kern County Environmental Health Services Department	Less than significant

Not Available for the Disposal of Wastewater.		(KCEHS). Proving the proposed septic design plans comply with these requirements will ensure that all standards for septic tanks, seepage pits, and soils are capable of adequately supporting the use of septic tanks. **MM 4.7-10: Final Leach Field Disposal System.** The final leach field disposal system shall be designed by a licensed engineer, taking into full consideration the recommendations provided in the June 2016 Kern County On-site Systems Manual.	
Cumulative Impacts	Potentially significant	Implement Mitigation Measures MM 4.7-1 through MM 4.7-10, above.	Less than significant
4.8 GREENHOUSE GASES			
4.8-1: The Project Would Generate Greenhouse Gas Emissions, Either Directly or Indirectly, That May Have a Significant Impact on the Environment.	Less than significant	No mitigation measures are required.	Less than significant
4.8-2: The Project Would Conflict with an Applicable Plan, Policy or Regulation Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases.	Potentially significant	Implement Mitigation Measure MM 4.3-1, above.	Less than significant
Cumulative Impacts	Significant and unavoidable	Implement Mitigation Measure MM 4.3-1, above.	Significant and unavoidable
4.9 HAZARDS/HAZARDOUS MATERIALS			
4.9-1: The Project Create a Significant Hazard to the Public or the Environment Through the Routine Transport, Use or Disposal of Hazardous Materials.	Potentially significant	**MM 4.9-1: Hazardous Materials Business Plan.** During the life of the project, including decommissioning, the project operator shall prepare and maintain a Hazardous Materials Business Plan (HMBP), as applicable, pursuant to Article 1 and Article 2 of California Health and Safety Code 6.95 and in accordance with Kern County Ordinance Code 8.04.030, by submitting all the required information to the California Environmental Reporting System (CERS) at http://cers.calepa.ca.gov/ for review and approval. The HMBP shall: Delineate hazardous material and hazardous waste storage areas Describe proper handling, storage, transport, and disposal techniques Describe methods to be used to avoid spills and minimize impacts in the event of a spill Describe procedures for handling and disposing of unanticipated hazardous materials encountered during construction	Less than significant

		Establish public and agency notification procedures for spills and other emergencies including fires. Include procedures to avoid or minimize dust from existing residual pesticides and herbicides that may be present on the site The project proponent shall ensure that all contractors working on the project are familiar with the facility's HMBP as well as ensure that one copy is available at the project site at all times. In addition, a copy of the approved HMBP from CERS shall be submitted to the Kern County Planning and Natural Resources Department for inclusion in the projects permanent record. **MM 4.9-2: Spill Prevention Control and Countermeasures (SPCC) Response Plan.** Prior to the issuance of a certificate of occupancy for an individual parcel project which exceeds any of the thresholds established by Title 40, Code of Federal Regulations, Part 112, related to facilities requiring a Spill Prevention Control and Countermeasures (SPCC) Response Plan, the individual parcel proponent shall prepare and submit an SPCC Response Plan to the Kern County Public Health Services Department/ Environmental Health Division and the California Department of Water Resources. The individual parcel proponent shall ensure the project is implemented in compliance with the approved Spill Prevention Control and Countermeasures Response Plan.	
4.9-2: The Project Would Create a Significant Hazard to the Public or the Environment Through Reasonably Foreseeable Upset and Accidental Conditions Involving the Release of Hazardous Materials into the Environment.	Potentially significant	**MM 4.9-34: Discovered/Spilled Hazardous Waste Materials.** The Project proponent shall continuously comply with the following: If suspect materials or wastes of unknown origin are discovered during construction on the project site, which is thought to include hazardous waste materials the following shall occur: All work shall immediately stop in the vicinity of the suspected contaminant; Project Construction Manager shall be notified; Area(s) shall be secured as directed by the Project Construction Manager; Notification shall be made to the Kern County Environmental Health Services Division/Hazardous Materials Section for consultation, assessment, and appropriate actions; and, Copies of all notifications and correspondence shall be submitted to the Kern County Planning and Natural Resources Department.	Less than significant

		MM 4.9-4~~5~~: Hazardous Materials Specialist. Prior to issuance of the grading permit, a qualified hazardous materials specialist shall inspect each power pole on-site with a transformer. Those containing polychlorinated biphenyls shall be removed by the hazardous specialist and disposed of at an appropriate hazardous materials disposal site to the satisfaction of Department of Toxic Substances Control. The hazardous materials specialist shall provide a short report to the Kern County Planning and Natural Resources Department and the Kern County Environmental Health Services Division/Hazardous Materials Section for review and approval. Prior to construction, Pacific Gas and Electric Company (PG&E) shall be contacted regarding the disposition of pole-mounted transformers. In the event of a future release or leak of insulating fluids from any of the pole-mounted transformers, PG&E shall be contacted for their removal or replacement. **MM 4.9-5~~6~~: Known/Discovered Well Remediation.** Prior to start of construction, the abandoned petroleum prospect well shall be located, exposed, and re-abandoned, if required, to conform to the current abandonment requirements of the California Department of Conservation, Division of Oil, Gas and Geothermal Resources and the Kern County Department of Environmental Health Services. **MM 4.9-6~~7~~: Final Maps and Grading Plans, Notes.** The following note shall appear on all final maps and grading plans: "If during grading or construction, any plugged and abandoned or unrecorded wells are uncovered or damaged, the Department of Oil, Gas and Geothermal Resources will be contacted to inspect and approve any remediation required." **MM 4.9-7~~8~~: Underground Service Alert One-call.** Prior to grading or excavating the Underground Service Alert One-call center shall be contacted at (800) 227-2600. The proposed excavation area shall be delineated with white marking paint or with other suitable markers such as flags or stakes at least two days prior to commencing any excavation work. A "Dig Alert" ticket number would be issued at the time Underground Service Alert is contacted. Excavating is not permitted without this ticket number and is valid for twenty-eight days. Underground Service Alert would notify its member utilities having underground facilities in the area. Underground Service Alert does not notify nonmember utilities or energy companies, or Caltrans. **MM 4.9-8~~9~~: Ruptured Pipeline Safety**. If a rupturing of a pipeline should occur during excavation and construction activities the Kern County Fire Department and Pacific Gas and Electric Company should be contacted immediately. Natural gas transmission pipeline rupture most often indicated an emergency situation and 9-1-1 should be dialed. If an emergency is not indicated, the Kern County Fire Department Greenfield	

		Station 52, located at 312 Taft Highway, should be contacted at (661) 834-5144. Non-Emergency telephone numbers for the Kern County Fire Department number (661) 324-6551 and the project proponent shall follow all safety and cleanup regulations. **MM 4.9-9~~10~~: On-site Water Wells**. If the on-site water wells are not to be used for irrigation or industrial purposes, they shall be destroyed in accordance with California Well Standards as governed by the California Department of Water Resources, and permit requirements of the Kern County Environmental Health Services Division. **MM 4.9-10~~11~~: Herbicides**. Prior to the issuance of grading or building permits for the project, if herbicides are to be utilized, the contractor or personnel applying herbicides must have the appropriate State and local herbicide applicator licenses and comply with all State and local regulations regarding herbicide use. Herbicides shall be mixed and applied in conformance with the product manufacturer's directions. The herbicide applicator shall be equipped with splash protection clothing and gear, chemical resistant gloves, chemical spill/splash wash supplies, and material safety data sheets for all hazardous materials to be used. To minimize harm to wildlife, vegetation, and waterbodies, herbicides shall not be applied directly to wildlife, products identified as non-toxic to birds and small mammals shall be used if nests or dens are observed. Herbicides shall not be applied if it is raining at the site, rain is imminent, or the target area has puddles or standing water, and shall not be applied when wind velocity exceeds 10 miles per hour. If spray is observed to be drifting to a non-target location, spraying shall be discontinued until conditions causing the drift have abated. **MM 4.9-11~~12~~: Asbestos Containing Materials.** If asbestos containing materials are identified during construction (particularly in the concrete irrigation (transite) pipe located on-site, then the San Joaquin Valley Air Pollution Control District shall be contacted for removal and disposal procedures. These procedures shall be followed in order to eliminate asbestos exposure to construction workers and surrounding workers and residents.	
4.9-3: The Project Would Emit Hazardous Emissions or Handle Hazardous or Acutely Hazardous, Substances, or Waste Within One-	Less than significant.	No mitigation measures are required.	Less than significant.

Quarter Mile of an Existing or Proposed School.			
4.9-4: The Project Would Be Located on a Site That is Included on a List of Hazardous Materials Sites Compiled Pursuant to Government Code Section 65962.5 and, as a Result, Would Create a Significant Hazard to the Public or the Environment.	Less than significant.	No mitigation measures are required.	Less than significant.
4.9-5: The Project Would Be Located Within an Adopted Kern County Airport Land Use Compatibility Plan Resulting in a Safety Hazard for People Residing or Working in the Project Area	Less than significant	No mitigation measures are required.	Less than significant
4.9-6: The Project Would Result in a Safety Hazard for People Residing or Working in the Project Area from a Private Airstrip.	Less than significant	No mitigation measures are required.	Less than significant
4.9-7: The Project Would Impair Implementation of, or Physically Interfere with, an Adopted Emergency Response Plan or Emergency Evacuation Plan.	Less than significant	No mitigation measures are required.	Less than significant
4.9-8: The Project Would Expose People or Structures to a Significant Risk of Loss, Injury or Death Involving Wildland Fires, Including Where Wildlands are Adjacent to Urbanized Areas or Where Residences Are Intermixed with Wildlands.	Less than significant	No mitigation measures are required.	Less than significant
Cumulative Impacts	Potentially significant	Implement Mitigation Measure MM 4.9-1 through MM 4.9-11~~12~~.	Less than significant
4.10 HYDROLOGY AND WATER QUALITY			

4.10-1: The Project Would Violate Any Water Quality Standards or Waste Discharge Requirements.	Potentially significant	Implement Mitigation Measure MM 4.7-8.	Less than significant
4.10-2: The Project Would Substantially Deplete Groundwater Supplies or Interfere Substantially with Groundwater Recharge Such That There Would be a Net Deficit in Aquifer Volume or a Lowering of the Local Groundwater Table Level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).	Potentially significant	Implement Mitigation Measure MM 4.17-1 through MM 4.17-5.	Less than significant
4.10-3: The Project Would Substantially Alter the Existing Drainage Pattern of the Site or Area, Including Through the Alteration of the Course of a Stream or River, in a Manner Which Would Result in Substantial Erosion or Siltation On- or Off-Site.	Potentially significant	Implement Mitigation Measure MM 4.7-8.	Less than significant
4.10-4: The Project Would Substantially Alter the Existing Drainage Pattern of the Site or Area, Including Through the Alteration of the Course of a Stream or River, or Substantially Increase the Rate or Amount of Surface Runoff in a Manner Which Would Result in Flooding On- or Off-Site.	Potentially significant	Implement Mitigation Measure MM 4.7-8.	Less than significant
4.10-5: The Project Would Create or Contribute Runoff Water Which Would Exceed the Capacity of Existing or Planned Stormwater Drainage Systems or Provide Substantial Additional Sources of Polluted Runoff.	Less than significant	Implement Mitigation Measure MM 4.7-8.	Less than significant

4.10-6: The Project Would Otherwise Substantially Degrade Water Quality.	Less than significant	Implement Mitigation Measure MM 4.7-8.	Less than significant
4.10-7: The Project Would Place Housing Within a 100-Year Flood Hazard Area as Mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or Other Flood Hazard Delineation Map.	Less than significant	No mitigation measures are required.	Less than significant
4.10-8: The Project Would Place Within a 100-Year Flood Hazard Area Structures Which Would Impede or Redirect Flood Flows.	Less than significant	No mitigation measures are required.	Less than significant
4.10-9: The Project Would Expose People or Structures to a Significant Risk of Loss, Injury or Death Involving Flooding, Including Flooding as a Result of the Failure of a Levee or Dam.	Less than significant	No mitigation measures are required.	Less than significant
4.10-10: The Project Would Be Subject to Inundation By Seiche, Tsunami, or Mudflow.	Less than significant	No mitigation measures are required.	Less than significant
Cumulative Impacts	Potentially significant	Implement Mitigation Measure MM 4.7-8 and Mitigation Measure MM 4.17-5 and MM 4.17-6.	Less than significant
4.11 LAND USE AND PLANNING			
4.11-1: The Project Would Physically Divide an Existing Community or Contribute to the Decline of an Existing Community.	Less than significant	No mitigation measures are required.	Less than significant
4.11-2: The Project Would Conflict with Applicable Land Use Plan, Policy or Regulation of an Agency with Jurisdiction Over the Project.	Potentially significant	**MM 4.11-1: Master Precise Development Plan**. Prior to the issuance of any grading or building permit issued on the proposed project site, the project proponent shall process through the Kern County Planning and Natural Resources Department a Master Precise Development Plan in accordance with the requirements identified in Chapter 19.56 of the Kern County Zoning Ordinance. All future changes to the physical environment of the site and or the specific characteristics of the existing uses of the site, either by a Master Developer or	Less than significant

		subsequent future land owners shall require revision and/or modification of the Master Precise Development Plan in accordance with Chapter 19.56 of the Kern County Zoning Ordinance. The following thresholds have been established for the project site. The proposed uses on the site shall not exceed a maximum of 4,613,004square feet of industrial and/or commercial use as determined by the Kern County Planning Director.	
4.11-3: The Project Would Conflict with Applicable Habitat Conservation Plan or Natural Community Conservation Plans.	Less than significant	No mitigation measures beyond compliance with the Metropolitan Bakersfield Habitat Conservation Plan is required. No additional mitigation measures are proposed.	Less than significant
Cumulative Impacts	Less than significant	No mitigation beyond compliance with the goals, policies, and implementation measures of the Metropolitan Bakersfield General Plan and the Metropolitan Bakersfield Habitat Conservation Plan is required. No additional mitigation measures are proposed.	Less than significant
4.12 MINERAL RESOURCES			
4.12-1: The Project Would Not Result in the Loss of Availability of a Known Mineral Resource That Would be of Value to the Region and the Residents of the State.	Potentially significant	Implement Mitigation Measures MM 4.9-5~~6~~, 4.9-6~~7~~, 4.9-8~~9~~, and 4.9-9~~10~~. **MM 4.12-1: Natural Gas Pipeline Easements**. The Pacific Gas and Electric (PG&E) natural gas pipeline easement shall be included on all maps and grading plans to allow for continuous PG&E access for all maintenance activities	Less than significant
4.12-2: The Project Would Result in the Loss of Availability of a Locally Important Mineral Resource Recovery Site Delineated on a Local General Plan, Specific Plan or Other Land Use Plan.	Less than significant	No mitigation measures are required.	Less than significant
Cumulative Impacts	Less than significant	No mitigation measures are required.	Less than significant
4.13 NOISE			

4.13-1: The Project Would Result in Exposure of Persons to, or Generation of, Noise Levels in Excess of Standards Established in the Local General Plan or Noise Ordinance or Applicable Standards of Other Agencies.	Significant and unavoidable	**MM 4.13-1: Acoustical Analysis.** Prior to the submittal of any Precise Development Plan or modification to an approved Master Precise Development Plan: The project proponent shall be required to prepare an acoustical analysis to ensure that all appropriate noise control measures are incorporated in to the proposed project design so as to mitigate any noise impacts to off-site sensitive uses. Such noise control measures may include, but are not limited to: noise barrier use, site redesign, silencers, partial or complete enclosures of critical equipment, etc. Noise impacts shall be evaluated by the Planning and Natural Resources Department during the Precise Development Plan review process. **MM 4.13-2: Noise Levels.** The following measures are recommended to reduce short-term noise levels associated with project construction: 1. Construction activities at the project site shall comply with the hourly restrictions for noise-generating construction activities, as specified in the Kern County Noise Ordinance (Municipal Ordinance Code 8.36.020). Accordingly, construction activities shall be prohibited between the hours of 9:00 PM to 6:00 AM on weekdays, and between 9:00 PM to 8:00 AM on weekends. These hourly limitations shall not apply to activities where hourly limitations would result in increased safety risk to workers or the public. 2. Equipment staging and laydown areas shall be located at the furthest practical distance from nearby residential land uses. To the extent possible, staging and laydown areas should be located at least 500 feet of existing residential dwellings. 3. Where feasible construction equipment shall be fitted with approved noise-reduction features such as mufflers, baffles and engine shrouds that are no less effective than those originally installed by the manufacturer. 4. Haul trucks shall not be allowed to idle for periods greater than five minutes, except as needed to perform a specified function (e.g., concrete mixing). 5. On-site vehicle speeds shall be limited to 15 miles per hour, or less (except in cases of emergency). 6. Back-up beepers for all construction equipment and vehicles shall be broadband sound alarms or adjusted to the lowest noise levels possible, provided that the Occupational Safety and Health Administration and California Division of Occupational Safety and Health's safety requirements are not violated. On vehicles where back-up beepers are not available, alternative safety measures such as escorts and spotters shall be employed.	Significant and unavoidable

		MM 4.13-3: Noise Disturbance Coordinator. Prior to the issuance of grading permits, a "Noise Disturbance Coordinator" shall be established. The project operator shall submit evidence of methods of implementation and shall continuously comply with the following during construction: 1. The disturbance coordinator shall be responsible for responding to any local complaints about construction noise. 2. The disturbance coordinator shall determine the cause of the noise complaint (e.g., starting to early, bad muffler, etc.) and shall be required to implement reasonable measures such that the complaint is resolved.	
4.13-2: The Project Would Expose Persons to or Generation of Excessive Ground Borne Vibration or Ground Borne Noise Levels.	Potentially significant	Implement Mitigation Measure MM 4.13-2, above.	Significant and unavoidable
4.13-3: The Project Would Create a Substantial Permanent Increase in Ambient Noise Levels in the Project Vicinity Above Levels Existing Without the Project.	Potentially significant	Implement Mitigation Measures MM 4.13-2, above. **MM 4.13-4: Noise Reduction Methods**. The following notes shall be placed on all grading and building permits issued for the project site: Construction noise reduction methods such as shutting off idling equipment, installing temporary acoustic barriers around stationary construction noise sources, maximizing the distance between construction equipment staging areas and occupied residential areas, and use of electric air compressors and similar power tools, rather than diesel equipment, shall be used where feasible. During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers. All equipment shall be fitted with factory equipped mufflers, and be in good working condition. Construction contracts shall specify that all construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and other state required noise attenuation devices.	Less than significant
4.13-4: The Project Would Create a Substantial Temporary or Periodic Increase in Ambient Noise Levels in the Project Vicinity Above Levels Existing Without the Project.	Significant and unavoidable	Implementation of Mitigation Measure MM 4.13-2, above. **MM 4.13-5: Written Notice to the Public.** Prior to commencement of any on-site construction activities (i.e., fence construction, mobilization of construction equipment, initial grading, etc.) the project proponent shall provide written notice to the public through mailing a notice.	Significant and unavoidable

		1. The mailing notice shall be to all residences within 1,000 feet of the project site, 15 days or less prior to construction activities. The notices shall include: The construction schedule, telephone number and email address where complaints and questions can be registered with the noise disturbance coordinator. 2. A minimum of one sign, legible at a distance of 50 feet, shall be posted at the construction site or adjacent to the nearest public access to the main construction entrance throughout construction activities that shall provide the construction schedule (updated as needed) and a telephone number where noise complaints can be registered with the noise disturbance coordinator. 3. Documentation the public notice has been sent and the sign has been posted shall be provided to the Kern County Planning and Natural Resources Department.	
4.13-5: The Project is Not Located Within an Airport Land Use Plan or, Where Such a Plan Has Not Been Adopted, Within Two Miles of a Public Airport or Public Use Airport, Would the Project Expose People Residing or Working in the Project Area to Excessive Noise Levels.	Less than significant	No mitigation measures are required.	Less than significant
4.13-6: The Project is Within the Vicinity of a Private Airstrip, Would the Project Expose People Residing or Working in the Project Area to Excessive Noise Levels.	Less than significant	No mitigation measures are required.	Less than significant
Cumulative Impacts	Significant and unavoidable	Implement Mitigation Measures MM 4.13-1 through MM 4.13-5 above.	Significant and unavoidable
4.14 POPULATION AND HOUSING			
4.14-1: The Project Would Directly Induce Substantial Population Growth.	Less than significant	No mitigation measures are required.	Less than significant
Cumulative Impacts	Less than significant	No mitigation measures are required.	Less than significant
4.15 PUBLIC SERVICES			

4.15-1: The Project Would Result in Adverse Physical Impacts Associated with New or Physically Altered Governmental Facilities or Result in the Need for New or Physically Altered Governmental Facilities and Have Significant Fiscal Impacts on Public Services.	Potentially significant	**MM 4.15-1: Fire Safety Plan.** Prior to the issuance of grading or building permits, the project proponent shall develop and implement a Fire Safety Plan for use during construction and operation. The project proponent will submit the Fire Safety Plan, along with maps of the project site and access roads, to the Kern County Fire Department for review and approval. The Fire Safety Plan will contain notification procedures and emergency fire precautions for construction and operations phases of the proposed project. **MM 4.15-2: Land Development Services Fee Schedule.** Prior to the issuance of grading or building permits, the project proponent shall coordinate with Kern County to determine the need for payment of land development services fees, in accordance with the Kern County Land Development Services Fee Schedule, for impacts to countywide public protection, sheriff's patrol and investigative services, and fire services.	Less than significant
Cumulative Impacts	Potentially significant	Implement Mitigation Measures MM 4.15-1 and 4.15-2, above.	Less than significant.
4.16 Transportation and Traffic			
4.16-1: The Project Would Not Conflict with an Applicable Plan, Ordinance, or Policy Establishing Measures of Effectiveness for the Performance of the Circulation System, Including but not Limited to Intersections, Streets, Highways and Freeways, Pedestrian and Bicycle Paths, and Mass Transit.	Less than significant	No mitigation measures are required.	Less than significant
4.16-2: The Project Would Not Conflict with an Applicable Congestion Management Program, Including, but not Limited to Level of Service Standards and Travel Demand Measures, or Other Standards developed by the County Congestion Management Agency for designated roads or highways.	Potentially significant	**MM 4.16-1: Supplemental Road Improvements.** Prior to final approval of any Master Precise Development Plan or recordation of any parcel map, the project proponent will provide to the County a written statement of intent, which will detail the approach used to satisfy obligations for supplemental road improvements. This written statement of intent and method proposed will be approved by the Kern County Public Works Department- Development Review. The applicant will have three approaches to fulfill the road improvement responsibilities: Lump Sum Payment: Any lump sum payment will be made prior to final approval of any Master Precise Development Plan, parcel map recordation or issuance of grading or building permits. All monies will be paid to the Kern County Roads Department. At the time of payment, the Kern County Roads Department will conduct a review of the distributed share amount and make adjustments, if required, based on increases to the construction cost index, other changes in standards or technology for required	Less than significant

		signalization or improvements, or updated development projects or proposals. The Kern County Roads Department may request, at a cost to be borne by the applicant, a supplemental traffic analysis to determine the correct lump sum payment. Construction of Road Improvements: If, in an approved summary of intent, the Project Applicant seeks to construct road improvements in lieu of a lump sum payment, the improvements will be constructed and accepted by the County prior to issuance of the Certificate of Occupancy for the related building permits. Deviations from this sequence of events may be approved by the Kern County Roads Department. Combination of Approach A and Approach B: The Project Applicant may choose to provide construction for certain roadway improvements and payment for others. This approach must be used in communication with the Kern County Roads Department. All monies designated for roadway improvements shall initially be identified and calculated during processing of the Master Precise Development Plan or parcel map, whichever comes first. All final payments and or construction of roadway improvements shall be completed at the issuance of any grading or building permit. **MM 4.16-2: Construction Traffic Control Plan.** Prior to the issuance of construction or building permits, the project proponent shall: Prepare and submit a Construction Traffic Control Plan to Kern County Public Works Department- Development Review and the California Department of Transportation offices for District 9, as appropriate, for approval. The Construction Traffic Control Plan must be prepared in accordance with both the California Department of Transportation Manual on Uniform Traffic Control Devices and Work Area Traffic Control Handbook and must include, but not be limited to, the following issues: Timing of deliveries of heavy equipment and building materials; Directing construction traffic with a flag person; Placing temporary signing, lighting, and traffic control devices if required including pedestrians and bicyclist; including, but not limited to, appropriate signage along access routes to indicate the presence of heavy vehicles and construction traffic; Ensuring access for emergency vehicles to the project sites; Temporarily closing travel lanes or delaying traffic during materials delivery, transmission line stringing activities, or any other utility connections; Maintaining access to adjacent property; and,	

		Specifying both construction-related vehicle travel and oversize load haul routes, minimizing construction traffic during the AM and PM peak hour, distributing construction traffic flow across alternative routes to access the project sites, and avoiding residential neighborhoods to the maximum extent feasible. Obtain all necessary encroachment permits for the work within the road right-of-way or use of oversized/overweight vehicles that will utilize county-maintained roads, which may require California Highway Patrol or a pilot car escort. Copies of the approved traffic plan and issued permits shall be submitted to the Kern County Planning and Natural Resources Department and the Kern County Public Works Department-Development Review. Enter into a secured agreement with Kern County to ensure that any County roads that are demonstrably damaged by project-related activities are promptly repaired and, if necessary, paved, slurry-sealed, or reconstructed as per requirements of the state and/or Kern County. Submit documentation that identifies the roads to be used during construction. The project proponent shall be responsible for repairing any damage to non-county-maintained roads that may result from construction activities. The project proponent shall submit a preconstruction video log and inspection report regarding roadway conditions for roads used during construction to the Kern County Public Work Department-Development Review and the Kern County Planning and Natural Resources Department. 5. Within 30 days of completion of construction, the project proponent shall submit a post-construction video log and inspection report to the County. This information shall be submitted in DVD format. The County, in consultation with the project proponent's engineer, shall determine the extent of remediation required, if any.	
4.16-3: The Project Would Cause an Increase in Operation-Related Safety Hazards or Result in a Change in Air Traffic Patterns, Including Either an Increase in Traffic Levels or a Change in Location that Would Result in Substantial Safety Risks.	Less than significant	No mitigation measures are required.	Less than significant
4.16-4: The Project Would Cause an Increase in Construction-Related Safety Hazards or Would Substantially Increase Hazards Due to a Design Feature (e.g.,	Potentially significant	Implement Mitigation Measure MM 4.16-2.	Less than significant

Sharp Curves or Dangerous Intersections) or Incompatible Uses (e.g., Farm Equipment).			
4.16-5: The Project Would Result in Inadequate Emergency Access.	Less than significant	Implement Mitigation Measure MM 4.16-2.	Less than significant
4.16-6: The Proposed Project Would Conflict with Adopted Policies, Plans or Programs Supporting Alternative Transportation (e.g., bus turnouts and bicycle racks).	Less than significant	No mitigation measures are required.	Less than significant
Cumulative Impacts	Significant and unavoidable	Implement Mitigation Measure MM 4.16-2.	Significant and unavoidable
4.17 UTILITIES			
4.17-1: The Project Would Exceed Wastewater Treatment Requirements of the Applicable Regional Water Quality Control Board.	Less than significant	No mitigation measures are required.	Less than significant
4.17-2: The Project Would Require or Result in the Construction of New Water or Wastewater Treatment Facilities or Expansion of Existing Facilities, the Construction of Which Would Cause Significant Environmental Effect.	Potentially significant	**MM 4.17-1:** All special equipment for the proposed Project, such as package treatment plants, their appurtenances, and their effluent disposal areas and methods shall be designed, located, and constructed in coordination with the Kern County Public Works Department, so as to preclude contamination, pollution, nuisance, and structural and mechanical instability. **MM 4.17-2: Package Treatment and Disposal Facilities.** Proposals and plans for package treatment and disposal facilities shall be subject to the review and approval of: 1. The State and County Environmental Health Services Departments for design and contamination aspects; 2. The Regional Water Quality Control Board for elements of pollution and nuisance; and 3. The Kern County Public Works Department for structural and mechanical integrity. Special structures, such as pump stations, pressure lines and sags, etc.	Less than significant

		shall be subject to the approval of the Kern County Public Works Department and the maintaining District. **MM 4.17-3: Wastewater Package Plant Facility.** The new wastewater package plant facility shall be constructed according to State specifications, with coordination of Kern County Public Works and Kern County Environmental Health Services Departments and shall be operated in such a way as to not contaminate the underlying unconfined aquifer. **MM 4.17-4: Water System.** All facilities of the water system shall be designed and constructed to comply with Kern County Development Standards and approved by the Kern County Public Works Department.	
4.17-3: The Project Would Require or Result in the Construction of New Stormwater Drainage Facilities or Expansion of Existing Facilities.	Potentially significant	Implement Mitigation Measures MM 4.7-8.	Less than significant
4.17-4: The Project Would Have Insufficient Water Supplies Available to Serve the Project from Existing Entitlement and Resources and New or Expanded Entitlement is Needed.	Potentially significant	**MM 4.17-5: Water Meters.** Water meters shall be installed on all facilities. Once operations of the first facility constructed on-site have commenced, the Master Developer or subsequent future land owners shall be required to submit annual reports to the Kern County Planning Department and the Kern County Environmental Health Services Department detailing the annual water usage on site.	Less than significant
4.17-5: The Project Would Result in a Determination by the Wastewater Treatment Provider Which Serves or May Serve the Project That it Does Not Have Adequate Capacity to Serve the Project's Projected Demand in Addition to the Provider's Existing Commitments.	Potentially significant	Implement Mitigation Measures MM 4.17-1 through MM 4.17-5.	Less than significant
4.17-6: The Project Would be Served by a Landfill That Has Sufficient Permitted Capacity to Accommodate the Project's Solid Waste Disposal Needs.	Potentially significant	**MM 4.17-6: Recycling on Site.** During construction, demolition debris and construction wastes shall be recycled to the extent feasible. 1. An on-site recycling coordinator will be designated by the Project Applicant/ Developer to facilitate recycling of all construction waste through coordination with the on-site contractors, local waste haulers, and/or other facilities that recycle construction/demolition wastes. 2. The name and phone number of the coordinator will be provided to the Kern County Waste Management Department prior to issuance of building permits	Less than significant

		3. The on-site recycling coordinator will also be responsible for ensuring that wastes requiring special disposal are handled according to state and County regulations that are in effect at the time of disposal.	
4.17-7: The Project Would Comply with Federal, State, and Local Statues and Regulations Related to Solid Waste.	Potentially significant	Implement Mitigation Measure MM 4.17-6.	Less than significant
4.17-8: The Project Would Exceed the Capacity of the Electrical and Natural Gas Facilities Within the Project Area.	Potentially significant	**MM 4.17-7: Electrical Services.** Prior to approval of a Master Precise Development Plan or modification to an existing precise development plan on-site, the Master Developer or future land owner shall coordinate with Pacific Gas and Electric Company (PG&E) staff early in the planning stages to ensure that adequate facilities are incorporated into the Project design. Prior to issuance of grading and building permits the Project proponent shall coordinate with PG&E staff to determine the specific requirements regarding any potential electric service or facility issues needed to adequately accommodate the proposed Project. The Project proponent shall comply with and adhere to all requirements identified by PG&E to full mitigate impacts to electric services and facilities, as needed as Project construction progresses. **MM 4.17-8: Natural Gas.** Prior to approval of a Master Precise Development Plan or modification to an existing precise development plan on-site, the Master Developer or future land owner shall coordinate with Pacific Gas and Electric Company (PG&E) staff early in the planning stages to ensure that adequate facilities are incorporated into the Project design. Prior to issuance of grading and building permits the Project proponent shall coordinate with PG&E staff to determine the specific requirements regarding any potential natural gas service or facility issues needed to adequately accommodate the proposed Project. The Project proponent shall comply with and adhere to all requirements identified by PG&E to fully mitigate impacts to natural gas services and facilities, as needed as Project construction progresses. **MM 4.17-9: PG&E Notification**. The Project proponent shall notify PG&E six months prior to any construction activities in the immediate vicinity of PG&E Transmission Line 300B.	Less than significant
Cumulative Impacts	Potentially significant	Implement Mitigation Measures MM 4.17-1 through MM 4.17-9.	Less than significant
4.18 Wildfire			

4.18-1: The Project Would Substantially Impair an Adopted Emergency Response Plan or Emergency Evacuation Plan.	Less than significant	No mitigation measures are required.	Less than significant
4.18-2: The Project Would Due to Slope, Prevailing Winds, and Other Factors, Exacerbate Wildfire Risks, and Thereby Expose Project Occupants to, Pollutant Concentrations from a Wildfire or the Uncontrolled Spread of a Wildfire.	Less than significant	No mitigation measures are required.	Less than significant
4.18-3: The Project Would Require the Installation or Maintenance of Associated Infrastructure (Such As Roads, Fuel Breaks, Emergency Water Sources, Power Lines or Other Utilities) That May Exacerbate Fire Risk or That May Result In Temporary or Ongoing Impacts to The Environment.	Less than significant	No mitigation measures are required.	Less than significant
4.18-4: The Project Would Expose People or Structures to Significant Risks, Including Downslope or Downstream Flooding or Landslides, as a Result of Runoff, Post-Fire Slope Instability, or Drainage Changes	Less than significant	No mitigation measures are required.	Less than significant
Cumulative Impacts	Less than significant	No mitigation measures are required.	Less than significant

Chapter 2

Introduction

Chapter 2
Introduction

2.1 Intent of the California Environmental Quality Act

The Kern County Planning and Natural Resources Department, as lead agency, has determined that a Project Level Recirculated Environmental Impact Report (REIR) must be prepared for the proposed 99 Houghton Industrial Park Project. The proposed Project would permit the development of a light to medium industrial park containing approximately 4,613,004 square feet (ft^2) (net building area) of warehousing, distribution, and retail showroom uses.

This Recirculated Draft EIR has been prepared pursuant to the following:

- California Environmental Quality Act (Public Resources Code [PRC], Section 21000 et seq.);
- CEQA Guidelines (California Code of Regulations [CCR], Title 14, Chapter 3, Section 15000 et seq.); and
- Kern County CEQA Implementation Document.

The overall purposes of the CEQA process are to:

- ensure that the environment and public health and safety are protected in the face of discretionary projects initiated by public agencies or private concerns;
- provide for full disclosure of the project's environmental effects to the public, the agency decision-makers who will approve or deny the project, and responsible and trustee agencies charged with managing resources (e.g., wildlife, air quality) that may be affected by the project; and
- provide a forum for public participation in the decision-making process with respect to environmental effects.

2.2 Purpose of this Recirculated Draft Environmental Impact Report

This document is the Recirculated DEIR for the 99 Houghton Industrial Park. This introduction provides the manner in which changes were made to the previous DEIR, background information concerning this document, and the procedure for commenting on this Recirculated DEIR.

The 99 Houghton Industrial Park Project Environmental Impact Report was originally circulated for public comment from February 13, 2018, with a comment closing date of April 2, 2018, by the Kern County Planning Department acting as the lead agency. On March 13, 2018, prior to the end of the original comment period, the project was formally withdrawn from circulation. The County has received and considered written comments that were received after the close of the public comment period.

County staff has determined that changes should be made in the Draft EIR that was originally circulated for public comment. In some cases changes have been made to the project and in some cases new or revised information or analysis has been included in the Recirculated Draft EIR.

The Guidelines adopted by the Governor's Office of Planning and Research for the California Environmental Quality Act (Guidelines) provide that a lead agency is required to recirculate an environmental impact report when *significant new information* is added to an EIR after public review of the Draft EIR has begun. New information can include changes in the project description, changes in the environmental setting, as well as other additional data or information. This information may relate to new environmental impacts, severity of such impacts, alternatives or mitigation. Recirculation of an EIR is covered by CEQA Guidelines Section 15088.5.

As mandated by State law, the minimum public review period for this document is 45 days. CEQA Guidelines Section 15088.5 (f) (1) provides that when an Environmental Impact Report (EIR) is substantially revised and the entire EIR is circulated, Kern County, as lead agency, may require that reviewers submit new comments, and the lead agency need not respond to those comments received during the earlier circulation period. Kern County will therefore respond in the Final Recirculated EIR only to new comments received regarding this Recirculated Draft EIR received during this comment period

Additions to the text of the 2018 DEIR are indicated with underline formatting, and text deletions are indicated with strikethrough formatting.

An EIR is a public informational document used in the planning and decision-making process. This Project Level REIR will analyze the environmental impacts of the proposed Project. The Kern County Planning Commission and Board of Supervisors will consider the information in the REIR, including the public comments and staff responses to those comments, during the public hearing process. As a legislative action, the final decision is made at the Board of Supervisors where the proposed Project may be approved, conditionally approved, or denied. The purpose of a Recirculated EIR is to identify:

- the significant potential impacts of the proposed Project on the environment and indicate the manner in which those significant impacts can be avoided or mitigated
- any unavoidable adverse impacts that cannot be mitigated
- reasonable and feasible alternatives to the proposed Project that would eliminate any significant adverse environmental impacts or reduce the impacts to a less-than-significant level

A Recirculated EIR also discloses growth-inducing impacts; impacts found not to be significant; and significant cumulative impacts of past, present, and reasonably anticipated future projects.

CEQA requires that a Recirculated EIR reflect the independent judgment of the lead agency regarding the impacts, the level of significance of the impacts (both before and after mitigation), and mitigation measures proposed to reduce the impacts. A Recirculated Draft EIR is circulated to responsible agencies, trustee agencies with resources affected by the project, and interested agencies and individuals. The purposes of public and agency review of a Recirculated Draft EIR include sharing expertise, disclosing agency analyses, checking for accuracy, detecting omissions, discovering public concerns, and soliciting counterproposals.

Reviewers of a Recirculated draft EIR should focus on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the proposed Project might be avoided or mitigated. Comments are most helpful when they suggest additional specific alternatives or mitigation measures that would provide better ways to avoid or mitigate significant environmental effects.

Issues to Be Resolved

Section 15123(b)(3) of the CEQA Guidelines requires that a Recirculated EIR contain issues to be resolved, which includes the choices among alternatives and whether or how to mitigate significant impacts. The major issues to be resolved regarding the proposed Project include decisions by the lead agency as to whether or not:

- the Recirculated Draft EIR adequately describes the environmental impacts of the proposed Project;
- the recommended mitigation measures should be adopted or modified; or
- additional mitigation measures need to be applied.

2.3 Terminology

To assist readers in understanding this Recirculated EIR, terms used are defined in the following manner.

- *Project* means the whole of an action that has the potential for resulting in a physical change in the environment, directly or indirectly.
- *Environment* means the physical conditions that exist in the area that would be affected by a proposed Project, including land, air, water, minerals, flora, fauna, ambient noise and objects of historical or aesthetic significance. The area included in this definition is the area in which significant direct or indirect impacts would occur as a result of the proposed Project. The environment includes both natural and artificial conditions.
- *Impacts* analyzed under CEQA must be related to a physical change. Impacts are:
  - direct or primary impacts that are caused by the proposed Project and occur at the same time and place or
  - indirect or secondary impacts that are caused by the proposed Project and are later in time or farther removed in distance but are still reasonably foreseeable. Indirect or secondary impacts may include growth-inducing impacts and other effects related to induced changes in the pattern of land use; population density or growth rate and related effects on air, water and other natural systems, including ecosystems.
  - the California Supreme Court recently ruled that the environment's impact on a project fall outside the scope of CEQA except to the extent that impacts from a project exacerbate such impacts. This Recirculated DEIR includes the environment's impacts on a project for informational purposes, and to address the exacerbation component of the Court's decision.

- *Significant impact on the environment* means a substantial or potentially substantial, adverse change in any of the physical conditions in the area affected by the proposed Project, including land, air, water, minerals, flora, fauna, ambient noise and objects of historical or aesthetic significance. An economic or social change by itself is not considered a significant impact on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.
- *Mitigation* consists of measures to avoid or substantially reduce the proposed Project's significant environmental impacts by:
  - avoiding the impact altogether by not taking a certain action or parts of an action;
  - minimizing impacts by limiting the degree or magnitude of the action and its implementation;
  - rectifying the impact by repairing, rehabilitating or restoring the affected environment;
  - reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action: or
  - compensating for the impact by replacing or providing substitute resources or environments.
- *Cumulative impacts* are two or more individual impacts that, when considered together, are considerable, compound, or increase other environmental impacts. The following statements also apply when considering cumulative impacts:
  - The individual impacts may be changes resulting from a single project or separate projects.
  - The cumulative impact from several projects is the change in the environment that results from the incremental impact of the proposed Project when added to other closely related past, present and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over time.

This Recirculated EIR uses a variety of terms to describe the level of significance of adverse impacts. These terms are defined as follows:

- *Less than significant:* An impact that is adverse but that does not exceed the defined thresholds of significance. Less than significant impacts do not require mitigation.
- *Significant:* An impact that exceeds the defined thresholds of significance and would or could cause a substantial adverse change in the environment. Mitigation measures are recommended to eliminate the impact or reduce it to a less than significant level.
- *Significant and unavoidable:* An impact that exceeds the defined thresholds of significance and cannot be eliminated or reduced to a less than significant level through the implementation of mitigation measures.

2.4 Decision-Making Process

CEQA requires lead agencies to solicit and consider input from other interested agencies, citizen groups, and individual members of the public. CEQA also requires the proposed Project to be monitored after it has been permitted to ensure that mitigation measures are carried out.

CEQA requires the lead agency to provide the public with a full disclosure of the expected environmental consequences of the proposed Project, and with an opportunity to provide comments. In accordance with CEQA, the following is the process for public participation in the decision-making process:

- **Notice of Preparation/Initial Study (NOP/IS).** Kern County prepared and circulated an NOP/IS to responsible, trustee, and local agencies for review and comment on May 1, 2009. The NOP/IS and responses to the NOP are included in Appendix A, *Initial Study/Notice of Preparation and Notice of Preparation Responses*. In conjunction with this public notice, a scoping meeting was held by Kern County on May 22, 2009, to provide a forum for public comments on the scope of the EIR.
- **Recirculated Draft EIR Preparation/Notice of Completion (NOC).** A Recirculated Draft EIR will be circulated for review and comment to appropriate agencies and additional individuals and interest groups who have requested to be notified of EIR projects. Per Section 15105 of the CEQA Guidelines, Kern County will provide for a 45-day public review period on the Recirculated Draft EIR. Kern County will provide responses to comments to each agency or person who provided written comments on the Recirculated EIR two weeks before the scheduled Planning Commission hearing.
- **Preparation and Certification of Final Recirculated EIR.** The Kern County Planning Commission will consider the Final Recirculated EIR and the proposed Project, acting in an advisory capacity to the Kern County Board of Supervisors. Upon receipt of the Planning Commission's recommendation, the Board of Supervisors will also consider the Final Recirculated EIR, along with all public comments, and take final action on the proposed Project. At least one public hearing will be held by both the Planning Commission and Board of Supervisors to consider the Final Recirculated EIR, take public testimony, and either approve, conditionally approve, or deny the proposed Project.

Notice of Preparation

In accordance with Section 15082 of the CEQA Guidelines, as amended, the Kern County Planning and Natural Resources Department circulated an NOP/IS to the State Clearinghouse, public agencies, special districts, and members of the public for a 30-day public review. The public review period for the NOP/IS began on May 1, 2009, and ended on June 1, 2009. The NOP/IS was also posted in the Kern County Clerk's office for 30 days and sent to the State Clearinghouse at the Governor's Office of Planning and Research to solicit statewide agency participation in determining the scope of the Recirculated EIR. The purpose of the NOP/IS was to formally convey that the County, as the lead agency, solicited input regarding the scope and proposed content of the Recirculated EIR. The NOP/IS and all comment letters are provided in Appendix A of this Recirculated EIR.

Scoping Meeting

Pursuant to Section 15206 of the CEQA Guidelines, the lead agency is required to conduct at least one scoping meeting for all projects of statewide, regional, or area-wide significance. The scoping meeting is for jurisdictional agencies and interested persons or groups to provide comments regarding, but not limited to, the range of actions, alternatives, mitigation measures, and

environmental effects to be analyzed. A public scoping meeting was held at 1:30 p.m. on May 22, 2009, at the Kern County Public Services Building, 2700 M Street, Conference Room 1A, Bakersfield, California.

Notice of Preparation/Initial Study and Scoping Meeting Results

Nine (9) comment letters were received during the scoping process. Specific environmental concerns raised in written comments provided to staff during circulation of the NOP/IS for the proposed Project are discussed below. The NOP/IS and all comments are included in Appendix A, along with the Summary of Proceedings from the Scoping Meeting.

Notice of Preparation Written Comments

Table 2-1, *Summary of Written Comments on Notice of Preparation/Initial Study*, summarizes the comments received in response to the NOP/IS. Copies of the original comments are included in Appendix A.

Table 2-1. Summary of Written Comments on Notice of Preparation/Initial Study

Commenter	Summary of Comment
Sierra Club - Kern-Kaweah Chapter (letter dated May 27, 2009)	The EIR should address the following issues: incompatibility with the Metropolitan Bakersfield General Plan, need for the project, farmland conversion, air quality, biological resources, global warming, water supplies, energy and solar photovoltaics, traffic, aesthetics and light pollution, alternatives, and cumulative impacts.
Department of Agriculture and Measurement Standards (letter dated May 21, 2006)	The Department is concerned about the project depleting prime agricultural land to industrial uses. The EIR should address issues involving compatibility with industrial uses and the scope of impact upon the surrounding agricultural properties.
Kern County Resource Management Agency, Roads Department (letter dated May 18, 2009)	When the traffic impact study for the proposed Project is submitted to the County, the Roads Department would like a copy for review and comment.
Division of Oil, Gas and Geothermal Resources (DOGGR) (letter dated May 5, 2009)	The proposed Project is located outside the administrative boundaries of any oil or gas field, and there is one plugged and abandoned oil well within the Project boundaries. The abandoned well will need to be addressed if structures, roads, or parking lots are planned in proximity to it.
Tejon Indian Tribe (letter dated May 24, 2009)	The proposed Project is located in an area that Tejon Indian Tribe ancestors used in the past; however, the Tribe has no information or concerns at this time.
Native American Heritage Commission (NAHC) (letter dated May 22, 2009)	The NAHC, as the state trustee agency, recommended various actions in order to adequately assess the project-related impacts on historical resources.
California Department of Transportation (letter dated May 20, 2009)	A traffic impact study is needed for the proposed Project. An encroachment permit may be needed for the proposed Project, for any work in the State right-of-way.

Table 2-1. Summary of Written Comments on Notice of Preparation/Initial Study

Commenter	Summary of Comment
San Joaquin Valley Air Pollution Control District (letter dated June 1, 2009)	The EIR should include a quantitative emissions analysis, a discussion of greenhouse gas emissions generated by the project and the effect they will have (if any) on global climate change, a discussion of potential odors / sensitive receptors, potential health impact of Toxic Air Contaminants (if any), existing District regulations, feasible mitigation measures that will reduce air quality impacts.
Kern County Superintendent of Schools (letter dated May 13, 2009)	The Kern County Superintendent of Schools office represents the Greenfield Union and Kern High School Districts with regard to the imposition of developer fees. The collection of statutory fees shall be collected at the time that building permits are issued. Currently, these fees are set at $0.47 per square foot, an amount subject to adjustment every two years.

Availability of Recirculated Draft EIR

This Recirculated Draft EIR is being distributed directly to agencies, organizations, and interested groups and persons for comment during a 45-day formal review period, in accordance with Section 15087 of the State CEQA Guidelines. This Recirculated Draft EIR and the full administrative record for the proposed Project, including all studies, is available for review during normal business hours, Monday through Friday, at the Kern County Planning and Natural Resources Department, located at:

Kern County Planning and Natural Resources Department
2700 "M" Street, Suite 100
Bakersfield, CA 93301-2370
Phone: (661) 862-8600, Fax: (661) 862-8601

Additionally, this Recirculated Draft EIR is available at the following library:

Kern County Library/Beale
Local History Room
701 Truxtun Avenue
Bakersfield, CA 93301

2.5 Format and Content

This Recirculated Draft EIR addresses the potential environmental effects of the proposed Project and was prepared following input from the public and the responsible and affected agencies, through the EIR scoping process, as discussed previously. The content of this Recirculated Draft EIR was established based on the findings in the NOP/IS, and public and agency input. Based on the findings of the NOP/IS and amendments to CEQA Guidelines in 2018, a determination was

made that a Recirculated DEIR is required to address potentially significant environmental effects on the following resources:

- Aesthetics/Urban Decay
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geologic and Seismic Hazards ~~Geology and Soils~~
- Energy
- Greenhouse Gases
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation (discussed in Section 4.14, Public Services)
- Transportation/Traffic
- Utilities
- Wildfires

Required Recirculated DEIR Content and Organization

This Recirculated Draft EIR includes all sections required by CEQA. Table 2-2, *Required EIR Contents,* contains a list of sections required under CEQA, along with a reference to the chapter in which they can be found in this document.

Table 2-2. Required EIR Contents

Requirement/CEQA Section	Location in EIR
Table of contents (Section 15122)	Table of Contents
Summary (Section 15123)	Chapter 1
Project description (Section 15124)	Chapter 3
Significant environmental impacts (Sections 15126 and 15126.2)	Chapter 1; Sections 4.1–4.16; Chapter 5
Environmental setting (Section 15125)	Sections 4.1–4.16
Mitigation measures (Section 15126.4)	Chapter 1; Sections 4.1–4.16
Cumulative impacts (Section 15130)	Chapter 1; Sections 4.1–4.16; Chapter 5
Alternatives to the proposed project (Section 15126.6)	Chapter 6
Growth-inducing impacts (Section 15126.2)	Chapter 1; Section 4.13; Chapter 5
Effects found not to be significant (Section 15128)	Chapter 1; Sections 4.1–4.16; Chapter 5
Unavoidable significant environmental impacts (Section 15126.2)	Chapter 1; Sections 4.2, 4.3, 4.7, 4.12, and 4.15; Chapter 5
Organizations and persons consulted (Section 15129)	Chapter 8
List of preparers (Section 15129)	Chapter 9
References (Section 15129)	Chapter 10

Recirculated DEIR Organization

The content and organization of this Recirculated Draft EIR are designed to meet the requirements of CEQA, the CEQA Guidelines, and the Kern County CEQA Implementation Document, as well as to present issues, analysis, mitigation, and other information in a logical and understandable way. This Recirculated Draft EIR is organized into the following sections:

- Chapter 1, *"Executive Summary,"* provides a project description and a summary of the environmental impacts and mitigation measures.
- Chapter 2, *"Introduction,"* provides CEQA compliance information, overview of the decision-making process, organization of the Recirculated EIR and a responsible and trustee agency list.
- Chapter 3, *"Project Description,"* provides a description of the location, characteristics, objectives and the relationship of the project to other plans and policies.
- Chapter 4, *"Environmental Setting, Impacts and Mitigation Measures,"* contains a detailed environmental analysis of the existing conditions, project impacts, mitigation measures and unavoidable adverse impacts.
- Chapter 5, *"Consequences of Project Implementation (Mandatory CEQA Sections),"* presents an analysis of the project's cumulative and growth-inducing impacts and other CEQA requirements, including significant and unavoidable impacts and irreversible commitment of resources.
- Chapter 6, *"Alternatives,"* describes a reasonable range of alternatives to the project that could reduce the significant environmental effects that cannot be avoided.

- Chapter 7, *"Responses to Comments,"* is reserved for responses to comments on this Recirculated Draft EIR.
- Chapter 8, *"Organizations and Persons Consulted,"* lists the organizations and persons contacted during preparation of this Recirculated Draft EIR.
- Chapter 9, *"Preparers,"* identifies persons involved in the preparation of the Recirculated Draft EIR.
- Chapter 10, *"Bibliography,"* identifies reference sources for the Recirculated Draft EIR.
- Chapter 11, *"Acronyms and Abbreviations,"* lists all acronyms and abbreviations mentioned throughout the Recirculated Draft EIR with corresponding definitions.
- *"Appendices"* provide information and technical studies that support the environmental analysis contained within the Recirculated Draft EIR.

The analysis of each environmental category in Chapter 4 is organized as follows:

- *"Introduction"* provides a brief overview on the purpose of the section being analyzed with regard to the project.
- *"Environmental Setting"* describes the physical conditions that exist at this time and that may influence or affect the topic being analyzed.
- *"Regulatory Setting"* provides state and federal laws and the Metropolitan Bakersfield General Plan (MBGP) goals, policies, and implementation measures that apply to the topic being analyzed.
- *"Impacts and Mitigation Measures"* discusses the impacts of the project in each section, presents the determination of the level of significance and provides a discussion of feasible mitigation measures to reduce any impacts.

2.6 Responsible and Trustee Agencies

Projects or actions undertaken by the lead agency, in this case the Kern County Planning and Natural Resources Department, may require subsequent oversight, approvals or permits from other public agencies in order to be implemented. Other such agencies are referred to as "responsible agencies" and "trustee agencies." Pursuant to Sections 15381 and 15386 of the State CEQA Guidelines, as amended, responsible agencies and trustee agencies are defined as follows:

- A "*responsible agency"* is a public agency that proposes to carry out or approve a project, for which a lead agency is preparing or has prepared an EIR or Negative Declaration. For the purposes of CEQA, the term "responsible agency" includes all public agencies other than the lead agency that have discretionary approval power over the projects. (Section 15381).
- A "*trustee agency"* is a state agency having jurisdiction by law over natural resources affected by a project that are held in trust for the people of the State of California. (Section 15386).

  The various public, private, and political agencies and jurisdictions with a particular interest in the proposed Project include but are not limited to the following:

Federal Agencies

- U.S. Fish and Wildlife Service
- Department of Agriculture (USDA)
- Department of Interior
- Environmental Protection Agency
- Farm Service Agency
- Federal Highway Administration (FHWA)
- U.S. Army Corps of Engineers
- USDA, Forest Service

State Agencies

- Department of Conservation
- Reclamation Board
- Department of Conservation, Division of Oil, Gas & Geothermal Resources (DOGGR)
- Department of Mines and Geology
- Department of Fish and Wildlife
- Department of Water Resources
- Office of Historic Preservation
- Governor's Office of Planning and Research
- California Air Resources Board
- California Integrated Waste Management Board
- Regional Water Quality Control Board (RWQCB) – Central Valley Region
- California Department of Transportation (Caltrans) District 6
- California Native American Heritage Commission
- California Public Utilities Commission
- California Department of Forestry and Fire Protection (CalFire)

Local Agencies

- Kern Council of Governments (Kern COG)
- Kern County Administrative Office

- Kern County Board of Supervisors
- Kern County Economic Development Department
- Kern County Department of Agriculture
- Kern County Public Works Department
- Kern County Fire Department
- Kern County Library Facilities
- Kern County Parks and Recreation Department
- Kern County Planning Commission
- Kern County Sherriff's Department
- Kern County Water Agency (KCWA)
- Greenfield County Water District
- Kern County Superintendent of Schools
- Kern High School District
- Greenfield Union School District
- San Joaquin Valley Air Pollution Control District (SJVAPCD)
- City of Bakersfield Public Works Department
- City of Bakersfield Development Services Department

2.7 Incorporation by Reference

In accordance with Section 15150 of the *CEQA Guidelines* to reduce the size of the report, the following documents are hereby incorporated by reference into this Recirculated Draft EIR and are available for public review at the Kern County Planning and Natural Resources Department. A brief synopsis of the scope and content of these documents is provided below.

- **Metropolitan Bakersfield General Plan (MBGP) (2007)** - The MBGP is a policy document designed to give long-range guidance for decision-making affecting the future character of the Metropolitan Bakersfield planning area. It represents the official statement of the community's physical development as well as its economic, social and environmental goals. The MBGP has the following elements: Land Use, Circulation, Housing, Conservation, Open Space, Noise, Safety, Public Services and Facilities, and Parks. An additional element includes the Kern River Plan, which helps to define goals and policies for issues unique to the Metropolitan Bakersfield area. The MBGP was utilized throughout this Recirculated EIR as the fundamental planning document governing development on the proposed Project site. Background information and policy information from the Plan are cited in several sections of the Recirculated EIR.

- **Metropolitan Bakersfield Habitat Conservation Plan (MBHCP) (April 1994)** - The MBHCP, as amended, and implementing agreements and ordinances provide a method of collecting funds for the acquisition and perpetual management of habitat land for the purpose of creating preserves. The MBHCP and associated implementing ordinances and agreements are available through the Kern County Planning and Natural Resources Department. The plan provides descriptions of species of concern and habitat areas within the Metropolitan Bakersfield General Plan Area. Development projects within Metropolitan Bakersfield pay mitigation fees, which are used to buy habitat lands. These lands are managed by wildlife agencies or by entities approved by wildlife agencies. Measures to avoid taking a protected species are also listed in the MBHCP. The amount of habitat preserved must always be greater than what is being developed. The boundaries of the MBHCP study area match the boundaries of the MBGP, which consists of 408 square miles.

- **Kern County Zoning Ordinance (July 2016)** - According to Chapter 19.02.020, Purposes, Title 19 was adopted to promote and protect the public health, safety, and welfare through the orderly regulation of land uses throughout the unincorporated area of Kern County. Further, the purposes of this title are to:
    - Provide the economic and social advantages resulting from an orderly planned use of land resources;
    - Encourage and guide development consistent with the Kern County General Plan (KCGP);
    - Divide Kern County into zoning districts of a number, size and location deemed necessary to carry out the purposes of the KCGP and this title;
    - Regulate the size and use of lots, yards and other open spaces;
    - Regulate the use, location, height, bulk and size of buildings and structures;
    - Regulate the intensity of land use;
    - Regulate the density of population in residential areas;
    - Establish requirements for off-street parking;
    - Regulate signs and billboards; and
    - Provide for the enforcement of regulations of Chapter 19.02.020.

- **County of Kern Housing Element 2015-2023 (2016)** - The development and preservation of adequate and affordable housing is important to the well-being of the residents and the economic prosperity of the County. To plan for the development of adequate housing for all income segments, a Housing Element was prepared as a part of the KCGP. This document specifically addresses housing needs and resources in the County's unincorporated areas. The Housing Element must maintain consistency with the other elements of the KCGP.

- **Destination 2030: Regional Transportation Plan (RTP)** - The latest Regional Transportation Plan (RTP) was adopted in 2018. The 2018 RTP/Sustainable Communities Strategy (SCS) establishes a set of regional transportation goals, objectives, policies, and actions intended to guide development of the planned multimodal transportation systems in Kern County. It was developed through a continuing, comprehensive, and cooperative planning process, and

provides for effective coordination between local, regional, State, and federal agencies. This RTP/SCS provides transportation and air quality goals, policies and actions for now and into the future, and includes programs and projects for congestion management, transit, airports, bicycles and pedestrians, roadways, and freight. The 2018 RTP/SCS continues the implementation of California's Sustainable Communities and Climate Protection Act (Senate Bill [SB] 375) which requires the inclusion of a Sustainable Communities Strategy that reduces greenhouse gas emissions from passenger vehicles and light duty trucks by 5 percent per capita by 2020 and 10 percent per capita by 2035. In addition, it provides a discussion of all mechanisms used to finance transportation and air quality (including greenhouse gas) program implementation (Kern Council of Governments [COG], 2018).

- **Kern County Airport Land Use Compatibility Plan -** The Kern County Airport Land Use Compatibility Plan (ALUCP) was originally adopted in 1996 and has since been amended to comply with Aeronautics Law, Public Utilities Code (Chapter 4, Article 3.5) regarding public airports and surrounding land use planning. As required by that law, proposals for public or private land use developments that occur within defined airport influence areas are subject to compatibility review. The principle airport land use compatibility concerns addressed by the plan are: (1) exposure to aircraft noise; (2) land use safety with respect to both people and property on the ground and the occupants of aircraft; (3) protection of airport air space; and (4) general concerns related to aircraft overflights.

  The ALUCP identifies policies and compatibility criteria for influence zones or planning area boundaries. The ALUCP maps and labels these zones as A, B1, B2, C, and D, ranging from the most restrictive (A - airport property-runway protection zone) to the least restrictive (D - disclosure to property owners only). As required by law, the following affected cities have adopted the ALUCP for their respective airports: City of Bakersfield, City of California City, City of Delano, City of Shafter, City of Taft, City of Tehachapi, and City of Wasco.

2.8 Sources

This Recirculated Draft EIR is dependent upon information from many sources. Some sources are, for example, studies or reports that have been prepared specifically for this document. Others are studies or reports that may provide background information related to one or more issue areas that have been discussed in this document. The sources and references used in the preparation of this Recirculated Draft EIR are listed in Chapter 10, *"Bibliography,"* and are available for review during normal business hours at the:

Kern County Planning and Natural Resources Department
2700 "M" Street, Suite 100
Bakersfield, California 93301-2370

This Draft Recirculated DEIR is also available on the Kern County Planning and Natural Resources Department website:
https://kernplanning.com/planning/environmental-documents/.

Chapter 3

Project Description

Chapter 3
Project Description

3.1 Project Overview

This Environmental Impact Report (EIR) has been prepared to identify and evaluate potential environmental impacts associated with implementation of 99 Houghton Industrial Park Project (proposed Project). When the Notice of Preparation (NOP) was initially circulated in May 2009, the proposal consisted of the same parcels with different proposed land use designation and zoning classifications, and a larger net building space. However, after the circulation of the NOP and further analysis of the proposed Project, the project proponent elected to reduce the net building space and allow for highway commercial and general commercial land uses. Table 3-1, *Project Statistics*, provides a comparison the changes to the proposed Project between the time of the NOP and this EIR. The size of the project site has not changed. The characteristics of the Project site are summarized in Table 3-2, *Description of Site*. All associated technical studies prepared for the proposed Project have been reviewed and updated as needed to reflect these changes to the proposed Project.

Table 3-1. Project Statistics

Total Project Site Boundary		Net Building Space	Proposed MBGP Land Use Designations				Proposed Zoning Classifications			
			GC	HC	LI	SI	M-1 PD	M-2 PD	CH PD	C-2 PD
Previous (NOP)	314.31 acres	5,134,253 square feet (ft^2)	N/A	N/A	129.73 acres	184.58 acres	129.73 acres	184.58 acres	N/A	N/A
Current (DEIR)	314.30 acres	4,613,004 ft^2	22 acres	9.01* acres	107.72 acres	159 acres	107.72 acres	159 acres	25 acres	22 acres
Change	-0.01 acre	-521,249 ft^2	+22 acres	+9.01* acres	-22.01 acres	-25.58 acres	-22.01 acres	-25.58 acres	+25 acres	+22 acres

Metropolitan Bakersfield General Plan (MBGP) Land Use Designations:
GC = General Commercial; HC = Highway Commercial; LI = Light Industrial; SI = Service Industrial

Kern County Zoning Classifications:
M-1 (Light Industrial); M-2 (Medium Industrial); CH = Highway Commercial; C-2 = General Commercial; PD = Precise Development Combining

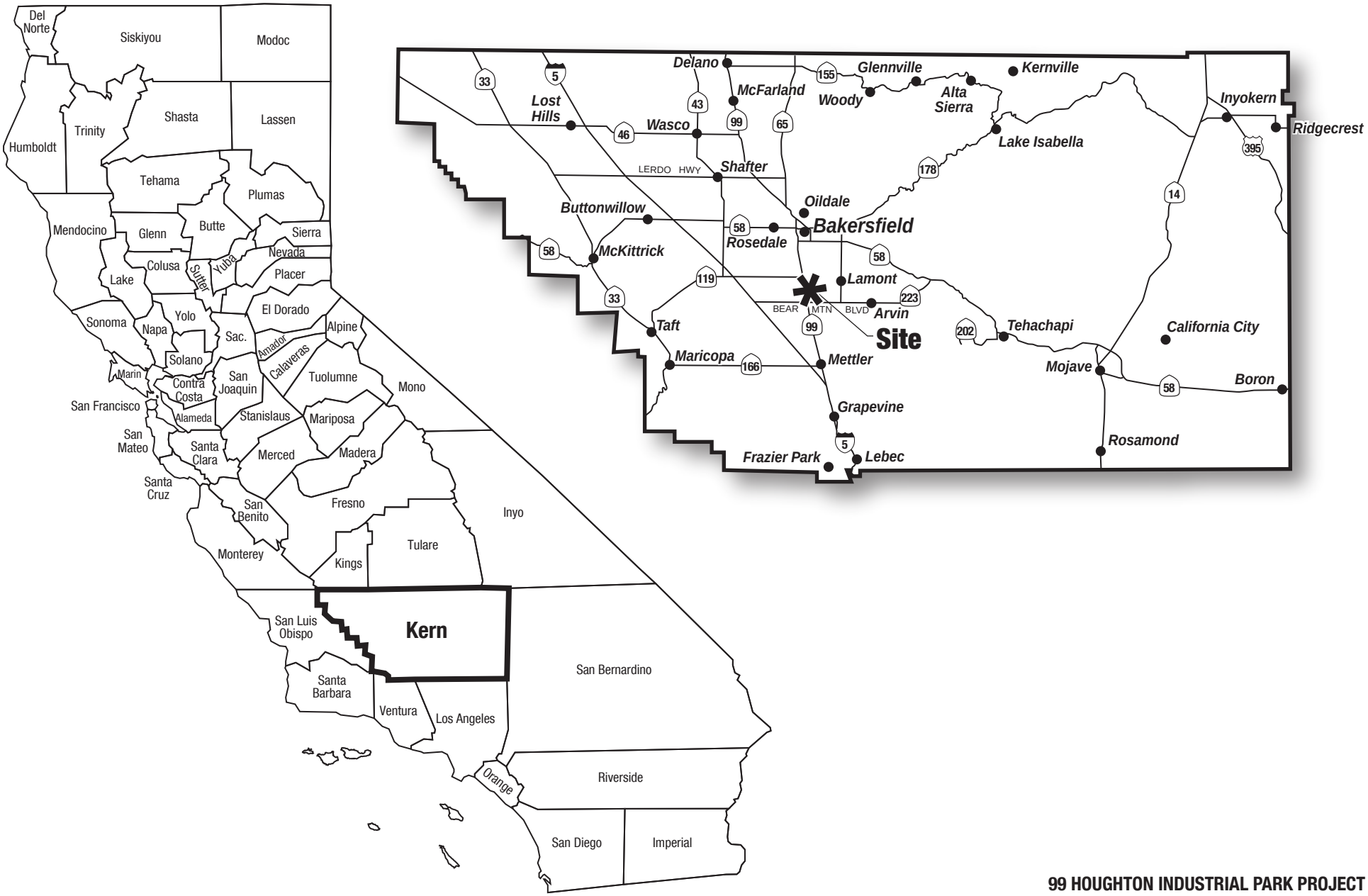
* The project site currently contains 15.99 acres of exiting HC land use designation under the MBGP; therefore, the proposed project would have a total of 25 acres of HC land use designation.

Table 3-2. Description of Site

Developer/Total Acreage	Entitlements	Location
99 Houghton Industrial Park 314 acres	General Plan Amendment No. 1, Map 143-07; Zone Change No. 2, Map 143-07; Conditional Use Permit No. 5, Map 143-07; Conditional Use Permit No. 6, Map 143-07; Exclusion from Agricultural Preserve No. 13	APN 185-140-08; bounded by South Union Avenue to the east, State Route 99 to the west, DiGiorgio Road to the north, and Houghton Road to the south

As shown in Table 3-1, *Project Statistics*, and Table 3-2, *Description of Site*, above, the proposed Project encompasses approximately 314 acres, and is located north of Houghton Road, east of State Route 99 (SR-99), west of South Union Avenue, and south of DiGiorgio Road, in Kern County (Figure 3-1, *Regional Vicinity*, and Figure 3-2, *Project Vicinity*). The proposed Project would allow for development of a light to medium industrial park containing approximately 4,613,004 square feet (net building area) of warehousing, distribution, and retail showroom uses. A private package sewer treatment plant is proposed to provide sewer services for the Project site. Development of the proposed Project would require the following decisions by the Kern County Planning Commission and Board of Supervisors:

- approval of a General Plan Amendment (GPA) to amend the existing land use designation from R-IA (Resource – Intensive Agriculture) to LI (Light Industrial), SI (Service Industrial), GC (General Commercial), and HC (Highway Commercial);
- approval of a Zone Change (ZCC) to remove the existing A (Exclusive Agriculture) zoning classification and rezone the Project site to M-1 PD (Light Industrial, Precise Development Combining), M-2 PD (Medium Industrial, Precise Development Combining), CH PD (Highway Commercial, Precise Development Combining), and C-2 PD (General Commercial, Precise Development Combining);
- approval of a Conditional Use Permit for a Sewer Treatment Plant; and
- ~~approval of a Conditional Use Permit for a Water Treatment Plant; and~~
- approval of an agricultural preserve exclusion from Agricultural Preserve No. 13.



not to scale

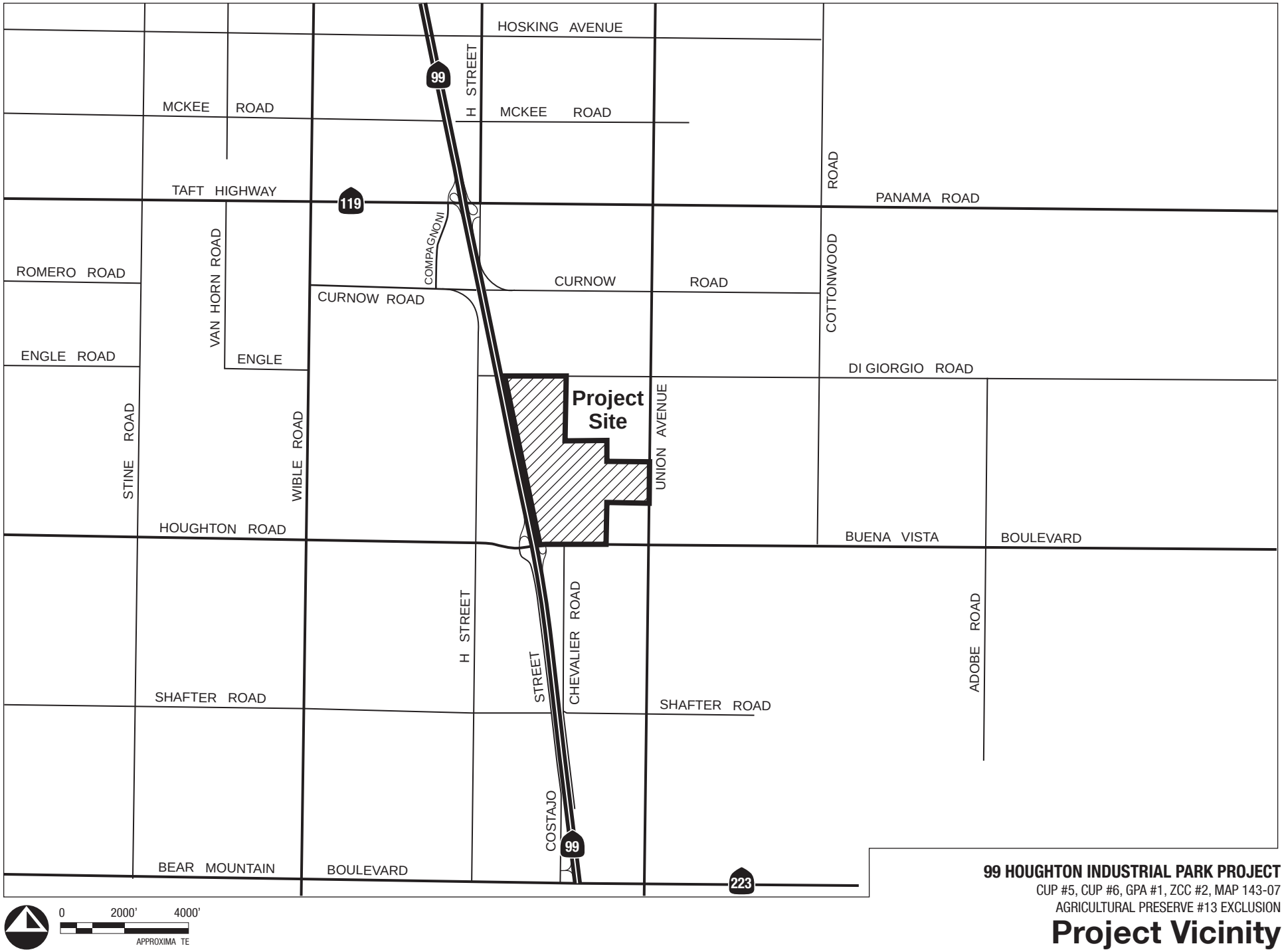
99 HOUGHTON INDUSTRIAL PARK PROJECT

CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07

AGRICULTURAL PRESERVE #13 EXCLUSION

Regional Vicinity

Figure 3-1



99 HOUGHTON INDUSTRIAL PARK PROJECT

CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07

AGRICULTURAL PRESERVE #13 EXCLUSION

Project Vicinity

Figure 3-2

3.2 Project Location and Setting

Project Location

The proposed Project is situated in the southern San Joaquin Valley in Kern County, California; refer to Figure 3-1, *Regional Vicinity*. It is located approximately 1.10 miles south of the Bakersfield City limits (approximately 8.6 miles south of downtown), within the administrative boundaries of the Metropolitan Bakersfield General Plan (MBGP) in Kern County. The proposed Project consists of approximately 314 acres, generally located north of Houghton Road, east of SR-99, west of South Union Avenue, and south of DiGiorgio Road. South Union Avenue (SR-204), Houghton Road, and the DiGiorgio Road alignment provide the primary access to and from the Project area. Refer to Figure 3-2, *Project Vicinity*.

The proposed Project is located within a portion of Section 7, Township 31 South (S), Range 28 East (E), Mount Diablo Base and Meridian (MDBM). The latitude and longitude of the approximate center of the site is 35°14'34.10" North (N) and 119°0'40.69" West (W). The Universal Transverse Mercator (UTM) coordinates for the approximate center are East 3901819.39 meters and South 316999.72 meters, in Zone 11.

Regional Setting

Kern County is California's third largest county in land area, encompassing approximately 8,202 square miles and has a total population of 916,464 as of January 1, 2019 (California Department of Finance, 2019). The County is bound by Kings, Tulare, and Inyo counties to the north; San Bernardino County to the east; Los Angeles and Ventura counties to the south; and Santa Barbara and San Luis Obispo counties to the west. The County's geography is diverse, containing mountainous areas, agricultural lands, and desert areas. These areas are generally divided into three regions: the Valley Region, the Mountain Region, and the Desert Region. The Project site is located within the Valley Region, which is characterized by relatively low rainfall, relatively high average summer temperatures, and generally mild winters.

The dominant land use within the County is agriculture, although over the last few decades, urban development has occurred in and around the County's 11 incorporated cities. Bakersfield is the County's largest City, with a population of approximately 386,839 persons as of January 1, 2018 (California Department of Finance 2018). The Project site is located approximately 1.10 miles south of the Bakersfield city limits (8.6 miles south of downtown Bakersfield), 5.2 miles west of Lamont, 10 miles northwest of Arvin, 12.3 miles north of Mettler, and 25.7 miles east of Taft.

Local Setting and Surrounding Land Uses

Current Land Use

The Project site consists of disced land and has been utilized for row-crop agriculture consisting of cotton, alfalfa, carrot corn, wheat, and grain; a steel storage building associated with agricultural activities is located in the eastern portion of the site, near South Union Avenue. The topography of the Project site is relatively flat, sloping slightly from the northwest to the southeast with elevations ranging from approximately 331 feet above mean sea level (msl) to 340 feet above msl.

The majority of the Project site is currently designated by the Metropolitan Bakersfield General Plan (MBGP) as R-IA (Resource-Intensive Agriculture), while the southwest corner of the Project site is designated HC (Highway Commercial). The proposed Project has a Kern County Zoning Ordinance classification of A (Exclusive Agriculture). The Project site is located within an area that is designated by the California Department of Conservation (DOC) as Prime Farmland, Farmland of Statewide Importance, Semi-Agricultural and Rural Commercial Land, and Vacant or Disturbed Land (DOC, 2014a). The Project site does not contain Farmland of Local Importance (DOC, 2014a). The approximately 257.57 acres of the Project site is located within the boundary of Agricultural Preserve No. 13, as is the standard practice in Kern County for any land that is zoned A (Exclusive Agriculture). The Project site is not subject to a Williamson Act land use contract.

Kern County is one of the richest oil-producing counties in the United States with approximately 66 active oil fields[1]. The State Division of Oil, Gas, and Geothermal Resources (DOGGR) most recent information on Kern County's oil production is the 2018 Oil, Gas, and Water Production and Well Count by County (DOGGR, 2018). In 2018, Kern County produced 113,141,827 billion barrels of oil. According to DOGGR, the proposed Project is not located within an oil or gas field. There is one plugged and abandoned oil well located within the proposed Project boundaries (Big McKittrick Oil Company "Sea Cliff-Houghton" 1). In addition, one active, diesel-powered irrigation well and one domestic well are located on-site.

Surrounding Land Uses

Adjacent land uses include vacant land and agricultural uses to the north, agricultural uses and a small cluster of single-family residential homes to the east, SR-99 to the west, and agricultural uses and an automobile wrecking yard located south/southeast of Project site. Table 3-3, *Proposed Project Site and Surrounding Land Uses*, provides existing land uses and zoning classifications of the Project site and surrounding area.

Table 3-3. Proposed Project Site and Surrounding Land Uses

Direction from Project Site	Existing Land Use	*Existing Land Use Designation (Metropolitan Bakersfield General Plan)*	Existing Zone Classification (Kern County)
Project Site	Agriculture	R-IA (Resource-Intensive Agriculture) HC (Highway Commercial)	A (Exclusive Agriculture)
North	Agriculture; DiGiorgio Road	R-IA (Resource-Intensive Agriculture) LMR (Low Medium Density Residential, 4 to 10 units per acre) HMR (High Medium Density Residential, 7.26 to 17.42 units per acre) SR (Suburban, 4 units per acre) GC (General Commercial)	A-1 (Limited Agriculture) A (Exclusive Agriculture) E(1) RS MH (Estate 1 Acre, Residential Suburban Combining, Mobile Home Combining) E(2 ½) RS (Estate 2.5 Acres, Residential Suburban Combining) E(1/2) RS (Estate 0.5 Acres, Residential Suburban Combining)

[1] DOGGR GIS data. California Department of Conservation. (2019).

Table 3-3. Proposed Project Site and Surrounding Land Uses

Direction from Project Site	Existing Land Use	*Existing Land Use Designation (Metropolitan Bakersfield General Plan)*	Existing Zone Classification (Kern County)
			R-2 (Medium Density Residential, 16 units per acre)
East	Agriculture, Single-Family Residential, Commercial, SR-204	R-IA (Resource-Intensive Agriculture) RR (Rural Residential) SI (Service Industrial)	A (Exclusive Agriculture) A-1 (Limited Agriculture) E(10) RS (Estate 10 Acres, Residential Suburban Combining) M-2 PD (Medium Industrial, Precise Development Combining) CH (Highway Commercial)
West	SR-99; Agriculture, Fallow Land	PT (Public Transportation) R-IA (Resource-Intensive Agriculture)	A (Exclusive Agriculture) A-1 (Limited Agriculture) C-2 PD (General Commercial, Precise Development Combining)
South	Agriculture, Rural Residential, Automobile Wrecking Yard; Houghton Road	R-IA (Resource-Intensive Agriculture) RR (Rural Residential, 2½ acres per unit) HC (Highway Commercial)	A (Exclusive Agriculture) A-1 (Limited Agriculture) C-2 PD (General Commercial, Precise Development Combining)

3.3 Existing Planning and Zoning Regulations

The proposed Project is under the jurisdiction of the County and within the City of Bakersfield's Sphere of Influence. Land use and planning decisions are regulated by a variety of jurisdictional planning agencies and programs. Land use is governed by the jointly prepared, but separately adopted County/City Metropolitan Bakersfield General Plan and the Kern County Zoning Ordinance. Proposed Project development would also be regulated by the Metropolitan Bakersfield Habitat Conservation Plan. Applicable land use planning documents that regulate the proposed Project area are discussed below.

Metropolitan Bakersfield General Plan (MBGP)

The City and County have prepared and adopted the MBGP to provide cohesive land use planning for areas that lie both within the County's jurisdiction and the City's future service area. The MBGP is a separate but interrelated land use planning program within Kern County. It was updated by the County in 2007 and was updated by the City on January 20, 2016. The area covered by the MBGP coincides with the City of Bakersfield sphere of influence.

Kern County Zoning Ordinance

The Kern County Zoning Ordinance establishes the basic regulations under which land is developed. This includes allowable uses, building setback requirements, and development standards. Pursuant to state law, the Kern County Zoning Ordinance must be consistent with the Kern County General Plan and all Specific Plans. The basic intent of the Kern County Zoning

Ordinance is to promote and protect the public health, safety, and welfare via the orderly regulation of land uses throughout the unincorporated area of the county. This zoning code applies to all property in unincorporated Kern County, except land owned by the United States or any of its agencies.

The proposed Project is currently zoned A (Exclusive Agriculture). The purpose of the A zone is to designate areas suitable for agricultural uses and to prevent the encroachment of incompatible uses onto agricultural lands and the premature conversion of such lands to nonagricultural uses.

Metropolitan Bakersfield Habitat Conservation Plan

The goal of the MBHCP is to acquire, preserve, and enhance native habitats that support endangered and sensitive species, while allowing urban development to proceed as set forth in the MBGP. The study area covered by the MBHCP contains both City and County jurisdictions. The MBHCP is intended to meet the requirements of both state and federal endangered species acts. In addition, the MBHCP complies with state and federal environmental regulations set forth in the National Environmental Policy Act (NEPA) and CEQA. Upon payment of required mitigation fees and receipt of project approval, a developer/applicant would become a subpermittee and would be allowed the "incidental take" of covered species in accordance with state and federal endangered species laws. The proposed Project site is within the boundaries of the MBHCP.

3.4 Project Objectives

The Project proponent has defined the following objectives for the proposed Project:

- Facilitate quality development that is consistent with and implements the goals of the Kern County General Plan and Metropolitan Bakersfield General Plan.
- To develop the site consistent with the provisions of the Kern County Zoning Ordinance, Land Division Ordinance, and Development Standards.
- Assure adequate planning for all community facilities including circulation improvements, drainage facilities, water, and wastewater facilities.
- Ensure that the project, in and of itself, does not contribute to the conversion of adjacent agricultural areas.
- Cluster commercial retail uses that provide goods and services near an interchange with SR-99 to accommodate interstate freight and reduce traffic congestion and air emissions.
- Accommodate new development that channels land uses in a phased, orderly manner and is coordinated with the provision of infrastructure and public improvements.
- Address community circulation, both vehicular and pedestrian, utilizing available capacity with the existing circulation system, and provide fair-share system improvements to deficient intersections or road segments.
- Facilitate a planned development and related in-line tenants consistent with the market objectives of the applicant and its tenants.

- Accommodate growth within the proposed project while balancing environmental considerations.
- Provide an industrial center at the Houghton Road and SR-99 interchange in the southern metropolitan area adjacent to the City that would provide a broad range of goods and services that serve the regional market area.
- Allow for the development of a variety of commercial and industrial centers which are differentiated by their function, intended users and level of intensity.
- Provide new industrial development that captures the economic demands generated by the marketplace.
- Provide new development that will assist the County of Kern in obtaining fiscal balance in the years and decades ahead.

3.5 Proposed Project

The proposed Project includes a General Plan Amendment (GPA) and concurrent Change of Zoning District (ZCC) to modify the existing MBGP land use designations, and the Kern County Zoning Ordinance classifications on the 314-acre Project site. In addition, the Project includes a petition to exclude the Project site from Agricultural Preserve No. 13. The GPA and ZCC would allow for development of a light to medium industrial park containing approximately 4,613,004 square feet (net building area) of warehousing, distribution, and retail showroom uses. Table 3-4, *Existing and Proposed Land Use and Zoning,* below, provides the proposed GPA and ZCC summary for the proposed Project.

Table 3-4. Existing and Proposed Land Use and Zoning

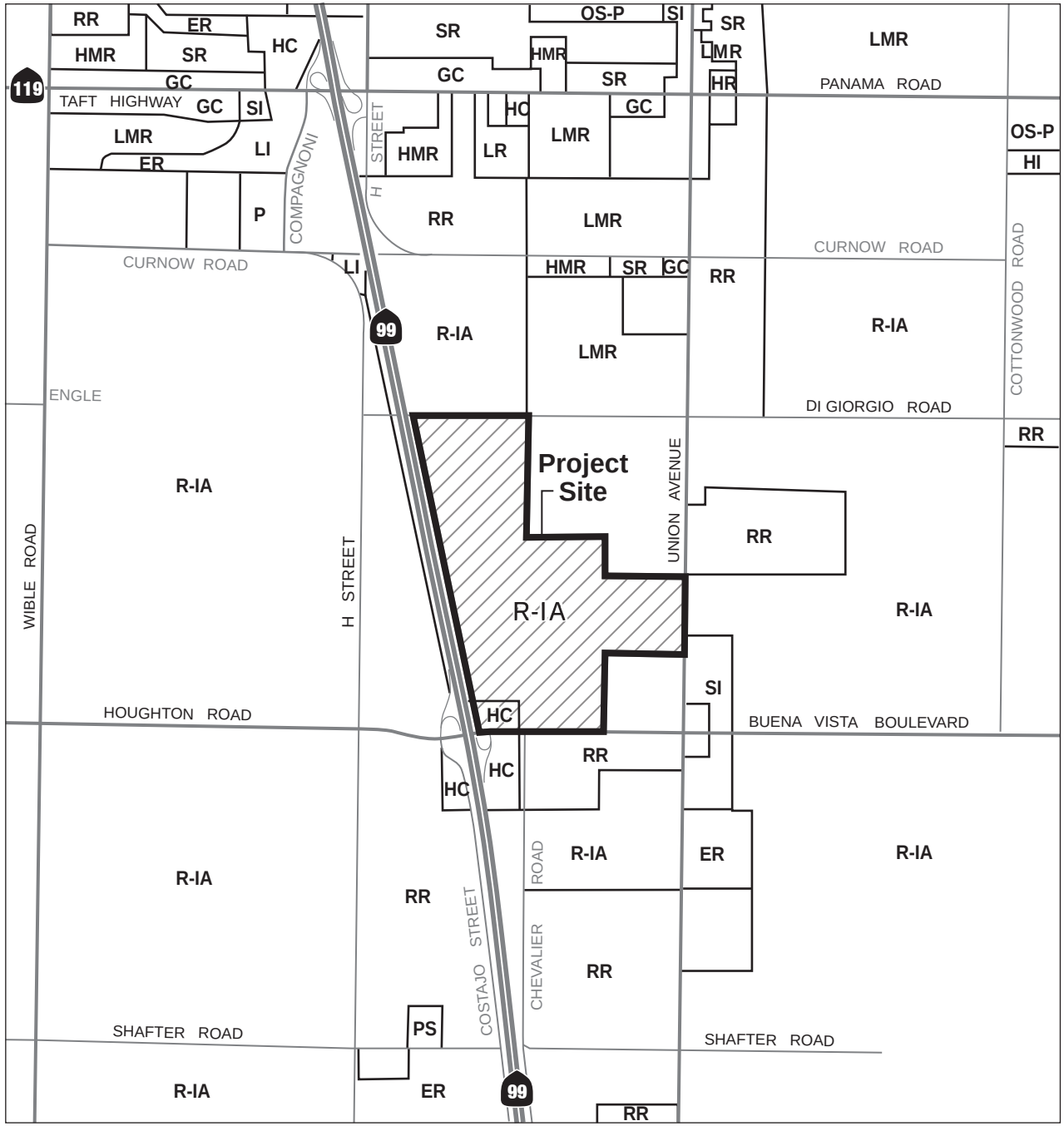
Existing MBGP Land Use Designations	Proposed MBGP Amendment (Land Use Designations)	Existing Zone Classification	Proposed Zone Change (Zone Classification)	Gross Acres
R-IA (Resource-Intensive Agriculture) HC (Highway Commercial)	GC (General Commercial)	A (Exclusive Agriculture)	C-2 PD (General Commercial, Precise Development Combining)	22
	LI (Light Industrial)		M-1 PD (Light Industrial, Precise Development Combining)	108
	SI (Service Industrial)		M-2 PD (Medium Industrial, Precise Development Combining)	159
	HC (Highway Commercial)		CH PD (Highway Commercial, Precise Development Combining)	25
			Total	**314***

Numbers have been rounded to the nearest whole number.
* Petition for Exclusion from Agricultural Preserve No. 13

Proposed General Plan Amendment

The Project proposes to amend the MBGP land use designations from R-IA (Resource-Intensive Agriculture) and HC (Highway Commercial), to LI (Light Industrial), SI (Service Industrial), HC

(Highway Commercial), and GC (General Commercial) (refer to Figure 3-3, *Existing General Plan Land Use Designations* and Figure 3-4, *Proposed General Plan Land Use Designations*). Approximately 108 acres would be amended to LI, approximately 159 acres would be amended to SI, approximately 9.01 acres would be amended to HC (Highway Commercial), and approximately 22 acres would be amended to GC (General Commercial). The Project site contains 15.99 acres of HC (Highway Commercial) that would remain unchanged. The LI designation is characterized by unobtrusive industrial activities that can be located in close proximity to residential and commercial uses with a minimum of environmental conflicts. The SI designation is characterized by industrial activities which involve outdoor storage or use of heavy equipment (MBGP, 2007).



not to scale

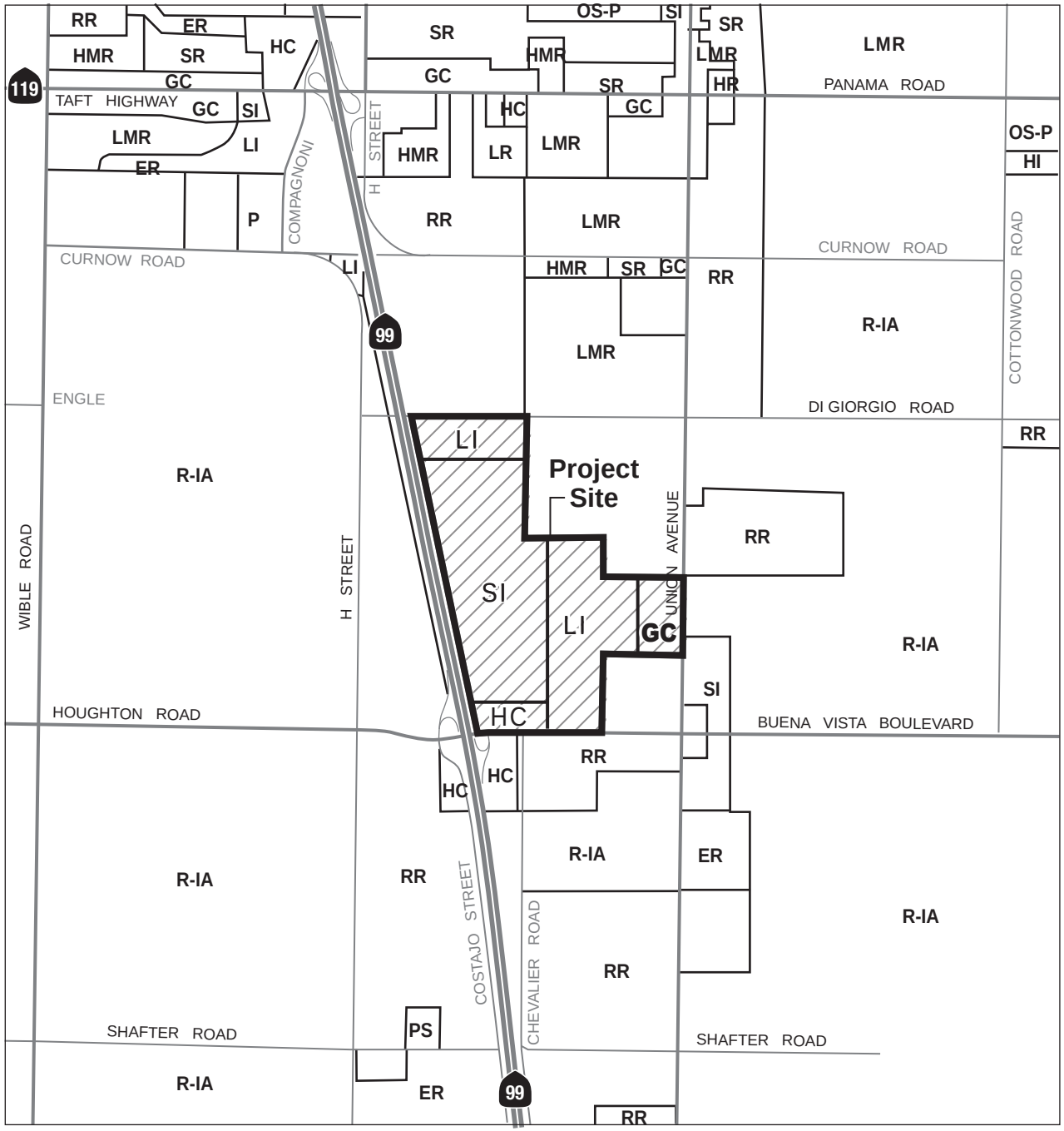
Land Use Designations

R-IA	Resource - Intensive Agriculture
LMR	Low Medium Residential
HMR	High Medium Residential
RR	Rural Residential
ER	Estate Residential
SR	Suburban Residential
GC	General Commercial
HC	Highway Commercial
LI	Light Industrial
SI	Service Industrial
HI	Heavy Industrial
OS-P	Parks and Recreation Facilities
PS	Public and Private Schools
P	Publicly Owned Facilities

99 HOUGHTON INDUSTRIAL PARK PROJECT
CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07
AGRICULTURAL PRESERVE #13 EXCLUSION

Existing General Plan Land Use Designations

Figure 3-3



not to scale

Land Use Designations

R-IA	Resource - Intensive Agriculture
LMR	Low Medium Residential
HMR	High Medium Residential
RR	Rural Residential
ER	Estate Residential
SR	Suburban Residential
GC	General Commercial
HC	Highway Commercial
LI	Light Industrial
SI	Service Industrial
HI	Heavy Industrial
OS-P	Parks and Recreation Facilities
PS	Public and Private Schools
P	Publicly Owned Facilities

99 HOUGHTON INDUSTRIAL PARK PROJECT
CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07
AGRICULTURAL PRESERVE #13 EXCLUSION

Proposed General Plan Land Use Designations

Figure 3-4

Proposed Zone Change

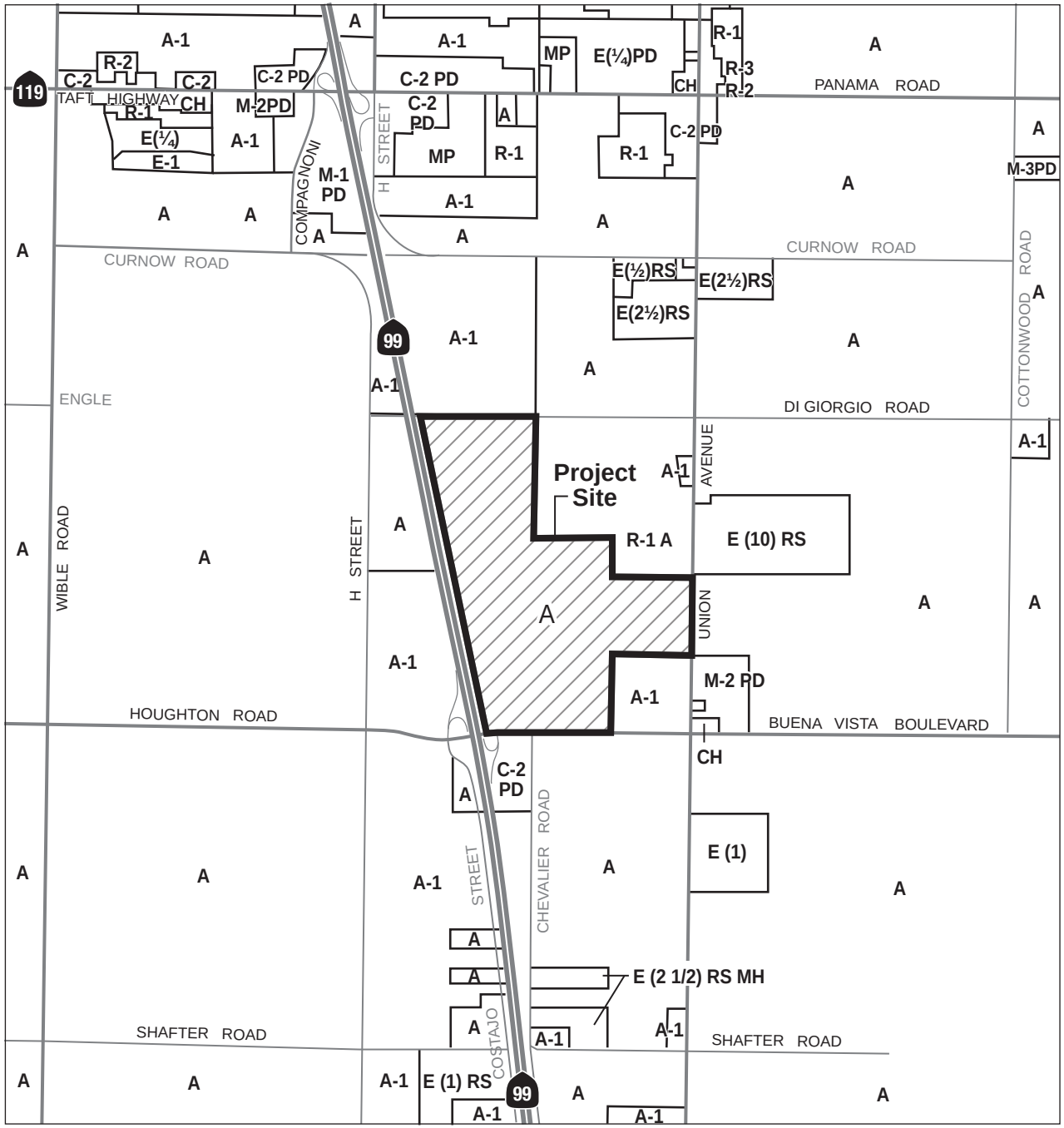
The Project proposes a Zone Change from A (Exclusive Agriculture) to M-1 PD (Light Industrial, Precise Development Combining), M-2 PD (Medium Industrial, Precise Development Combining), CH PD (Highway Commercial, Precise Development Combining), and C-2 PD (General Commercial, Precise Development Combining). Approximately 108 acres would be amended to M-1 PD, approximately 159 acres would be amended to M-2 PD, approximately 22 acres would be amended to C-2 PD, and approximately 25 acres would be amended to CH PD; refer to Figure 3-5, *Existing Zoning*, and Figure 3-6, *Proposed Zoning*, for a graphical representation of the proposed Project zone changes. As discussed in further detail below, all zones would be amended to contain the PD (Precise Development) Combining District overlay. The C-2 zoning classification is typically characterized by regional shopping centers and heavy commercial uses while CH zoning classification is typically characterized by gas stations, restaurants, and motels. The purpose of the M-1 zoning classification is to designate areas for wholesale commercial, storage, trucking, assembly-type manufacturing, and other similar industrial uses. The M-2 zoning designation is typically characterized by general manufacturing, processing, and assembly activities. The purpose of the PD Combining District is to designate areas with unique site characteristics or environmental conditions or areas surrounded by sensitive land uses to ensure that development in such areas is compatible with such constraints.

Precise Development Plans

Included with the proposed zone change to C-2, CH, M-1, and M-2 is the Precise Development (PD) Combining District. The purpose of the Precise Development (PD) Combining District is to designate areas with unique site characteristics or environmental conditions or areas surrounded by sensitive land uses to ensure that development in such areas is compatible with such constraints. All development in the PD Combining District shall be subject as a minimum to Special Development Standards as specified in Chapter 19.80 of the Kern County Zoning Ordinance; however, a Special Development Standard Plan Review shall not be required. The regulations established by the PD District shall be in addition to the regulations of the base district with which the PD District is combined.

Given the uncertainty regarding the specific use to be developed on site at this time, the PD Combining District is being included in the proposed zone change request. Implementation of the PD Combining District will ensure that as development of the site moves forward, the Kern County Planning and Natural Resources Department and the community at large will have the opportunity to publicly review site specific proposals to ensure compliance with the environmental impact report, the specific development standards and overall compatibility with the surrounding uses. Implementation of the site is expected to be processed under a Master Precise Development Plan.

This Page Intentionally Left Blank



not to scale

Zoning Districts

A	Exclusive Agriculture
A-1	Limited Agriculture
C-2 PD	General Commercial, Precise Development Combining
C-2	General Commercial
CH	Highway Commercial
E (1/4)	Estate .25 Acres
E (1/2) RS	Estate .5 Acres, Residential Suburban Combining
E (1)	Estate 1 Acre
E (10) RS	Estate 10 Acres, Residential Suburban Combining
E (2 1/2) RS	Estate 2.5 Acre, Residential Suburban Combining
M-2 PD	Medium Industrial, Precise Development Combining
M-3 PD	Heavy Industrial, Precise Development Combining
MP	Mobile Home Park
R-1	Low Density Residential

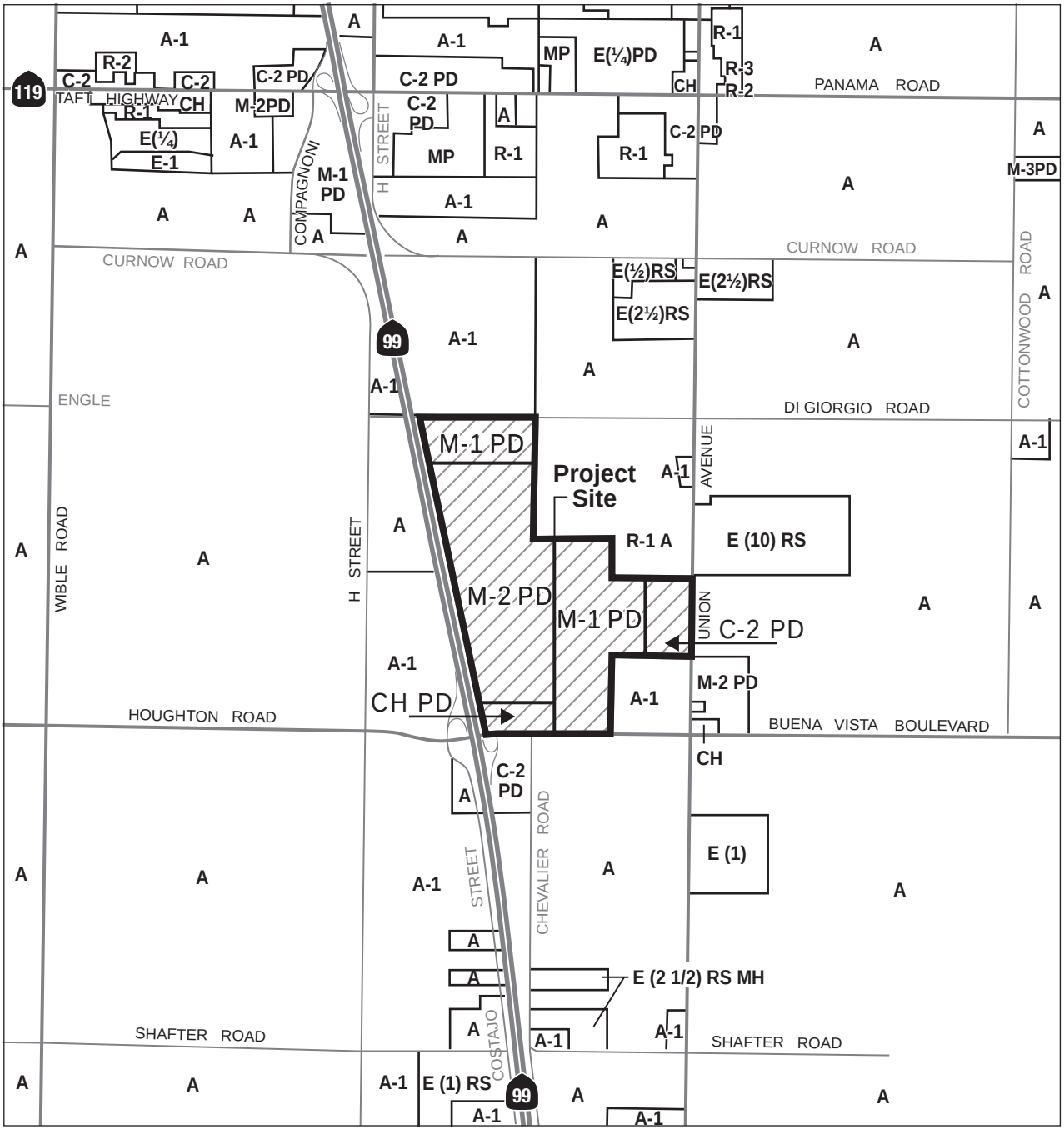
99 HOUGHTON INDUSTRIAL PARK PROJECT

CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07

AGRICULTURAL PRESERVE #13 EXCLUSION

Existing Zoning

Figure 3-5



not to scale

Zoning Districts

A	Exclusive Agriculture
A-1	Limited Agriculture
C-2 PD	General Commercial, Precise Development Combining
C-2	General Commercial
C-2 PD	General Commercial Precise Development Combining
CH	Highway Commercial
CH PD	Highway Commercial Precise Development Combining
E (1/4)	Estate .25 Acres
E (1/2) RS	Estate .5 Acres, Residential Suburban Combining
E (1)	Estate 1 Acre
E (10) RS	Estate 10 Acres, Residential Suburban Combining
E (2 1/2) RS	Estate 2.5 Acre, Residential Suburban Combining
M-1	Light Industrial
M-1 PD	Light Industrial, Precise Development Combining
M-2	Medium Industrial
M-2 PD	Medium Industrial, Precise Development Combining
M-3 PD	Heavy Industrial, Precise Development Combining
MP	Mobile Home Park
R-1	Low Density Residential

99 HOUGHTON INDUSTRIAL PARK PROJECT
CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07
AGRICULTURAL PRESERVE #13 EXCLUSION

Proposed Zoning

Figure 3-6

Agricultural Preserve – Exclusion

An agricultural preserve defines the boundary of an area within the County that meets the criteria for property owners to enter into Williamson Act Land Use Contracts and Farmland Security Zone Contracts. Only land within an agricultural preserve is eligible for such contracts. The Kern County Board of Supervisor policy has established the criteria for inclusion into a preserve as land having a General Plan resource designation (RI–A), and having a zoning designation of A (Exclusive Agriculture). If approved, the requested MBGP designations of LI and SI would require the exclusion of approximately 257.57 acres from Agricultural Preserve No. 13 (refer to Figure 3-7, *Agricultural Preserve No. 13 Map*).

Parcel Map Processing

A Parcel Map shows the subdivision of land into parcels for sale and is recorded in the County Recorder's Office. Parcel Maps typically contain fewer "Lots" than Tract Maps and requirements for improvements (to the property) are less extensive than for Tract Maps. Industrial projects are done by Parcel Map if they plan to sell off the parcels. If one large complex is being developed, and parcels will not be sold, then a Parcel Map is not required. It is expected that the proposed Project will require Parcel Map processing; however, the certainty is unknown at this time.

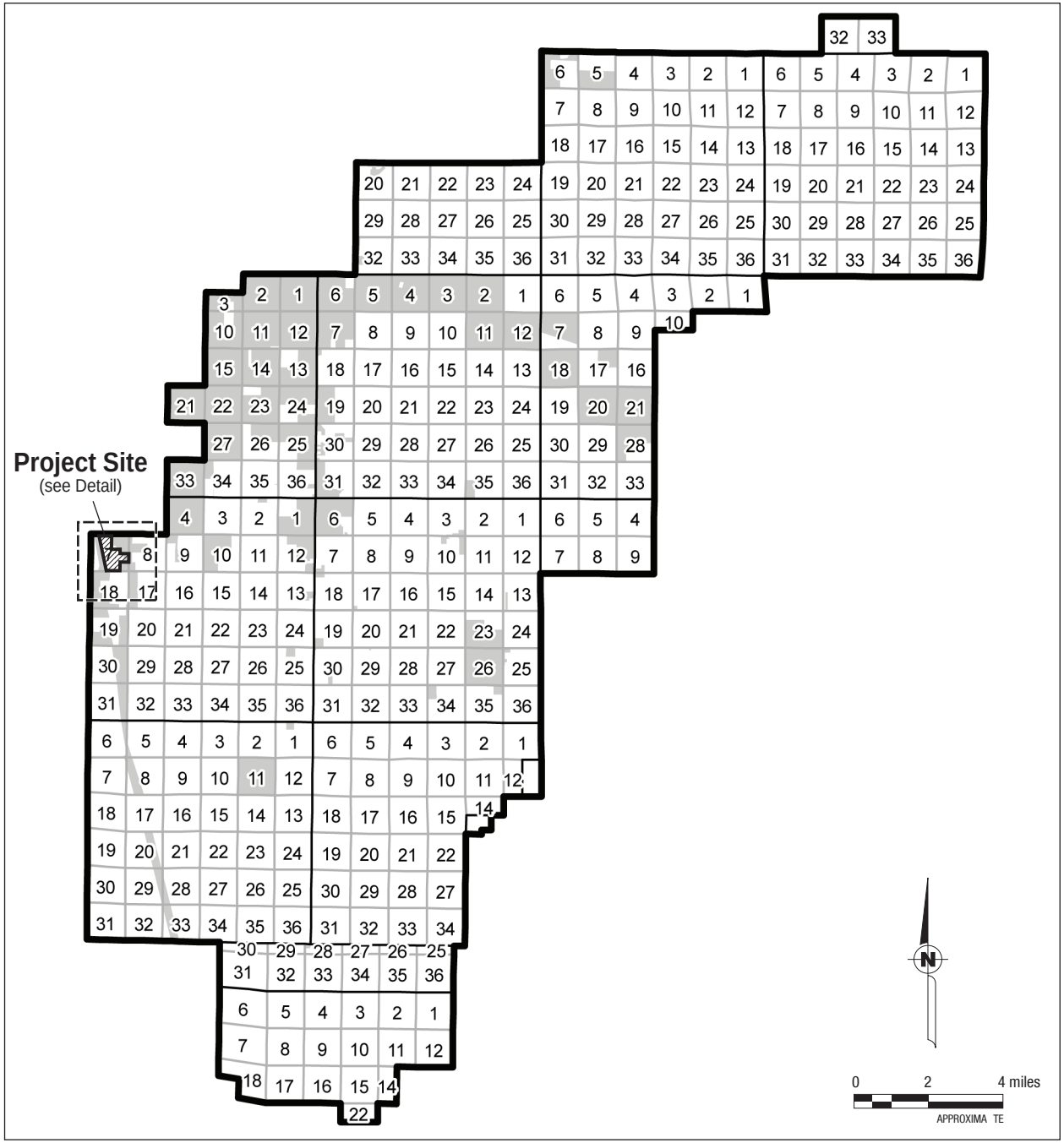
Project Phasing

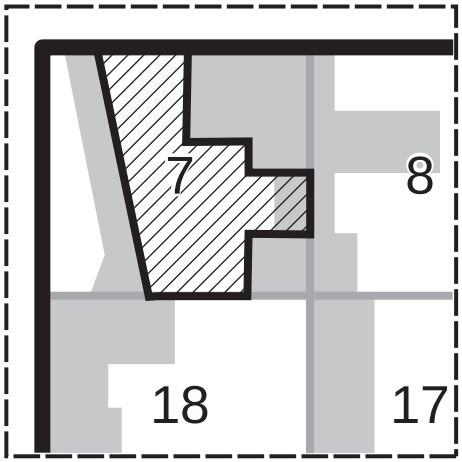
Implementation of the proposed Project is planned to be developed in phases over a twenty-five-year period. The layout for the individual phases is unknown at this time. The construction details regarding a construction start date is unknown at this time.

Water Supply

Water would be provided to the project site by the California Water Services Company (Cal Water), which provides service through of 24 Districts within California. The proposed project is not located within an existing service area but is approximately 0.5 mile south of the Bakersfield District (District). To serve the proposed project, Cal Water would require approval from the California Public Utility Commission (CPUC) to expand its service area to include the proposed project. Cal Water will submit an application to the CPUC and anticipates receiving approval to expand its serving to the proposed site in mid to late 2019. A water service line would be extended from an existing 12” Cal Water main located on the east side of Wible Road at the intersection with Engle Road (CR 918), then east along an alignment along the section line, currently a disturbed unimproved dirt dairy access road within the County’s road reservation, to the intersection of S. H St. and DiGiorgio Road (CR 704), then continue east and across S.R. 99 to the northwest corner of the proposed project site along DiGiorgio Road. If needed by Cal Water, a second water main extension would begin at the current end of the 12” water main located on the south side of Shafter Road at the east side of the General Shafter Elementary School, continue east along Shafter Road in an existing right-of-way to the intersection with Costajo Road, then continue east and across SR-99 to the intersection with Chevalier Road in existing right-of-way, then continue north in existing right-of-way to the south side of the proposed project north of Houghton Road. A treated water service line would be constructed from the southwest corner of the proposed WWTP westerly under SR-99, continuing to the Kern Island Canal and the Kern Island Recharge Basins located near the northwest corner of S. H St & Houghton Road as an outfall location for excess treated recycled water. An agreement with Kern Delta District will be required.

This Page Intentionally Left Blank





Project Site Detail

LEGEND

- 99 Houghton Project Site
- Agricultural Preserve 13
- Townships
- PLSS Sections
- Portion Excluded From Agricultural Preserve

99 HOUGHTON INDUSTRIAL PARK PROJECT
CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07
AGRICULTURAL PRESERVE #13 EXCLUSION

Agricultural Preserve No. 13 Map

Figure 3-7

This Page Intentionally Left Blank

3.6 Entitlements Required

The Kern County Planning and Natural Resources Department, as lead agency for the proposed Project, has discretionary authority over the primary project proposal. Construction and operation of the proposed Project may require certain discretionary actions and approvals including, but not limited to, the following:

Kern County

- Consideration and certification of a final Environmental Impact Report (FEIR) with appropriate State CEQA Guidelines Sections 15091 Findings, 15093 Statement of Overriding Considerations, the mitigation measures monitoring reporting program by the Kern County Planning Commission and Kern County Board of Supervisors
- Approval by the Kern County Board of Supervisors for a general plan amendment for the proposed Project site, to amend the existing land use designation from R-IA (Resource – Intensive Agriculture) to LI (Light Industrial), SI (Service Industrial), HC (Highway Commercial), and GC (General Commercial)
- Approval by the Kern County Board of Supervisors for a zone change (ZCC) for the Project site, to remove the existing A (Exclusive Agriculture) zoning classification and rezone the Project site M-1 PD (Light Industrial, Precise Development Combining), M-2 PD (Medium Industrial, Precise Development Combining), CH PD (Highway Commercial, Precise Development Combining), and C-2 PD (General Commercial, Precise Development Combining)
- Approval by the Kern County Board of Supervisors for a conditional use permit (CUP) for a Sewer Treatment Plant;
- Exclusion of the Project site from Agricultural Preserve No. 13
- ~~Approval by the Kern County Board of Supervisors and processing of a parcel map(s)~~
- ~~Kern County Public Works Department – construction, grading, and building permits~~
- ~~Kern County Environmental Health Services Division – Water well permits, if applicable~~
- ~~Kern County Fire Department – Fire Safety Plan~~
- ~~Kern County Permit for Occupancy~~

Other Responsible Agencies

- California Department of Fish and Wildlife
- Agreements/Permits/Authorizations pursuant to the California and federal Endangered Species Acts, if necessary

- Approval by California Department of Transportation (Caltrans) for encroachment permit(s) for road access to the project site under Caltrans jurisdiction
- Regional Water Quality Control Board (RWQCB) permits
- State Water Resources Control Board National Pollutant Discharge Elimination System (NPDES) Permit
- General Construction Stormwater Permit (Preparation of a SWPPP)
- Approvals from the California Public Utilities Commission for any project elements to be constructed by regulated public utilities
- San Joaquin Valley Air Pollution Control District (SJVAPCD) – Fugitive Dust Control Plan, Authority to Construct, Permit to Operate, any other permits as necessary
- Other additional permits or approvals from responsible agencies may be required for the proposed Project

Upon completion of the environmental review process and prior to construction, the proposed Project would be reviewed through standard County plan check procedures, to verify that the Project conforms to all applicable County design criteria.

3.7 Cumulative Projects

CEQA requires that an EIR evaluate a project's cumulative impacts. Cumulative impacts are the project's impacts combined with the impacts of other related past, present and reasonably foreseeable future projects. As set forth in the CEQA Guidelines, the discussion of cumulative impacts must reflect the severity of the impacts, as well as the likelihood of their occurrence; however, the discussion need not be as detailed as the discussion of environmental impacts attributable to the project alone. As stated in CEQA, Public Resources Code, Section 21083(b) (2), "a project may have a significant effect on the environment if the possible effects of a project are individually limited but cumulatively considerable."

According to the CEQA Guidelines:

Cumulative impacts refer to two or more individual effects, which, when considered together, are considerable and which compound or increase other environmental impacts.

(a) The individual effects may be changes resulting from a single project or a number of separate projects.

(b) The cumulative impact from several projects is the change in the environment, which results from the incremental impact of the project when added to other closely related past, present, and reasonable foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time (California Code of Regulations [CCR], Title 14, Division 6, Chapter 3, §15355).

In addition, as stated in the CEQA Guidelines, it should be noted that:

The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable (CCR, Title 14, Division 6, Chapter 3, Section 15064[I][5]).

Each environmental topic has a different way of evaluating cumulative effects. Cumulative impact discussions for each environmental topic area are provided at the end of each technical analysis contained within Chapter 4, under "*Impacts and Mitigation Measures*." The San Joaquin Valley Air Pollution Control District (SJVAPCD) requires use of a 1-mile radius to identify hazardous air pollutant emissions as well as most odor sources. The SJVAPCD also recommends a one-mile limit for hazardous air pollutants because such emissions primarily affect individuals that reside or work within the immediate vicinity (1 mile) of the emissions source. The Kern County Planning and Natural Resources Department's Guidelines for Preparing an Air Quality Assessment for Use in Environmental Impact Reports requires a six-mile radius to assess cumulative impacts because housing growth, especially in rural areas, tends to affect a larger geographical area than developments located in urban areas.

As set forth in the CEQA Guidelines, related projects consist of "closely related past, present, and reasonable foreseeable probable future projects that would likely result in similar impacts and are located in the same geographic area" (CCR, Title 14, Division 6, Chapter 3, Section 15355). City and County files were reviewed to determine the number of permitted or planned projects within the 1 to 6-mile radius. The cumulative analysis in Chapter 4 of this Recirculated Draft EIR is based on a quantitative cumulative analysis of the projects located within this 6-mile radius of the proposed Project, as well as growth projections to the year 2030. Different resource-specific analyses use this 6-mile radius unless specific methodology deems other supplemental approaches are appropriate. Projects that are planned but have not been submitted for review or approved by the City or County are not included in this analysis because there is no way to know or ascertain what they might consist of, be approved, or be completed.

EIRs that have been prepared for various areas surrounding Bakersfield by the City and County have been incorporated into the Bakersfield General Plan EIR and the MBGP Update EIR (June 2002). The Bakersfield General Plan EIR states that between 1987 and 2010, an expected 112,620 dwelling units will be built. The MBGP Update EIR expects an additional 39,500 residential units from 2010 to 2020. Both of these EIRs considered the impacts from the development of additional residential construction within the proposed Project area.

The MBGP is the primary guide for land development in the proposed Project vicinity. The Land Use Element provides for a growth in commercial and industrial development similar to the existing rate and anticipates the growth rate will parallel the growth rate in residences to the unincorporated areas of the County. The proposed Project can and should be considered part of this projected growth.

Table 3-5, *Cumulative Projects List for Kern County,* lists pending projects within a six-mile radius of the Project site pertaining to Kern County projects. Table 3-6, *Cumulative Projects List for the City of Bakersfield,* lists pending projects within a six-mile radius of the Project site pertaining to City of Bakersfield Projects. These projects were considered when analyzing cumulative conditions and impacts

This Page Intentionally Left Blank

.

Table 3-5. Cumulative Projects List for Kern County

Zone Map	Project	Location or APN	Acres	Description
142	Cruz, Gabriel/B Anderson	Western Section of South "H" Street, North of Bear Mountain Boulevard	N/A	AR Trucking, Products and Services; CUP
143	Recology Blossom Valley Organics/ Nicole Proiette	1261 North Wheeler Ridge Road	N/A	Modification of CUP 27, Map 143 (Community Recycling)
143	Douglas Kaiser	13627 Chevalier Road (APN 185-381-31)	15.25	Ag Truck Facility, CUP
142	Beard Family Trust	184-310-23	38.16	CUP for concrete batch plant per Section 19.12-030G of County Zoning Ordinance
143	Fresno MSA Limited Partnership dba Verizon Wireless	14911 Adobe Road (APN 185-310-03)	N/A	CUP to allow a 150-foot tall monopole wireless communication facility with associated equipment shelter
143	Dominguez/Cuevas by Afinar Civil Engineers	Northeast corner of Di Giorgio Road and South Union Avenue (APN 185-050-03)	17.89	GPA from RR to GC; ZCC from A to C-2
143	Delgado By Jaime Sandoval	Western Section of Union Avenue, 5/8 mile south of Bear Mountain Boulevard	N/A	GPA from 8.1 to 5.7/2.3; ZCC to E(5)
143	Jose Ramos By Jaime Sandoval	West of South Union Avenue, ½ mile south of Bear Mountain Blvd.	21.18	GPA from 8.1 to 5.7/2.3, ZCC to E (5)
142	Jon Moule	Northeast Corner of Progress Road and Shafter Road	20	GPA from R-IA to RR, ZCC from A to E (2½)
143	Bakersfield Land Company LLC by Delmarter	Costajo Road and Bear Mountain Blvd.	20	GPA RR to HC; ZCC from A-1 to CH
143	Nolan Campbell	13308 South Union Avenue	N/A	Metropolitan Bakersfield GPA from ER to Mineral and Petroleum; ZCC from E(1) to NR
142	DFI Commercial & Residential Project by CE	Weedpatch Highway between Mountain View Road and McKee	73	GPA to Commercial and Residential; ZCC to Commercial and Residential
143	Loma Vista Real Estate / D&D	3130 Di Giorgio Road	9.92	ZCC to E (2½) RS
142	Gill, Punit K by GW Wilson	Northeast Corner of Gosford and Chaidez	9.218	ZCC change to E (2½) RS
143	NSR Investors	South Side of Suckow, West of Flint	61.32	ZCC to 4-1 MP, M-1

Table 3-5. Cumulative Projects List for Kern County

Zone Map	Project	Location or APN	Acres	Description
143	Guadalupe Jimenez	17221 South Union Avenue	3.30	ZCC to M-1 or M-2
142	Juarez, Ethel	10604 South "H" Street	4.00	ZCC to C-2
143	Miguel de Leon	14103 South Union Avenue	9.64	ZCC from A to M-1 PD
143	K&P Stenderup Family Trust	Southwest corner of Bear Mountain Boulevard and Weedpatch Highway	20	ZCC from Agriculture to Commercial
143	Arnold S. Kirschenmann	Northwest corner of Bear Mountain Boulevard and Weedpatch Highway	20	ZCC for future development of Travel Plaza
123	Lopez, Pablo / Frank Slinkard	3018 Wood Lane	N/A	ZCC to R-1; CUP
160	Rudnick Feedlot / Philip and Daniel Rudnick	Old River Road 2 miles south of I-5 (APN 295-110-31)	320.00	CUP, Feedlot
161	Silver Oak / David & Douglas Kaiser	Northeast Corner of Teale Road and Adobe Road	632	CUP, Dairy
161	Rosa Dairy / Agricultural Man Systems	South of Herring, West of Wheeler Ridge Road	640	CUP, Dairy
161	Bloomfield / Tillema, Rich / John Schaap	Bear Mountain Road and Cottonwood Road	1,274	CUP, Dairy
124	Mayberry, Danny	3125 South Fairfaxs	N/A	CUP
124	Del Toro, Joe	5516 Weedpatch Highway (APN 174-011-05)	5.00	CUP, Ag Trucking Facility
124	Ana Maria Garay	6214 Kimber Avenue	2.50	CUP, firewood sales
124	Douglas Escalante	7401 Reynolds Street	1	CUP
124	Michael E. Ford	7837 East White Lane	4.51	CUP, outdoor event venue Section 19.08.085
160	California Bioenergy LLC	20400 Old River Road	300.57	CUP, co-digestion facility
124	Raul Perez	Southeast corner of Pacheco Road and Cottonwood	39.49	CUP, park (soccer fields)
124	Verizon Wireless	5941 Panama Lane	2.44	CUP to allow a wireless communication facility

Table 3-5. Cumulative Projects List for Kern County

Zone Map	Project	Location or APN	Acres	Description
123	THV Enterprises, Inc. Attn: Chris Ghasabyan	1015 Castro Lane	N/A	CUP to convert church to community care facility
124	Broadband Integrators Attn: Robert Gonzales	6217 Brundage Lane	N/A	CUP
124	Alfonso G. Moreno	1213 Feliz Drive	N/A	CUP
123	Salvador Cruz	Northwest corner of Taft Highway and Cerro Drive	0.12	GPA from GC to SI; ZCC from C-2 to M-2 PD
123	Munn and Fong Chau	Northwest corner of Michele Street and Taft Highway	6.78	GPA from SR to GC; ZCC from E(1) to C-2 PD
124	Firas Mufli	1300 Union Avenue	1.25	GPA, ZCC to C-2
124	Cornerstone Engineering / Louis Rodriguez	Southwest corner of Mountain View Road and Weedpatch Highway	73.17	GPA from E(R) to GC and HMR; ZCC from A to C-2 and R-3
124	Joshua Huff	113 Pepper Drive	2.11	GPA from 5.4 to 7.1; SPA
124	Valdez, Maria/San Joaquin Eng'g	170 and 180 Berkshire Lane	N/A	ZCC to C-2
124	Solis, Luis Manuel	6221 East Brundange Lane	2.70	ZCC to M-1 PD
123	Keith Spurlock	21 Stine Road	0.15	ZCC to small office
124	Ghaleb Haddad	1227 Ming Avenue	0.24	ZCC from R-1 to C-2
124	Ruben Escalera	328 Trinity Avenue	0.14	ZCC from R-1 to R-2
124	Carlos Amezcua	8005 Blackburn Street	2.52	ZCC from A-1 MH to E(1) RS MH and M-1 PD
124	Felipe Laines by LAV Consulting	1955 East Panama Lane	10.65	ZCC, parking/storage for trucks
124	Shakib Dashtipour	South Fairfax Road and East Panama Lane	N/A	ZCC E(2 ½) RS MH PE FPS to C-2 PD

Table 3-6. Cumulative Projects List for the City of Bakersfield

Project Number	Project	Location or APN	Acres	Description
Environmental Impact Reports				
07-2211	Crossroads EIR	South of Harris Road, north of Panama Lane, and west of Gosford Road	69.85	Tentative Tract Map / Site Plan Review
Zone Changes				
ZC 16-0365	N/A	N/A		ZCC from A to M-1
Annexations				
654	Michelle No. 1	N/A	6.83	Annexation
658	Taft Highway No. 2	N/A	15.24	Annexation
669	Panama No. 22	N/A	0.90	Annexation
667	Old River Road Detachment	Detachment "B"	1.48	Annexation
675	White No. 11	N/A	0.45	Annexation

File Number	Developer/Subdivider	Engineer	Acres	Tract Number
Tentative Tract Map				
T6503R	BAK BULLFROG LLC	R THOMPSON CONSULTING	N/A	6503
T6505	GLOBAL INVESTMENT & DEVELOPMENT, LL	HENDRICKS ENGINEERING		6505
T6514	GLOBAL INVESTMENT & DEVELOPMENT, LL	HENDRICKS ENGINEERING		6514
T6519	JAMES T MURPHY	PINNACLE ENGINEERING		6519
T6521	BVGG LLC.	PINNACLE ENGINEERING		6521
T6522R	RYER ISLAND LAND CO.	PINNACLE ENGINEERING		6522
T6531	LENNAR HOMES	SMITHTECH USA INC		6531
T6551	MARGUERITE GARRONE BENTZ	JOHN R WILSON		6551
T6585	GLOBAL INVESTMENT & DEV, LLC	HENDRICKS ENGINEERING		6585

File Number	Developer/Subdivider	Engineer	Acres	Tract Number
T6615	ENNIS LAND DEVELOPEMENT, LLC	QUAD KNOPF		6615
T6739	PB1-VENTURES, LLC	SMITHTECH USA INC		6739
T6741	SANTA BARBARA CAPITAL	McINTOSH & ASSOC		6741
T6744	SANTA BARBARA CAPITAL	McINTOSH & ASSOC		6744
T6745	SANTA BARBARA CAPITAL	McINTOSH & ASSOC		6745
T6747	SANTA BARBARA CAPITAL	McINTOSH & ASSOCIATES		6747
T6748	SANTA BARBARA CAPITAL	McINTOSH & ASSOC		6748
T6749	SANTA BARBARA CAPITAL	McINTOSH & ASSOCIATES		6749
T6750	SANTA BARBARA CAPITAL	McINTOSH & ASSOCIATES		6750
T6788	NIRMAL S GILL	SAN JOAQUIN ENGINEERING, INC		6788
T6792	PB3, PB6, PB7- VENTURES LLC	SMITHTECH USA		6792
T6802	FLOYD HINESLEY	PORTER-ROBERTSON		6802
T6807	DELRAY DEVELOPMENT	STANTEC CONSULTING INCV		6807
T6811	LYNX REALTY & MANAGEMENT	DEWALT CORPORATION		6811
T6849	TREND CAPITAL	MC INTOSH & ASSOCIATES		6849
T6859	ADAVCO, INC.	SMITHTECH USA INC		6859
T6860	ADAVCO, INC.	SMITHTECH USA INC		6860
T6865	EAST PANAMA LLC	DELMARTER & DEIFEL		6865
T6868	JM DEVELOPMENT INC.	MC INTOSH & ASSOCIATES		6868
T6871	COTTONWOOD VILLAS, LLC	HENDRICKS ENGINEERING		6871
T6873	PB 5 VENTURES LLC	SMITHTECH-USA		6873
T6874	PB 5 VENTURES LLC	SMITHTECH USA INC.		6874
T6875	PB5 VENTURES LLC	SMITHTECH USA		6875
T6880	LENNOX HOMES	SMITHTECH USA		6880
T6917	SITARAM HAPPY HOMES, LLC	PINNACLE ENGINEERING		6917

File Number	Developer/Subdivider	Engineer	Acres	Tract Number
T6919	KERN DELTA LAND DEVELOPMENT	CORNERSTONE ENGINEERING, INC.		6919
T6945	GGB PROPERTIES LLC	TERRA SURVEYING CONSULTANTS		6945
T7043	PB1-VENTURES, LLC	SMITHTECH USA, INC		7043
T7044	PB1-VENTURES, LLC	SMITHTECH USA, INC		7044
T7045	PB1-VENTURES, LLC	SMITHTECH USA, INC		7045
T7113	WINCHESTER WOOLLARD	PINNACLE ENGINEERING		7113
T7140	OLD RIVER LAND CO LLC	SUMMIT ENGINEERING		7140
T7190	PB3 VENTURES LLC	SMITHTECH USA		7190
T7191	PB3 VENTURES LLC	SMITHTECH USA		7191
T7192	PB3 VENTURES LLC	SMITHTECH USA		7192
T7193	PB7 VENTURES LLC	SMITHTECH USA		7193
T7194	PB7 VENTURES LLC	SMITHTECH USA		7194
T7195	PB6 VENTURES LLC	SMITHTECH USA		7195
T7196	PB6 VENTURES LLC	SMITHTECH USA		7196
T7213	OLD RIVER LAND CO	SUMMIT ENGINEERING		7213
T6181	GLOBAL INVESTMENT & DEVELOPMENT CO.	HENDRICKS ENGINEERING		6181
T6283R	S.W.M. DEVELOP. TRACT 6283	DELMARTER AND DEIFEL		6283
T6369	FLOYD HINSLEY	PORTER-ROBERTSON ENGINEERING		6369
T6410	HERSHEL & CLARISSA MOORE	DELMARTER AND DEIFEL		6410
T6442	ADAVCO, INC.	SMITHTECH USA, INC.		6442
T6616-2R	110 McCUTCHEN LLC	THE LUSICH COMPANY INC		6616
T7136	TRIMARK PACIFIC HOMES	THE LUSICH CO		7136
T7165	OLD RIVER LAND CO	SUMMIT ENGINEERING		7165
T7226	BERKSHIRE BAKERSFIELD LLC	DELMARTER & DEIFFEL		7226
T6520	LENOX HOMES	DELMARTER & DEIFFEL		6520

File Number	Developer/Subdivider	Engineer	Acres	Tract Number
T6712	ADAVACO, INC.	SMITHTECH USA INC.		6712
T7253	CLEAR CREEK HOMES	PORTER & ASSOC		7253
T7261	PANAMA LANE PROPERTIES, LLC	MC INTOSH & ASSOCIATES		7261
T6746	SANTA BARBARA CAPITAL	McINTOSH & ASSOCITATE		6746
T6969	CENTEX HOMES	McINTOSH & ASSOCIATES		6969
T6759	CENTEX HOMES	MC INTOSH & ASSOCIATES		6759
T6743	SANTA BARBARA CAPITAL	McINTOSH & ASSOCIATES		6743
T6825	CENTEX HOMES	MC INTOSH & ASSOCIATES		6825
T6536	LENNAR HOMES OF CALIFORNIA	SMITHTECH USA INC		6536
T6760	CENTEX HOMES	McINTOSH & ASSOC		6760
T6742	SANTA BARBARA CAPITAL	McINTOSH & ASSOCIATES		6742
T6397	ADAVCO INC	SMITHTECH USA		6397
T6607	MICHEL GARONE	PORTER-ROBERTSON ENGINEERING		6607
T6755	GLOBAL INVESTMENT & DEVP LLC	HENDRICKS ENGINEERING		6755
T7263	PANAMA LANE PROPERTIES, LLC	McINTOSH & ASSOC		7263
T6663	THE JOHN M ANTONGIOVANNI TRUST	PACIFIC ENGINEERING ASSOCIATES, INC		6663
T7301	AKERS LLC	PASQUINI ENGINEERING INC		7301
T7262	PANAMA LANE PARTNERS, LLC	McINTOSH & ASSOCIATES		7262
T6899	M. S. WALKER & ASSOCIATES, INC.	CRC ENTERPRISES		6899
T7029	EAST PANAMA LLC	DELMARTER & DEIFEL		7029
T7267	RIVER RANCH COMMUNITY, LLC	DPSI		7267

File Number	Developer/Subdivider	Engineer	Acres	Tract Number
T7304	OLD RIVER ROAD, LLC	DPSI		7304

Tentative Parcel Map

Project Number	Subdivider	Engineer	File Number	Map Type
12023	BEECH A/C PROPERTIES, LLC	JASON VAN CUREN, PLS	P12023	STANDARD
12086	WIBLE INVESTORS II, LLC	SMITHTECH USA	P12086	STANDARD
12123	GTIS GID HOLDINGS, LLC	SMITHTECH USA INC.	P12123	STANDARD
12122	GTIS GID HOLDINGS, LLC	SMITHTECH USA INC.	P12122	STANDARD
12167	STEVE ANTONGIOVANNI ET. AL.	McINTOSH & ASSOCIATES	P12167	STANDARD
12169	ROLL REAL ESTATE DEVELOPMENT LLC	DPSI	P12169	CONDOMINIUM
12173	M&R INVESTMENT GROUP, LLC	McINTOSH & ASSOC	P12173	STANDARD
11864	SUKHVINDER SINGH GHUMAN	HIGHER GROUND	P11864R	STANDARD
11118	CASTLE & COOKE CALIFORNIA, INC	MC INTOSH & ASSOCIATES	P11118R	STANDARD
11554	WILLIAM LEE	DEE JASPAR & ASSOCIATES	P11554	STANDARD
11592	LEONARDO LOPEZ	HENDRICKS ENGINEERING	P11592	STANDARD
11614	JESUS & ADRIANA CONTRERAS	WILEY D HUGHES SURVEYING	P11614	STANDARD
11718	BAKERSFIELD GROVE LTD, LLC	M.S. WALKER & ASSOC INC	P11718	STANDARD
11773	GREGORY D BYNUM ASSOC	McINTOSH & ASSOC	P11773	STANDARD
11783	METRO NOVA DEVELOPMENT	DEWALT CORP	P11783	STANDARD
11809	OLD RIVER LAND CO LLC	SUMMIT ENGINEERING	P11809	STANDARD

11874	PANAMA & GOSFORD RETAIL LLC	HIGHER GROUND	P11874	STANDARD
11331	THREE GILLS INC, A CALIFORNIA CORP	DELMARTER AND DEIFEL	P11331	STANDARD
11472	ARNULFO ZEPEDA	NELMS SURVEYING INC	P11472	STANDARD
11879	CASTLE & COOKE COMMERCIAL-CA	McINTOSH & ASSOC	P11879	STANDARD
11865	CASTLE & COOKE COMMERCIAL\	McINTOSH AND ASSOC	P11865	STANDARD
10606	RUBEN MIRONOWSKI	DAWSON ENGINEERING & ASSOC.	P10606	STANDARD
11992	BENTON PARK LLC	H3 ASSOCIATES	P11992	STANDARD

Specific Plan Review

Project Number	Type	Address	Dwelling Units	Description
13-0266	COMMERCIAL	9855 COMPAGNONI STREET	N/A	HIGHWAY PATROL STATION
SPR16-0252	COMMERCIAL	9800 & 9804 COMPAGNONI STREET	N/A	HOTEL AND RESTAURANT – 78 ROOMS / 54,679 SQUARE FEET
12-0254	COMMERCIAL	4607 WIBLE RD	0	AUTO DEALERSHIP - 6,000 S.F.
12-0247	COMMERCIAL	1800 WHITE LN	0	OFFICE - 864 S.F.
12-0280	INDUSTRIAL	5551 DISTRICT BLVD	0	WAREHOUSE BG - 6,600 S.F.
12-0289	COMMERCIAL	4621 WHITE LN	0	MEDICAL OFFICE - 845 S.F.
12-0311	COMMERCIAL	7800 SILVER DOLLAR WAY	0	TRAILER SALES / SHOP - 7000 S.F.
12-0358	COMMERCIAL	700 PLANZ RD	0	RETAIL BG - 3,300 S.F.
12-0319	MISCELLANEOUS	9100 ELLASHOSH ST	0	CHURCH - 1,500 S.F.
12-0073	COMMERCIAL	571 Panama Ln	0	1541 sf Addition to existing convenience store
12-0432	COMMERCIAL	6900 McCutchen Rd	0	18,701 square foot office/warehouse buildings
13-0061	COMMERCIAL	3515 PANAMA LN	0	Fitness Club - 18,370 sf
13-0149	INDUSTRIAL	67 East White Lane	0	Auto dismantling facility in an M-3
13-0060	INDUSTRIAL	7225 Schirra Ct	0	9,750 sf warehouse
13-0164	INDUSTRIAL	4200 Resnick Ct	0	Warehouse/office 14,560sf
13-0171	INDUSTRIAL	7700 District Blvd	0	Warehouse/Office 30,860sf
13-0169	COMMERCIAL	3221 Taft Hwy	0	Convenience Store addition 591sf
13-0206	MISCELLANEOUS	1451 MADISON AVE	0	75-foot tall stealth wireless communications facility
12-0002	INDUSTRIAL	5010 YOUNG ST	0	75,600 square foot industrial office/warehouse building
13-0347	COMMERCIAL	5100 YOUNG ST	0	22,316 SF general office building & 1,836 SF addition to existing building
13-0319	INDUSTRIAL	3451 Panama Lane	0	70' stealth wireless comm. facility in a C-2
13-0354	INDUSTRIAL	3232 STINE RD	0	84-foot tall stealth wireless facility in a C-1 zone
13-0364	INDUSTRIAL	4801 S H ST	0	72' stealth wireless facility in a C-1
13-0377	INDUSTRIAL	5102 PARK DIANE AVE	0	6,506 sf general office & 1,216 storage buildings

13-0371	COMMERCIAL	2540 WIBLE RD	0	1850 sf Restaurant
13-0389	COMMERCIAL	5300 GASOLINE ALLEY DRIVE	0	5400sf ADD to service garage
13-0397	MISCELLANEOUS	5614 WOODMERE DRIVE	0	12000 sf church
14-0078	INDUSTRIAL	5913 WOODMERE DR	0	industrial office/warehouse 4235 sf
14-0124	COMMERCIAL	8601 South H St	0	13,401sf assembly building & 8,480 sq ft social hall
14-0125	INDUSTRIAL	5907 WOODMERE	0	3920sf Industrial office / Warehouse
14-0169	COMMERCIAL	4250 Ashe Road	0	two modular office buildings totaling 11,610 sq ft
14-0215	RESIDENTIAL	4103 Rock Lake Dr	2	492 sf 2d DU
14-0323	INDUSTRIAL	6013 Nathaniel Way	0	7,157 sf office/warehouse
14-0283	INDUSTRIAL	4516 District Blvd	0	6,000 sf warehouse (additional to existing)
14-0408	INDUSTRIAL	5500 Gasoline Alley Drive	0	12,100-square foot auto dealership repair shop
14-0456	INDUSTRIAL	5813 NATHANIEL WAY	0	Office/Warehouse - 4130sf
15-0019	COMMERCIAL	2500 White Ln	0	Restaurant - 1,776 s.f. w/Drive through
14-0466	INDUSTRIAL	5700 Woodmere Drive	0	Retail/Warehouse - 6,006 s.f.
15-0047	COMMERCIAL	3117 WILSON RD	0	Banquet Hall 16,451 s.f.
15-0132	COMMERCIAL	3105 AUTO MALL DR	0	672 SF automobile sales office
15-0151	INDUSTRIAL	5901 WOODMERE DR	0	4248 sf Ofc/Warehouse
15-0159	INDUSTRIAL	5815 WOODMERE DR	0	3920 sf ofc/warehouse
15-0105	COMMERCIAL	5701-6411 Gosford Road	0	786,370-sq ft retail center in M-2
15-0231	INDUSTRIAL	4325 Stine Road	0	6,000-sf industrial office/warehouse building
15-0203	COMMERCIAL	2303-2305 S Union Ave	0	51,815 sf RETAIL CENTER
15-0274	COMMERCIAL	7700 District Boulevard	0	15,210 SF RESTARUANT/BREWERY BLDG
14-0177	MISCELLANEOUS	5703 Nathaniel Way	0	11,088 sf church building in an M-1
15-0393	RESIDENTIAL	6503 JERNO DR	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	6507 JERNO DR	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	6511 JERNO DR	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	6601 JERNO DR	2	1 DUPLEXE of 57 TOTAL

15-0393	RESIDENTIAL	6605 JERNO DR	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	6609 JERNO DR	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	6613 JERNO DR	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	6617 JERNO DR	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	6703 JERNO DR	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	6707 JERNO DR	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	6711 JERNO DR	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	6715 JERNO DR	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	6719 JERNO DR	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	6801 JERNO DR	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	6807 JERNO DR	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	6811 JERNO DR	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	6815 JERNO DR	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	6819 JERNO DR	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	6600 JERNO DR	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	6606 JERNO DR	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	6612 JERNO DR	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	6616 JERNO DR	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	6702 JERNO DR	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	6706 JERNO DR	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	6712 JERNO DR	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	6716 JERNO DR	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	6722 JERNO DR	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	6800 JERNO DR	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	6806 JERNO DR	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	5200 GASOL CT	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	5204 GASOL CT	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	5208 GASOL CT	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	5212 GASOL CT	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	5216 GASOL CT	2	1 DUPLEXE of 57 TOTAL

15-0393	RESIDENTIAL	5000 CALLADO LN	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	5004 CALLADO LN	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	5010 CALLADO LN	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	5016 CALLADO LN	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	5102 CALLADO LN	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	5108 CALLADO LN	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	5114 CALLADO LN	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	5200 CALLADO LN	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	5208 CALLADO LN	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	5216 CALLADO LN	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	5001 CALLADO LN	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	5005 CALLADO LN	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	5009 CALLADO LN	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	5013 CALLADO LN	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	5017 CALLADO LN	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	5103 CALLADO LN	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	5107 CALLADO LN	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	5111 CALLADO LN	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	5115 CALLADO LN	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	5205 CALLADO LN	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	5209 CALLADO LN	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	5217 CALLADO LN	2	1 DUPLEXE of 57 TOTAL
15-0393	RESIDENTIAL	5221 CALLADO LN	2	1 DUPLEXE of 57 TOTAL
15-0430	COMMERCIAL	4550 PANAMA LN	0	TIRE SHOP - 8099 SF
15-0446	COMMERCIAL	5203 YOUNG ST	0	ATHLETIC TRAINING FACILITY
15-0425	COMMERCIAL		0	10.023 sf outpatient medical clinic
15-0365	COMMERCIAL	4151 Mexicali Dr	0	720 s.f. Modular Medical office building
15-0486	COMMERCIAL	6600 COLONY ST	0	1850 S.F. RESTRAUNT w/ Drive thru
15-0509	MISCELLANEOUS	4300 STINE ROAD	0	63 FT STEALTH WIRELESS TOWER
16-0026	COMMERCIAL	3699 Wilson Rd	0	351 SF ADD. TO CONVENIENCE STORE

16-0037	RESIDENTIAL	5201 GASOL CT	216	APT COMPLEX - 216 units
16-0070	COMMERCIAL	2201 S UNION AVE	0	WRHSE conversion to Truck repair shop
16-0171	INDUSTRIAL	7224 SCHIRRA CT	0	Warehouse - 20,000 sf
16-0113	RESIDENTIAL	1418 ROSALIA DR	2	2ND DU
16-0198	RESIDENTIAL	2301 WILSON RD	2	2ND DU
16-0174	COMMERCIAL	6300 White Lane	0	CRV Recycling facility
16-0192	INDUSTRIAL	6514 & 6515 Woodmere Dr	0	Ofc Bldg 26,925 sf
16-0245	COMMERCIAL	7315 WHITE LN	0	Car Wash & detail shop
16-0256	MISCELLANEOUS	4500 Hughes Lane	0	Water Well
16-0257	MISCELLANEOUS	3411 Hosking Ave (	0	water well (#225-01)
16-0191	COMMERCIAL	3301 Wible Rd`	0	Mini Mart addition
16-0288	MISCELLANEOUS	3608 Brisbane Ave	0	Unmanned water treatment facility
16-0357	INDUSTRIAL	2612 Pacheco Rd	0	TEMP. Auto Storage
16-0356	INDUSTRIAL	2620 Pacheco Rd	0	TEMP. Auto Storage
16-0358	INDUSTRIAL	2604 Pacheco Rd	0	TEMP. Auto Storage
16-0368	COMMERCIAL	5700 Gasoline Alley Dr	0	64,675 sq ft auto service repair shop
16-0376)	COMMERCIAL	2128 SOUTH UNION AVE	0	commercial truck repair facility 16,090 sf
16-0417	COMMERCIAL	7701 WHITE LN	0	CRV Recycling
16-0482	RESIDENTIAL	4602 CROSSHAVEN AVE (#B)	2	2nd du
16-0460	COMMERCIAL	6710 COLONY ST	0	RETAIL BLDG - 22000 sf
16-0474	COMMERCIAL	2309 South Union Ave	0	14,428 sf Banquet Hall
16-0481	INDUSTRIAL	8701 SWIGERT CT	0	9694 SF Ofc/Warehouse
16-0474	COMMERCIAL	8101 STINE RD	0	11715 SF ENTRY & DINING HALL ADD.

Source: City of Bakersfield, July and August 2017.

Section 4.1

Aesthetics

Section 4.1
Aesthetics

4.1.1 Introduction

This section discusses impacts associated with the potential for the proposed Project to degrade the existing visual character or quality of the site and its surroundings through changes in the existing landscape. Potential effects are evaluated relative to important visual features (e.g., scenic highways, scenic features), and the existing visual landscape and its users.

Degradation of the visual character of a site is usually addressed through a qualitative evaluation of the changes to the aesthetic characteristics of the existing environment, and the proposed Project-related modification that would alter the visual setting. Aesthetics, as addressed under the California Environmental Quality Act (CEQA), refers to visual considerations in the physical environment. Because a person's reaction and attachment to a given viewshed are subjective, visual changes inherently affect viewers differently. Accordingly, aesthetics analysis, or visual resource analysis, is a systematic process to logically assess visible change in the physical environment and the anticipated viewer response to that change. This Aesthetics section of this Recirculated Draft Environmental Impact Report (RDEIR) describes the existing landscape character of the project site, existing views of the surrounding area from various on-the-ground vantage points, the visual characteristics of the project site, and the landscape changes that would be associated with the implementation of the proposed project, as seen from various vantage points.

Issues of visual blight are addressed by considering the potential for urban decay that may be precipitated or exacerbated in metropolitan Bakersfield and its environs and by considering the indirect changes in visual quality that could occur as a result of the proposed Project. Visual blight related to urban decay is defined as a general deterioration of the urban landscape that is characterized by long-term building vacancies, poor building maintenance, and increased vandalism. This definition of urban decay is based on the *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) (124 Cal. App. 4th 1184) decision.

The term *visual blight*, as referred to in this Recirculated Draft Environmental Impact Report (RDEIR), is a condition where real property, by reason of its appearance, is detrimental to the property of others or to the aesthetic value of adjacent properties or reduces the aesthetic appearance of the neighborhood. The analysis regarding potential impacts from urban decay is based on the Urban Decay Study prepared in August 2017 by The Natelson Dale Group, Inc. See Appendix K, *Urban Decay Study*, and Appendix N, *Original Technical Studies*.

4.1.2 Environmental Setting

Local Character

The proposed Project is located is located approximately 1.10 miles southeast of the Bakersfield City limits, within the Metropolitan Bakersfield General Plan, in Kern County. The proposed

Project consists of approximately 314.3 acres, generally located north of Houghton Road, east of State Route (SR) 99, west of South Union Avenue, and south of DiGiorgio Road. The proposed Project location is illustrated on Figure 3-2, *Project Vicinity*, of the Recirculated Draft EIR.

On-site topography is relatively flat, with elevations ranging between 331 and 340 feet above mean sea level (msl). The proposed Project is mostly vacant; however, a steel storage building associated with agricultural activities is located in the eastern portion of the site, near South Union Avenue. The proposed Project site consists of disked land and has been previously utilized for row-crop agriculture consisting of cotton, alfalfa, carrot, corn, wheat, and grain. Views across the proposed Project site are currently unobstructed due to the existing agricultural use of the site and level terrain. Public viewers of the site include motorists traveling along the surrounding roadways. Refer to Figure 4.1-1, *Photograph Vantage Point Locations*, and Figures 4.1-2, *Key Observation Point A*, 4.1-3, *Key Observation Point B,* 4.1-4, *Key Observation Point C*, and 4.1-5, *Key Observation Point D*, that show representative pictures of the proposed Project site and surrounding area.

Key Observation Points (KOPs) Existing Conditions

Existing land uses in the area include vacant land and agricultural uses to the north, agricultural uses and a small cluster of single-family residential homes to the east, SR-99 to the west, and agricultural uses and an automobile wrecking yard located south/southeast of proposed Project site.

KOP A - Northward Views from Houghton Road.

Views northward toward the project site consist of existing agricultural land that depending on the season is vegetated or fallow with exposed bare ground. From this vantage point the proposed Project site appears completely flat with no structures or landforms. On the northwesterly side and northerly side of the proposed Project site off-site trees are visible. Prominent landforms to the northwest and north are absent and significant landform features area lacking. Distant views of the mountains to the northeast and available depending on the weather conditions and air quality but are largely obscured by intervening vegetation and structures. There are no prominent views of the project site from this location as significant features in the landscape are lacking. Refer to Figure 4.1-2, *Key Observation Point A*.

KOP B - Eastward Views from Houghton Road.

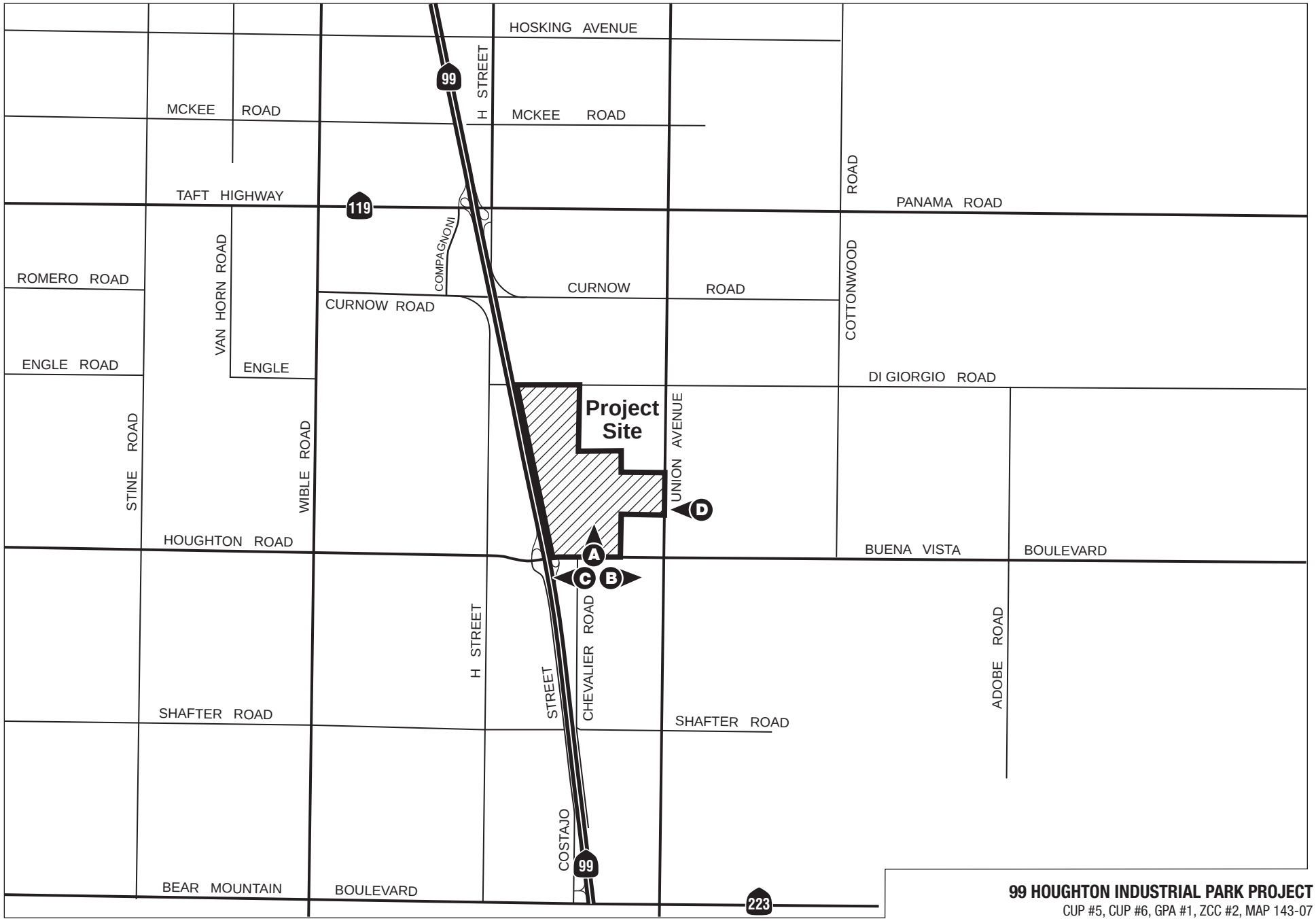
Views eastward and northeasterly toward the project site consist of existing agricultural land that depending on the season is vegetated or fallow with exposed bare ground. The northerly side of the Houghton Road shoulder is heavily disturbed and largely unvegetated and contains wooden utility poles that run along the entire southern project boundary. Approaching Union Avenue views of the automobile wrecking yard come into view and the palm trees lining the eastern project boundary are visible. Distant views of the mountains between the central valley and points east are visible depending on weather and air quality conditions but partially obscured from intervening structures and trees. There are no prominent views of the project site from this location as significant features in the landscape are lacking. Refer to Figure 4.1-3, *Key Observation Point B*.

KOP C - Westward Views from Houghton Road.

Views westward and northwesterly toward the project site consist of existing agricultural land that depending on the season is vegetated or fallow with exposed bare ground. The northerly side of the Houghton Road shoulder is heavily disturbed and largely unvegetated and contains wooden utility poles that run along the entire southern project boundary. Approaching SR-99 there is a dirt road that "T's" with Houghton Road and provides access to the interior of the site. At this point Houghton Road begins to slope upward to provide elevation for the overpass over SR-99. Approaching SR-99 there are trees visible on the westerly side of SR-99. There are no prominent views of the project site from this location as significant features in the landscape are lacking. Refer to Figure 4.1-4, *Key Observation Point C.*

KOP D - Westward Views from Union Avenue.

Views from Union Avenue westward across the project site consist of existing agricultural land that depending on the season is vegetated or fallow with exposed bare ground. The westerly side of Union Avenue is lined with mature palm trees and utility poles that run along the entire southern project boundary (the palm trees are visible in the Photo for KOP-B). Westerly views from Union Avenue approaching Houghton Road consist of a small cluster of single-family rural residential homes with numerous out buildings and other structures, as well as automobile wrecking yard at the northwest corner of the intersection. A sparse tree line on the westerly side of SR-99 is visible, but there are no prominent distant views from this vantage point and there are no significant features in the landscape. Refer to Figure 4.1-4, *Key Observation Point D.*



0 2000' 4000'
APPROXIMATE

99 HOUGHTON INDUSTRIAL PARK PROJECT
CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07
AGRICULTURAL PRESERVE #13 EXCLUSION

Photo Vantage Point Locations

Figure 4.1-1

View looking north across the Project site from Houghton Road.

99 HOUGHTON INDUSTRIAL PARK PROJECT
CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07
AGRICULTURAL PRESERVE #13 EXCLUSION

not to scale

Key Observation Point A

Figure 4.1-2

View looking east along Houghton Road towards Union Avenue.

99 HOUGHTON INDUSTRIAL PARK PROJECT
CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07
AGRICULTURAL PRESERVE #13 EXCLUSION

Key Observation Point B

Figure 4.1-3

View looking west along Houghton Road towards SR-99 ramps (adjacent to the Project's southern boundary).

99 HOUGHTON INDUSTRIAL PARK PROJECT
CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07
AGRICULTURAL PRESERVE #13 EXCLUSION

Key Observation Point C

Figure 4.1-4

View looking west across the Project site from Union Avenue.

99 HOUGHTON INDUSTRIAL PARK PROJECT
CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07
AGRICULTURAL PRESERVE #13 EXCLUSION

Key Observation Point D

Figure 4.1-5

Regional Character

The unincorporated area outside of Metropolitan Bakersfield is currently dominated by agricultural lands (crops and orchards) and other resources designated industrial uses, crisscrossed by country roads, and interspersed with older farmhouses. The majority of housing development and urbanization is taking place within the surrounding planning areas of Metropolitan Bakersfield and the City of Shafter.

Lighting Environment

The Bakersfield area has a nighttime light environment that is visible from great distances, but the character of the nighttime environment changes with increasing distance from the downtown area.

The proposed Project site is devoid of any substantial development. As such, the area produces little light. Light that is produced would be minimally visible from any off-site areas or to drivers on adjacent roadways. Because the majority of the surrounding area is also vacant or have very low residential densities, there are no substantial light sources in the immediate vicinity. Minimal light and glare emanates from the single-family residential uses east of the proposed Project site and the automobile wrecking yard southeast of the Project site. The existing agricultural land to the north and south do not currently create substantial or unusual amounts of light or glare onto the proposed Project site. Additionally, because the surrounding areas are used for agriculture, no sensitive light receptors are located near the proposed Project.

There are two typical types of light intrusion. First, light emanates from the interior of structures and passes out through windows. Second, light projects from exterior sources, such as street lighting, security lighting and landscape lighting. Glare mainly results from sunlight reflection off flat building surfaces, with glass typically contributing the highest degree of reflectivity. Light introduction can be a nuisance to adjacent residential areas and diminish the view of the clear night sky, and if uncontrolled, can disturb wildlife in natural habitat areas. Perceived glare is the unwanted and potentially objectionable sensation as observed by a person as they look directly into the light source of a luminaire.

Light spill-over is typically defined as the presence of unwanted and/or misdirected light on properties adjacent to the property being illuminated.

Economic Environment

To determine whether the proposed Project would create condition for urban decay, the local market and the economic character of existing commercial development are evaluated. The economic setting is based on 2017 The Natelson Dale Group's (TNDG's) Urban Decay Study, which is included as Appendix K of this Recirculated Draft EIR. The analysis in the Urban Decay Study was based on market research and interviews with area real estate brokers, along with other sources of economic data.

Taxable sales in retail stores in Bakersfield accounted for 56 percent of total sales in Kern County in 2014 (TNDG 2017). The City with the next highest retail store sales was the City of Shafter, which had retail stores sales representing six (6) percent of total sales in Kern County. Bakersfield

serves a retail shopping destination for the larger surrounding metropolitan area as well as Kern County as a whole (TNDG 2017).

The overall vacancy rate of retail space in Bakersfield has declined from approximately 14 percent in 2010 to 10.7 percent at the end of 2015. This was up slightly from the 9.6 percent vacancy rate at the end of 2014. The slight uptick in the vacancy rate resulted from the closing of grocery stores, in addition to the construction of several retail shopping centers with speculative space, but not from weakness in the retail market. This slight uptick would likely be temporary as several of the large vacancies are expected to be leased throughout this year (TMDG 2017).

4.1.3 Regulatory Setting

This regulatory framework identifies the federal, State, regional, and local statutes, ordinances, or policies that govern the light, glare, viewshed, and scenic character that must be considered by Kern County during the decision-making process for projects that have the potential to affect aesthetics.

Federal

U.S. Department of Transportation

The U.S. Department of Transportation Act of 1966, Section 4(f), "Protection of Publicly Owned Park, Recreation Area, Wildlife or Waterfowl Refuge, or Land from Historic Sites," was established to provide certain protections to publicly owned parks; recreation areas; wildlife and waterfowl refuges; and land from historic sites of national, State, or local significance. Section 4(f) requires that the federal agency must show that there are no feasible or prudent alternatives to the use of these areas.

The project would not result in the conversion of existing publicly owned park areas. Therefore, project compliance with the U.S. Department of Transportation Act of 1966 was not considered in this analysis.

National Scenic Byways Program

The National Scenic Byways program is part of the U.S. Department of Transportation, Federal Highway Administration (FWHA). The program was established under the Intermodal Surface Transportation Efficiency Act of 1991 and was reauthorized in 1998 under the Transportation Equity Act for the 21st Century. Under the program, the U.S. Secretary of Transportation recognizes certain roads as National Scenic Byways or All-American Roads based on their archaeological, cultural, historic, natural, recreational, or scenic qualities. There are no National Scenic Byways or All-American Roads located within Kern County.

U.S. Department of Agriculture, Forest Service

The National Trails System Act (NTSA) of 1969 seeks to preserve scenic and natural qualities along trails and recognizes the rights of private landowners and provides that "full consideration shall be given to minimizing the adverse effects upon the adjacent landowner or user and his operation" in the development and use of a trail (National Park Service [NPS], 2009).

The NTSA assigns management responsibility for trails to various federal resource agencies, depending on which agency holds jurisdiction over the public lands on which the trail is located in a given area (U.S. Forest Service, U.S. Park Service, or BLM). The Pacific Crest Trail was created under the NTSA to provide for outdoor recreation opportunities and the conservation of significant scenic, historic, natural, or cultural qualities. The Pacific Crest Trail stretches 2,650 miles from Mexico to Canada through California, Oregon, and Washington and is designated in the KCGP as a scenic feature. The U.S. Forest Service administers the Pacific Crest Trail in the vicinity of the project, even though there are no federally owned lands involved with this project. The Pacific Crest Trail is located approximately 24 miles southeast of the project site at its closest point. Therefore, project compliance with the NTSA was not considered in this analysis.

State

California Environmental Quality Act (CEQA)

CEQA Guidelines define a "significant effect" on the environment to mean a "substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance" (California Code of Regulations [CCR], Title 14, § 15382, 2010).

California Department of Transportation (Caltrans)

The California Department of Transportation (Caltrans) manages the California Scenic Highway Program, which was created in 1963 by the California legislature to preserve and protect scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to highways. The program includes a list of highways that are eligible for designation as scenic highways or have been designated as such. A highway may be designated as scenic based on certain criteria, including how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes on the traveler's enjoyment of the view. State laws governing the Scenic Highway Program are found in the Streets and Highways Code, Sections 260 through 263.

The County does not contain Designated State Scenic Highways or scenic resources. However, the County does include segments of three Eligible State Scenic Highways consisting of SR-14 north of Mojave, SR-58 east of Mojave, and an approximately 5-mile-long segment of SR-41, which crosses through the extreme northwest corner of the County (Caltrans, 2017). The nearest Eligible State Scenic Highway to the proposed project is more than 50 miles east of the proposed project.

Local

Metropolitan Bakersfield General Plan (MBGP)

The Aesthetics Element of the Metropolitan Bakersfield General Plan evaluates the visual and aesthetic setting of Metropolitan Bakersfield and assesses the potential for visual impacts. According to the Aesthetic Element, the proposed Project is not identified as a significant scenic resource.

The Metropolitan Bakersfield General Plan provides goals and policies for the design features of development projects in order to reduce impacts of such projects. The aesthetic goals and policies are discussed in Table 4.1-1, *Metropolitan Bakersfield General Plan Goals and Policies For Aesthetics*, below.

Table 4.1-1. Metropolitan Bakersfield General Plan Goals and Policies for Aesthetics
Goals and Policies: Land Use Element
Goal #3: Accommodate new development which is compatible with and complements existing land uses.
Goal #7: Establish a built environment which achieves a compatible functional and visual relationship among individual buildings and sites.
Policy #21: Encourage a separation of at least one-half mile between new commercial designations.
Policy #26: Encourage adjacent commercial uses to be of compatible height, setback, color and materials.
Policy #28: Require that commercial development provide design features such as screen walls, landscaping and height, setback and lighting restrictions between the boundaries of adjacent residential land use designations so as to reduce impacts on residences due to noise, traffic, parking, and differences in scale.
Policy #30: Street frontages along all new commercial development shall be landscaped.
Policy #34: Provide for the clustering of new industrial development adjacent to existing industrial uses and along major transportation corridors.
Policy #35: Encourage upgrading of visual character of heavy manufacturing industrial areas through the use of landscaping or screening of visually unattractive buildings and storage areas.
Policy #36: Require that industrial uses provide design features, such as screen walls, landscaping and height, setback and lighting restrictions between the boundaries of adjacent residential land use designations so as to reduce impacts on residences due to light, noise, sound and vibration.
Policy #37: Street frontages along all new industrial development shall be landscaped.
Policy #62: Encourage the use of creative and distinctive signage which establishes a distinctive image for the planning area and identifies principal entries to the metropolitan area, unique districts, neighborhoods and locations.
Policy #71: Promote the establishment of attractive entrances into communities, major districts, and transportation terminals, centers, and corridors within the planning area.
Policy #73: Encourage the establishment of design programs which may include signage, street furniture, landscape, lighting, pavement treatments, public art, and architectural design.
Goals and Policies: Public Services and Facilities Element - Street Lighting
Goal #2: Develop uniform Planning area street light location and design standards.
Policy #4: Require developers to install street lighting in all new developments in accord with adopted city standards and county policies.

Kern County Zoning Ordinance

Chapter 19.81, Dark Skies Ordinance (Outdoor Lighting)

Kern County approved a Dark Skies Ordinance in November 2011. The purpose of this ordinance is to maintain the existing character of Kern County by requiring a minimal approach to outdoor

lighting, recognizing that excessive illumination can create a glow that may obscure the night sky and excessive illumination or glare may constitute a nuisance. The ordinance provides requirements for outdoor lighting within specified unincorporated areas of Kern County to accomplish the following objectives:

- **Objective 1**: Encourage a safe, secure, and less light-oriented nighttime environment for residents, businesses, and visitors.
- **Objective 2**: Promote a reduction in unnecessary light intensity and glare and reduce light spillover onto adjacent properties.
- **Objective 3**: Protect the ability to view the night sky by restricting unnecessary upward projections of light.
- **Objective 4**: Promote a reduction in the generation of greenhouse gases by reducing wasted electricity that can result from excessive or unwanted outdoor lighting.

Kern County Development Standards

The Kern County Development Standards have specific regulations pertaining to lighting standards. Lighting shall be designed so that light is reflected away from surrounding land uses so as not to affect or interfere with vehicular traffic, pedestrians or adjacent properties.

4.1.4 Impacts and Mitigation Measures

Methodology

The potential aesthetic, light and glare impacts associated with projects are evaluated on a qualitative basis. The evaluation of Project impacts is based on professional judgment, the *Urban Decay Study* prepared by TNDG in August 2017, the Metropolitan Bakersfield General Plan goals and policies related to visual resources, and the significance criteria established by CEQA.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the CEQA Guidelines, to determine if a project could potentially have a significant impact. Such an impact would occur if the proposed project would:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway;
- Substantially degrade the existing visual character or quality of the site and its surroundings; and/or
- Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

Project Impacts

Impact 4.1-1: The Project Would Have a Substantial Adverse Effect on a Scenic Vista.

The proposed Project is not designated as, or located near land designated as, visually significant or "scenic" according to the Metropolitan Bakersfield General Plan and the Kern County General Plan. Additionally, development of the proposed Project would not block or preclude views to any area containing important or what would be considered a scenic vista. Therefore, no scenic vista would be affected by development of the proposed Project, and impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.1-2: The Project Would Substantially Alter or Damage Scenic Resources, Including but not Limited to, Trees, Rock outcroppings, and Historic Buildings Within a State Scenic Highway.

According to the Metropolitan Bakersfield General Plan, the proposed Project is not located near what would be considered a visually appealing landform, scenic resource, or state designated scenic highway. The are no scenic trees or rock outcroppings, or historic buildings on the project site. Therefore, impacts are considered to be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.1-3: The Project Would Substantially Degrade the Existing Visual Character or Quality of the Proposed Project Site and Its Surroundings.

Impacts from Site Development

Project construction activities would temporarily disrupt views across the site, from surrounding areas. Graded surfaces, construction debris, construction equipment, and heavy truck traffic would be visible. Soil would be stockpiled and equipment for grading activities would be staged at various locations. These impacts would be short-term and would cease upon Project completion.

Project implementation would alter the nature and appearance of the proposed Project site from agricultural uses and primarily vacant land to light and service industrial development, and highway and general commercial uses. On-site structures would be visible from surrounding areas. This alteration of appearance is permanent and would continue throughout the life of the proposed Project. Views of the primarily vacant agricultural land that currently comprise the proposed Project site are available to motorists and pedestrians along the surrounding roadways. Other than the steel storage building associated with agricultural activities is located in the eastern portion of the site, near South Union Avenue, the majority of views of the proposed Project site are currently unobstructed, so the change in visual character from open space to developed conditions would be a distinct visual alteration of the Project site.

Although the visual appearance of the proposed Project site may change, visual qualities would not be degraded. The proposed Project would include landscaping requirements and light and glare limiting requirements identified within the Kern County Zoning Ordinance and Development Standards. As shown in the figures presenting the Key Observation Points, views across the project site are largely unobstructed in the foreground and middle ground. Distant views; however, are not prominent and are partially obstructed by intervening vegetation and structures. Additionally, the proposed Project is located near to industrial and commercial uses existing to the east; therefore, the new industrial development would not be inconsistent with the adjacent uses. While placement of new structures associated with the proposed Project would alter the visual character of the site, this would not be considered a substantial degradation of the Project site. Visual changes to the proposed Project site and its surroundings are considered less than significant. To further reduce impacts, the proposed Project would incorporate mitigation related to project design, landscaping, architectural features, and screening. With the implementation of mitigation measures impacts would be further reduced.

Impacts from Urban Decay

Of the approximate 314.3-acre project area, the proposed Project retail components would include zoning classifications of approximately 22 acres for C-2 PD (General Commercial, Precise Development Combining) uses, 25 acres of CH PD (Highway Commercial, Precise Development Combining). The proposed Project would contain approximately 4,613,004 square feet (net building area) of warehousing, distribution, and retail showroom uses, which may draw business from existing commercial centers in the region. This could result in urban decay if other stores close as a result of the loss of business and the buildings remain vacant and unmaintained for extended periods of time.

The Retail Trade Area (RTA) used in this analysis is defined using Regional Statistical Areas (RSA). The RSA's are geographical polygons that have been defined by the Kern County Council of Governments (Kern COG) for the purposes of demographic analysis and regional planning. The RSA's are comprised of smaller geographical units called Transportation Analysis Zones (TAZ) which have also been defined by Kern COG and are comparable in size to census tracts.

The boundaries of the trade areas evaluated in this report are shown on Figure 4.1-6, *Retail Trade Areas*, and are defined as follows:

1. *Retail Trade Area (RTA)*: The RTA is comprised of three RSA's: Metropolitan Bakersfield Southwest, Metropolitan Bakersfield Southeast, and Greater Arvin.

   The RTA includes the bulk of the populated area and retail inventory in Metropolitan Bakersfield. The proposed Project site is near the southern boundary of the RTA. There is very little existing population to the south and more population growth is anticipated in areas to the north. For these reasons, most of the retail demand for the proposed Project is anticipated to come from the north of the site and very little from the south.

   The Urban Decay Study estimated total and net supportable retail space in the RTA. The total supportable retail space in the market area represents retail space that is projected to be supported by future demand. The percent of total supportable retail is an estimation of the proposed Project's share of future total demand, in the form of supportable retail store square footage.

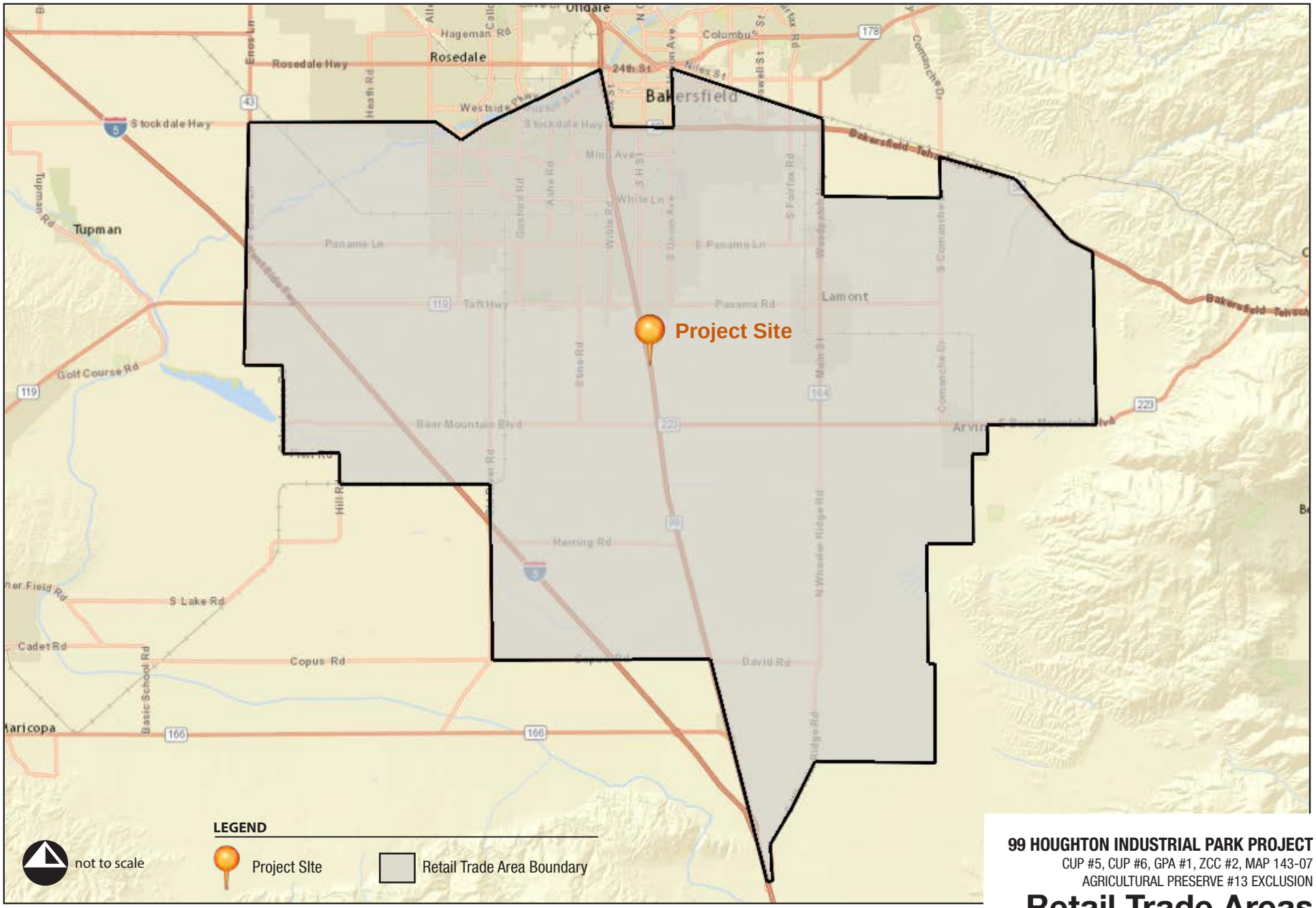
   The square footage projections shown in Table 4.1-2, *Total Supportable Retail Square Footage for the Retail Trade Area, are* based on sales per square foot estimates for each retail category that could potentially be represented by retailers in the proposed Project. The retail categories assessed in the RTA include apparel, general merchandise stores, drug stores, household and home furnishings, household appliance dealers, farm and garden supply stores, specialty/other, food stores, eating and drinking establishments, building materials/hardware, and automotive supplies and parts (TNDG 2010).

Table 4.1-2. Total Supportable Retail Square Footage for the Retail Trade Area

Retail Summary Category	2015	2020	2025	2030	2035
Shopper Goods	4,416,321	4,705,748	5,194,138	5,682,528	6,170,918
Convenience Goods	2,230,928	2,377,133	2,623,846	2,870,559	3,117,272
Heavy Commercial Goods	1,534,626	1,635,198	1,804,909	1,974,619	2,144,330
Total	8,181,875	8,718,079	9,622,893	10,527,706	11,432,520
Proposed Project as Percent of Total Supportable Retail Space					
Proposed Project (square feet)	0	511,380	511,380	511,380	511,380
Percent of Supportable Retail	0.0%	5.9%	5.3%	4.9%	4.5%

Source: Urban Decay Study, The Natelson Dale Group, Inc., August 2017.

From 2015 to 2020, the total supportable retail space in the RTA is projected to increase from approximately 8.2 million square feet to 8.7 million square feet. The proposed Project's retail square footage is projected to represent approximately 5.9 percent of the RTA's total supportable retail square footage in 2020. Based on projected growth in population and retail demand, the proposed Project's share of the RTA's total supportable square footage is projected to decrease to 5.3 percent by 2025 and 4.5 percent by 2035.



99 HOUGHTON INDUSTRIAL PARK PROJECT
CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07
AGRICULTURAL PRESERVE #13 EXCLUSION

Retail Trade Areas

Figure 4.1-6

The net supportable retail space is the net growth in available demand from period to period, again as represented by supportable retail space, over base demand in 2015, Refer to Table 4.1-3, *Net Supportable Retail Square Footage for the Primary Retail Trade Area*. The proposed Project's percent of net supportable space shows the proportion of new available (i.e., incremental) demand that would be represented by the proposed Project upon completion and in each period thereafter.

Net supportable retail square footage is based on demand from a combination of two sources: 1) the assumed recaptured of existing demand generated by trade area residents that is currently being spent outside the trade area; plus 2) growth in demand within the trade area based on projected increases in population.

Table 4.1-3. Net Supportable Retail Square Footage for the Primary Retail Trade Area

Retail Summary Category	2015	2020	2025	2030	2035
Shopper Goods	43,939	333,366	821,756	1,310,146	1,798,536
Convenience Goods	228,037	374,243	620,956	867,669	1,114,381
Heavy Commercial Goods	204,816	305,389	475,100	644,810	814,521
Total	476,793	1,012,998	1,917,811	2,822,625	3,727,438
Proposed Project as Percent of Total Supportable Retail Space					
Proposed Project (square feet)	0	511,380	511,380	511,380	511,380
Percent of Supportable Retail	0.0%	50.0%	26.7%	18.1%	13.7%

Source: Urban Decay Study, The Natelson Dale Group, Inc., August 2017.

The RTA is projected to generate approximately 1.01 million square feet of new net supportable retail space between 2015 and 2020 in the RTA. New net supportable retail space is projected to increase to 1.9 million square feet by 2025 and 3.7 million square feet by 2035. The proposed Project's retail square footage is estimated to represent approximately 50.5 percent of net supportable square feet in the RTA in 2020. The proposed Project's proportion of net supportable square footage is expected to decrease to 26.7 percent by 2025 and 13.7 percent by 2035.

The proposed Project does not represent a significant enough proportion of the existing demand in the market place to cause, in and of itself, significant closures of existing retail businesses in the RTA. In addition, existing economic conditions in the area's retail market have largely improved over the past five years, with vacancy rates declining from 14 percent (2010) to 10.7 percent (2015).

Even with relatively modest growth in population, the Urban Decay Study (provided in Appendix K) estimates that future net demand for retail space is more than sufficient to accommodate the proposed Project without significant impact on existing retailers. The proposed Project's retail space represents approximately 50 percent of the new net supportable retail space in the RTA by 2020.

The Urban Decay Study (provided in Appendix K) notes that technically there would be sufficient demand to support the retail components of the proposed Project by 2020. If the proposed Project's retail components are tied to its other proposed light industrial land uses, then it is likely that the retail would be developed at the same time as the other uses. As noted above, the proposed Project is anticipated to be built out over a 25-year development period.

While it is not possible to determine with absolute certainty that the proposed Project would have no economic effects on existing retail businesses in the trade area, it is anticipated that the proposed Project would not have a significant enough impact to cause urban decay. In this context, it is important to note that the terms "economic impact" and "economic effect" refer to loss of sales, or at most, closure of a business. Under CEQA, such purely economic impacts are not in themselves considered significant. To meet the definition of a "significant impact" under CEQA, there must be a substantial *physical* effect. For example, the competitive effects of a new project could result in a substantial economic impact to an existing business, leading to its closure and result in the vacancy of that space. If that space remained vacant for an extended period without regular maintenance such that it was subject to physical deterioration, then urban decay conditions could ultimately ensue. However, it is not anticipated that the proposed Project is likely to be the primary cause of the closure of any existing retailers, much less that it is likely to create conditions severe and prolonged enough to cause closures that would lead to physical urban decay.

Given these findings, it can be concluded that development of the proposed Project would not contribute to urban decay and a degradation of the existing visual character.

Mitigation Measures

MM 4.1-1: Prior to the issuance of building permits, the project operator shall demonstrate compliance with ~~one of~~ the following:

a. The project proponent shall present a plan to color treat the proposed warehouse and office buildings to blend in with the colors found in the surrounding natural landscape while not producing reflection, as approved by the Kern County Planning and Natural Resources Department;

MM 4.1-2: The following aesthetic features shall be required in site plans and building permits for commercial buildings located within 1,000 feet of the State Route 99 corridor:

a. Rooftop screening features shall be installed to create a visual screen for rooftop mechanical equipment, such as a parapet or screening material.

b. Reflective metal exteriors shall not be used as exterior architectural elements in buildings immediately adjacent to State Route 99.

MM 4.1-3: Prior to the issuance of building permits for any facilities on the project site, the project applicant shall submit to the Kern County Planning and Natural Resources Department for approval, a landscape plan that will effectively buffer foreground views of the proposed project site from State Route 99. This landscape plan shall include, but is not limited to, landscape structural elements (such as fencing), and planting materials consistent with current Kern County landscape requirements and shall be cleared of trash and debris at least monthly during the year.

The plan shall also include:

a. Preparation by a licensed Landscape Architect and approval by the Kern County Planning and Natural Resources Department Director prior to buffer planting;

b. The plan shall include California native, drought-tolerant plants.

c. The plan shall provide for an irrigation plan as required under the Kern County Zoning Ordinance 19.86.070.

d. Should perimeter fencing be proposed, fencing materials shall be constructed of any materials commonly used in the construction of fences and walls such as wood, stone, rock, tubular steel, wrought iron, or brick, or other durable materials. Masonry block walls shall be decorative and not bare masonry blocks. Decorative materials can include a façade, colored masonry blocks, or other materials. Fencing proposed around sumps may be chain-link with view obscuring slats. Barbed wire is not permitted.

e. A 20-foot wide perimeter buffer along any visible boundary from the State Route 99 frontage and shall be included as part of the landscape plan. This buffer shall consist of live ground cover, shrubs, or grass, and:

1) One (1) tree having a minimum planting height of six (6) feet for every fifty (50) lineal feet of buffer;

2) Shrubs which reach a minimum height of four (4) to six (6) feet.

3) Live ground cover consisting of low-height plants, or shrubs, or grass shall be planted in the portion of the landscaped area not occupied by trees or evergreen shrubs.

4) Bare gravel, rock, bark or other similar materials may be used, but are not a substitute for ground cover plantings, and shall be limited to no more than twenty-five (25) percent of the required landscape area.

5) Landscaping shall be installed prior to final occupancy.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.1-4: The Project Would Create a New Source of Substantial Light and Glare That Would Adversely Affect Daytime or Nighttime Views of the Area.

The proposed Project may introduce new sources of lighting into the Project area. Introduction of new lighting from the proposed Project may include lights within and around the proposed industrial uses (warehousing, distribution, and retail showroom), parking lot lighting, and security lighting. Light sources from the on-site industrial development may have a significant impact on

the surrounding areas. Additionally, on-site light sources may create light spillover and glare impacts on surrounding land uses in the absence of mitigation.

The proposed Project represents an extension of urban growth and development south of the City of Bakersfield. Most of the lighting for the proposed Project would not substantially affect views in this area because the light generated would be typical of industrial development. There are no sensitive receptors to lighting within the proposed Project site, and the majority of the proposed lighting would be consistent with existing lighting in developing areas of Metropolitan Bakersfield. Lighting strategies such as directional lighting and lighting hoods would further minimize light and glare from these sources and reduce spill light and glare on adjacent properties.

Motorists would observe new light and glare in the area, especially in areas where no lights currently exist. Impacts to motorists resulting from lighting would be minimized through compliance with the Kern County Zoning Ordinance, and the goals, policies, and implementation measures of the General Plan. Compliance with the Kern County Dark Skies Ordinance would be required.

The lighting within the proposed Project site would comply with County standards, including Title 19.82.090(K) of the Kern County Zoning Ordinance, which indicates that lighting used to illuminate parking areas shall be directed away from any adjacent properties and streets. In accordance with the goals and policies previously outlined in this section, lights would be focused downward and would not be directed off-site. In addition, implementation of mitigation measures would minimize the potential for spillover lighting to affect motorists adversely to a less than significant level.

Mitigation Measures

MM 4.1-4: The project shall continuously comply with the following: project facility lighting shall comply with the applicable provisions of the *Dark Skies Ordinance* (Chapter 19.81 of the Kern County Zoning Ordinance), and shall be designed to provide the minimum illumination needed to achieve safety and security objectives. All lighting shall be directed downward and shielded to focus illumination on the desired areas only and avoid light trespass into adjacent areas. Lenses and bulbs shall not extend below the shields.

MM 4.1-5: Prior to the issuance of building permits for any facilities on the project site, the project applicant shall submit, and the Kern County Planning and Natural Resources Department shall have approved, plans verifying all outdoor lighting is designed so that all direct lighting is confined to the project site property lines and that adjacent properties and roadways are protected from spillover light and glare.

Level of Significance after Mitigation

Impacts would be less than significant.

Cumulative Impacts

Impacts from Site Development

Construction of currently approved and pending projects in the Project vicinity would permanently alter the nature and appearance of the area through loss of open space. As development occurs throughout the proposed Project area, residents and visitors would notice the visual effects of urbanization. The significance of these visual and aesthetic changes is difficult to determine, because aesthetic value is subjective and potential impacts are site-specific. Security and parking lot lighting would introduce light and glare potential to the area. Cumulative impacts can be mitigated to less than significant levels with use of building materials that are consistent with the general character of the area, landscaping design and proper lighting techniques to direct light on-site and away from adjacent properties. Additionally, cumulative projects will be designed consistent with the land use designations, zoning requirements, and other requirements of the County. The absence of scenic vistas, major landforms, and scenic resources in the area all contribute to a finding of less than cumulatively significant with implementation of existing Kern County development regulations and Mitigation Measures MM 4.1-1 through MM 4.1-5.

Impacts from Urban Decay

The known active planned and pending retail projects in the PRTA would total approximately 1.4 million square feet of retail space. It is possible that the RTA could become overbuilt during the period between 2020 and 2035, unless aggregate retail development planned during that period is substantially reduced or delayed. If an overbuilt retail environment does develop, there would be a potential for business failures with resulting closures of retail facilities in the RTA. However, most of the future tenants of the proposed Project and planned and pending projects have not yet been identified. As such, it is currently not possible to identify which retail categories might become overbuilt, or to identify existing businesses in those categories which might be forced to close. For the purposes of the State CEQA Guidelines, it is not required, or valid, to engage in speculative analysis.

A more likely cumulative scenario is that infrastructure constraints and retail market conditions would result in a more gradual buildout of planned retail development, such that the pace of retail development would more closely follow the growth in retail demand, an assumption consistent with prevailing industry customs and practices (Appendix K, *Urban Decay Study*). Under this scenario, there is less potential for overbuilt conditions to occur, and consequently a reduced potential for building vacancies and urban decay to follow. Any attempt to identify businesses which might be affected under this scenario, whose closures might ultimately result in urban decay and degradation of visual character would be speculative in nature.

Attempting to predict whether actual retail projects will ultimately be proposed and developed, estimating the square feet of retail development that might ultimately be developed and/or the timing of the potential development would be speculative at best. As such, it is currently not possible to identify which retail categories could possibly become overbuilt, or to identify existing businesses in those categories which might be forced to close if the potential retail components of these projects are ultimately developed. Therefore, any attempt to identify specific vacancies which might possibly result, or to determine the potential for physical deterioration or urban decay, would be speculative in this context. For purposes of evaluating CEQA impacts, it is not required or valid

to engage in speculative analysis. Rather, it is assumed that these potential, yet unplanned, retail sites would be developed only if and when future demand dictates, which assumption is consistent with existing industry customs and practice. Therefore, there would be no significant cumulative impacts to existing or reasonably foreseeable retail facilities regarding urban decay or the degradation of visual character in the RTA with the implementation of mitigation measures.

Mitigation Measures

Implement Mitigation Measures MM 4.1-1 through MM 4.1-5, above.

Level of Significance after Mitigation

Impacts would be less than significant.

This Page Intentionally Left Blank

Section 4.2

Agriculture

Section 4.2
Agriculture

4.2.1 INTRODUCTION

The purpose of this section is to document the impacts associated with the conversion of agricultural land to nonagricultural use. This section also discusses the potential conflicts between proposed urban uses and current agricultural activities in the vicinity of the proposed Project. Mitigation measures are recommended to reduce the significance of impacts, where applicable. A Farmland Conversion Study was prepared by McIntosh & Associates in May 2009 (refer to Appendix N). A second Farmland Conversion Study was prepared by McIntosh & Associates in June 2017. See Appendix B, *Farmland Conversion Study*, and Appendix N, *Original Technical Studies*.

4.2.2 Environmental Setting

Regional Agricultural Setting

State of California

California had 80,500 farming operations for the year 2012 (the most recent year available). This number represents less than four percent of the nation's total farming operations, however, these farms account for approximately 12.8 percent of the national gross cash receipts from farming (McIntosh & Associates 2017).

California farmland totaled 25.4 million acres for the year 2010, down less than 0.5 percent from the year 2010 acreage, and the number of farms decreased by 0.4 percent from the year 2005. The average farm size in California is 312 acres, and approximately 400 crops are recognized in the State, including nearly half of the Unites States, fruits, nuts, and vegetables (McIntosh & Associates 2017).

Kern County

The Valley Region of Kern County is highly suitable for agricultural cultivation. Kern County contains 839,079 acres of harvested land. Within that acreage, 73,550 acres were harvested for vegetable crops, 442,146 acres were harvested for fruit crops, and 339,746 acres were harvested for field crops. Agriculture provides the backbone of the County's economy, with a 2015 total value of nearly $6.9 billion dollars, which was a decrease of approximately 9 percent from the 2014 crop value. The total harvested acreage decreased approximately 4.5 percent. The year 2015 top five commodities were grapes, almonds, citrus, milk and cattle (McIntosh & Associates 2017).

From 1990 to 2006 the County was ranked among California's leading counties in total urbanization and loss of farmland and during that time the amount of "important" and "interim" farmland in Kern County decreased by 88,338 acres. Approximately one-third (approximately 29,000 acres) of this decrease was due to urban-related changes, while two-thirds (approximately 58,000 acres) was associated with the idling of farmland. There are many reasons why farmland may be idled in a particular year and it is not necessarily an indication of permanent farmland loss.

Table 4.2-1, *Years 2013-2014 California Land Conservation (Williamson Act)*, provides total acreages of contracted lands in Kern County (McIntosh & Associates 2017).

Table 4.2-1. Years 2013-2014 California Land Conservation (Williamson Act)

Williamson Act Contract	Prime	632,177 acres
	Non-Prime	911,620 acres
Land Conservation Act Nonrenewal (Year 2011)	Prime	48,158 acres
	Non-Prime	31,628 acres
Farmland Security Zone Contract - Urban	Prime	25,316 acres
	Non-Prime	0 acres
Farmland Security Zone Contract – Non-Urban	Prime	133,751 acres
	Non-Prime	0 acres
Farmland Security Zone – Non-contracted*	Prime	13,172 acres
	Non-Prime	0 acres

Source: McIntosh & Associates, 2017.
*These lands have requested non-renewal of their contract and are in the process of "backing out" of the 9-year contract.

As shown above, a large numbers of property owners are continuing to nonrenew contracted acreage, resulting in a loss of 13,172 acres of prime and nonprime property in the last reporting year. The California Department of Finance (DOF) projects the County's population will grow from its January 1, 2017 population of 895,112 to more than 1.06 million in 2030. This growth in population will continue to decrease the amount of agricultural land in Kern County.

Metropolitan Bakersfield Area

Agriculture in the Metropolitan Bakersfield area has been extensive since the introduction of livestock in the 1860s. Livestock raising on large land grants and some production of grain under dry-farming methods were the chief agricultural pursuits until about 1880. Rapid agricultural development occurred after 1880 due to the development of irrigation (harnessing the uncontrolled flow of water from the Kern River), inexpensive land, favorable crop yields, the advent of two railroads, the development of the petroleum industry and access to markets. A review of the California Department of Food and Agriculture Annual Crop Reports indicates a history of high agricultural production for many crops over the years, continuing to the present time. Factors that have in the past influenced high agricultural productivity and continue today include climate, availability of water, dependable market demand and good soils.

Local Setting and Historic Uses

The proposed Project is generally located between Houghton Road to the south, Di Giorgio Road to the north, State Route (SR) 99 along the western edge, and South Union Avenue (SR-204) along the eastern frontage. Existing adjacent land uses include vacant land and agricultural uses to the north, agricultural uses and a small cluster of single-family residential homes to the east, SR-99 to the west, and agricultural uses and an automobile wrecking yard (Higgins Auto Wrecking) located south/southeast of proposed Project site. A dairy (Richmar Farms #2) is located approximately 1.25 miles southeast of the proposed Project at the northeast corner of South Union Avenue and Shafter Road. Existing dairies are generally located more than two miles east and southwest of the proposed Project.

The proposed Project includes approximately 314.30 acres of agricultural land. The Project site is currently designated R-IA (Resource-Intensive Agriculture) and HC (Highway Commercial), and is zoned A (Exclusive Agriculture). Historically, the Project site has been used for alfalfa and grain production, and sheep grazing. A steel storage building associated with agricultural activities is located in the eastern portion of the Project site, near South Union Avenue (SR-204). In addition, two active, 150 horsepower diesel-powered irrigation wells are located on the Project site. According to the Kern County Agricultural Commissioners Office permit records and information provided by the farmer, the information in Table 4.2-2, *Crops Planted on Proposed Project Site (2003-2015)*, lists the crops grown and pesticides permitted on the proposed Project site from 2004 to 2015:

Table 4.2-2. Crops Planted on Proposed Project Site (2003 - 2015)

Year(s)	Farming Company	Crops Planted	Pesticide and/or Chemical Use
2015	Mitchell Property Management, LP Permit No. 1502896	Alfalfa, Wheat, Fallow	Yukon, Lomite, Fusilade DX, Oroboost, Trifluralin, Boric Acid, MCPA, Dimethylamine Salt, Bromoxynil Octanoate, Ammonium Sulfate, Glyphosate, Isopropylamine Salt, Mepiquat Chloride, Thidiazuron, Fenproatin, Avermectin, Bifenthrin, Pyrithiobac-Sodium, Pyriproxyfen, Dicamba, Diglycolamine Salt, Prometryn, Indoxacarb, Acetamiprid, Glyphosate, Potassium Salt, Pyraflufen-Ethyl, Prowl, Roundup, Leaf Life
2014	Mitchell Property Management, LP Permit No. 1502896	Alfalfa, Corn / Fod	
2013	Mitchell Property Management, LP Permit No. 1502896	Alfalfa, Corn / Fod	
2012	Mitchell Property Management, LP Permit No. 1502896	Alfalfa	
2011	Mitchell Property Management, LP Permit No. 1502896	Alfalfa, Corn / Fod	
2010	Mitchell Property Management, LP Permit No. 1502896	Alfalfa, Oat, Fallow	
2009	Mitchell Property Management, LP Permit No. 1502896	Corn / Fod, Oat / Fod, Alfalfa, Sudan Grass	
2008	Doug Kaiser Farms Permit No. 1500895	Wheat, Alfalfa, Corn / Fod	
2007	Doug Kaiser Farms Permit No. 1500895	Alfalfa, Corn / Fod, Grain	
2006	Jerry P. Mitchell Family Part. L.P. Permit No. 1502896	Alfalfa	
2005	Jerry P. Mitchell Family Part. L.P. Permit No. 1502896	Grain, Alfalfa	
2004	Jerry P. Mitchell Family Part. L.P. Permit No. 1502896	Grain, Alfalfa	
2004	Jerry P. Mitchell Family Part. L.P. Permit No. 1502896	Alfalfa	

Source: Farmland Conversion Study, McIntosh & Associates, May 2009 (refer to Appendix N) and June 2017 (refer to Appendix B).

Additionally, the majority of the proposed Project site (approximately 257.57 acres) is within Agricultural Preserve No. 13 (Refer to Figure 3-7). The proposed Project site is not under a Williamson Act Land Use Contract.

The soil types that occupy the proposed Project consist of Bakersfield fine sandy loam (170.22 acres) and Cajon sandy loam (144.08 acres). The Bakersfield find sandy loam consists of very deep,

poorly drained soil with 0 to 1 percent slopes. The Cajon sandy loam consists of very deep, somewhat excessively drained soils with 0 to 2 percent slopes.

4.2.3 Regulatory Setting

State Regulations

Farmland Mapping and Monitoring Program (FMMP)

Maps of Important Farmlands are prepared by the California Department of Conservation as part of its Farmland Mapping and Monitoring Program (FMMP). Important Farmland maps are prepared periodically for most of the State's agricultural areas based on information from the Natural Resource Conservation Service's soil survey maps, land inventory, and monitoring criteria developed by the Natural Resource Conservation Service and land use information mapped by the California Department of Water Resources. These criteria generally are expressed as definitions that characterize the land's suitability for agricultural production, physical and chemical characteristics of the soil, and actual land use. Important farmland maps are generally updated every two years. The following provides descriptions for the eight mapping categories, five related to farmlands and three associated with nonagricultural purposes:

- *Prime Farmland*: Lands with the combination of physical and chemical features best able to sustain long-term production of agricultural crops. The land must be supported by a developed irrigation water supply that is dependable and of adequate quality during the growing season. It also must have been used for production of irrigated crops at some time during the four years before mapping data was collected.
- *Farmland of Statewide Importance*: Lands with agricultural land use characteristics, irrigation water supplies and physical characteristic similar to those of Prime Farmland but with minor shortcomings, such as a steeper slope or less ability to retain moisture.
- *Unique Farmland*: Lands with lesser-quality soils used for the production of California's leading agricultural cash crops. These lands usually are irrigated but may include non-irrigated orchards or vineyards, as found in some of the state's climatic zones.
- *Farmland of Local Importance*: Lands of importance to the local agricultural economy, as determined by each county's board of supervisors and a local advisory committee.
- *Grazing Land*: Lands in which the existing vegetation is suited to the grazing of livestock.
- *Urban and Built-up Land*: Lands occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. These lands are used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.
- *Other Land*: Lands not included in any of the other mapping category.
- *Water*: Perennial water bodies with an extent of at least 40 acres.

Unless otherwise noted, a minimum of 10 acres is mapped for each category. A total of 48 counties covering 44.1 million acres are mapped every two years. Current land use information is gathered using aerial photographs, a computer mapping system, public review, and field reconnaissance. The conversion of prime farmland is considered very important at both local and statewide levels.

According to the 1998 through 2014 Kern County General Plan and Housing Element Annual Progress Reports, the total permanent conversion of agricultural designations in the unincorporated Kern County, outside the Metropolitan Bakersfield area, to urban uses is 19,973 acres (outside the Metropolitan Bakersfield area). Refer to Table 4.2-3, *Planned Land Use Designations Conversions to Non-Agricultural Use from 1998-2014 (in acres),* for a yearly breakdown of agricultural conversions for Kern County General Plans from 1998-2014.

Table 4.2-3. Planned Land Use Designations Conversions to Non-Agricultural Use from 1998-2014 (in Acres)

	Acres Converted to non-resources map codes designations (Loss)	Acres Converted to Soild Waste Buffer Area (Loss)	Acres Converted to Solar	Acres Converted to Resource Map Code Designations (Gained)	Total Acres Converted (Loss or Gain)	
1998-1999	221	111		413	Gain of 81	
1999-2000	23	2,285			Loss of 2,308	
2000-2002	57	119		1,011	Gain of 835	
2002-2003	1,163	253			Loss of 1,416	
2003-2004	43				Loss of 43	
2004-2005	87			125	Gain of 38	
2005-2007	119				Gain of 871	
2008	14			9	Loss of 23	
2009	53	801	430		Gain of 4,001	
2010	117		7,477		Loss of 6,634	
2011	50		8,803		Loss of 8,694	
2012			434		Loss of 434	
2013	1,434	128	1,383		Loss of 2,547	
2014	56.38		3,968		Loss of 3,700	
Total:	3,387.38				25,799	5,826

Source: County of Kern General Plan EIR (2004) & Annual GPA Update Reports (2004-2014)

The CEQA statute defines "agricultural land" for the purposes of assessing environmental impacts using the FMMP categories of "prime farmland," "farmland of statewide importance," or "unique farmland." (Pub. Resources Code § 21060.1) (a).) Where land has not been surveyed by the FMMP, "agricultural land" is defined consistent with the Williamson Act's definition of "prime agricultural land." (Pub. Resources Code § 21060.1 (b).)

California Land Conservation Act (Williamson Act)

The California Land Conservation Act (Williamson Act) was adopted initially by the State of California in 1965, with the basic intent of encouraging the preservation of the State's agricultural lands in view of the increasing trends toward their urbanization. The Williamson Act established a land contract procedure whereby the County Board of Supervisors could stabilize (i.e., not increase) taxes on certain qualifying lands in return for an owner's guarantee to keep the lands in agricultural preserve status for a ten-year period. A Williamson Act contract is automatically renewed each year, unless a notice of non-renewal is initiated by the land owner or the County. Once a notice of

non-renewal is given, the contract remains in place on the land for the remaining nine-year term. After the nine years, the land is no longer restricted to agricultural or open space uses. Additionally, once a notice of non-renewal is submitted, the taxes on the land are annually reassessed in accordance with a formal set in the Williamson Act.

The Williamson Act defines "prime agricultural lands" as follows:

- All land that qualifies for rating as Class I or Class II in the Natural Resource Conservation Service Land Use Capabilities Classifications;
- Land that qualifies for rating 80 through 100 in the Storie Index Rating (a numerical value indicating the relative suitability of a soil group for general agricultural practices);
- Land that supports livestock used for the production of food and fiber and that has an annual carrying capacity equivalent to at least one animal unit per acre, as defined by the United States Department of Agriculture;
- Land planted with fruit- or nut-bearing trees, vines, bushes, or crops that have a nonbearing period of less than five years and will normally return during the commercial bearing period from the production of unprocessed agricultural plant production not less than two hundred dollars ($200) per acre per year; and
- Land that has returned from the production of unprocessed agricultural plant products a gross value of not less than two hundred dollars ($200) per acre per year for three of the previous five years.

As of December 2015, 14.8 million acres of farm and ranch land of the State's 30 million acres were protected by Williamson Act contracts. This is a slight decrease in reported enrollment compared with approximately 15.4 million acres reported in the 2014 Status Report. This cumulative nonrenewal acreage constitutes 3.8 percent of the Williamson Act enrollment (DOC, 2016). At a County level, according to the Kern County 2014-2015 Williamson Act Open Space Subvention Report, a total of 1,468,900 acres of farmland is currently enrolled in Williamson Act contracts. Of this total, 99.31 acres are in the non-renewal process. The majority of the proposed Project site (approximately 257.57 acres) is within Agricultural Preserve No. 13; however, the site is not under a Williamson Act Land Use Contract.

Farmland Security Zone Contract

The California Department of Conservation passed the Farmland Security Zone legislation (Govt. Code Sec. 51296) in 1998. The Farmland Security Zone allows counties to establish an additional program for farmlands to enter into contracts with the State. This legislation allows landowners whose land is under a Williamson Act contract to petition to the county board of supervisors to annul the Williamson Act contract for a Farmland Security Zone Contract. A Farmland Security Zone Contract is a 20-year contract that allows the property owner to receive 35 percent more in tax savings than a Williamson Act contract. According to the Kern County Williamson act Open Space Subvention Report for the years 2014-2015, 1,468,900 acres have been enrolled in Farmland Security Zone Contracts.

Public Resources Code Section 21060.1

The Public Resources Code Section 21060.1 defines agricultural land for the purposes of assessing environmental impacts using the FMMP. The FMMP was established in 1982 to assess the location, quality and quantity of agricultural lands and the conversion of these lands. The FMMP provides analysis of agricultural land use and land use changes throughout California.

Farmland Conversion Report: 2004 to 2006

- According to the Farmland Conversion Report: 2004 to 2006, prepared by the Farmland Mapping and Monitoring Program in the Department of Conservation, Farmland of Local Importance is classified as:

  "Farmland of Local Importance is land of importance to the local economy, as defined by each county's local advisory committee and adopted by its Board of Supervisors.

- Farmland of Local Importance is either currently producing, or has the capability of production, but does not meet the criteria of Prime Farmland, Farmland of Statewide Importance or Unique Farmland. Authority to adopt or to recommend changes to the category of Farmland of Local Importance rests with the Board of Supervisors in each county."

Local Regulations

The area of the proposed Project is governed by agricultural and farmland regulations established by the State of California. The Metropolitan Bakersfield General Plan and the Kern County Zoning Ordinance, control local land uses within agricultural areas. These documents identify the types of land uses permitted in agricultural zones and define the development parameters within each land use category.

Metropolitan Bakersfield General Plan

The Metropolitan Bakersfield General Plan identifies goals and policies that are intended to provide for the planned management, conservation and wise utilization of agricultural land within the Planning area. Implementation of these goals and policies serve to direct growth and promote agricultural conservation through development in accordance with the Metropolitan Bakersfield General Plan. Refer to Table 4.2-4, *Metropolitan Bakersfield General Plan Goals and Policies for Agricultural Land*.

Table 4.2-4. Metropolitan Bakersfield General Plan Goals and Policies for Agricultural Land
Goals and Policies: Land Use, Open Space, and Conservation Element
Goal #1: "Provide for the planned management, conservation, and wise utilization of agricultural land in the planning area."
Goal #2: "Promote soil conservation and minimize development of prime agricultural land as defined by the following criteria: Capability Class I and/or II irrigated soils, 80-100 Storie Index rating, Gross crop return of $200 or more per acre per year, and Annual carrying capacity of one animal per acre per year."
Goal #3: "Establish urban development patterns and practices that promote soil conservation and that protect areas of agricultural production of food and fiber crops, and nursery products."
Policy #1: "Determine the extent and location of all prime agricultural land within the study area."
Policy #2: "Review projects that propose subdividing or urbanizing prime agricultural land to ascertain how continued commercial agricultural production in the project vicinity would be affected."
Policy #3: "Protect areas designated for agricultural use, which includes Class I and II agricultural soils having surface delivery water systems, from the encroachment of residential and commercial subdivision development activities."
Policy #4: "Monitor the amount of prime agricultural land taken out of production for urban uses or added within the plan area."
Policy #6: "Continue implementing land grading ordinances that reduce soil erosion/siltation commonly associated with land development."
Policy #7: "Land use patterns, grading, and landscaping practices shall be designed to prevent soil erosion while retaining natural watercourses when possible."
Policy #9: "Protect prime agricultural lands against unplanned urban development by adopting agricultural zoning, general plan agriculture designation, and by encouraging use of the Williamson Act and supporting programs and policies that provide tax and economic incentives to ensure the long-term retention of agricultural lands."
Policy #10: "Encourage landowners to retain their lands in agricultural production."
Policy #12: "Prohibit premature removal of ground cover in advance of development and require measures to prevent soil erosion during and immediately after construction."
Policy #13: "Minimize the alteration of natural drainage and require development plans to include necessary construction to stabilize runoff and silt deposition through enforcement of grading and flood protection ordinances."
Policy #14: "When considering proposal to convert designated agricultural lands to non-agricultural use, the decision-making body of the city and County shall evaluate the following factors to determine the appropriateness of the proposal: • Soil quality; • Availability of irrigation water; • Proximity to non-agricultural uses; • Proximity to intensive parcelization; • Effect on properties subject to "Williamson Act" land use contracts; • Ability to be provided with urban services (sewer, water, roads, etc.); • Ability to effect the application of agricultural chemicals on nearby agricultural properties; • Ability to create a precedent-setting situation that leads to the premature conversion of prime agricultural lands; • Demonstrated project need; and • Necessity of buffers such as lower densities, setbacks, etc.

Kern County Zoning Ordinance (Title 19 of the Ordinance Code of Kern County)

Chapter 19.12 Exclusive Agriculture (A) District

The purpose of the Exclusive Agriculture (A) District (Chapter 19.12) is to designate areas suitable for agricultural uses and to prevent the encroachment of incompatible uses onto agricultural lands and the premature conversion of such lands to non-agricultural uses. Uses in the Exclusive Agriculture (A) district are limited primarily to agricultural uses and other activities compatible with agricultural uses. Allowable land uses within the Exclusive Agriculture (A) district are set forth in Sections 19.12.020 and 19.12.030 and include those associated with growing and harvesting of crops, breeding and raising animals, agricultural industries, residential uses to house farm workers or the landowner, Christmas tree farms, utility corridors, resource extraction, waste facilities, institutional/educational uses, and various miscellaneous uses such as animal shelters and clubs. Facilities permitted on properties zoned for Exclusive Agricultural (A) with approval of a conditional use permit (CUP) include those associated with recreation, entertainment, and tourist facilities, utilities and communications, resource extraction and energy development (i.e., wind and solar generators, mining, dams, batch plants), institutional uses (i.e., churches, zoos, government facilities), and schools.

4.2.4 Impacts and Mitigation Measures

Methodology

The potential impacts associated with the proposed Project are evaluated on a qualitative and quantitative basis through a comparison of the anticipated Project effects on agricultural activities. A change in the land use will normally be determined to be significant if the effects described in the Thresholds of Significance occur (see California Code of Regulations, title 14 §15064.7(a)). The evaluation of Project impacts as based on professional judgment, analysis of the County's agricultural resources policies and the significance criteria established by Appendix G of the State CEQA Guidelines, which the County has determined to be appropriate criteria for this Recirculated Draft EIR.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist state that a project could potentially have a significant effect if it would:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use;
- Conflict with existing zoning for agricultural use or a Williamson Act contract;
- Conflict with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code section 12220(g)) or timberland (as defined in Public Resources Code section 4526);

- Result in the loss of forest land or conversion of forest land to non-forest use;
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland, to non-agricultural use or conversion of forest land to non-forest use; and/or
- Results in the cancellation of an open space contract made pursuant to the Williamson Act or Farmland Security Zone contract for any parcel of 100 or more acres (Section 15206(b)(3) Public Resources Code).

Project Impacts

Impact 4.2-1: The Project Would Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as Shown on the Maps Prepared Pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to Nonagricultural Use.

The Metropolitan Bakersfield General Plan area has been experiencing intense urbanization for the last two decades, and is actively annexing properties by providing the infrastructure needed to serve more densely populated communities. Urbanization in farming areas typically begins with conversion of one or a few parcels adjacent to the city limit line. The encroachment of urban uses on existing agricultural areas is prevalent adjacent to the City, where both farmers and urban neighbors operate with both negative and positive consequences. The challenge is to minimize the negative interactions and create the conditions for a long-term and mutually beneficial coexistence between farmers and urban residents. The negative interactions can be divided into the impacts that farmers can have on urban neighbors and the impacts that urban neighbors can have on farmers.

Kern County has ranked among the leading counties in California for urbanization and net loss of farmland. From 1990 to 2006, the amount of important and interim farmland in Kern County decreased by 88,338 acres. About one-third of this decrease was due to urban-related changes, while two-thirds was associated with the idling of farmland.

As previously discussed, from the years 1998 to 2015, a total of 3,387.38 acres were converted from agricultural to non-resource map code designations, outside the Metropolitan Bakersfield area. This proposed Project would convert approximately 314.30 acres of farmland in order to accommodate industrial development. These 314.30 acres include approximately 170.22 acres of soil capability Class II irrigated prime agricultural land and approximately 144.08 acres of soil capability Class III.

The Department of Conservation's FMMP designates the proposed Project as "prime." However, the FMMP maps the County at such a large scale that much of the smaller scale soil information is lost. The FMMP also focuses exclusively on soils, and does not consider any other indicator or agricultural viability. Therefore, additional analysis of the value of the proposed Project site for agricultural production is appropriate.

California Land Evaluation and Site Assessment Model (LESA)

The California Land Evaluation and Site Assessment Model (LESA) was applied to determine if the conversion of approximately 314.30 acres of farmland was significant. The Project's Farmland Conversion Study utilizes LESA to aid in determining the significance of the proposed Project's conversion of agricultural lands. LESA provides guidelines for rating the relative quality of land resources based on specified measurable features. Additionally, it is intended "to provide lead agencies with an optional methodology to ensure that significant effects on the environment of agricultural land conversions are quantitatively and consistently considered in the environmental review process." The LESA comprises two categories, Land evaluation (Land Capability Classification [LCC] and Storie Index Rating) and Site Assessment (project size, water resources, surrounding agricultural lands and protected resources lands). The following describes each category and the on-site scores (any site that scores between 80 and 100 points is significant).

Land Evaluation

The LLC analyzes suitability of soils for most kinds of crops. Determinations are made according to the limitations of the soils when used to grow crops and the risk of damage to soils when they are in agriculture. The Storie Index provides a numeric rating (out of 100 points) of the relative degree of suitability of value of a given soil for intensive agriculture. The soil types that occupy the proposed Project consist of Bakersfield fine sandy loam and Cajon sandy loam. According to the USDA Soil Survey of Kern County, California – Southwestern Part, the soil units within the proposed Project meet the requirements for prime farmland. The USDA Soil Survey of Kern County, California – Southwestern Part, does not include the Storie Index for each soil unit, therefore, the LE portion for the analysis accounts for 50 percent of the LESA score. The LCC score is 31.28; therefore, the land evaluation subtotal is 31.28 out of 50.

Site Assessment

The Site Assessment provides information on size, water availability, and surrounding land uses. The proposed Project produces a project size rating of 15; water resource availability rating of 15; a surrounding agricultural lands rating of 13.95; and a protected resource lands rating of zero. The combined Assessment score is 43.95 out of 50.

The LESA score for the proposed Project site is 75.23. This is considered significant because neither of the land assessment or site assessment sub-scores are less than 20 points.

Metropolitan Bakersfield General Plan Farmland Conversion Criteria

In order to determine whether the conversion of approximately 314.30 acres of FMMP designated prime land is in fact a significant impact, the proposed Project's consistency with the Metropolitan Bakersfield General Plan's policies regarding farmland conversion were considered. This analysis used the following criteria to evaluate the significance of this 314.30-acre conversion of farmland:

- soil quality;
- availability of irrigation water;
- proximity to nonagricultural uses;

- proximity to intensive parcelization;
- effect on properties subject to the "Williamson Act" land use contracts;
- ability to be provided with urban services (sewer, water, roads, etc.);
- ability to affect the application of agricultural chemicals on nearby agricultural properties;
- ability to create a precedent-setting situation that leads to the premature conversion of prime agricultural lands;
- demonstrated project need; and
- necessity of buffers such as lower densities, setbacks, etc.

Soil Quality

The Metropolitan Bakersfield General Plan's Conservation/Soils and Agriculture Element states among its goals to promote soil conservation and minimize development of prime agricultural land as defined by the following criteria:

- Capability Class I and/or II irrigated soils;
- 80-100 Storie Index rating;
- Gross crop return of $200 or more per acre per year; and
- Annual carrying capacity of one animal unit per acre per year.

The definition of "prime agricultural land" in the Williamson Act (Gov. Code §51201) is consistent with the Metropolitan Bakersfield General Plan's Conservation/Soils and Agriculture Element.

Implementation of the proposed Project would result in the conversion of approximately 314.30 acres of farmland to urban uses. The 314.30 acres include approximately 170.22 acres of Bakersfield fine sandy loam. This soil is classified by the USDA Soil Conservation Service as Class II which means it is prime agricultural land. Approximately 144.08 acres include Cajon sandy loam, which is classified by the USDA Soil Conservation Service as Class III, which means approximately 314.30 acres (or 100 percent of the proposed Project) would meet the requirements for prime farmland if undeveloped and water for irrigation is available. Based on the Farmland Conversion Study, Table 6, the proposed Project does not exceed the gross crop threshold of gross crop return of $200 or more a year. In 2015, the unit value per ton (of crop) was $135 for wheat and $169 for alfalfa (McIntosh & Associates 2017).

Approval and implementation of the proposed Project would result in a significant impact from the conversion of approximately 314.30 acres of soil that meets the requirements for prime farmland if water for irrigation were available.

Availability of Irrigation Water

The most recent data provided by the California Department of Water Resources indicates that the unconfined water table is approximately 100 to 105 feet below ground surface (bgs) beneath the project site. Two active, (150 horsepower) diesel-powered irrigation wells are situated on the project site. The west well is located adjacent to SR-99 where a concrete-lined ditch also serves as an identifying landmark. The northwest well is located near the northwest corner of the proposed Project site. The main sources of water for irrigation are the two water wells located on the site. In addition, water from the Kern Island Canal, located on the west side of SR-99 is used when available. The methods of irrigation used on the proposed Project site is flood irrigation.

The availability of irrigation water at the proposed Project site contributes to the conclusion that conversion of the site from agricultural to a nonagricultural use would be significant.

Proximity to Non-Agricultural Uses

Planned future development and planned roadway system expansion near and within the proposed Project indicates that the site is in the logical path of development. The following factors indicate that the proposed Project area and adjacent properties will be affected by existing and planned urban development.

The proposed Project is bound by the DiGorgio Road alignment to the north, South Union Avenue to the east, Houghton Road to the south, and SR-99 to the west. The proposed future South Beltway alignment would be adjacent to the southern boundary of the proposed Project. In addition, a 56.33-acre residential development is proposed to the northwest, a 62-acre residential development is proposed to the north; a 17.89-acre general commercial development is proposed to the northeast; a 28.67-acre medium industrial development is proposed to the east; and a 36-acre residential development, along with a 20-acre light industrial development are proposed south of the proposed Project. Approved tracts and proposed projects near the Project site (within the County of Kern) indicate that the site is in the logical path of urbanization.

Given the adjacent existing and proposed residential, commercial, and industrial development surrounding the proposed Project site, implementation of the proposed Project would represent an extension of existing nonagricultural uses and is considered a less than significant impact.

Proximity to Intensive Parcelization

The encroachment of urban uses on existing agricultural areas can result in negative interactions between farmers and urban neighbors. Farming operations can affect urban neighbors by creating inconveniences or discomforts such as equipment noise, odors from manure, and other chemicals and dust or smoke. Urban uses can create adverse impacts to farmers such as the introduction of pests, disease and weeds, increased complaints about noise, dust, smoke, odors and spray drift from pesticide and fertilizer use, restrictions to the application of pesticides and chemicals, increased flooding and siltation increase traffic, vandalism and trespassing.

The proposed Project would be significantly and unavoidably affected by the close proximity of urbanized areas. Farming practices will be more restricted as to the manner of application and type

of herbicides and pesticides that can be utilized in the vicinity of these urbanized areas. The proposed Project, as well as others in the area, is the next logical step for urbanization in this area due to the planned urban development near the property and its significant impacts to the crop production.

Effect of Properties Subject to Williamson Act Land Use Contracts

As of 2015, the County of Kern has determined that 1,468,900.00 acres of land in Kern County are under Williamson Act Land Use Contracts and 144,339.68 acres under the Farmland Security Zone contract. Non-renewals initiated for the year totaled 99.31 acres of prime and non-prime property. Both of these contracts require that lands be within an established Agricultural Preserve. Agricultural lands that are not in a preserve face the greatest threat of conversion, as they are assessed higher property taxes due to their proximity to urbanization.

The proposed Project is not under a Williamson Act Land Use Contract. Between the years 2009-2015, many of the properties under existing Williamson Act Land Use Contracts (in the vicinity of the proposed Project) had planned for the eventual urbanization of those lands by nonrenewing their contracts. However, there are numerous properties to the east (including one parcel that is directly adjacent to the proposed Project) and west of the proposed Project site that are under Williamson Act Contracts. Therefore, resultant impacts to agricultural resources as a result of proposed Project implementation are considered less than significant because existing restrictions and limitations have already been placed on local growers by these uses.

Ability to be Provided with Urban Services

The existing water purveyor, who provides irrigation solely for agricultural purposes, will not service the proposed Project with domestic water. Instead, the domestic water would be provided by an on-site private well with water treatment and distribution facilities. A private package sewer treatment plant is proposed to provide sewer services for the Project site.

The proposed Project is generally located north of Houghton Road (an arterial), east of SR-99, west of South Union Avenue (SR-204) (an arterial), and south of DiGiorgio Road (an arterial). Additionally, the County of Kern and City of Bakersfield have adopted the alignment of the West Beltway as a Specific Plan line approximately which is adjacent to the southern boundary of the proposed Project. This indicates that further urbanization is expected for the proposed Project area. Therefore, the conversion of the proposed Project site to urbanization is appropriate for the area, as it has the ability to be provided with urban services.

Ability to Affect the Application of Agricultural Chemicals on Nearby Agricultural Properties

Urban encroachment affects adjacent lands remaining in agricultural production as conflicts arise from the infringement of the new users, which include people and animals, into the area. Resultant impacts to agricultural resources as a result of proposed Project implementation are considered less than significant due to restrictions and limitations that have been placed on local growers within the proximity of planned urban developments.

Ability to Create a Precedent-Setting Situation that Leads to the Premature Conversion of Prime Agricultural Lands

Proposed urban development on properties adjacent to and near the proposed Project indicate that it is in an area of potential growth. Although agricultural lands nearby are currently producing agricultural crops, implementation of the proposed Project would not create a precedent-setting situation given the site is located adjacent to urban land use designations identified within the Metropolitan Bakersfield General Plan. There are a number of proposed residential, commercial, and industrial development projects, including the proposed West Beltway transportation corridor, and a number of properties that have indicated their intent to cease farming activities in the area by filing for non-renewal of their existing Williamson Act Land Use Contracts near the proposed Project.

Demonstrated Project Need

The Metropolitan Bakersfield General Plan states that the Bakersfield Planning Department projects the population of the plan area to be 468,175 in the year 2030. Population growth will result in the need for additional housing within the plan area; however, development of the proposed Project consists of non-residential uses and will not contribute to meet the Metropolitan Bakersfield's existing and future housing demand.

It is assumed that future development in the Metropolitan Bakersfield General Plan planning area would continue to include "prime" agricultural soils that exist on the Valley floor. This loss has not limited itself to Metropolitan Bakersfield but has become an issue of statewide concern. The Metropolitan Bakersfield General Plan concludes that conversion of prime agricultural lands to urban uses will result in a reduction of the regional agricultural economy and is considered a significant adverse impact. The Metropolitan Bakersfield General Plan currently designates the Project site as R-IA (Resource-Intensive Agriculture) and HC (Highway Commercial). Approval and implementation of the proposed Project would result in a significant impact from the conversion of approximately 314.30 acres of soil that meet the requirements for prime farmland if water for irrigation were available.

Planned urban development located northwest and within close proximity to the proposed Project indicates that this Project is on the logical path of development. The Metropolitan Bakersfield General Plan encourages the orderly outward expansion of new urban development that maintains continuity of existing development and allows incremental expansion of infrastructure and public services. The proposed Project complies with the Metropolitan Bakersfield General Plan's criteria.

Necessity of Buffers Such as Lower Densities, Setbacks, Etc.

If urban developments do not include buffer zones in their design, growers must sometimes allocate a portion of their land to the creation of a buffer zone adjacent to agricultural fields. As an example, growers might be required to refrain from spraying or harvesting the outside rows of their crops. In those cases, buffer zones represent a loss to the farmer of both crop production and income.

Buffer zones can consist of roads, canals, walls, easements, setbacks, etc. The future development of the Project is not proposing the creation of a buffer zone. However, the Kern County Zoning and

Land Division Ordinances will guarantee that adequate buffers be provided to avoid conflict between agricultural and urban uses. In addition, the proposed Project is bound by Di Giorgio Road alignment to the north, SR-99 to the west, South Union Avenue to the east, and Houghton Road to the south. These roadways will contribute to buffer the proposed Project from adjacent land uses.

Significance Conclusion

Due to the soil quality coupled with the availability of irrigation water at the proposed Project site, the Project site is considered prime farmland; therefore, conversion of the site to nonagricultural use would be a significant impact.

Mitigation Measures

MM 4.2-1: Prior to issuance of a grading or building permit, whichever occurs first, the project proponent shall provide written evidence of completion of one or more of the following measures to mitigate the loss 314.30 acres of agricultural land before conversion, at a one-to-one ratio.

- Funding and/or purchase of agricultural conservation easements (will be managed and maintained by an appropriate entity);
- Purchase of credits from an established agricultural farmland mitigation bank;
- Contribution of agricultural land or equivalent funding to an organization that provides for the preservation of farmland in California; or
- Participation in any agricultural land mitigation programs adopted by Kern County that provides equal or more effective mitigation than the measures listed above.

Mitigation land shall meet the definition of prime farmland or farmland of statewide importance established by the State Department of Conservation. Completion of the selected measure(s), or with the Planning Director's approval, a combination of the selected mitigation measures, can be on qualifying agricultural land within the San Joaquin Valley (San Joaquin, Stanislaus, Merced, Fresno, Madera, Kings, Tulare, Kern Counties) or outside the San Joaquin Valley with written evidence that the same or equivalent crops can be produced on the mitigation land.

Level of Significance after Mitigation

Impacts would be significant and unavoidable.

Impact 4.2-2: The Project Would Conflict with Existing Zoning for Agricultural Use, or a Williamson Act Contract.

According to the Kern County Zoning Ordinance, the proposed Project is zoned A (Exclusive Agriculture). The proposed Project is located within an Agricultural Preserve area. The majority of the proposed Project site (approximately 257.57 acres) is within Agricultural Preserve No. 13. However, the proposed Project is not under a Williamson Act Land Use Contract. The proposed

Project would not conflict with existing zoning for agricultural, nor a Williamson Act Land Use Contract.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.2-3: The Project Would Conflict with Existing Zoning for, or Cause Rezoning of, Forest Land (as Defined in Public Resources Code Section 12220(g)) or Timberland (as Defined in Public Resources Code Section 4526).

The proposed Project is not located on forest land as defined in Public Resources Code Section 12220(g), nor is the property zoned for such use as identified in the Kern County Zoning Ordinance. Implementation of the proposed Project would not result in the loss of forest land. No impact would occur.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

No impacts would occur.

Impact 4.2-4: The Project Would Result in the Loss of Forest Land or Conversion of Forest Land to Non-Forest Use.

The proposed project is not located on forest land as defined in Public Resources Code Section 12220(g), nor is the property zoned for such use as identified in the Kern County Zoning Ordinance. Implementation of the project would not result in the loss of forest land. No impact would occur.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

No impacts would occur.

Impact 4.2-5: The Project Would Involve Other Changes in the Existing Environment Which, Due to Their Location or Nature, Could Result in Conversion of Farmland, to Non-Agricultural Use or Conversion of Forest Land to Non-Forest Use.

The proposed development would occur within the Project site. No other changes in the existing environment would result from the proposed Project. The following provides a description of the existing and planned land uses surrounding the proposed Project site:

- The Proposed South Beltway Alignment is located along the southern project boundary.
- General Plan Amendment and Zone change is proposed for 28.67 acres west of the project site to allow for Light Industrial uses.
- General Plan Amendments located northwest of the site to allow for Service Industrial uses.
- General Plan Amendment located at the northeast corner of Hosking Road and Highway 99 to allow for retail commercial center with approximately 1 million square feet of leasable commercial space and a 300-room hotel (140,000 square feet) on 109 acres.
- General Plan Amendment located at Taft Highway and Chevalier to allow for General Commercial, Office Commercial and High Density residential.
- Zone Change located South of Taft Highway and Chevalier to allow for Commercial and Residential development.

Although some of the surrounding agricultural properties have filed a notice of non-renewal for the Williamson Act land use contract property, others have not. Implementation of this project would further encourage those properties who have already filed for non-renewal of their Williamson Act property to discontinue agricultural production on-site and may encourage the property directly north to abandon its agricultural use. Although the proposed industrial use is compatible with agricultural production and there are a number of similar uses scattered throughout the project vicinity, implementation of the project may result in changes to the environment which could result in conversion of additional farmland to nonagricultural use. As such, impacts are considered significant and unavoidable.

Mitigation Measures

Implement MM 4.2-1.

Level of Significance after Mitigation

Impacts are considered significant and unavoidable.

Impact 4.2-6: The Project Would Result in the Cancellation of an Open Space Contract Made Pursuant to the California Land Conservation Act of 1965 or Farmland Security Zone Contract for Any Parcel of 100 or More Acres (Section 1526(b)(3) Public Resources Code.

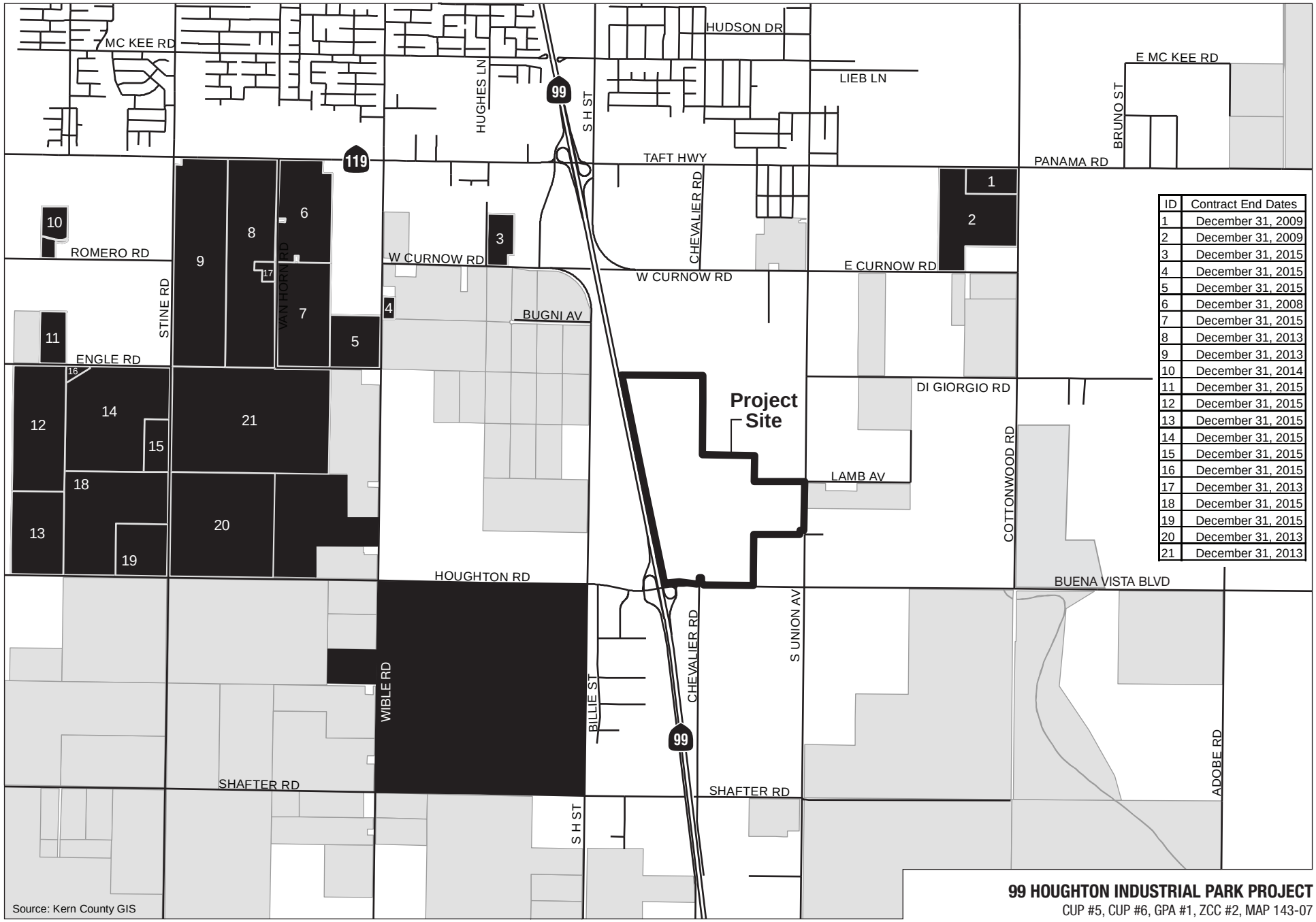
The proposed Project is not under a Williamson Act Land Use Contract. Many of the properties under existing Williamson Act Land Use Contracts (in the vicinity of the proposed Project) have already planned for the eventual urbanization of those lands by non-renewing their contracts. From 2009 to 2015, these properties were planning to end their Williamson Act Contracts (refer to Figure 4.2-1, *Williamson Act Contracts*). There are numerous properties to the east (including one parcel that is directly adjacent to the proposed Project) and west of the proposed Project site that are under Williamson Act Contracts.

Mitigation Measures

Implement MM 4.2-1.

Level of Significance after Mitigation

Impacts are considered less than significant.



ID	Contract End Dates
1	December 31, 2009
2	December 31, 2009
3	December 31, 2015
4	December 31, 2015
5	December 31, 2015
6	December 31, 2008
7	December 31, 2015
8	December 31, 2013
9	December 31, 2013
10	December 31, 2014
11	December 31, 2015
12	December 31, 2015
13	December 31, 2015
14	December 31, 2015
15	December 31, 2015
16	December 31, 2015
17	December 31, 2013
18	December 31, 2015
19	December 31, 2015
20	December 31, 2013
21	December 31, 2013

0 0.5 1 mile
APPROXIMATE

99 Houghton Project Site

Non-renewal Williamson Act Contracts

Williamson Act Contracts

99 HOUGHTON INDUSTRIAL PARK PROJECT

CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07

AGRICULTURAL PRESERVE #13 EXCLUSION

Williamson Act Contracts

Figure 4.2-1

Cumulative Impacts

Kern County has ranked among the leading counties in California for urbanization and net loss of farmland. For the years 2013-2014, the amount of important and interim farmland in Kern County decreased by 88,338 acres. About one-third of this decrease was due to urban-related changes, while two-thirds was associated with the idling of farmland.

The Metropolitan Bakersfield General Plan EIR also acknowledges that some of the Williamson Act contracted lands within the Metropolitan Bakersfield area will be lost to future development. The Farmland Conversion Study concluded that the proposed Project would not result in pressures to develop neighboring Williamson Act lands and is considered appropriate for the conversion as proposed.

As seen in Chapter 3, *Project Description*, Table 3-5, *Cumulative Projects List*, there are more than 100 proposed and/or pending Projects within a six-mile radius of the proposed Project. The conversion of approximately 314.30 acres of farmland within the Project site would increase the total acreage of urban uses. Additionally, the conversion of this property from agricultural use to commercial/industrial use is expected to create cumulative or growth-inducing impacts to other adjacent farmlands. The existing and planned land uses surrounding the proposed Project site, as previously discussed, illustrate that the proposed Project site is in an area that is experiencing some growth.

Although the Metropolitan Bakersfield General Plan has various land use policies that direct development to encourage site compatibility with surrounding uses, the cumulative loss of agricultural land results in a significant and unavoidable impact. Therefore, Project implementation, when combined with the potential loss of other agricultural lands within the Planning area, over time, would remain a significant and unavoidable impact.

Mitigation Measures

Implement MM 4.2-1.

Level of Significance after Mitigation

Impacts would be significant and unavoidable.

This Page Intentionally Left Blank

Section 4.3

Air Quality

Section 4.3
Air Quality

4.3.1 Introduction

This section of the RDEIR analyzes the potential air quality impacts associated with the proposed Project. The air quality section is divided into the following subsections: Environmental Setting, Regulatory Setting, and Impacts and Mitigation Measures. This section evaluates the short and long-term air quality impacts associated with the build out of the proposed Project site and discusses mitigation where required to avoid or lessen the project's impacts.

Insight Environmental Consultants completed an Air Quality Impact Analysis in June 2009 that evaluated the proposed Project's potential impacts on air quality. A second Air Quality Impact Analysis was prepared by Insight Environmental Consultants in July 2017. See Appendix C, Air Quality Impact Analysis, and Appendix N, Original Technical Studies. Information supporting this analysis is also contained in the San Joaquin Valley Air Pollution Control District (SJVAPCD) 2015 Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI) and Kern County's Guidelines for the Preparation of Air Quality Assessment for Environmental Impact Reports.

4.3.2 Environmental Setting

The California Air Resources Board (CARB) has divided California into regional air basins according to topographic drainage features. The proposed Project site is located in the western portion of Kern County, within the San Joaquin Valley Air Basin (SJVAB) and is under the jurisdiction of the SJVAPCD. The SJVAB, which is 250 miles long and 35 miles wide, is the second-largest air basin in the state.

Topography and Meteorology

Air pollution, especially the dispersion of air pollutants, is directly related to a region's topographic features, which also make up the SJVAB boundaries. The SJVAB lies in the central region of the State of California and is bounded to the east by the Sierra Nevada Mountain Range (8,000 to 14,000 feet in elevation), to the west by the Coast Mountain Range (averaging 3,000 feet in elevation), and to the south by the Tehachapi Mountain Range (6,000 to 8,000 feet in elevation). Between these boundaries is a relatively flat valley floor that opens to the sea at the Carquinez Strait where the San Joaquin-Sacramento Delta (Delta) empties into San Francisco Bay.

Localized air quality can be greatly affected by elevation and topography. For the majority of the San Joaquin Valley, air movement through and out of the SJVAB is restricted by the hills and the mountains surrounding it. Although marine air generally flows into the SJVAB from the San Joaquin–Sacramento Delta, the Coast Range hinders wind movement into the SJVAB from the west, the Tehachapi Mountains prevent the southerly passage of airflow, and the Sierra Nevada is a significant wind barrier to the east. These topographic features result in weak airflow into the valley, which

becomes vertically blocked by high barometric pressure over the SJVAB. As a result, the majority of the SJVAB is highly susceptible to pollutant accumulation over time. Furthermore, most of the surrounding mountains are above the normal height of the summer inversion layer.

Wind speed and direction play an important role in the dispersion and transport of air pollutants. Ozone (O_3) and inhalable particulates (particulate matter 10 microns or less in diameter [PM_{10}] and particulate matter 2.5 microns or less in diameter [$PM_{2.5}$]) are classified as regional pollutants because they can be transported away from the emission source before concentrations peak. In contrast, local pollutants, such as carbon monoxide (CO), tend to have their highest concentrations near the source of emissions and dissipate easily; therefore, their highest concentrations occur during low wind speeds.

Wind speed and direction data indicate that during the summer, winds usually originate at the north end of the SJVAB and flow in a south/southeasterly direction through the Tehachapi Pass and into the Southeast Desert Air Basin. During the winter, winds occasionally originate from the south end of the SJVAB and flow in a north/northwesterly direction. Also, during winter, the SJVAB experiences light, variable winds, typically less than 10 miles per hour. Low wind speeds, combined with low inversion layers in the winter, create a climate that is conducive to high CO and inhalable PM_{10} concentrations.

The vertical mixing of air pollutants is limited by the presence of persistent temperature inversions. Inversions may be either at ground level or elevated. Ground-level inversions occur frequently during fall and early winter (i.e., October through January). High concentrations of primary pollutants, which are those emitted directly into the atmosphere (e.g., CO), may be found during these times. Elevated inversions act as a lid over the basin and limit vertical mixing. Severe air stagnation occurs as a result of these inversions. Elevated inversions contribute to the occurrence of high levels of O_3 during the summer months.

The SJVAB enjoys an inland Mediterranean climate, averaging more than 260 sunny days per year. The valley floor is characterized by warm, dry summers and cooler winters. Average daily temperatures in the basin range from 41.7 degrees Fahrenheit (°F) in December to 98.7°F in July. Summer highs often exceed 100°F, averaging in the low 90s in the northern valley and high 90s to the south. Although the SJVAB enjoys a high percentage of sunshine, a reduction in sunshine occurs during December and January because of fog and intermittent stormy weather. Nearly 90 percent of the annual precipitation falls in the six months between October and May. Precipitation is low because the mountains to the west and south produce a rain shadow effect by intercepting prefrontal, moisture-laden western and southern winds. The southern valley receives precipitation primarily from cold, unstable, northwesterly flows that usually follow a frontal passage.

Sensitive Receptors

Some people are considered more sensitive to air pollutants than others, including those with pre-existing health problems, those who are close to an emissions source, or those who are exposed to air pollutants for long periods of time. The SJVAPCD GAMAQI defines sensitive receptors as those that are more susceptible to the effects of air pollution than the population at large and include "facilities that house or attract children, the elderly, and people with illnesses, hospitals, schools, convalescent

facilities, and residential areas are examples of sensitive receptors" (SJVAPCD, 2015). Land uses such as primary and secondary schools, hospitals, and convalescent homes are considered to be relatively sensitive because the very young, the old, and the infirm are more susceptible to respiratory infections and other air quality–related health problems than the general public. Residential areas are considered sensitive to poor air quality because people in residential areas are often at home for extended periods. Recreational land uses are moderately sensitive to air pollution because vigorous exercise associated with recreation places a high demand on the human respiratory function.

There are residential areas within one mile or less to the north, east, and south of the proposed Project, with the closest residential structures located within properties adjacent to the Project site, approximately 500 feet from the Project boundaries. There are four non-residential sensitive receptors within two miles of the proposed Project as follows:

- General Shafter Elementary School, 1.09 miles southwest;
- McKee Middle School, 1.35 miles northeast;
- Golden Valley High School, 1.76 miles north; and
- Horizon Elementary School, 2.00 miles north.

National and State Ambient Air Quality Standards

Both the State of California and the federal government have established ambient air quality standards for several different pollutants. A summary of state and national ambient air quality standards (CAAQS and NAAQS, respectively) is shown in Table 4.3-1, *National and California Ambient Air Quality Standards.* For some pollutants, separate standards have been set for different periods. Most standards have been set to protect public health. For other pollutants, standards have been based on other values (such as protection of crops, protection of materials, or avoidance of nuisance conditions).

Table 4.3-1. National and California Ambient Air Quality Standards

Pollutant	Averaging Time	National Standards[a]	California Standards[b]
Ozone (O_3)	8 Hours	0.070 ppm (137 µg/m^3)[c]	0.070 ppm (137 µg/m^3)
	1 Hour	--[d]	0.09 ppm (180 µg/m^3)
Carbon Monoxide (CO)	8 Hours	9 ppm (10 mg/m^3)	9.0 ppm (10 mg/m^3)
	1 Hour	35 ppm (40 mg/m^3)	20 ppm (23 mg/m^3)
Nitrogen Dioxide (NO_2)	Annual Average	53 ppm (100 µg/m^3)	0.030 ppm (56 µg/m^3)
	1 Hour	100 ppb (188.68 µg/m^3)	0.18 ppm (338 µg/m^3)
Sulfur Dioxide (SO_2)	3 Hour	0.5 ppm (1,300 µg/m^3)	--
	24 Hours	0.14 ppm (365 µg/m^3)	0.04 ppm (105 µg/m^3)

Table 4.3-1. National and California Ambient Air Quality Standards

Pollutant	Averaging Time	National Standards[a]	California Standards[b]
	1 Hour	75 ppb (196 µg/m^3)	0.25 ppm (655 µg/m^3)
Particulate Matter (PM_{10})	Annual Arithmetic Mean	--[e]	20 µg/m^3
	24 Hours	150 µg/m^3	50 µg/m^3
Particulate Matter—Fine ($PM_{2.5}$)	Annual Arithmetic Mean	12.0 µg/m^3	12 µg/m^3
	24 Hours	35 µg/m^3	--
Sulfates (SO_4)	24 Hours	--	25 µg/m^3
Lead[f] (Pb)	Rolling Three Month Average	0.15 µg/m^3	--
	30-day Average	--	1.5 µg/m^3
Hydrogen Sulfide (H_2S)	1 Hour	--	0.03 ppm (42 µg/m^3)
Vinyl Chloride (chloroethene)	24 Hours	--	0.01 ppm (26 µg/m^3)
Visibility-Reducing Particles (VRPs)	8 Hours (1000 to 1800 PST)	--	--[g]

ppm = parts per million; ppb = parts per billion; mg/m^3 = milligrams per cubic meter; µg/m^3= micrograms per cubic meter.
[a] 1-Hour O3 standard revoked effective June 15, 2005.
[b] Annual PM 10 standard revoked effective December 18, 2006.
[c] EPA finalized the revised (2008) 8-hour O3 standard of 0.075 ppm on March 27, 2008. The 1997 8-hour O3 standard of 0.08 ppm has not been revoked. In the January 19, 2010 Federal Register, EPA proposed to revise the 2008 O3 NAAQS of 0.075 ppm to a NAAQS in the range of 0.060 to 0.070 ppm. EPA expects to finalize the revised NAAQS, which will replace the 0.075 ppm NAAQS, by July 29, 2011.
[d] On October 15, 2008, EPA strengthened the Pb standard.
[e] Statewide Visibility Reducing Particle Standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

Source: Insight Environmental Consultants, 2017.

Local Standards

CARB operates the local meteorological and air quality monitoring stations in the Project vicinity. Table 4.3-2, *San Joaquin Valley Air Bain Attainment Status*, lists the air quality attainment status for the SJVAB. Pursuant to the methodologies prescribed by the SJVAPCD's GAMAQI, the analysis within this section primarily models and analyzes reactive organic gases (ROG), nitrogen oxides (NO_X), carbon monoxide (CO), particulate matter 10 microns or less in diameter (PM_{10}), particulate matter 2.5 microns or less in diameter ($PM_{2.5}$) and sulfur oxides (SO_X). In accordance with the January 2015 GAMAQI technical guidance document, the SJVAPCD no longer monitors lead in the ambient air of the SJVAB since the used of leaded fuel has been mostly phased out. Hydrogen sulfide (H_2S) is associated with geothermal activities, oil and gas production, refining, sewage treatment plants and confined animal feeding operations; however, CARB does not have a measuring method to accurately designate areas in the state (i.e., attainment or nonattainment). Sulfate data collected in the SJVAB demonstrated levels of sulfates significantly less than the health standards.

Areas can be classified as in attainment (air pollutant levels consistently below the standard) or as nonattainment (levels of air pollutant consistently violate the standard). Areas that do not meet the standards shown in Table 4.3-1 are classified as nonattainment areas. The determination of whether an area meets the State and National standards is based on air quality monitoring data. Some areas

are unclassified, which means that not enough data available to determine whether the standard is exceeded in an area. Unclassified areas are typically treated as being in attainment. Because the attainment/nonattainment designation is pollutant specific, an area may be classified as a nonattainment area for one pollutant and an attainment area for another. Similarly, because the State and National standards differ, an area could be classified as an attainment area for the National standards of a pollutant and as a nonattainment area for the state standards of the same pollutant. As presented in Table 4.3-2, the SJVAB is currently in severe nonattainment for the one-hour State standard for ozone (O_3), extreme nonattainment and nonattainment for the eight-hour federal and State standard for O_3, respectively, and nonattainment for State standard for PM_{10}. The area is also in nonattainment for the federal and State standards for particulate matter 2.5 microns or less in diameter ($PM_{2.5}$).

Table 4.3-2. San Joaquin Valley Air Quality Attainment Status

Pollutant	Federal Standards[1]	State Standards[2]
Ozone—1 hour	No federal standard[3]	Nonattainment - Severe
Ozone—8 hour	Nonattainment – Extreme[4]	Nonattainment
PM_{10}	Attainment[5]	Nonattainment
$PM_{2.5}$	Nonattainment[6]	Nonattainment
CO	Attainment /Unclassified	Attainment/Unclassified
Nitrogen dioxide	Attainment/Unclassified	Attainment
Sulfur dioxide	Attainment/Unclassified	Attainment
Lead (Particulate)	No designation/classification	Attainment
Hydrogen sulfide	No federal standards	Unclassified
Sulfates	No federal standards	Attainment
Visibility-reducing particulates	No federal standards	Unclassified
Vinyl Chloride	No federal standard	Attainment

[a] See 40 CFR Part 81
[b] See CCR Title 17 Sections 60200-60210
[c] On September 25, 2008, EPA redesignated the San Joaquin Valley to attainment for the PM_{10} National Ambient Air Quality Standard (NAAQS) and approved the PM10 Maintenance Plan.
[d] The Valley is designated nonattainment for the 1997 PM2.5 NAAQS. EPA designated the Valley as nonattainment for the 2006 $PM_{2.5}$ NAAQS on November 13, 2009 (effective December 14, 2009).
[e] Though the Valley was initially classified as serious nonattainment for the 1997 8-hour O_3 standard, EPA approved Valley reclassification to extreme nonattainment in the Federal Register on May 5, 2010 (effective June 4, 2010).
[f] Effective June 15, 2005, the EPA revoked the federal 1-hour O_3 standard, including associated designations and classifications. EPA had previously classified the SJVAB as extreme nonattainment for this standard. EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan on March 8, 2010 (effective April 7, 2010). Many applicable requirements for extreme 1-hour O3 nonattainment areas continue to apply to the SJVAB.

Source: Insight Environmental Consultants, 2017.

In order to reach attainment for the State and National ambient air quality standards, the Extreme Ozone Attainment Demonstration Plan (Extreme OADP) was published by the SJVAPCD and approved by CARB and the United States Environmental Protection Agency (EPA). The Extreme OADP was prepared to fulfill the requirements of the Federal Clean Air Act (CAA) and attain the federal one-hour O_3 ambient air quality standards in the SJVAB by November 15, 2010. It identifies control measures needed to reduce emissions and projects future air quality impacts with implementation of those controls. The SJVAPCD and CARB implement control measures needed to

achieve emission reductions, with the SJVAPCD implementing some of the control measures as listed in the Extreme OADP as rules.

Regional Air Quality

The SJVAPCD is the regional agency responsible for the regulation and enforcement of federal, state, and local air pollution control regulations in the SJVAB. The SJVAPCD jurisdiction includes all of Merced, San Joaquin, Stanislaus, Madera, Fresno, Kings, and Tulare counties, and the San Joaquin Valley portion of Kern County. The SJVAPCD has identified quantitative emission thresholds for CO, nitrogen oxides (NO_X), ROGs, SO_x, PM_{10}, and $PM_{2.5}$ to determine whether the potential air quality impacts of a project may produce a significant impact. The air quality threshold for CO is 100 tons per year, NO_x and ROG is 10 tons per year, SO_x is 27 tons per year, and for PM_{10} and $PM_{2.5}$ is 15 tons per year, which establish the limit at which an impact to the SJVAB may occur.

Additionally, the SJVAPCD's GAMAQI considers construction emissions and operational emissions as separate and distinct in that construction emissions are considered short-term impacts and temporary in nature while operational and area source emissions are considered long-term.

The SJVAPCD has set up the Indirect Source Review (ISR) Program in order to address new development projects that have not yet gained discretionary approval from the applicable public agency. The ISR Program is based on SJVAPCD Rules 9510 and 3180, which provide a methodology for assessing the air quality impacts created by a new development; regulations to limit the emissions of pollutants during the construction process; and the option of onsite emissions reduction measures and offsite emission reduction through fees, which are used to fund offsite emission reduction projects, or some combination of both options; refer to Appendix C.

Local Air Quality

Under authority and oversight from the EPA pursuant to 40 CFR Part 58, the SJVAPCD and CARB maintain ambient air quality monitoring stations throughout the SJVAB, with ten sites in Kern County (Arvin-DiGiorgio, Bakersfield (four sites), Edison, Lebec, Maricopa, Oildale, and Shafter). Not all air pollutants are monitored at each station; thus, data from the closest representative station that monitors a specific pollutant are summarized.

Table 4.3-3, *Existing Air Quality Monitoring Data for 2013-2015,* shows the Kern County monitoring stations and the pollutants monitored. The locations of these stations were chosen to meet monitoring objectives. The monitoring objectives call for stations that monitor the highest pollutant concentrations, representative concentrations in areas of high population density, the impact of major pollution emissions sources, and general background concentration levels (Insight Environmental Consultants 2016).

The Air Quality Impact Analysis (Insight Environmental Consultants 2017) relied on data collected from 2013 to 2015 at the CARB monitoring stations that are located in the closest proximity to the proposed Project. Table 4.3-3, provides the background concentrations for O_3, PM_{10}, $PM_{2.5}$, CO, NO_2, SO_2, and lead (Pb) as of November 2015 as well as the number of days that thresholds were exceeded. Information is provided for the Bakersfield-5558 California Avenue; Arvin-Di Giorgio,

Oildale – 3311 Manor Street; Bakersfield – 410 E. Planz Road; Bakersfield-Municipal Airport; Bakersfield – Golden State Highway; Edison, Shafter – Walker Street; Maricopa-Stanislaus Street; and Sacramento – Del Paso Manor monitoring stations for 2013 through 2015. No data are available for hydrogen sulfide, vinyl chloride, or other toxic air contaminants (TACs) in Kern County. Detailed air quality data are included in Appendix C, *Air Quality Impact Assessment*.

Table 4.3-3. Existing Air Quality Monitoring Data for 2013-2015

Pollutant and Monitoring Station Location	Maximum Concentration			Days Exceeding Standard		
	2013	2014	2015	2013	2014	2015
Ozone: Maximum 1-Hour (CAAQS 0.09 ppm)						
Bakersfield-5558 California Ave.	0.107	0.102	0.104	3	3	6
Bakersfield – Municipal Airport	0.109	0.108	0.118	6	10	23
Arvin-DiGiorgio	0.109	0.109	0.124	14	15	16
Edison	0.101	0.107	0.112	2	15	17
Maricopa - Stanislaus	0.089	0.090	0.094	0	0	0
Shafter- Walker Street	0.112	0.100	0.104	1	2	3
Oildale – 3311 Manor St.	0.099	0.093	0.099	1	0	2
Ozone: Maximum 8-Hour (CAAQS 0.07 ppm)						
Bakersfield-5558 California Ave.	0.099	0.093	0.097	47	39	54
Bakersfield – Municipal Airport	0.103	0.095	0.106	56	60	73
Arvin-DiGiorgio	0.095	0.092	0.101	68	69	55
Edison	0.086	0.092	0.099	21	55	45
Maricopa - Stanislaus	0.084	0.084	0.088	23	25	32
Shafter- Walker Street	0.097	0.087	0.091	19	28	34
Oildale – 3311 Manor St.	0.090	0.085	0.092	15	25	33
Ozone: Maximum 8-Hour (NAAQS 0.07 ppm)						
Bakersfield-5558 California Ave.	0.098	0.092	0.096	43	36	52
Bakersfield – Municipal Airport	0.102	0.095	0.106	55	58	69
Arvin-DiGiorgio	0.094	0.091	0.101	64	65	53
Edison	0.086	0.091	0.099	19	52	42
Maricopa - Stanislaus	0.083	0.083	0.087	23	24	32
Shafter- Walker Street	0.096	0.087	0.090	17	24	34
Oildale – 3311 Manor St.	0.090	0.085	0.092	13	24	33
PM_{10}: 24-Hour (CAAQS 50 µg/m^3)						
Bakersfield-5558 California Ave.	116.9	419.5	103.6	16	69	20
Bakersfield – Golden State Hwy.	*	*	94.6	0	0	16
Oildale – 3311 Manor Street	138.0	335.6	104.4	27	20	26
PM_{10}: 24-Hour (NAAQS 150 µg/m^3)						
Bakersfield-5558 California Ave.	120.07	430.1	104.7	0	1	0
Bakersfield – Golden State Hwy.	*	*	100.5	0	0	0
Oildale – 3311 Manor Street	134.3	336.4	98.5	0	3	0
$PM_{2.5}$: 24-Hour (NAAQS 35 µg/m^3)						
Bakersfield – 410 East Planz Road	167.3	91.0	83.2	15	15	13
Bakersfield – 5558 California Avenue	111.7	101.9	107.8	44	37	29
Bakersfield – Golden State Highway	*	107.2	91.1	*	2	9
CO: 8-hour (CAAQS & NAAQS 9.0 ppm)						
Fresno – 1st Street	n/a	n/a	n/a	n/a	n/a	n/a

Table 4.3-3. Existing Air Quality Monitoring Data for 2013-2015

Pollutant and Monitoring Station Location	Maximum Concentration			Days Exceeding Standard		
	2013	2014	2015	2013	2014	2015
NO_2: 1-Hour (CAAQS 0.18 ppm)						
Bakersfield – 5558 California Avenue	0.055	0.060	0.054	0	0	0
Shafter – Walker Street	0.058	0.058	0.045	0	0	0
Edison	0.047	0.035	0.046	0	0	0
Bakersfield – Municipal Airport	0.065	0.064	0.055	0	0	0
NO_2: 1-Hour (NAAQS 0.10 ppm)						
Bakersfield – 5558 California Avenue	0.055	0.061	0.055	0	0	0
Shafter – Walker Street	0.059	0.059	0.045	0	0	0
Edison	0.047	0.035	0.047	0	0	0
Bakersfield – Municipal Airport	0.065	0.064	0.055	0	0	0
SO_2: 24-Hour Concentration (CAAQS 0.04 ppm; NAAQS 0.14 ppm)[1]						
Sacramento – Del Paso Manor	n/a	n/a	n/a	n/a	n/a	n/a
Pb – Maximum 30-Day Concentration (CAAQS 1.5 µg/m^3)						
Bakersfield – 5558 California Avenue	0.0067	0.0140	0.0095	*	*	*

Notes: ppm= parts per million
* There was insufficient (or no) data available to determine the value.
[1] SJVAB did not have any monitoring stations that measured SO_2 during the years of 2012-2014.
Source: Insight Environmental Consultants 2017.

Common Air Pollutants

The following is a general description of the sources, and the physical and health effects, for air pollutants expected from this proposed Project.

Ozone

Ozone (O_3) occurs in two layers of the atmosphere. The layer surrounding the earth's surface is the troposphere. In the troposphere, ground level, or "bad," ozone is an air pollutant that damages human health, vegetation, and many common materials. It is a key ingredient of urban smog. The troposphere extends to a level about 10 miles up, where it meets the second layer, the stratosphere. The stratospheric, or "good," ozone layer extends upward from about 10 to 30 miles and protects life on earth from the sun's harmful ultraviolet rays.

"Bad" ozone is what is known as a photochemical pollutant. It needs ROG, NO_x, and sunlight. ROG and NO_x are emitted from various sources throughout Kern County. In order to reduce ozone concentrations, it is necessary to control the emissions of these ozone precursors. Significant ozone formation generally requires an adequate amount of precursors in the atmosphere and several hours in a stable atmosphere with strong sunlight. High ozone concentrations can form over large regions when emissions from motor vehicles and stationary sources are carried hundreds of miles from their origins.

O_3 is a regional air pollutant and the SJVAB has high concentrations of ozone. It is generated over a large area and transported and spread by the wind. As the primary constituent of smog, ozone is the most complex, difficult to control, and pervasive of the criteria pollutants. Ozone is a photochemical pollutant that is not emitted directly into the earth's lower atmosphere, but formed by a complex series

of chemical reactions between ROG, NO_X and sunlight. Ozone precursors (ROG and NO_X) can come from a variety of sources throughout the Valley including; automobiles, solvents, and fuel combustion; therefore, ozone is a regional pollutant because ozone precursors are transported and diffused by wind concurrently with the reaction process. The highest ozone concentrations are generally found downwind from emission sources, generally located in the metropolitan areas.

Health Effects

While ozone in the upper atmosphere protects the earth from harmful ultraviolet radiation, high concentrations of ground-level ozone can adversely affect the human respiratory system. Many respiratory ailments, as well as cardiovascular disease, are aggravated by exposure to high ozone levels. Ozone also damages natural ecosystems, such as forests and foothill communities; agricultural crops; and some man-made materials, such as rubber, paint, and plastic. High levels of ozone may negatively affect immune systems, making people more susceptible to respiratory illnesses, including bronchitis and pneumonia. Ozone accelerates aging and exacerbates pre-existing asthma and bronchitis and, in cases with high concentrations, can lead to the development of asthma in active children. Active people, both children and adults, appear to be more at risk from ozone exposure than those with a low level of activity. Additionally, the elderly and those with respiratory disease are also considered sensitive populations for ozone.

Ozone is a powerful oxidant; it can be compared to household bleach, which can kill living cells (such as germs or human skin cells) upon contact. Ozone can damage the respiratory tract, causing inflammation and irritation, and it can induce symptoms such as coughing, chest tightness, shortness of breath, and worsening of asthmatic symptoms. Ozone in sufficient doses increases the permeability of lung cells, rendering them more susceptible to toxins and microorganisms. Exposure to levels of ozone above the current ambient air quality standard leads to lung inflammation and lung tissue damage and a reduction in the amount of air inhaled into the lungs. Recent evidence has, for the first time, linked the onset of asthma to exposure to elevated ozone levels in exercising children. Elevated ozone concentrations also reduce crop and timber yields, damage native plants, and damage materials such as rubber, paints, fabric, and plastics.

Reactive Organic Gases (ROG) and Volatile Organic Compounds (VOC)

Hydrocarbons are organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases, including volatile organic compounds (VOCs) and ROGs, which include all hydrocarbons except those exempted by CARB. Therefore, ROGs are a set of organic gases based on state rules and regulations. VOCs are similar to ROGs in that they include all organic gases except those exempted by Federal law. The list of compounds exempt from the definition of a VOC is presented in District Rule 1102.

Both VOCs and ROGs are emitted from incomplete combustion of hydrocarbons or other carbon-based fuels. Combustion engine exhaust, oil refineries, and oil-fueled power plants are the primary sources of hydrocarbons. Another source of hydrocarbons is evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint.

Health Effects

The primary health effects of hydrocarbons result from the formation of ozone and its related health effects (see the ozone health effects discussion above). High levels of hydrocarbons in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. There are no separate federal or California ambient air quality standards for ROG. Carcinogenic forms of ROG are considered TACs. An example is benzene, which is a carcinogen. The health effects of individual ROGs are described under the toxic air contaminants heading below.

Carbon Monoxide (CO)

Carbon monoxide (CO) is emitted by mobile and stationary sources as a result of incomplete combustion of hydrocarbons or other carbon-based fuels. CO is an odorless, colorless, poisonous gas that is highly reactive.

CO is a byproduct of motor vehicle exhaust, which contributes more than two-thirds of all CO emissions nationwide. In cities, automobile exhaust can cause as much as 95 percent of all CO emissions. Vehicular emissions can result in high background concentrations of CO, particularly in local areas with heavy traffic congestion. Other sources of CO emissions include industrial processes and fuel combustion from sources such as boilers and incinerators. Despite an overall downward trend in concentrations and emissions of CO, some metropolitan areas still experience high levels of CO.

Health Effects

CO enters the bloodstream and binds more readily to hemoglobin than oxygen, reducing the oxygen-carrying capacity of blood and thus reducing oxygen delivery to organs and tissues. The health threat from CO is most serious for those who suffer from cardiovascular disease. Healthy individuals are also affected but only at higher levels of exposure. CO binds strongly to hemoglobin, the oxygen-carrying protein in blood, and thus reduces the blood's capacity for carrying oxygen to the heart, brain, and other parts of the body. Exposure to CO can cause chest pain in heart patients, headaches, and reduced mental alertness. At high concentrations, CO can cause heart difficulties in people with chronic diseases and can impair mental abilities. Exposure to elevated CO levels is associated with visual impairment, reduced work capacity, reduced manual dexterity, poor learning ability, difficulty performing complex tasks, and in prolonged, enclosed exposure, death.

The adverse health effects associated with exposure to ambient and indoor concentrations of CO are related to the concentration of carboxyhemoglobin (COHb) in the blood. Health effects observed may include an early onset of cardiovascular disease; behavioral impairment; decreased exercise performance of young, healthy men; reduced birth weight; sudden infant death syndrome (SIDS); and increased daily mortality rate (Fierro et al. 2001).

Most of the studies evaluating adverse health effects of CO on the central nervous system examine high-level poisoning. Such poisoning results in symptoms ranging from common flu and cold symptoms (shortness of breath on mild exertion, mild headaches, and nausea), to unconsciousness and death.

Oxides of Nitrogen (NO_x)

NO_X is a family of highly reactive gases that are primary precursors to the formation of ground-level ozone and react in the atmosphere to form acid rain. NO_X is emitted from the use of solvents and combustion processes in which fuel is burned at high temperatures, principally from motor vehicle exhaust and stationary sources such as electric utilities and industrial boilers. A brownish gas, NO_X is a strong oxidizing agent that reacts in the air to form corrosive nitric acid, as well as toxic organic nitrates. NO_x is an ozone precursor that combines with ROG to form ozone (see the discussion of ozone above).

Health Effects

NO_X is an ozone precursor that combines with ROG to form ozone. See the ozone section above for a discussion of the health effects of ozone.

Direct inhalation of NO_X can also cause a wide range of health effects. NO_X can irritate the lungs, cause lung damage, and lower resistance to respiratory infections such as influenza. Short-term exposures (e.g., less than three hours) to low levels of nitrogen dioxide (NO_2) may lead to changes in airway responsiveness and lung function in individuals with preexisting respiratory illnesses. These exposures may also increase respiratory illnesses in children. Long-term exposures to NO_2 may lead to increased susceptibility to respiratory infection and may cause irreversible alterations in lung structure. Other health effects associated with NO_X are an increase in the incidence of chronic bronchitis and lung irritation. Chronic exposure to NO_2 may lead to eye and mucus membrane aggravation, along with pulmonary dysfunction. NO_X can cause fading of textile dyes and additives, deterioration of cotton and nylon, and corrosion of metals due to production of particulate nitrates. Airborne NO_X can also impair visibility.

NO_X contributes to a wide range of environmental effects both directly and indirectly when combined with other precursors in acid rain and ozone. Increased nitrogen inputs to terrestrial and wetland systems can lead to changes in plant species composition and diversity. Similarly, direct nitrogen inputs to aquatic ecosystems such as those found in estuarine and coastal waters can lead to eutrophication (a condition that promotes excessive algae growth, which can lead to a severe depletion of dissolved oxygen and increased levels of toxins that are harmful to aquatic life). Nitrogen, alone or in acid rain, also can acidify soils and surface waters. Acidification of soils causes the loss of essential plant nutrients and increased levels of soluble aluminum, which is toxic to plants. Acidification of surface waters creates low pH conditions and levels of aluminum that are toxic to fish and other aquatic organisms.

Particulate Matter

Particulate matter pollution consists of very small liquid and solid particles floating in the air. Some particles are large or dark enough to be seen as soot or smoke. Others are so small they can be detected only with an electron microscope. Particulate matter is a mixture of materials that can include smoke, soot, dust, salt, acids, and metals. Particulate matter also forms when gases emitted from motor vehicles and industrial sources undergo chemical reactions in the atmosphere. PM_{10} refers to particles less than or equal to 10 microns in aerodynamic diameter. $PM_{2.5}$ refers to particles less than or equal to 2.5 microns in aerodynamic diameter and are a subset of PM_{10}.

In the western United States, there are sources of PM_{10} in both urban and rural areas. PM_{10} and $PM_{2.5}$ are emitted from stationary and mobile sources, including diesel trucks and other motor vehicles; power plants; industrial processes; wood-burning stoves and fireplaces; wildfires; dust from roads, construction, landfills, and agriculture; and fugitive windblown dust. Because particles originate from a variety of sources, their chemical and physical compositions vary widely.

Health Effects

PM_{10} and $PM_{2.5}$ particles are small enough to be inhaled and lodged in the deepest parts of the lung where they evade the respiratory system's natural defenses. Health problems begin as the body reacts to these foreign particles. Acute and chronic health effects associated with high particulate levels include the aggravation of chronic respiratory diseases; heart and lung disease; and coughing, bronchitis, and respiratory illnesses in children. Recent mortality studies have shown a statistically significant direct association between mortality and daily concentrations of particulate matter in the air. PM_{10} and $PM_{2.5}$ can aggravate respiratory disease and cause lung damage, cancer, and premature death. Sensitive populations, including children, the elderly, exercising adults, and those suffering from chronic lung disease such as asthma or bronchitis are especially vulnerable to the effect of PM_{10}. Non-health-related effects include reduced visibility and soiling of buildings.

Attaining the California particulate matter standards would annually prevent about 6,500 premature deaths, or 3 percent of all deaths. These premature deaths shorten lives by an average of 14 years. This is roughly equivalent to the same number of deaths (4,200 to 7,400) linked to secondhand smoke in 2000. In comparison, motor vehicle crashes caused 3,200 deaths, and 2,000 deaths resulted from homicide. Attaining the California particulate matter and O_3 standards would annually prevent 4,000 hospital admissions for respiratory disease, 3,000 hospital admissions for cardiovascular disease, and 2,000 asthma-related emergency room visits. Exposure to diesel particulate matter causes about 250 excess cancer cases per year in California (CARB and American Lung Association of California, 2007).

A recent study provides evidence that exposure to particulate air pollution is associated with lung cancer. This study found that residents who live in an area that is severely affected by particulate air pollution are at risk of lung cancer at a rate comparable to nonsmokers exposed to secondhand smoke. This study also found an approximately 16 percent excess risk of dying from lung cancer due to fine-particulate air pollution (Pope et al., 2002). Another study shows that individuals with existing cardiac disease can be in a potentially life-threatening situation when exposed to high levels of ultrafine air pollution. Fine particles can penetrate the lungs, cause the heart to beat irregularly, or cause inflammation, which could lead to a heart attack (Peters et al., 2001). Currently, 57 percent of California's population lives in areas that exceed the National $PM_{2.5}$ air standard, while 90 percent lives in areas that exceed California's $PM_{2.5}$ air standard (CARB and American Lung Association of California, 2007).

Sulfur Dioxide (SO_2)

SO_2 is a colorless, irritating gas with a "rotten egg" smell formed primarily by the combustion of sulfur-containing fossil fuels. Historically, SO_2 was a pollutant of concern in Kern County, but with the successful application of regulations, the levels have been reduced significantly.

Health Effects

High concentrations of SO_2 can result in temporary breathing impairment for asthmatic children and adults who are active outdoors. Short-term exposures of asthmatic individuals to elevated SO_2 levels during moderate activity may result in breathing difficulties that can be accompanied by symptoms such as wheezing, chest tightness, or shortness of breath. Other effects that have been associated with longer term exposures to high concentrations of SO_2 in conjunction with high levels of particulate matter include aggravation of existing cardiovascular disease, respiratory illness, and alterations in the lungs' defenses. SO_2 also is a major precursor to $PM_{2.5}$, which is a significant health concern and a main contributor to poor visibility. (See also the discussion of the health effects of particulate matter above.)

SO_2 not only has a bad odor, it can irritate the respiratory system. Exposure to high concentrations for short periods of time can constrict the bronchi and increase mucous flow, making breathing difficult. SO_2 can also irritate the lung and throat at concentrations greater than 6 ppm in many people, impair the respiratory system's defenses against foreign particles and bacteria when exposed to concentrations less than 6 ppm for longer time periods, and enhance the harmful effects of O_3 (combinations of the two gases at concentrations occasionally found in the ambient air appear to increase airway resistance to breathing).

SO_2 tends to have more toxic effects when acidic pollutants, liquid or solid aerosols, and particulates are also present. Effects are more pronounced among "mouth breathers" (e.g., people who are exercising or who have head colds). SO_2 easily injures many plant species and varieties, both native and cultivated. Some of the most sensitive plants include various commercially valuable pines, legumes, red and black oaks, white ash, alfalfa, and blackberry. Increases in SO_2 concentrations accelerate the corrosion of metals, probably through the formation of acids. SO_2 is a major precursor to acidic deposition. Sulfur oxides may also damage stone and masonry, paint, various fibers, paper, leather, and electrical components. Increased SO_2 also contributes to impaired visibility. Particulate sulfate, much of which is derived from SO_2 emissions, is a major component of the complex total suspended particulate mixture.

Other Pollutants

Sulfates

Sulfates (SO_x) are particulate products from combustion of sulfur-containing fossil fuels. When sulfur monoxide or SO_2 is exposed to oxygen, it precipitates out into sulfates (SO_3 or SO_4). Data collected in Kern County identify levels of sulfates that are significantly less than the applicable health standards.

Sulfates are the fully oxidized ionic form of sulfur. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to SO_2 during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO_2 to sulfates takes place comparatively rapidly and completely in urban areas of California because of regional meteorological features.

Health Effects

CARB's sulfates standard is designed to prevent aggravation of respiratory symptoms. Effects of sulfate exposure at levels above the standard include a decrease in oxygen intake, aggravation of asthmatic symptoms, and an increased risk of cardio-pulmonary disease. Sulfates are particularly effective in degrading visibility and, because they are usually acidic, can harm ecosystems, and damage materials and property (CARB 2009).

Lead (Pb)

Lead is a metal that is a natural constituent of air, water, and the biosphere. Lead is neither created nor destroyed in the environment, so it essentially persists forever. Historically, lead was used to increase the octane rating in automobile fuel. However, because gasoline-powered automobile engines were a major source of airborne lead through the use of leaded fuels and that use has been mostly phased out, the ambient concentrations of lead have dropped dramatically. Kern County no longer monitors lead in the ambient air of the SJVAB.

Health Effects

Exposure to lead occurs mainly through inhalation of air and ingestion of lead in food, water, soil, or dust. It accumulates in the blood, bones, and soft tissues and can adversely affect the kidneys, liver, nervous system, and other organs. Excessive exposure to lead may cause neurological impairments such as seizures, mental retardation, and behavioral disorders. Even at low doses, lead exposure is associated with damage to the nervous systems of fetuses and young children, resulting in learning deficits and lowered IQ. Recent studies also show that lead may be a factor in high blood pressure and subsequent heart disease. Lead can also be deposited on the leaves of plants, presenting a hazard to grazing animals and humans through ingestion (USEPA 2011).

Hydrogen Sulfide (H_2S)

Hydrogen sulfide (H_2S) emissions are associated with geothermal activity, oil and gas production, refining, sewage treatment plants, and confined animal feeding operations.

Health Effects

Exposure to low concentrations of H_2S may cause irritation to the eyes, nose, or throat. It may also cause difficulty in breathing for some asthmatics. Exposure to higher concentrations (above 100 ppm) can cause olfactory fatigue, respiratory paralysis, and death. Brief exposures to high concentrations of H_2S (greater than 500 ppm) can cause a loss of consciousness. In most cases, the person appears to regain consciousness without any other effects. However, in many individuals, there may be permanent or long-term effects such as headaches, poor attention span, poor memory, and poor motor function. No health effects have been found in humans exposed to typical environmental concentrations of H_2S (0.00011–0.00033 ppm). Deaths due to breathing in large amounts of H_2S have been reported in a variety of different work settings, including sewers, animal processing plants, waste dumps, sludge plants, oil and gas well drilling sites, and tanks and cesspools.

Visibility-Reducing Particles

The CAAQS for visibility-reducing particles (VRPs), as shown in Table 4.3-1, is a measure or visibility. CARB does not have a measuring method with enough accuracy or precision to designate areas in the state as attainment or nonattainmnent areas with respect to visibility. The entire state is labeled as unclassified.

Vinyl Chloride

Vinyl chloride monomer is a sweet-smelling, colorless gas at ambient temperature. Landfills, publicly owned treatment works, and polyvinyl chloride (PVC) production are the major identified sources of vinyl chloride emissions in California. PVC can be fabricated into several products, such as PVC pipes, pipe fittings, and plastics. In humans, epidemiological studies of occupationally exposed workers have linked vinyl chloride exposure to development of a rare cancer, liver angiosarcoma, and have suggested a relationship between exposure and lung and brain cancers. There are currently no adopted ambient air standards for vinyl chloride.

Health Effects

Short-term exposure to vinyl chloride has been linked with the following acute health effects (Agency for Toxic Substances and Disease Registry 2010; U.S. Department of Health and Human Services 2006):

- Acute exposure of humans to high levels of vinyl chloride via inhalation in humans has resulted in effects on the central nervous system, such as dizziness, drowsiness, headaches, and giddiness.
- Vinyl chloride is reported to be slightly irritating to the eyes and respiratory tract in humans. Acute exposure to extremely high levels of vinyl chloride has caused loss of consciousness, lung and kidney irritation, and inhibition of blood clotting in humans, and cardiac arrhythmias in animals.
- Tests involving acute exposure of mice have shown vinyl chloride to have high acute toxicity from inhalation exposure.

Long-term exposure to vinyl chloride concentrations has been linked with the following chronic health effects (Agency for Toxic Substances and Disease Registry 2010; U.S. Department of Health and Human Services 2006; U.S. Environmental Protection Agency [USEPA] 2000a):

- Liver damage may result in humans from chronic exposure to vinyl chloride, through both inhalation and oral exposure.
- A small percentage of individuals occupationally exposed to high levels of vinyl chloride in air have developed a set of symptoms termed “vinyl chloride disease,” which is characterized by Raynaud’s phenomenon (fingers blanch and numbness and discomfort are experienced upon exposure to the cold), changes in the bones at the end of the fingers, joint and muscle pain, and scleroderma-like skin changes (thickening of the skin, decreased elasticity, and slight edema).

- Central nervous system effects (including dizziness, drowsiness, fatigue, headache, visual and/or hearing disturbances, memory loss, and sleep disturbances) as well as peripheral nervous system symptoms (peripheral neuropathy, tingling, numbness, weakness, and pain in fingers) have also been reported in workers exposed to vinyl chloride.

Several reproductive/developmental health effects from vinyl chloride exposure have been identified (Agency for Toxic Substances and Disease Registry 2010; U.S. Department of Health and Human Services 2006):

- Several case reports suggest that male sexual performance may be affected by vinyl chloride. However, these studies are limited by lack of quantitative exposure information and possible co-occurring exposure to other chemicals.

- Several epidemiological studies have reported an association between vinyl chloride exposure in pregnant women and an increased incidence of birth defects, while other studies have not reported similar findings.

- Epidemiological studies have suggested an association between men occupationally exposed to vinyl chloride and miscarriages during their wives' pregnancies, although other studies have not supported these findings.

Long-term exposure to vinyl chloride has also been identified as a cancer risk (Agency for Toxic Substances and Disease Registry 2010; U.S. Department of Health and Human Services 2006; U.S. EPA 2000a)

- Inhaled vinyl chloride has been shown to increase the risk of a rare form of liver cancer (angiosarcoma of the liver) in humans.

- Animal studies have shown that vinyl chloride, via inhalation, increases the incidence of angiosarcoma of the liver and cancer of the liver.

Toxic Air Contaminants (TACs)

Hazardous air pollutants (HAPs) is a term used by the federal Clean Air Act (CAA) that includes a variety of pollutants generated or emitted by industrial production activities. Called TACs under the California Clean Air Act of 1988 (CCAA), ten have been identified through ambient air quality data as being the most substantial health risk in California. Direct exposure to these pollutants has been shown to cause cancer, birth defects, damage to the brain and nervous system, and respiratory disorders.

TACs do not have ambient air quality standards. Since no safe levels of TACs can be determined, there are no air quality standards for TACs. Instead, TAC impacts are evaluated by calculating the health risks associated with a given exposure. The requirements of the Air Toxic "Hot Spots" Information and Assessment Act apply to facilities that use, produce, or emit toxic chemicals. Facilities that are subject to the toxic emission inventory requirements of the act must prepare and submit toxic emission inventory plans and reports and periodically update those reports.

Acetaldehyde

Acetaldehyde is both directly emitted into the atmosphere and formed in the atmosphere from photochemical oxidation. Sources include combustion processes such as exhaust from mobile sources and fuel combustion from stationary internal combustion engines, boilers, and process heaters. Approximately 76 percent of acetaldehyde emissions are from mobile sources, with area sources such as residential wood combustion accounting for approximately 17 percent of total emissions.

Health Effects

Acetaldehyde is classified as a Federal HAP and as a California TAC. Acetaldehyde is a carcinogen that also causes chronic non-cancer toxicity in the respiratory system. The primary acute effect of inhalation exposure to acetaldehyde is irritation of the eyes, skin, and respiratory tract in humans. At higher exposure levels, erythema, coughing, pulmonary edema, and necrosis may also occur (USEPA 2017a).

Benzene

Benzene is highly carcinogenic and occurs throughout California. Approximately 84 percent of the benzene emitted in California comes from motor vehicles, including evaporative leakage and unburned fuel exhaust; currently, the benzene content of gasoline is less than one percent.

Health Effects

Benzene also has non-cancer health effects. Brief inhalation exposure to high concentrations can cause central nervous system depression. Acute effects include central nervous system symptoms of nausea, tremors, drowsiness, dizziness, headache, intoxication, and unconsciousness (USEPA 20017b). Exposure to liquid and vapor may irritate the skin, eyes, and upper respiratory tract in humans. Redness and blisters may result from dermal exposure.

1,3–Butadiene

The majority of 1,3-butadiene emissions comes from incomplete combustion of gasoline and diesel fuels. Mobile sources account for 83 percent of total statewide emissions. Area-wide sources such as agricultural waste burning and open burning contribute to approximately 13 percent of statewide emissions. Approximately 67 percent of 1,3-butadiene emissions are from mobile sources.

Health Effects

In California, 1,3-butadiene has been identified as a carcinogen. Butadiene vapors cause neurological effects at very high levels such as blurred vision, fatigue, headache, and vertigo. Dermal exposure of humans to 1,3-butadiene causes a sensation of cold, followed by a burning sensation, which may lead to frostbite (USEPA 2017c).

Carbon Tetrachloride

The primary sources of carbon tetrachloride in California include chemical and allied product manufacturers and petroleum refineries.

Health Effects

In California, carbon tetrachloride has been identified as a carcinogen. Carbon tetrachloride is also a central nervous system depressant and mild eye and respiratory tract irritant. EPA has classified carbon tetrachloride as a Group B2 probable human carcinogen (USEPA 2017d).

Chromium, Hexavalent

Chromium plating and other metal finishing processes are the primary sources of hexavalent chromium emissions in California. Approximately 65 percent of hexavalent chromium emissions are from stationary sources, such as electrical generation facilities, aircraft and parts manufacturing plants, and fabricated-metal manufacturing facilities.

Health Effects

In California, hexavalent chromium has been identified as a carcinogen. There is epidemiological evidence that exposure to inhaled hexavalent chromium may result in lung cancer. The principal acute effects are renal toxicity, gastrointestinal hemorrhage, and intravascular hemolysis (USEPA 2017e).

Para-Dichlorobenzene

The primary sources of para-dichlorobenzene include consumer products such as non-aerosol insect repellents and solid/gel air fresheners. These sources contribute 99 percent of the statewide para-dichlorobenzene emissions.

Health Effects

In California, para-dichlorobenzene has been identified as a carcinogen. Acute exposure to 1,4-dichlorobenzene via inhalation results in irritation to the eyes, skin, and throat in humans. In addition, long-term inhalation exposure may affect the liver, skin, and central nervous system in humans (e.g., cerebellar ataxia, dysarthria, weakness in limbs, and hyporeflexia) (USEPA 2017f).

Formaldehyde

Formaldehyde is both emitted into the atmosphere directly and formed in the atmosphere as a result of photochemical oxidation. Formaldehyde is a product of incomplete combustion. One of the primary sources of formaldehyde is vehicular exhaust. Formaldehyde is also used in resins, many consumer products (as an antimicrobial agent), and fumigants and soil disinfectants. Approximately 68 percent of formaldehyde emissions in the SJVAB are from mobile sources.

Health Effects

The major toxic effects caused by acute formaldehyde exposure via inhalation are eye, nose, and throat irritation and effects on the nasal cavity. Other effects seen from exposure to high levels of formaldehyde in humans are coughing, wheezing, chest pains, and bronchitis. In California, formaldehyde has been identified as a carcinogen (USEPA, 2017g).

Methylene Chloride

Methylene chloride is used as a solvent, a blowing and cleaning agent in the manufacture of polyurethane foam and plastic, and a solvent in paint-stripping operations. Paint removers account for the largest use of methylene chloride in California (approximately 82 percent).

Health Effects

Case studies of methylene chloride poisoning during paint-stripping operations have demonstrated that inhalation exposure to extremely high levels can be fatal to humans. Acute inhalation exposure to high levels has resulted in effects on the central nervous system, including decreased visual, auditory, and psychomotor functions, but these effects are reversible once exposure ceases. The major effects from chronic inhalation exposure are effects on the central nervous system, such as headaches, dizziness, nausea, and memory loss. California considers methylene chloride to be carcinogenic (USEPA, 2017h).

Perchloroethylene

Perchloroethylene is used as a solvent, primarily in dry cleaning operations; it is also used in degreasing operations, paints and coatings, adhesives, aerosols, specialty chemical production, printing inks, silicones, rug shampoos, and laboratory solvents.

Health Effects

In California, perchloroethylene has been identified as a carcinogen. Perchloroethylene vapors are irritating to the eyes and respiratory tract. Following chronic exposure, workers have shown signs of liver toxicity as well as kidney dysfunction and neurological disorders.

Diesel Particulate Matter

Diesel particulate matter is emitted from both mobile and stationary sources. In California, onroad diesel-fueled engines contribute approximately 24 percent of the statewide total, with an additional 71 percent attributed to other mobile sources such as construction and mining equipment, agricultural equipment, and transport refrigeration units. Stationary sources contribute about 5 percent of total diesel particulate matter.

Health Effects

Diesel exhaust and many individual substances contained in it (including arsenic, benzene, formaldehyde, and nickel) have the potential to contribute to mutations in cells that can lead to cancer. Long-term exposure to diesel exhaust particles poses the highest cancer risk of any TAC evaluated by the California Office of Environmental Health Hazard Assessment (OEHHA). CARB estimates that about 70 percent of the cancer risk that the average Californian faces from breathing toxic air pollutants stems from diesel exhaust particles.

Diesel engines are a major source of fine-particle pollution. The elderly and people with emphysema, asthma, and chronic heart and lung disease are especially sensitive to fine-particle pollution. Numerous studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems. Because children's lungs and respiratory systems are still developing, they are also more susceptible than healthy adults to fine particles. Exposure to fine particles is associated with increased frequency of childhood illnesses and can also reduce lung function in children. In California, diesel exhaust particles have been identified as a carcinogen (California OEHHA and the American Lung Association, 2005; CARB, 2008).

Airborne Fungus (Valley Fever)

Valley Fever, or coccidioidomycosis, is caused by the microscopic fungus coccidioides immitis (*C. immitis*), which grows in arid soil in parts of Kern County and other parts of America. Infection occurs when the spores of the fungus become airborne and are inhaled. The fungal spores become airborne when contaminated soil is disturbed by human activities, such as construction and agricultural activities, and by natural phenomenon, such as wind storms, dust storms, and earthquakes.

Health Effects

Approximately 60 percent of infected persons have no symptoms. The remainder develop flu-like symptoms that can last for a month and tiredness that can sometimes last for several weeks. A small percentage of infected persons (less than one percent) can develop disseminated disease that spreads outside the lungs to the brain, bone, and skin. Without proper treatment, Valley Fever can lead to severe pneumonia, meningitis, and even death. Symptoms may appear between one and four weeks after exposure (County of Los Angeles 2004).

A diagnosis of Valley Fever is made through a sample of blood or other body fluid or biopsy of the affected tissue. It is treatable with anti-fungal medicines and is not contagious. Once recovered from the disease, the individual is protected against further infection. Persons at highest risk from exposure are those with compromised immune systems, such as those with HIV, and those with chronic pulmonary disease. Farmers, construction workers, and others who engage in activities that disturb the soil are at highest risk for Valley Fever. Infants, pregnant women, diabetics, people of African, Asian, Latino, or Filipino descent, and the elderly may be at increased risk for disseminated disease. Historically, people at risk for infection are individuals not already immune to the disease and whose jobs involve extensive contact with soil dust, such as construction or agricultural workers and

archeologists (County of Los Angeles 2004). The disease also has been known to infect animals. Infections occur most often in summer.

It is thought that during drought years the number of organisms competing with *C. immitis* decreases, and the *C. immitis* remains alive but dormant. When rain finally occurs, the arthrocondia germinate and multiply more than usual because of a decreased number of other competing organisms. Later, the soil dries out in the summer and fall, and the fungi can become airborne and potentially infectious (Kirkland and Fierer 1996).

Persons at risk for Valley Fever should avoid exposure to dust and dry soil in areas where Valley Fever is common. Areas with high Valley Fever rates are called hyper-endemic. Approximately 10–50 percent of people living in endemic disease regions are seropositive and considered immune. In any given year, about 3 percent of people who live in an area where coccidiodomycosis is common will develop an infection (County of Los Angeles 2004). The areas of Kern County that have the most incidents of Valley Fever exposure are northeast Bakersfield, Lamont-Arvin, Taft, and Edwards Air Force Base. The Valley Fever fungus has been identified in soil samples taken near the California State University, Bakersfield campus.

Asbestos

Ultramafic serpentinized rock is closely associated with asbestos and composed of the following minerals:

- Antigorite: (Mg, Fe)3Si2O5(OH)4;
- Clinochrysotile: Mg3Si2O5(OH)4;
- Lizardite: Mg3Si2O5(OH)4;
- Orthrochrysotile: Mg3Si2O5(OH)4; and
- Parachrysotile: (Mg, Fe)3Si2O5(OH)4.

Chrysotile minerals are more likely to form serpentinite asbestos; however, serpentinite is uncommon to sedimentary soil found in the project area. Asbestos occurs in certain geologic environments, none of which are common in the project area.

Health Effects

Asbestos can adversely affect humans only in its fibrous form, and these fibers must be broken and dispersed into the air and then inhaled. During geological processes, the asbestos mineral can be crushed, causing it to become airborne. It also enters the air or water from the breakdown of natural deposits. Constant exposure to asbestos at high levels on a regular basis may cause cancer in humans. The two most common forms of cancer are lung cancer and mesothelioma, a rare cancer of the lining that covers the lungs and stomach.

4.3.3 Regulatory Setting

In California, air quality is regulated by several agencies, including USEPA, CARB, and local air districts such as the SJVAPCD. Each of these agencies develops rules and/or regulations to attain the goals or directives imposed upon them through legislation. Although USEPA regulations may not be superseded, some state and local regulations may be more stringent than Federal regulations. The project site is located in the SJVAB and is under the jurisdiction of the SJVAPCD.

Federal

U.S. Environmental Protection Agency (EPA)

The 1977 Federal CAA and 1990 revisions required EPA to identify National Ambient Air Quality Standards (NAAQS) to protect the public health and welfare (see Table 4.3-1). In June of 1997, EPA adopted new PM_{10} National standards and an additional standard for suspended particulate matter at or below PM_{10} to $PM_{2.5}$.

On March 12, 2008, EPA implemented an 8-hour standard for O_3. On October 1, 2015, the EPA Administrator signed the notice for the final rule to revise the primary and secondary NAAQS for O_3 of both primary and secondary standards from 0.075 ppm to 0.070 ppm, and retaining their indicators (O_3), forms (fourth-highest daily maximum, averaged across three consecutive years) and averaging times (eight hours). On April 12, 2010, EPA implemented a 1-hour standard for NO_2 of 100 parts per billion (ppb).

Pursuant to the 1990 CAA Amendments (CAAA), EPA classified air basins (or portions thereof) as either attainment or nonattainment areas for each criteria air pollutant based on whether or not the NAAQS have been achieved. The CAA also required each state to prepare an air quality control plan (State Implementation Plan [SIP]). The 1990 amendments additionally required states containing areas that violate NAAQS to revise their SIPs to incorporate additional control measures to reduce air pollution. EPA has the responsibility to review all SIPs to determine if they conform to the mandates of the CAAA and will achieve air quality goals when implemented.

Regulation of TACs (HAPs under Federal regulations) is achieved through Federal and state controls on individual sources. Federal law defines HAPs as non-criteria air pollutants with short-term (acute) and/or long-term (chronic or carcinogenic) adverse human health effects. The 1977 CAA required EPA to identify National Emission Standards for Hazardous Air Pollutants (NESHAPs) to protect public health and welfare.

The 1990 CAAA offer a technology-based approach to reducing air toxics. Since the CAAA were approved, 188 chemicals have been designated as HAPs and are regulated under a two-phase strategy. The first phase involves requiring facilities to install Maximum Achievable Control Technology (MACT), which includes measures, methods, and techniques—such as material substitutions, work practices, and operational improvements—aimed at reducing toxic air emissions. MACT is the lowest emission rate, or highest level of control demonstrated, on average by the top performing companies (top 12 percent) in the source category. MACT standards already exist for the 174 source categories: 166 major sources and eight area sources. Under the air toxics program, facilities having similar

operating processes are grouped into categories. These MACTs were promulgated in four "bins" of years: 1992, 1994 (39 categories), 1997 (62 categories), and 2000 (67 categories). MACT standards for municipal solid waste landfills were promulgated on May 23, 2002. As of August 2003, MACT standards have been made for 174 source categories and their subcategories.

State

California Air Resources Board (CARB)

CARB, a department of the California Environmental Protection Agency (CalEPA), oversees air quality planning and control throughout California by administering the SIP. Its primary responsibility lies in ensuring implementation of the 1989 amendments to the California Clean Air Act (CCAA), as well as responding to the Federal CAA requirements and regulating emissions from motor vehicles sold in California. It also sets fuel specifications to further reduce vehicular emissions.

The amendments to the CCAA establish the CAAQS and a legal mandate to achieve these standards by the earliest practical date. These standards apply to the same criteria pollutants as the Federal CAA, and also include sulfate, VRPs, hydrogen sulfide and vinyl chloride (refer to Table 4.3-1). They are also more stringent than the Federal standards. The SJVAB is designated as nonattainment for the State ozone and PM_{10} standards. Concentrations of all other pollutants meet state standards.

CARB is also responsible for regulations pertaining to TACs. The Air Toxics "Hot Spots" Information and Assessment Act (Assembly Bill [AB] 2588, 1987, Connelly) was enacted in 1987 as a means to establish a formal air toxics emission inventory risk quantification program. AB 2588, as amended, establishes a process that requires stationary sources to report information regarding the type and quantities of certain substances their facilities routinely release into the SJVAB. Each air pollution control district ranks the data into high, intermediate and low priority categories. When considering the ranking, the potency, toxicity, quantity, volume and proximity of the facility to receptors are given consideration by an air district.

CARB also has on- and off-road engine emission-reduction programs that would indirectly affect the project's emissions through the phasing in of cleaner on- and off-road engines. In addition, CARB has a Portable Equipment Registration Program that allows owners or operators of portable engines and associated equipment to register their units under a statewide program, with specified emission requirements, without having to obtain individual permits from local air districts.

The state recently enacted a new regulation for the reduction of diesel particulate matter and criteria pollutant emissions from in-use off-road diesel-fueled vehicles (13 CCR Article 4.8, Chapter 9, Section 2449). This regulation provides target emission rates for particulate matter and NO_X emissions for owners of fleets of diesel-fueled off-road vehicles. It applies to equipment fleets of three specific sizes, and the target emission rates are reduced over time.

Title V and Extreme Designation

Title V of the CAA, as amended in 1990, creates an operating permits program for certain defined sources. In general, owner/operators of defined stationary sources that emit more than 25 tons per

year of NO_X and ROG must possess a Title V permit. Title V is a federally enforceable state operating permit that is required under 40 CFR, Part 70. The Title V programs are developed at the state or local level, as outlined in 40 CFR 70.

Under the extreme definition, the definition of a major source subject to Title V permitting changes from 25 to 10 tons per year, which results in more businesses having to comply with Title V permitting requirements under the extreme nonattainment designation.

Title V does not impose any new air pollution standards, require installation of any new controls on the affected facilities, or require reductions in emissions. Title V does enhance public and EPA participation in the permitting process and requires additional recordkeeping and reporting by businesses, which results in significant administrative requirements.

Within the entire SJVAB, which includes eight counties, the SJVAPCD estimated that the reclassification to extreme nonattainment, added 150 businesses (excluding agricultural facilities) for a total of 420 facilities currently subject to Title V. These numbers compare to a total of approximately 7,000 facilities that are under permit with the SJVAPCD basin-wide.

Local

Metropolitan Bakersfield General Plan (MBGP)

The Metropolitan Bakersfield General Plan (MBGP) cites policies to provide decision-makers with long-range guidance affecting the future character of the Metropolitan Bakersfield planning area. The elements within the MBGP provide goals, policies, and implementation measures in order to reduce impacts of projects on air quality. Applicable goals relative to the proposed Project site within these elements are listed in Table 4.3-4, *Metropolitan Bakersfield General Plan Goals and Policies for Air Quality.*

Table 4.3-4. Metropolitan Bakersfield General Plan Goals and Policies for Air Quality

Goals and Policies: Conservation/Air Quality Element
Conservation/Air Quality Goal #1: "Promote air quality that is compatible with health, well being, and enjoyment of life by controlling point sources and minimizing vehicular trips to reduce air pollutants."
Conservation/Air Quality Goal #2: Continue working toward attainment of Federal, State and Local standards as enforced by the San Joaquin Valley Air Pollution Control District."
Conservation/Air Quality Goal #3: "Reduce the amount of vehicular emissions in the planning area."
Conservation/Air Quality Element Policies
Conservation/Air Quality Policy #1: "Comply with and promote San Joaquin Valley Unified Air Pollution Control District (SJVAPCD) control measures regarding Reactive Organic Gases (ROG). Such measures are focused on: (a) steam driven well vents, (b) Pseudo-cyclic wells, (c) natural gas processing plant fugitives, (d) heavy oil test stations, (e) light oil production fugitives, (f) refinery pumps and compressors, and (g) vehicle inspection and maintenance."
Conservation/Air Quality Policy #2: "Encourage land uses and land use practices which do not contribute significantly to air quality degradation."

Table 4.3-4. Metropolitan Bakersfield General Plan Goals and Policies for Air Quality
Goals and Policies: Conservation/Air Quality Element
Conservation/Air Quality Policy #3: "Require dust abatement measures during significant grading and construction operations."
Conservation/Air Quality Policy #4: Consider air pollution impacts when evaluating discretionary permits for land use proposals. Considerations should include: a) Alternative access routes to reduce traffic congestion, b) Development phasing to match road capacities, c) Buffers including increase vegetation to increase emission dispersion and reduce impacts of gaseous or particulate matter on sensitive uses."
Conservation/Air Quality Policy #11: "Improve the capacity of the existing road system through improved signalization and traffic control systems."
Conservation/Air Quality Policy #12: "Encourage the use of mass transit, carpooling and other transportation options to reduce vehicle miles traveled."
Conservation/Air Quality Policy #13: "Consider establishing priority parking areas for carpoolers in projects with relatively large numbers of employees to reduce vehicle miles traveled and improve air quality."
Conservation/Air Quality Policy #14: "Establish park and ride facilities to encourage car pooling and the use of mass transit."
Conservation/Air Quality Policy #16: "Cooperate with Golden Empire Transit [GET] and Kern Regional Transit to provide a comprehensive mass transit system for Bakersfield; require large-scale new development to provide related improvements, such as bus stop shelters and turnouts."
Conservation/Air Quality Policy #18: "Encourage walking for short distance trips through the creation of pedestrian friendly sidewalks and street crossings."
Conservation/Air Quality Policy #19: "Promote a pattern of land uses which locates residential uses in close proximity to employment and commercial services to minimize vehicular travel."

San Joaquin Valley Air Pollution Control District (SJVAPCD)

The Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI) is an advisory document that provides lead agencies, consultants, and project applicants with analysis guidance and uniform procedures for addressing air quality in environmental documents. Local jurisdictions are not required to use the methodology outlined therein. The GAMAQI describes the criteria that the SJVAPCD uses when reviewing and commenting on the adequacy of environmental documents. It recommends thresholds for determining whether projects would have significant adverse environmental impacts, identifies methods for predicting project emissions and impacts, and identifies measures that can be used to avoid or reduce air quality impacts. The GAMAQI includes guidance for analysis for criteria pollutants, particulates, HAPs, and odors for both construction and operations of a project. An update to the GAMAQI was approved on March 19, 2015, and was used as a guidance document for this analysis (SJVAPCD 2015).

There are currently multiple different attainment plans for the SJVAB. These are described in the sections that follow.

1-HOUR EXTREME OZONE ATTAINMENT DEMONSTRATION PLAN

In 2013, the SJVAB had zero violations of the 1-hour O_3 standard established by EPA under the CAA. The SJVAB now meets the 1-hour O_3 standard based on the most recent three-year period air monitoring data (2011-2013). On May 6, 2014, the SJVAPCD submitted a formal request that the EPA determine that the SJVAB has attained the federal 1-hour O_3 standard. In accordance with federal requirements, the SJVAPCD's submittal includes a clean data finding and a finding that attainment is due to permanent and enforceable emissions reductions.

The SJVAPCD developed a 2013 Plan for the Revoked 1-Hour O_3 Standard, which it adopted in September 2013. The modeling confirms that the SJVAB will attain the revoked 1-hour O_3 standard by 2017.

8-HOUR OZONE ATTAINMENT DEMONSTRATION PLAN

The SJVAB is designated as an extreme O3 nonattainment area for the EPA 2008 8-hour O3 standard of 75 parts per billion (ppb). The SJVAPCD is currently in the process of developing an O3 plan to address EPA's 2008 8-hour O3 standard, with attainment required by 2032. Because the SJVAB naturally has high background O3 levels and O3 transport, SJVAPVD faces a regulatory challenge to meet the 2008 8-hour O3 standard.

SJVAPCD adopted the 2007 8-Hour Ozone Plan in April 2007. This plan addresses EPA's 8-hour O3 standard of 84 ppb, which was established by EPA in 1997.

2009 RACT SIP

On April 16, 2009, the Governing Board adopted the Reasonably Available Control Technology Demonstration for Ozone State Implementation Plans (2009 RACT SIP) (SJVAPCD 2009a). In part, the 2009 RACT SIP satisfied the commitment by the SJVAPCD for a new RACT analysis for the 1-hour O3 plan (see discussion of the EPA withdrawal of approval in the Extreme 1-Hour Ozone Attainment Demonstration Plan summary above) and was intended to prevent all sanctions that could be imposed by EPA for failure to submit a required SIP revision for the 1-hour O3 standard. With respect to the 8-hour standard, the plan also assesses the SJVAPCD's rules based on the adjusted major source definition of 10 tons per year (due to the SJVAB's designation as an extreme O3 nonattainment area), evaluates SJVAPCD rules against new Control Techniques Guidelines promulgated since August 2006, and reviews additional rules and rule amendments that had been adopted by the Governing Board since August 17, 2006, for RACT consistency.

2013 PLAN FOR THE REVOKED 1-HOUR OZONE STANDARD

The SJVAPCD developed a plan for EPA's revoked 1-hour O3 standard after the EPA withdrew its approval of the 2004 Extreme 1-Hour Ozone Attainment Demonstration Plan as a result of litigation. As a result of the litigation, the EPA reinstated previously revoked requirements for 1 hour O3 attainment plans. The 2013 plan addresses those requirements, including a demonstration of implementation of Reasonably Available Control Measures and a demonstration of a rate of progress averaging 3 percent annual reductions of ROG or NOX emissions every 3 years. The 2013 Plan for the Revoked 1-Hour Ozone Standard was approved by the Governing Board on September 19, 2013 (SJVAPCD 2013a). Based on implementation of the ongoing control measures, preliminary modeling indicates that the SJVAB will attain the 1-hour O3 standard by 2017, before the final attainment year of 2022 and without relying on long-term measures under CAA Section 182(e)(5) ("black box reductions").

2014 RACT SIP

On June 19, 2014, the SJVAPCD adopted the 2014 Reasonably Available Control Technology Demonstration for the 8-Hour Ozone State Implementation Plan (2014 RACT SIP) (SJVAPCD 2014b). This RACT SIP includes a demonstration that the SJVAPCD rules implement RACT. The plan reviews each of the NOx reduction rules and concludes that they satisfy requirements for stringency, applicability, and enforceability and meet or exceed RACT. The plan's analysis of further ROG reductions through modeling and technical analyses demonstrates that added ROG reductions will not advance SJVAB's O3 attainment. Each ROG rule evaluated in the 2009 RACT SIP, however, has been subsequently approved by the EPA as meeting RACT within the last 2 years. The O3 attainment strategy, therefore, focuses on further NOx reductions.

PM_{10} ATTAINMENT DEMONSTRATION PLAN

A PM10 plan has been adopted and submitted to EPA for review. The 2006 PM10 Plan is a continuation of the SJVAPCD's strategy for achieving the NAAQS for PM10. It is the SIP revision required as a condition of EPA approval of the 2003 PM10 Plan, which became effective June 25, 2004. The SJVAB was recently designated as an attainment area for PM10 under the NAAQS.

On May 19, 2005, the SJVAPCD adopted amendments to the plan to update schedules and emission reductions and align the contingency measure discussion with National requirements. In addition to meeting the requirements of the CAA and containing measures needed to attain the NAAQS at the earliest possible date, this SIP revision is to include an evaluation of the modeling from the California Regional Particulate Air Quality Study and the latest technical information, including inventory and monitoring data.

In September 2007, the SJVAPCD approved a request to redesignate the SJVAB to attainment of the PM10 NAAQS and approve the 2007 PM10 Maintenance Plan. The

maintenance plan and request for redesignation was approved by CARB on October 27, 2007, and submitted to EPA for approval. EPA redesignated the SJVAB to attainment of the PM10 NAAQS and approved the 2007 PM10 Maintenance Plan on September 19, 2008.

$PM_{2.5}$ ATTAINMENT PLANNING

Based on the health studies conducted, PM2.5 is considered to be more adverse to human health than other pollutants. In July 1997, EPA set two PM2.5 standards: a 24-hour standard set at 65 µg/m3 to protect against short-term health impacts and a 12-month (annual) standard set at 15 µg/m3 to protect against longer term impacts. The SJVAB has been designated a nonattainment area for the PM2.5 standards.

The SJVAPCD Governing Board adopted the 2008 PM2.5 Plan on April 30, 2008. This plan is designed to assist the SJVAB in attaining all PM2.5 standards, including the 1997 federal standards, the 2006 federal standards, and the state standard, as soon as possible. On July 13, 2011, the EPA issued a rule partially approving and disapproving the 2008 PM2.5 Plan. Subsequently, on November 9, 2011, the EPA issued a final rule approving most of the plan with an effective date of January 9, 2012. However, the EPA disapproved the plan's contingency measures because they would not provide sufficient emission reductions.

Approved by the Governing Board on December 20, 2012, the 2012 PM2.5 Plan addresses attainment of EPA's 24-hour PM2.5 standard of 35 micrograms per cubic meter (µg/m³) established in 2006. In addition to reducing direct emissions of PM2.5, this plan focuses on reducing emissions of NOX, which is a predominant pollutant in the formation of PM2.5 in the SJVAB. The plan relies on a multilevel approach to reducing emissions through SJVAPCD efforts (industry, the general public, employers, and small businesses) and state/federal efforts (passenger vehicles, heavy-duty trucks, and off-road sources), as well as SJVAPCD and state/federal incentive programs to accelerate replacement of on- and off-road vehicles and equipment. Through compliance with this attainment plan, the SJVAB would achieve attainment of the federal PM2.5 standard by the attainment deadline of 2019, with the majority of the SJVAB actually experiencing attainment well before the deadline. The EPA lowered the PM2.5 standard again in 2012 and is in the process of completing attainment designations.

The Governing Board adopted the 2015 Plan for the 1997 PM2.5 Standard on April 16, 2015. This plan addresses the EPA's annual PM2.5 standard of 15 micrograms per cubic meter (µg/m3) and 24-hour PM2.5 standard of 65 µg/m3 established in 1997. While nearly achieving the 1997 standards, the SJVAB experienced higher $PM_{2.5}$ levels in winter 2013–2014 due to the extreme drought, stagnation, strong inversions, and historically dry conditions; thus, the SJVAPCD was unable to meet the attainment date of December 31, 2015. Accordingly, this plan also contains a request for a one-time extension of the attainment deadline for the 24-hour standard to 2018 and the annual standard to 2020. The plan builds on past development and implementation of effective control strategies. Consistent with EPA regulations for $PM_{2.5}$ plans to achieve the 1997 standards, the plan

contains Most Stringent Measures, Best Available Control Measures, additional enforceable commitments for further reductions in emissions, and ensures expeditious attainment of the 1997 standard.

APPLICABLE NON-STATIONARY SOURCE REGULATIONS

The SJVAPCD's primary means of implementing air quality plans are by adopting and enforcing rules and regulations. Stationary sources within the jurisdiction are regulated by the SJVAPCD's permit authority over such sources and through its review and planning activities. Unlike stationary source projects, which encompass very specific types of equipment, process parameters, throughputs, and controls, air emissions sources from land use development projects such as Grapevine are mainly mobile sources (traffic) and area sources (small dispersed stationary and other non-mobile sources), including exempt (i.e., no permit required) sources such as consumer products, landscaping equipment, furnaces, and water heaters. Mixed-use land development projects may include nonexempt sources including devices such as charbroilers, small to large boilers, stationary internal combustion engines, gas stations, or asphalt batch plants.

Notwithstanding nonexempt stationary sources, which would be permitted on a case-by-case basis, SJVAPCD Regulations VIII and IX generally apply to land use development projects and are described below:

SJVAPCD REGULATION VIII—FUGITIVE PM10 PROHIBITIONS.

Rules 8011–8081 are designed to reduce PM10 emissions (predominantly dust/dirt) generated by human activity, including construction and demolition, road construction, bulk materials storage, use of paved and unpaved roads, and carryout and trackout. Among the Regulation VIII rules applicable to the project are the following:

Rule 8011—General Requirements;

Rule 8021—Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities;

Rule 8031—Bulk Materials;

Rule 8041—Carryout and Trackout;

Rule 8051—Open Areas;

Rule 8061—Paved and Unpaved Roads; and

Rule 8071—Unpaved Vehicle/Equipment Traffic Areas.

REGULATION IX – MOBILE AND INDIRECT SOURCES

Rule 9110 General Conformity

Rule 9120 Transportation Conformity

Rule 9410 Employer Based Trip Reduction

Rule 9510 Indirect Source Review (ISR)

RULE 9510 (INDIRECT SOURCE REVIEW, ADOPTED DECEMBER 15, 2005)

The purpose of the Indirect Source Review (ISR) is to reduce emissions of NOX and PM10 from new development projects. Rule 9510 places application and emission-reduction requirements on certain development projects to reduce emissions through on-site mitigation, off-site SJVAPCD-administered projects, or a combination of the two. Each project proponent is required to submit an air impact assessment application concurrent with the last discretionary approval by the County pursuant to Rule 9510's requirements.

Although compliance with Rule 9510 is separate from the CEQA process, control measures used to comply with the Rule 9510 are considered mitigation to a less-than-significant impact under CEQA.

INDIRECT SOURCE MITIGATION FEE

Indirect sources are land uses that attract or generate motor vehicles trips. Indirect source emissions contain many pollutants, principally PM10, ROG, and NOX. The SJVAPCD included a requirement in the adopted 2003 PM10 Plan to develop and implement an ISR rule by July 2004, with implementation to begin in 2005. The ISR rule went into effect in March 2006. SB 709 required the SJVAPCD to adopt by regulation a schedule of fees to be assessed on area-wide and indirect sources of emissions. After public hearings, the district adopted Rule 9510 on December 15, 2005.

The purpose of Rule 9510 is to reduce emissions of NOX and PM10 from new development projects. The rule applies to development projects that, upon full buildout, seek to gain discretionary approval for any one of the following: 50 residential units, 2,000 square feet of commercial space, 25,000 square feet of light industrial space, 20,000 square feet of medical or recreational space, 39,000 square feet of general office space, 100,000 square feet of heavy industrial space, 9,000 square feet of educational space, 10,000 square feet of government space, or 9,000 square feet of any land use not identified above. Several sources are exempt from the rule, including transportation projects and transit projects (exempt only from Rule 9510 Section 6.2 and Section 7.1.2), reconstruction projects that result from a natural disaster, and development projects whose primary sources of emissions are subject to SJVAPCD Rules 2201 and 2010, which address stationary sources. Any development project that has a mitigated baseline of less than 2 tons per year for NOX

and PM10 is also exempted from the mitigation requirements of the rule. Developers are encouraged to reduce as much air pollution as possible through on-site mitigation or the incorporation of air-friendly designs and practices into the project. Some examples include bike paths and sidewalks; traditional street design; medium- to high-density residential developments; locating near bus stops and bike paths; locating near different land use zones, such as commercial; and increasing energy efficiency. If these practices do not completely meet the required reductions (under the rule), new development projects are required to mitigate the remainder of their emissions by contributing to a mitigation fund that would be used to pay for the most cost-effective projects to reduce emissions. Examples include projects to retire or crush polluting cars, replace older diesel engines, and replace gas-powered lawnmowers with electric lawnmowers.

The ISR requires developers to reduce 20 percent of construction-exhaust NOX, 45 percent of construction-exhaust PM10; 33 percent of operational NOX over 10 years; and 50 percent of operational PM10 over 10 years. The SJVAPCD estimates that the potential reductions from this program in 2010 will be 11.5 tons per day (4,197.5 tons per year) of PM10 and 4.1 tons per day (1,496.5 tons per year) of NOX.

DEVELOPMENT MITIGATION CONTRACT (DMC) AGREEMENTS

A development mitigation contract (DMC) is an air quality mitigation measure by which a developer enters into a contractual agreement with the district to reduce a development project's impact on air quality beyond that achieved by compliance with District Rule 9510. Implementation of the DMC is comparable to implementation of the ISR; project emissions are characterized, funds are paid to the district, and the district administers the funds to secure the required emission-reduction projects. For projects subject to Rule 9510, the DMC must exceed the air quality benefits from compliance with the ISR. Therefore, applicants that enter into a DMC are considered in compliance with District Rule 9510. Examples of emission-reduction projects include projects to retire or crush polluting cars, replace older diesel engines, and replace gas-powered lawnmowers with electric lawnmowers. The SJVAPCD's 2008 annual report on the district's ISR program (June 19, 2008) includes the projects and reductions attributable to Rule 9510, including DMC agreements for combined on- and off-site emission reductions, totaling 2,078 tons of NOX and 1,087 tons of PM10.

LOCAL CONTROL MEASURES

The SJVAPCD requires all local governments within its eight-county jurisdiction to adopt resolutions as part of the Extreme OADP that must be approved by EPA. The resolutions describe the reasonably available control measures that each jurisdiction will implement to reduce O3-causing emissions into the air from transportation sources. Local jurisdictions are also required to adopt best available control technology (BACT) measures to reduce particle emissions as part of the PM10 Area Attainment Demonstration Plan. This process is coordinated and assisted by regional transportation planning agencies, such as the Kern Council of Governments (Kern COG).

The Kern County Board of Supervisors adopted a resolution on March 12, 2002, that committed the County to implementing several measures to reduce O3-causing emissions. Among the measures are cost incentives for road contractors to minimize land closures, transit-oriented land use planning, and measures to encourage County employees and other motorists to restrict driving on days with high O3 levels as well as continuing efforts to convert County vehicles to low-emission compressed natural gas and gasoline/electric hybrid engines. Many of these measures have been incorporated as general plan update policies.

The Kern County Board of Supervisors adopted a resolution on January 7, 2003, that committed the County to implementing several measures aimed at reducing PM10 emissions from County roadways. Among the measures are plans to determine the feasibility of paving the County's unpaved roads, which are lightly traveled, paving the shoulders of the most heavily traveled paved County roads as funding allows, and purchasing two PM10-compliant street sweepers as funding allows. The resolution also committed the County to imposing tougher rules for cancelling road improvements on large rural parcels; requiring public and private access roads for new commercial and industrial development to be paved; evaluating the adverse air quality impacts of new development and, where appropriate, requiring mitigation measures; implementing policies that require developers to control and abate dust during grading and construction operations; and, to receive a permit for expansion or a significantly altered use, requiring unpaved parking and storage areas of commercial and agricultural operations in County areas to be paved.

APPLICABLE STATIONARY SOURCE REGULATIONS

The SJVAPCD has primary responsibility for regulating stationary sources of air pollution situated within its jurisdictional boundaries. To this end, the SJVAPCD implements air quality programs required by state and Federal mandates, enforces rules and regulations based on air pollution laws, and educates businesses and residents about its role in protecting air quality. The SJVAPCD is also responsible for managing and permitting existing, new, and modified sources of air emissions within the SJVAB and establishing the following rules and regulations to ensure compliance with local, state, and National air quality regulations.

RULE 2010 (PERMITS REQUIRED)

Rule 2010 requires that an Authority to Construct permit (a new source review permit) and a Permit to Operate be obtained prior to constructing, altering, replacing, or operating any device that emits or may emit air contaminants.

RULE 2020 (EXEMPTIONS)

Rule 2020 specifies criteria that emission units must meet to be exempt from SJVAPCD permit requirements. The rule also specifies the recordkeeping requirements to verify the

exemption and outlines the compliance schedule for emission units that lose the exemption after installation. Rule 2020 applies to any source that emits or may emit air contaminants.

RULE 2070 (EXEMPTIONS)

Rule 2070 sets forth the standards that must be met for a permit to be issued by the SJVAPCD. The rule applies to any activity required to obtain a permit according to Rule 2010 (Permits Required).

RULE 2201 (NEW AND MODIFIED STATIONARY SOURCE REVIEW RULE)

The stated purpose of Rule 2201 is to provide for the review of new and modified stationary sources of air pollution and to provide mechanisms, including emission trade-offs, by which authority to construct such sources may be granted without interfering with the attainment or maintenance of ambient air quality standards. The SJVAPCD new source review rule applies to all new stationary sources and all modifications to existing stationary sources that are subject to SJVAPCD permit requirements. The rule generally requires that new or modified equipment include BACT and that emission increases above specified thresholds be offset.

RULE 2520 (TITLE V FEDERALLY MANDATED OPERATING PERMITS)

Rule 2520 serves as the SJVAPCD's mechanism for issuing, renewing, revising, revoking, and terminating operating permits for sources of air contaminants in accordance with the requirements of Title 40, Part 70, of the Code of Federal Regulations (CFR). This rule defines the sources that require federally mandated operating permits, as well as the content of these permits. Federally mandated operating permits are required for all major sources of air pollutants, as well as other sources listed in Section 2.0 of the rule. Generally, the federally mandated operating permits include emission limitations and standards for federal criteria pollutants (ROG, NOx, CO, SOx, PM10, PM2.5, and lead), new source performance standards, and recordkeeping and reporting requirements. This rule requires that the SJVAPCD combine all federal and state applicable standards into one permit for each facility, and that the permit indicate where state standards exceed federal standards.

SJVAPCD Rule 2520 applies to major stationary sources of air contaminants and to major sources of HAPs. Major sources of air contaminants are generally considered to be sources that emit 100 tons per year of a regulated air pollutant, without considering fugitive emissions. To be considered major for HAPs, a source must emit 10 tons per year or more of a single HAP or 25 tons per year or more of HAPs in aggregate.

RULE 2530 (FEDERALLY ENFORCEABLE POTENTIAL TO EMIT)

The purpose of Rule 2530 is to restrict a stationary source's potential to emit so that a source may be exempt from the requirements of Rule 2520 (Federally Mandated Operating Permits). This rule applies to any stationary source that is a major source of regulated air pollutants or of hazardous air pollutants but with limitations would be exempt from Rule 2520. This exemption provides stationary sources in the SJVAPCD with a separate option to comply with air quality restrictions. Rule 2530 also includes recordkeeping and reporting requirements. Rule 2530 allows facilities to be excluded from the Title V program (see Rule 2520) by taking limits or keeping records to demonstrate that their emissions are below the applicable thresholds. This process is also referred to as a "synthetic minor."

RULE 2550 (FEDERALLY MANDATED PRECONSTRUCTION REVIEW FOR MAJOR SOURCES OF AIR TOXICS)

Rule 2550 provides an administrative mechanism for applying the requirements of 40 CFR 63.40–63.44 at major sources of hazardous air pollutants that have Authority to Construct permits for new construction or reconstruction. Rule 2550 requires that new or reconstructed sources use Toxic Best Available Control Technology, with some exceptions.

RULE 4001 (NEW SOURCE PERFORMANCE STANDARDS)

Rule 4001 codifies the SJVAPCD's adoption and incorporation of the New Source Performance Standards as set forth in 40 CFR 60. New Source Performance Standards apply to a variety of different types of stationary sources, including asphalt plants. The regulation imposes emissions standards for certain pollutants and requires that specified emission control equipment and monitoring devices be installed at all new, modified, or reconstructed facilities to limit emissions. The regulation also includes test methods and procedures, as well as monitoring, notification, and recordkeeping requirements.

RULE 4002 (NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS)

Rule 4002 incorporates the National Emission Standards for Hazardous Air Pollutants (NESHAPs) as set forth in 40 CFR 61, and the NESHAPs for source categories as set forth in 40 CFR 63. 40 CFR 61 includes emission standards for several known toxic air pollutants, such as beryllium, mercury, and vinyl chloride. 40 CFR 63 regulates the NESHAP by source categories. Both regulations also include test methods and procedures, as well as monitoring, notification, and recordkeeping requirements.

RULE 4101 (VISIBLE EMISSIONS)

Rule 4101 prohibits the emissions of visible air contaminants to the atmosphere. The rule applies to any source operation that emits or may emit air contaminants.

RULE 4102 (PUBLIC NUISANCE)

The purpose of Rule 4102 is to protect the health and safety of the public. The rule applies to any source operation that emits or may emit air contaminants or other materials and prohibits from any source whatsoever the discharge emissions of air contaminants or other materials that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public or that endanger the comfort, repose, health, or safety of any such person or the public or that cause or have a natural tendency to cause injury or damage to business or property.

RULE 4201 (PARTICULATE MATTER CONCENTRATION)

Rule 4201 establishes a particulate matter emission standard and applies to any source operation that emits or may emit dust, fumes, or total suspended particulate matter. The rule prohibits the release or discharge into the atmosphere from any single source operation, dust, fumes, or total suspended particulate matter emissions in excess of 0.1 grain per cubic foot of gas at dry standard conditions.

RULE 4801 (SULFUR COMPOUNDS)

Rule 4801 limits the emission of sulfur compounds and applies to any discharge to the atmosphere of sulfur compounds that would exist as a liquid or a gas at standard conditions. The rule prohibits the discharge of sulfur compounds into the atmosphere in concentrations greater than 2,000 parts per million by volume (ppmv) as SO2 on a dry basis averaged over 15 consecutive minutes.

Air Quality Conformity Determination for Transportation Plans and Programs

The federal CAA amendments of 1990 require a finding be made that any project, program, or plan subject to approval by a metropolitan planning organization conforms to air plans for attainment of air quality standards. Kern COG is designated the Regional Transportation Planning Agency and a Metropolitan Planning Organization for Kern County. In that capacity, Kern COG models air quality projections based on population projections in conjunction with current general plan designations and estimated vehicle miles in conjunction with the current Regional Transportation Plan (RTP) and the Federal Transportation Plan (FTP) for Kern County. These results are compared to pollutant budgets for each basin approved by EPA in the 1999 base year. Kern County is contained within two air basins: SJVAB and the Mojave Desert Air Basin. Each air basin has its own plans and pollutant budgets. Kern COG makes conformity findings for each air basin.

Kern County recently prepared a draft 8-Hour Ozone Air Quality Conformity Analysis to analyze Kern County's federally approved Federal Transportation Improvement Program (FTIP) and the Destination 2030 RTP. Changes to the NAAQS for ozone from a one-hour measurement to an eight-hour measurement have triggered the need for this analysis. The FTIP for the Kern County region is a six-year schedule of multimodal transportation improvements, and the RTP is a long-range, 26-year transportation plan. The conformity findings conclude that the FTIP and RTP result in emissions that are less than the emission budgets of baseline emissions for CO, VOC, NO_x, and PM_{10} (Kern Council of Governments [Kern COG] 2005).

4.3.4 Impacts and Mitigation Measures

This section describes the air quality significance thresholds, the air quality methodology used to evaluate whether the proposed Project would exceed the thresholds, and an evaluation of the proposed Project's impacts.

Methodology

The Air Quality Impact Analysis was prepared pursuant to the GAMAQI (SJVAPCD 2015) and the Kern County Air Quality Assessment Preparation Guidelines of the Kern County CEQA Implementation Document (December 2006). The County guidance was developed by the Kern County Planning and Natural Resources Department to assist with the preparation of the air quality assessments for use as a technical document in EIRs. This County guidance, called the "Guidelines for Preparing Air Quality Assessments for Use in EIRs" is intended to ensure that the assumptions and methodology used in the County's environmental documents are uniform from one project to the next to facilitate the comparison of air quality environmental effects. The County guidance states that the most recent air quality guidance documents from the SJVAPCD, such as the GAMAQI, must be used and referenced in the preparation of an air quality assessment and that the latest version of all models must be used for the appropriate application. It also notes that where the Kern County Planning and Natural Resources Department guidelines require quantification and the SJVAPCD does not; therefore, for purposes of CEQA, the Kern County Planning and Natural Resources Department guidelines must be followed.

Kern County guidance states that an air quality assessment should include estimates of short-term construction emissions in tons per year. The estimates must include site grading and building construction emissions, with comparison to the adopted County CEQA thresholds and the applicable air district (SJVAPCD for western Kern County) thresholds. Per the County's guidance, all assumptions should be clearly presented, including length of each construction phase, equipment that will be used during each phase, and the amount of soil disturbance, including any import or export of soil. The emission factors used to estimate emissions should be clearly documented, and the model output should be included in the report.

The SJVAPCD guidance, GAMAQI, states that the latest SJVAPCD-approved models should be used to conduct an air quality analysis. The current recommended model to estimate potential project-generated criteria air pollutant emissions from construction is the California Emissions Estimator Model (CalEEMod), Version 2013.2.2 (available on-line at www.caleemod.com). CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government

agencies, land use planners, and environmental professionals to quantify potential criteria air pollutant emissions from a variety of land use projects.

The GAMAQI identifies thresholds that separate a project's short-term and long-term emissions. The CalEEMod standard defaults were applied for the emissions estimates except for the following (Insight Environmental Consultants 2016):

- Land use size and lot acreage was adjusted to match the project description;
- Construction schedule was estimated for each construction phase;
- Average daily traffic numbers were adjusted based on data from the Traffic Study (July 2017); and
- Demolition construction phase was removed.

Short-term, emissions are primarily from the construction phase a project and are recognized to be short in duration and without lasting impacts on air quality.

The Air Quality Impact Assessment applied the default CalEEMod equipment list, many variables are factored into the calculation of construction emissions such as length of the construction period, number of each type of equipment, site characteristics, area climate, and construction personnel activities. All equipment was assumed to be in use for the proposed Project specified hours per day and load SJVAPCD's required measures for all project include: (1) water exposed area three times per day; and (2) reduce vehicle speed to less than 15 miles per hour.

Thresholds of Significance

The Kern County California Environmental Quality Act (CEQA) Implementation Document and Kern County Environmental Checklist state that a project could potentially have a significant effect if it would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard as adopted in (c) i or (c) ii, or as established by EPA or an air district, or contribute substantially to an existing or projected air quality violation.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable National or State ambient air quality standard (including emissions that exceed quantitative thresholds for ozone precursors). Specifically, would implementation of the project exceed any of the thresholds outlined in Table 4.3-5, *Proposed Project Air Quality Thresholds of Significance by Air Basin*?

Table 4.3-5. Proposed Project Air Quality Thresholds of Significance by Air Basin

Air Basin	Criteria Pollutant					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$

SJVAB[1]						
Construction Sources (tons/year)	10	10	100	27	15	15
Operations Sources (tons/year)	10	10	100	27	15	15
MDAB[2]						
Operations Daily Mobile Sources (lbs/day)	137	137	--	--	--	--
Operations Sources (tons/year)	25	25	NA	27	15	15

NA = not applicable.
Sources: 1) SJVAPCD, 2015a.
2) EKAPCD, 1999.

- Expose sensitive receptors to substantial pollutant concentrations.
- Cause the creation of objectionable odors, affecting a substantial number of people.

Kern County has adopted the SJVAPCD's quantitative emission thresholds for NO_X and ROG to determine whether the potential air quality impacts of a project may produce a significant impact. The air quality threshold for ROG and NO_X is 10 tpy. For PM_{10}, the County has adopted a threshold of significance that is consistent with the SJVAPCD's fugitive dust control rules (Regulation VIII). For CO, no regional emission thresholds have been established.

Project Impacts

Impact 4.3-1: The Project Would Not Be Consistent with the Air Quality Attainment Plan.

Air quality impacts from proposed projects within Kern County are controlled through policies and provisions of the SJVAPCD, KCGP, and MBGP (Insight Environmental Consultants 2017). Each project should also demonstrate consistency with the SJVAPCD's adopted Air Quality Attainment Plans (AQAP) for ozone and PM_{10}. The SJVAPCD is required to submit a "Rate of Progress" document to the CARB that demonstrates past and planned progress toward reaching attainment for all criteria pollutants. The CCAA requires air pollution control districts with severe or extreme air quality problems to provide for a five percent reduction in nonattainment emissions per year. The AQAP prepared for the San Joaquin Valley by the SJVAPCD complies with this requirement. The CARB reviews, approves, or amends the document and forwards the plan to the EPA for final review and approval within the State Implementation Plan (SIP).

Air pollution sources associated with stationary sources are regulated through the permitting authority of the SJVAPCD under the "New and Modified Stationary Source" rule (SJVAPCD Rule 2201). Owners of any new or modified equipment that emits, reduces, or controls air contaminants, except those specifically exempted by the SJVAPCD, are required to apply for an Authority to Construct and Permit to Operate (SJVAPCD Rule 2010). Additionally, best available control technology (BACT) is required on specific types of stationary equipment and are required to offset both stationary source emission increases along with increases in cargo carrier emissions if the specified threshold levels are exceeded (SJVAPCD Rule 2201, 4.7.1). Through this mechanism, the SJVAPCD ensures that all stationary sources within the proposed Project area would be subject to the standards of the SJVAPCD and that new developments do not result in net increases in stationary sources of criteria air pollutants.

Required Evaluation Guidelines

CEQA Guidelines and the Federal CAA (Sections 176 and 316) contain specific references on the need to evaluate consistencies between the proposed Project and the applicable AQAP for the proposed Project site. To accomplish this, the CARB has developed a three-step approach to determine proposed Project conformity with the applicable AQAP:

1. Determination that an AQAP is being implemented in the area where the project is being proposed. The SJVAPCD has implemented the current, modified, AQAP as approved by the CARB. The current AQAP is under review by the EPA.

2. The proposed Project must be consistent with the growth assumptions of the applicable AQAP. The proposed Project is included within the employment increases projected in the KCGP and MBGP.

3. The proposed Project must contain in its design all reasonably available and feasible air quality control measures. The proposed Project incorporates various policy and rule-required implementation measures that will reduce related emissions.

The CCAA and AQAP identify transportation control measures as methods to further reduce emissions from mobile sources. Strategies identified to reduce vehicular emissions, such as reductions in vehicle trips, vehicle use, vehicle miles traveled, vehicle idling, and traffic congestion in order to reduce vehicular emissions, can be implemented as control measures under the CCAA as well. Additional measures may also be implemented through the building process, such as providing electrical outlets on exterior walls of structures to encourage use of electrical landscape maintenance equipment or measures such as electrical outlets for electrical systems on diesel trucks to reduce or eliminate idling time.

Since the growth represented by the proposed Project was anticipated by the KCGP and MBGP and incorporated into the AQAP, conclusions may be drawn from the following criteria:

- The findings of the analysis conducted using Traffic Analysis Zones show that sufficient employment increases are planned for the proposed Project area;

- That, by definition, the emissions from the proposed Project are below the SJVAPCD's established emissions impact thresholds; and

- That the primary source of emissions from the proposed Project would be on-road trucks that are licensed through the State of California and whose emissions are already incorporated into the CARB's San Joaquin Valley Emissions Inventory.

Based on these factors, the proposed Project is consistent with the AQAP.

Consistency with Kern Council of Government's Regional Conformity Analysis

The Kern COG Regional Conformity Analysis Determination demonstrates that the regional transportation expenditure plans (Destination 2030 Regional Transportation Plan and Federal

Transportation Improvement Program) in the Kern County portion of the San Joaquin Valley air quality attainment areas would not hinder the efforts set out in the CARB's SIP for each area's nonattainment pollutants (CO, ozone, and PM_{10}). The analysis uses an adopted regional growth forecast governed by both the adopted Kern COG Policy and Procedure Manual and a Memorandum of Understanding between Kern County and Kern COG (representing itself and outlying municipal member agencies).

The Kern COG Regional Conformity Analysis considers general plan amendments (GPAs) and zone changes (ZCCs) that were enacted at the time of the analysis as projected growth within the area based on land use designations incorporated within the KCGP and MBGP. Land use designations that are altered based on subsequent GPAs that were not included in the regional conformity analysis were not incorporated into the Kern COG analysis. Consequently, if a proposed project is not included in the regional growth forecast using the latest planning assumptions, it may not be said to conform to the regional growth forecast. Under the current Kern County zoning, the proposed Project site is designated as A (Exclusive Agriculture) and would be included in the regional growth forecast.

> Item 2 under Section 3 of the Model Maintenance Procedure of the Kern COG Regional Transportation Modeling Policy and Procedure Manual, states:
>
> Land Use Data - General Plan land capacity data or "Build-out capacity" is used to distribute the forecasted County totals, and may be updated as new information becomes available, and is revised in regular consultation with local planning departments.

Under current policies, only after a GPA is approved can housing and employment assumptions be updated to reflect capacity changes. Since the proposed Project requires a GPA from R-IA (Resource-Intensive Agriculture) to LI (Light Industrial), SI (Service Industrial), GC (General Commercial), and HC (Highway Commercial). The existing growth forecast would eventually be modified to reflect these changes.

In addition, a review of the Kern COG regional forecast was prepared to evaluate if the proposed Project area growth forecast would be sufficient for the proposed Project's projected employment increase. The adopted growth forecasts are assigned to Traffic Analysis Zones (TAZs). A review of the growth forecast for a six-mile radius from the proposed Project was conducted (Insight Environmental Consultants 2017). Table 4.3-6, *TAZ Analysis Area Projected Growth Analysis*, shows the TAZ growth forecast data for the proposed Project's six-mile radius. Table 4.3-7 *Percent Increase/Decrease on TAZ Analysis Area* shows the percent increase or decrease for the six-mile radius regarding population, households and employment.

Table 4.3-6. TAZ Analysis Area Projected Growth Analysis

	Years		
	2015	2020	2030
Population	128,388	136,471	164,550
Households	37,429	40,811	49,703

Table 4.3-6. TAZ Analysis Area Projected Growth Analysis

	Years		
	2015	2020	2030
Employment	27,895	29,744	33,690

Source: Insight Environmental Consultants 2017.

Table 4.3-7. Percent Increase/Decrease on TAZ Analysis Area

Years	Percent Increase / Decrease		
	Population	Households	Employment
2015*	0	0	0
2020	6	9	7
2030	28	33	21

Source: Insight Environmental Consultants 2017.

The proposed Project is consistent with the existing land use designation and is currently located within an existing TAZ. There is sufficient employment growth forecast to account for employment growth by 2030. The proposed Project would be considered consistent with the adopted growth forecast and, therefore, consistent with the regional air quality conformity.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.3-2: The Project Would Violate Any Air Quality Standard as Adopted or Established by EPA or Air District or Contribute Substantially to an Existing or Projected Air Quality Violation.

Short-Term (Construction) Emissions

Generally short-term impacts refer to those impacts that occur during the construction phase of the proposed Project are temporary in nature without lasting impacts on air quality. Primarily this phase results in particulate emissions from the construction related activities including fugitive dust and other particulate matter, as well as exhaust emissions generated by earthmoving activities and operation of grading equipment during site preparation. Construction emissions are caused by on-site or off-site activities. On-site emissions principally consist of exhaust emissions (NO_x, SO_x, CO, ROG, PM_{10}, and $PM_{2.5}$) from heavy-duty construction equipment, motor vehicle operation, and fugitive dust

(mainly PM_{10}) from disturbed soil. Off-site emissions are caused by motor vehicle exhaust from delivery vehicles, as well as worker traffic, but also include road dust (PM_{10}). Major construction-related activities include the following:

- Grading/clearing, including the excavation;
- Excavation and earth moving for infrastructure construction of the utilities, both on and off-site, and dwelling unit foundations and footings;
- Building construction;
- Asphalt paving of access roads throughout the development; and
- Application of architectural coatings on surfaces such as dwelling stucco and interior painting.

Construction equipment such as scrapers, bulldozers, forklifts, backhoes, water trucks, and industrial saws are expected to be used on the proposed Project site and would result in exhaust emissions consisting of CO, NO_x, ROG, SO_x, PM_{10}, and $PM_{2.5}$. During the finishing phase, paving operations and application of architectural coatings would release ROG emissions. Construction emission can vary substantially from day to day, depending on the level of activity, the specific type of operation, and prevailing weather conditions.

Kern County requires that PM_{10} emissions from construction activities be included with the operational impacts of the proposed Project.

Regulation VIII Control Measures (From Table 6-2 of the SJVAPCD GAMAQI):

- All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/ suppressant, covered with a tarp or other suitable cover or vegetative ground cover.
- All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.
- All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.
- With the demolition of buildings up to six stories in height, all exterior surfaces of the building shall be wetted during demolition.
- When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained.

- All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions.) (Use of blower devices is expressly forbidden.)

- Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.

- Within urban areas, an owner/operator shall prevent carryout and trackout, or immediately remove carryout and trackout when it extends 50 feet or more from the nearest unpaved surface exit point of the site.

- Any construction site with 150 or more vehicle trips per day shall prevent carryout and track-out.

Enhanced and Additional Control Measures for Construction Emissions of PM_{10}:

Enhanced Control Measures - Measures to be implemented at construction sites when required to mitigate significant PM_{10} impacts:

- Limit traffic speeds on unpaved roads to 15 miles per hour;

- Shut down equipment when not in use for extended periods;

- Construction equipment shall operate no longer than eight (8) cumulative hours per day; and

- Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent.

Additional Control Measures - Measures that are encouraged at large construction sites located near sensitive receptors, or for projects requiring additional emissions reductions:

- Track out will be prevented by one of the following:

    - A Grizzly with rails, pipes or grates to dislodge debris off exiting vehicles;

    - A layer of washed gravel at one inch or larger in diameter, three inches deep;

    - Extension of paved road at least 100 feet from publicly maintained road; or

    - Installation of a wheel washer.

- Install wind breaks at windward side(s) of construction areas;

- Suspend excavation and grading activity when winds exceed 20 mph (Regardless of wind speed, an owner/operator must comply with Regulation VIII's 20 percent opacity limitation); and

- Limit area subject to excavation, grading, and other construction activity at any one time.

The precise construction details for the proposed Project were unknown at the time of the Air Quality Impact Analysis (Insight Environmental Consultants 2016; refer to Appendix C). The Air Quality Impact Analysis assumed default construction equipment list. All equipment was assumed to be in use for the proposed Project specified hours per day and load factors. SJVAPCD's required measures for all projects include: (1) water exposed area three-times per day; and (2) reduce vehicle speed to less than 15 miles per hour. Refer Appendix C for CalEEMod results.

Table 4.3-8, *Construction Emissions*, presents the proposed Project's unmitigated and mitigated short-term emissions based on the expected full buildout period for the proposed Project.

Table 4.3-8. Construction Emissions

Emissions Source	Pollutant (tons/year)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Unmitigated						
Year 2016	0.20	1.84	1.50	0.002	0.30	0.18
Year 2017	3.71	3.35	3.56	0.006	0.39	0.23
Year 2018	3.82	4.47	4.72	0.009	0.64	0.36
Year 2019	0.26	2.26	2.37	0.004	0.39	0.21
Year 2020	3.47	1.61	2.06	0.004	0.22	0.11
Year 2021	3.67	3.25	4.19	0.009	0.56	0.29
Year 2022	0.20	1.61	2.12	0.004	0.35	0.18
Year 2023	3.43	1.17	1.90	0.004	0.19	0.09
Year 2024	3.60	2.49	3.90	0.009	0.51	0.24
Mitigated						
Year 2016	0.20	1.84	1.50	0.002	0.20	0.13
Year 2017	3.71	3.35	3.56	0.006	0.39	0.23
Year 2018	3.82	4.47	4.72	0.009	0.54	0.32
Year 2019	0.26	2.26	2.37	0.004	0.29	0.17
Year 2020	3.47	1.61	2.06	0.004	0.22	0.11
Year 2021	3.67	3.25	4.19	0.009	0.46	0.24
Year 2022	0.20	1.61	2.12	0.004	0.25	0.13
Year 2023	3.43	1.17	1.90	0.004	0.19	0.09
Year 2024	3.60	2.49	3.90	0.009	0.41	0.19
SJVAPCD Threshold	10	10	100	27	15	15
Is Threshold Exceeded After Mitigation?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Source: Insight Environmental Consultants, 2017.

As calculated by CalEEMod using the default equipment list (refer to Appendix C), the short-term emissions for each year of construction are predicted to be below the SJVAPCD threshold levels and less than significant. Even though emissions would be below the threshold of significance, the Air Quality Impact Assessment also analyzed the emission levels with the incorporation of mitigation measures. The mitigated short-term emissions from the proposed Project (as calculated by CalEEMod) using the default equipment listing, would not exceed the SJVAPCD significance levels and the levels would be the same except for PM_{10} and $PM_{2.5}$; however, mitigation would further

reduce emission levels for PM_{10} and $PM_{2.5}$. With the implementation of mitigation measures, impacts would be less than significant in this regard.

Long-Term (Operational) Impacts

Long-term (operational) emissions are caused by operational mobile, area and energy sources. Table 4.3-9 *Operational Emissions* presents operational emissions for post-project conditions, approximately year 2025. The table depicts operational emissions with and without mitigation.

Table 4.3-9. Operational Emissions

Emissions Source	Pollutant (tons per year)*					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Unmitigated Emissions						
Area Source Emissions	12.96	0.0002	0.03	0.00	0.0001	0.0001
Energy Source Emissions	0.30	2.74	2.30	0.002	0.21	0.21
Mobile Source Emissions	22.40	70.27	288.17	0.67	33.51	10.02
Total Unmitigated Long-Term Emissions	**35.65**	**73.01**	**290.50**	**0.69**	**33.72**	**10.23**
SJVAPCD and Kern County Annual Threshold	**10**	**10**	**100**	**27**	**15**	**15**
Is the Threshold Exceeded Before Mitigation?	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**No**
Mitigated Emissions						
Area Source Emissions	11.79	0.0002	0.03	0.00	0.0001	0.0001
Energy Sources Emissions	0.30	2.74	2.30	0.02	0.21	0.21
Mobile Source Emissions	21.46	63.92	275.48	0.59	29.15	8.72
Rule 9510 – ISR Compliance Reduction	-	(17.96)	-	-	(12.50)	-
Total Mitigated Long-Term Emissions	**33.55**	**48.70**	**277.80**	**0.61**	**16.86**	**8.93**
SJVAPCD and Kern County Annual Threshold	**10**	**10**	**100**	**27**	**15**	**15**
Is the Threshold Exceeded After Mitigation?	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**No**

Notes:
* 0.00 may represent zero or emissions less than 0.005.

Source: Insight Environmental Consultants 2017.

As calculated by the CalEEMod, operational emissions would exceed the SJVAPCD threshold levels for ROG, NO_x, CO, and PM_{10}. Even with the incorporation of Mitigation Measures, long-term air quality operational impacts would be significant and unavoidable.

Fugitive Dust Emissions

Operations of the Project site at full buildout is not expected to present a significant source of fugitive dust (PM_{10}) emissions. The main source of PM_{10} emissions would be from project-related vehicular traffic from employees and consumers driving to and from the proposed Project site. PM_{10} on its own as well as in combination with other pollutants creates a health hazard. The SJVAPCD's Regulation VIII establishes required controls to reduce and minimize fugitive dust emissions. The following SJVAPCD Rules and Regulations apply to the proposed Project (as discussed above in Section 4.3.3, *Regulatory Setting*).

- Rule 4102 – Nuisance

- Regulation VIII – Fugitive PM_{10} Prohibitions
- Rule 8011 – General Requirements
- Rule 8021 – Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities
- Rule 8041 – Carryout and Trackout
- Rule 8051 – Open Areas

The proposed Project would comply with applicable SJVAPCD Rules and Regulations, the Kern County Zoning Ordinance. In addition, Mitigation Measures MM 4.3-1 through MM 4.3-3 would reduce operational fugitive dust emissions; however, as shown in Table 4.3-9 above, impacts would be significant and unavoidable.

Ambient Air Quality

An ambient air quality analyses were performed to determine if the project's construction and operations have the potential to impact ambient air quality through a violation of the ambient air quality standards or a substantial contribution to an existing or projected air quality standard. The basis for the analysis is dispersion modeling applied to the project as described. Maximum daily emissions were used as the basis for determining the proposed Project's potential impact on ambient air quality. Additional information on the ambient air quality modeling methods and assumptions are presented in Appendix C (Insight Environmental Consultants 2017).

The maximum off-site ground level concentration of each pollutant for the 1-hour, 3-hour, 8-hour, 24-hour and annual periods was predicted using the most recent version of EPA's AMS/EPA Regulatory Model (AERMOD) dispersion software under the Lakes Environmental ISC-AERMOD View interface. SJVAPCD-approved, AERMET-processed U Star meteorological datasets for calendar years 2010 through 2014 was input to AERMOD (Insight Environmental Consultants 2017). This was the most recent available dataset available at the time the modeling runs were conducted. All of the regulatory default AERMOD model keyword parameters were employed. Rural dispersion parameters were used for this project, which differs from the urban setting used in the CalEEMod model. The CalEEMod selection criteria is based on trip distances to the project site while the AERMOD selection criteria is based on the majority of the land use surrounding the facility. The majority of the land surrounding the project site is considered "rural" under the Auer land use classification method (Insight Environmental Consultants 2017).

Emissions were evaluated for each pollutant on a short-term (correlating to pollutant averaging period) and long-term (annual) basis, with the exception of CO that was evaluated only for short-term exposures since there are no long-term significance thresholds for CO. Emissions were modeled as an area source with a release height of 1.0 meters.

The majority of mobile emissions predicted by CalEEMod will occur beyond the project boundary because of vehicle trips. In order to determine the on-site vehicle emissions, the following

methodology was discussed and approved by the SJVAPCD (Insight Environmental Consultants 2016). An estimated on-site trip distance was determined by calculating the diagonal distance from the center of the project to the furthest corner. The on-site estimated trip distance was determined to be 0.75 miles. The on-site estimated trip distance was then divided by the average trip length used by CalEEMod, 8.09 miles, in order to determine the on-site to off-site mobile emissions ratio, 9.27 percent. The total mobile emissions calculated by CalEEMod were then reduced by 90.73 percent to estimate the mobile on-site emissions used for ambient air quality modeling.

A fenceline coordinate grid of receptor points was constructed. The grid consisted of a 25-meter fenceline spacing and 25-meter tier spacing extending a distance of 100 meters with initial receptors starting 25 meters from the facility boundary. Elevated terrain options were employed even though there is not a complex terrain in the proposed Project area.

For each pollutant and averaging period modeled, a "total" concentration was estimated by adding the maximum measured background air concentration to the maximum predicted Project impacts. The maximum measured background air concentrations used in this analysis were calculated from measured concentrations at the nearest monitoring stations.

The results of the air dispersion modeling are presented in Table 4.3-10 *Predicted Ambient Air Quality Impacts* and demonstrate that the maximum impacts attributable to the proposed Project, when considered in addition to the existing background concentrations, are below the applicable ambient air quality standard for NO_x, SO_x, and CO. Refer to Appendix C for details regarding the model outputs.

Table 4.3-10. Predicted Ambient Air Quality Impacts

Pollutants	Averaging Period	Background	Project	Project + Background	NAAQS	CAAQS
NO_2	1-hour	59.76	44.04	103.80	188.68	338
	Annual	24.57	3.08	27.65	100	56
SO_2	1-hour	30.50	0.36	30.86	196	655
	3-hour	27.450	0.15	27.60	1,300	---
	24-hour	6.770	0.08	6.85	365	105
	Annual	1.440	0.03	1.47	---	---
CO	1-hour	1480.00	141.70	1621.70	40,000	23,000
	8-hour	617.00	51.64	668.64	10,000	10,000
PM_{10}	24-hour	104.00	3.26	107.26	150	50
	Annual	56.42	1.04	57.45	---	20
$PM_{2.5}$	24-hour	83.20	1.14	84.34	35	---
	Annual	17.90	0.36	18.26	12	12

Source: Insight Environmental Consultants 2017.

Pre-Project concentrations of PM_{10} and $PM_{2.5}$ exceed their respective ambient air quality standards. PM_{10} and $PM_{2.5}$ are evaluated in accordance with the SJVAPCD recommended significant impact level for fugitive PM_{10} and $PM_{2.5}$ emissions. It is the SJVAPCD's policy to use significant impact levels to determine whether a proposed new or modified source will cause or contribute significantly

to an AAQS violation. If a project's maximum impacts are below the SJVAPCD's significance thresholds, the project is judged to not cause or contribute significantly to an AAQS or PSD increment violation. A comparison of the proposed impact from the Project to the District SIL values is provided in Table 4.3-11 *Modeled Project Levels Compared to Significance Threshold*.

Table 4.3-11. Modeled Project Levels Compared to Significance Thresholds

Pollutant	Averaging Period	Predicted Concentration	Significance Level
PM_{10}	24-hour	3.26	10.4
	Annual	1.04	2.08
$PM_{2.5}$	24-Hour	1.14	2.5
	Annual	0.36	0.63

Source: Insight Environmental Consultants 2017.

Because the Project's modelled PM_{10} and $PM_{2.5}$ are below the SJVAPCD's significance levels for 24-hour and annual concentrations, the Project's contribution to potential violations of ambient air quality standards would be less-than-significant.

Mitigation Measures

MM 4.3-1: **Air Quality**. To minimize personnel and public exposure to potential Valley Fever–containing dust both on- and off-site, the following additional control measures shall be included in the DCP to be prepared for this project:

a. Equipment, vehicles, and other items shall be thoroughly cleaned of dust before they are moved offsite to other work locations.

b. Wherever possible, grading and trenching work shall be phased so that earth-moving equipment is working well ahead or down-wind of workers on the ground.

c. The area immediately behind grading or trenching equipment shall be sprayed with water before ground workers move into the area.

d. In the event that a water truck runs out of water before dust is sufficiently dampened, ground workers being exposed to dust are to leave the area until a full truck resumes water spraying.

e. All heavy-duty earth-moving vehicles shall be closed-cab and equipped with a HEP-filtered air system.

f. Workers shall receive training to recognize the symptoms of Valley Fever, and shall be instructed to promptly report suspected symptoms of work-related Valley Fever to a supervisor. Evidence of training shall be provided to the Kern

County Planning and Natural Resources Department within 24 hours of the training session.

g. Valley Fever informational handout shall be provided to all on-site construction personnel. The handout shall, at a minimum, provide information regarding the symptoms, health effects, preventative measures, and treatment. Additional information and handouts can be obtained by contacting the Kern County Public Health Services Department.

MM 4.3-2: **Valley Fever Training**. Onsite personnel shall be trained on the proper use of personal protective equipment, including respiratory equipment. National Institute for Occupational Safety and Health (NIOSH)-approved respirators shall be provided to onsite personal, upon request. Evidence of training shall be provided to the Kern County Planning and Natural Resources Department within 24 hours of the training session.

MM 4.3-3: **Valley Fever Education Fees.** One-time payment of $3,200.00 shall be made to the Kern County Public Works: Public Health Department for the specific purposes of continued Valley Fever education and outreach.

MM 4.3-4: All required landscaping along major and arterial roadways will be designed with native drought-resistant species (plants, trees, and bushes) to reduce demand for gas-powered landscape maintenance equipment.

MM 4.3-5: Prior to issuance of building permit, the applicant shall submit evidence, verified by the Air District, that the development has total Project construction and operations mitigated baseline below 2 tons per year for NO_x (total Project construction and operations) and mitigated baseline below 2 tons per year for PM_{10} emissions (total Project constructions and operations). Required reductions can be achieved from any combination of Project design, compliance with the Indirect Source Review (ISR) and/or a Development Mitigation Contract. If a Development Mitigation Contract is utilized a copy of the executed agreement and implementing reports will be provided to the Planning Department to substantiate compliance. As there still would be unmitigated emissions of ROG participation in any air mitigation program adopted by Kern County that provides equal or more effective mitigation than this mitigation measure can be utilized as a replacement for the requirements of this mitigation measure.

Level of Significance after Mitigation

Less than significant for construction related impacts and operational SO_x PM_{10}, and $PM_{2.5}$. Significant and Unavoidable Impact of ROG, NO_x, and CO operational emissions.

Impact 4.3-3: The Project Would Violate Standards for CO Concentrations.

CO Hot Spots Analysis

Localized high concentrations of CO along a congested roadway or intersection may expose nearby sensitive receptors, e.g. children, the elderly, hospital patients, etc., even when it is not being recorded high at the monitoring sites. These areas of high CO concentrations are known as CO Hot Spots. The SJVAPCD GAMAQI contains criteria for determining whether an analysis is warranted for a particular project. If the following two criteria are met by the proposed Project then further CO analysis is warranted:

- The traffic study indicates that the Project would cause one or more streets or at one or more intersections within the general Project area would be reduced to a Level of Service (LOS) E or F;
- Signalized and/or channelization is added to an intersection and vicinity, and sensitive receptors such as residences, schools, hospitals, etc. are located in the vicinity of the affected intersection or signalization.

A traffic study was prepared for this proposed Project. The traffic study indicated that potentially impacted intersections and roadway segments would operate at a level of service (LOS) C or better and this is within the GAMAQI significance criteria. Based upon the results of the traffic study, a CO Hot Spot analysis was not prepared for this proposed Project. No concentrated excessive CO emissions are expected to be caused once the proposed Project is completed. The proposed Project would not violate CO standards and would therefore have a less than significant impact on air quality.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.3-4: The Project Would Result In A Cumulatively Considerable Net Increase of Any Criteria Pollutant For Which The Project Region Is Nonattainment Under an Applicable Federal Or State Ambient Air Quality Standard.

As noted in Table 4.3-2, the SJVAB is a nonattainment area for the State 1-hour ozone, 8-hour ozone, PM_{10}, and $PM_{2.5}$ standards and is a nonattainment area for National 8-hour ozone and $PM_{2.5}$ standards. As shown above in Table 4.3-8, project construction emissions of these pollutants would be below SJVAPCD annual thresholds. The proposed Project would create ozone, NO_X, PM_{10}, and $PM_{2.5}$ emissions during construction, which would contribute to the current nonattainment status of these pollutants within the SJVAB. As noted in Impact 4.3-2, the proposed Project's emissions during temporary construction activities would not exceed thresholds and would have a less than significant impact. Operation of the proposed Project would also create additional criteria pollutants, particularly

as a result of increased mobile emissions in the project area. As shown in Table 4.3-9, above, project operation emissions of these pollutants would exceed the SJVAPCD thresholds and result in a significant and unavoidable impact. (Refer to Impact 4.3-2, above, for further discussion.)

CEQA and SJVAPCD's Rule 9510 require that all feasible and reasonable mitigation be applied to the proposed Project to reduce air quality impacts from construction and operations, whether the emissions would exceed the thresholds or not.

Rule 9510 states that development projects with emissions above 2.0 tons per year of NO_X and/or PM_{10} are subject to the mitigation requirements of the rule. Rule 9510 allows these reductions to be accomplished through project design changes such as using a higher insulation value in construction that could result in no additional costs for fees to the SJVAPCD. The proposed Project would be required to adhere to any determination of this rule by SJVAPCD. In addition, the proposed Project would implement Mitigation Measures MM 4.3-1 through MM 4.3-5, which would further reduce construction and operation emissions. Even with implementation of these mitigation measures, however, the proposed Project would still contribute the non-attainment status in the SJVAB regarding these pollutants.

Based on these considerations, the proposed Project's potential to result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard would be potentially significant.

Mitigation Measures

Implement Mitigation Measures MM 4.3-1 through MM 4.3-5.

Level of Significance after Mitigation

Impacts would be significant and unavoidable.

Impact 4.3-5: The Project Would Expose Sensitive Receptors to Substantial Pollutant Concentrations.

Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: persons over 65 years of age, children under the age 14, athletes and persons with cardiovascular and chronic respiratory disease such as asthma, emphysema, and bronchitis.

There were four schools identified that are within a two-mile radius of the Project site. As identified in Table 4.3-8, above, construction emissions would be below SJVAPCD thresholds and would be less than significant. However, as shown in Table 4.3-9, above, operation Project emissions would exceed SJVAPCD thresholds for ROG, NO_x, CO, and PM_{10}. Thus, surrounding sensitive receptors could potentially be exposed to substantial pollutant concentrations from the proposed Project. Implementation of Mitigation Measure MM 4.3-1 through MM 4.3-5 would help to reduce impacts

to sensitive receptors; however, impacts to ROG, NO_x, and CO from operation of the proposed Project cannot be reduced to less than significant impacts. Therefore, sensitive receptors would potentially be exposed to adverse quantities of long-term emissions. The proposed Project would result in significant and unavoidable impacts to sensitive receptors.

Mitigation Measures

Implement mitigation measures MM 4.3-1 through MM 4.3-5.

Level of Significance After Mitigation

Significant and Unavoidable impact of ROG, NO_x, and CO operation emissions. Less than significant after mitigation for Project contribution of all other emissions. Less than significant for construction emissions.

Impact 4.3-6: The Project Would Create Odor Impacts.

Because offensive odors rarely cause any physical harm and no requirements for their control are included in State or federal air quality regulations, the SJVAPCD has no rules or standards related to odor emissions, other than its Nuisance Rule 22. According to the GAMAQI, analysis of potential odor impacts should be conducted for the following two situations:

- Generators – projects that would potentially generate odorous emissions proposed to locate near existing sensitive receptors or other land uses where people may congregate, and

- Receivers – residential or other sensitive receptor projects or other projects built for the intent of attracting people locating near existing odor sources.

The purpose of the proposed M-1 PD (Light Industrial, Precise Development Combining) Zone District it to designate areas for wholesale commercial, storage, trucking, assembly-type manufacturing, other similar industrial uses. According to the Kern County Zoning Ordinance Chapter 19.36, uses within the M-1 Zone District may not exceed six (6) stories or seventy-five (75) feet and may not produce fumes, odor, dust, smoke, gas, or vibrations extending beyond zoning district boundaries. The purpose of the proposed M-2 PD (Medium Industrial Precise Development Combining) Zone District is to designate areas for general manufacturing, processing, and assembly activities. According to the Kern County Zoning Ordinance Chapter 19.38, uses within the M-2 Zone District may not produce fumes, odor, dust, smoke, gas, or vibrations extending beyond zoning district boundaries. In addition to the proposed M-1 and M-2 Zone Districts, the proposed Project includes the Precise Development (PD) Combining Districts. Implementation of the proposed PD Combining Districts would ensure that although a specific use of the site is not proposed at this time any future proposed development would be required to prepare a PD Plan, which would ensure that any specific use would not produce any objectionable odors offsite.

The purpose of the proposed CH PD (Highway Commercial, Precise Development Combining) Zone District is to designate areas for gas stations, restaurants, and motels uses while the purpose of the proposed C-2 PD (General Commercial, Precise Development Combining) Zone District is to

designate areas for shopping centers and heavy commercial uses. According to the Kern County Zoning Ordinance Chapters 19.34 and 19.32, respectively, there is no specific odor restriction; however, according to Kern County Health and Safety Ordinance Chapter 8.2, any person in possess, charge or control of any structure, property or other premises shall keep it free and clear of all accumulations of solid waste which may produce odor, attract or harbor insects or rodents or provide a breeding place for them, be offensive to the senses, or become a hazard to health, safety and welfare of the public.

Because the proposed Project is a mixed use industrial and commercial project, any industrial activities triggering air permits would be under the regulation of the SJVAPCD and commercial activities do not typically allow tenants that create objectionable odors, the proposed Project is not considered a source of objectionable odors or odorous compounds. In addition, the proposed Project would not exceed any screening trigger levels to be considered a source of objectionable odors or odorous compounds based on the SJVAPCD's GAMAQI provisions (Insight Environmental Consultants 2017). Therefore, the proposed Project is not expected to be a source of any odorous compounds nor would it likely be impacted by any odorous source. Impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Cumulative Impacts

This cumulative impact analysis uses a tiered approach to provide the reader with a thorough understanding of local, regional, and valley-wide air quality conditions and the proposed Project's contribution to cumulative air quality impacts. The cumulative project list is provided in Table 3-5, *Cumulative Projects List for Kern County*, in Section 3.0, *Cumulative Projects*. This geographic scope of analysis is appropriate because of influence of the area with wildfires, as well as the localized nature of hazardous materials impacts and other hazards discussed in this section.

The Kern County Planning and Natural Resources Department's Guide for Preparing an Air Quality Assessment for Use in Environmental Impact Reports has determined that a cumulative analysis must be prepared for a proposed development when the project is required to prepare an EIR. The cumulative analysis is used to consider localized impacts, determine consistency with existing air quality plans, and provide a comparison of the project's impacts to the SJVAB emissions.

The air quality analysis conducted for this Project, which is included as Appendix C to this Recirculated Draft EIR, indicates that, with mitigation, Project impacts would be individually significant. The air quality impact analysis, however, also considered impacts of the proposed Project in conjunction with the impacts of other past, present, and reasonably foreseeable projects in the air basin. The following cumulative impacts were considered.

- Cumulative Ozone Impacts (ROG and NOx) from numerous sources within the region, including transport from outside the region. Ozone is in chemical reactions produced by ROG, NOx, and sunlight.

- Cumulative CO Impacts produced primarily by vehicular emissions.

- Cumulative PM_{10} Impacts within the region and locally from the various projects. Such projects may cumulatively produce a significant amount of PM_{10} if several projects conduct grading or earthmoving activities at the same time.

- HAP Impacts on sensitive receptors within the SJVAPCD-recommended screening radius of one mile.

Total Cumulative Project Emissions

A cumulative impact analysis considers the proposed Project along with the anticipated growth of the area. According to CEQA (§15355) cumulative impacts are defined "as two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts."

There are 104 planned development projects within a six-mile radius of the proposed Project. These projects are identified in Table 3-5, *Cumulative Projects List for Kern County*, as well as provided in Appendix C. Projects that are planned but have not been submitted for review or approved by the County or City were not included because there is no way to determine what the projects may entail.

Table 4.3-12, *Cumulative Projects Emissions,* provides the cumulative projects emissions for construction and operation phases of the cumulative environment. The emissions estimated presented in the Air Quality Impact Analysis were modeled using the CalEEMod computer model to predict cumulative impacts. Emissions for the construction and operational phase of each project were based on total number of lots or square footage for maximum project buildout. No mitigation measures were applied to any of the projects as it is not known which, if any, would be required by the City of Bakersfield or Kern County, or which may be voluntarily proposed by the individual developer or required by code or regulation. Additionally, no cumulative significance thresholds are shown because no cumulative thresholds have been established by SJVAPCD, CARB, or other regulatory authority. These projects represent all known and reasonably foreseeable projects in the area at this time. As these projects are either currently under construction or approved by the City of Bakersfield or Kern County for consistency with applicable regulations, it is assumed that they are in conformance with the regional AQAP. The model outputs for the cumulative impacts analysis have been included in Appendix C.

Table 4.3-12. Cumulative Projects Emissions

Six-Mile Radius Project Types	Pollutant (tons/year)							
	ROG	NO_x	CO	SO_x	Fugitive PM_{10}	Exhaust PM_{10}	PM_{10}	$PM_{2.5}$
Construction[1]								
Tentative Tracts Subtotal	204.88	114.95	345.67	1.23	131.95	3.77	135.73	36.91
Tentative Parcel Maps Subtotal	3.43	13.51	11.21	0.02	0.77	0.77	1.54	1.05
Site Plan Review Subtotal	8.17	9.41	11.09	0.02	0.95	0.45	1.41	0.73
Total Cumulative Six-Mile Projects	216.48	137.87	367.97	1.27	133.67	4.99	138.68	38.69
This Project	*22.36*	*22.05*	*26.32*	*0.051*	*1.85*	*1.10*	*2.95*	*1.61*
Total Cumulative Projects	**238.84**	**159.92**	**394.29**	**1.32**	**135.52**	**6.09**	**141.63**	**40.30**
Operations								
City of Bakersfield and Kern County (Combined)								
Tentative Tracts Subtotal	162.77	272.39	941.99	3.22	152.26	8.83	161.09	49.3
Tentative Parcel Maps Subtotal	1.68	2.42	9.19	0.03	1.25	0.08	1.32	0.41
Site Plan Review Subtotal	22.9	53.82	243.12	0.55	24.67	2.33	27.00	8.89
Total Cumulative Six-Mile Projects	**187.35**	**328.63**	**1,194.30**	**3.80**	**178.18**	**11.24**	**189.41**	**58.60**
This Project	*33.55*	*66.66*	*277.80*	*0.61*	*27.82*	*1.54*	*29.36*	*8.93*
Total Cumulative Projects	**220.9**	**395.29**	**1,472.10**	**4.41**	**206.00**	**12.78**	**218.77**	**67.53**

Source: Insight Environmental Consultants 2017.

[1] These emissions are overestimated and include all years of construction not just a single year, as they are discretionary projects that are subject to various mitigation measures that have not yet been determined nor their impacts reduced herein.

The most recent certified SJVAB Emission Inventory data available from the CARB is based on data gathered for the 2012 annual inventory. This data will be used to assist the SJVAPCD in demonstrating attainment of Federal eight-hour ozone standards and contained 218,964 tons/year VOC (ROG) and 119,282 tons/year NO_x from all sources (Insight Environmental Consultants 2016). On a regional basis, the proposed Project represents approximately 0.016 percent of the ROG and 0.038 percent NO_x emissions in the SJVAB. The SJVAB emissions would essentially stay the same regardless of whether or not the proposed Project is built (Insight Environmental Consultants 2017). However, the proposed Project by itself is considered significant. The proposed Project in conjunction with other past, present and foreseeable future projects would result in cumulative long-term impacts to air quality. The SJVAB's cumulative air quality impacts would remain significant without this project since the air basin is currently considered to be in nonattainment for certain criteria pollutants. The proposed Project's incremental contribution to these impacts is significant and unavoidable.

Mitigation Measures

Implement Mitigation Measures MM 4.3-1 through MM 4.3-5.

Level of Significance after Mitigation

Cumulative Impacts are considered significant and unavoidable.

Hazardous Air Pollutants

The GAMAQI states that, when evaluating potential impacts related to HAPs, "impacts of local pollutants (CO, HAPs) are cumulatively significant when modeling shows that the combined emissions from the proposed Project and other existing and planned projects will exceed air quality standards." Dispersion modeling showed that the proposed Project would not exceed any NAAQS, CAAQS, or other health risk standards (Insight Environmental Consultants 2017 refer to Appendix C); thus, the proposed Project would not be a significant source of HAPs. Therefore, the proposed Project would not pose a significant cumulative CO or HAPs impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Section 4.4

Biological Resources

Section 4.4
Biological Resources

4.4.1 Introduction

The purpose of this section is to identify existing biological resources on-site and in the vicinity of the proposed Project, analyze potential Project-related impacts on these resources (including special-status species and habitats), and recommend mitigation measures to reduce the significance of impacts. The analysis provided in this section is based on the findings of the Biota Report. A Biota report was prepared by McIntosh and Associates in June 2009. Due to the time between the technical study and this Recirculated Draft Environmental Impact Report (RDEIR), a second Biota Report was prepared by McCormick Biological, Inc. in July 2017. See Appendix D, Biota Report, and Appendix N, Original Technical Studies.

This section describes the biological character of the proposed Project site in terms of vegetation, flora, wildlife, and wildlife habitats, and analyzes the biological significance of the site in accordance with Federal, State and local laws and policies. General plant and wildlife surveys of the proposed Project site were conducted on October 31, November 1, and December 5, 2006, and again on March 10, 2016 (McIntosh & Associates 2009; McCormick Biological 2017). These surveys were conducted to evaluate the biological character of the proposed Project and to determine if special-status species have the potential to occur within the proposed Project site. Survey methodology in 2006 included meandering pedestrian transects through all present habitat types. In 2016, all perimeter and interior roads were slowly driven, stopping to inspect and evaluate representative habitat features and noting observations of identified plant and wildlife species observed. Supporting documentation regarding species findings included direct observations and/or significant species signs (e.g., scat, tracks, feather/fur, prey remains, nests/burrows or any other indication of wildlife presence) and literature reviews from the California Natural Diversity Database (CNBB), United States Fish and Wildlife Service (USFWS), California Fish and Wildlife Service (CDFW), the California Native Plant Society (CNPS), and Western Bat Working Group (WBWG). Botanical survey techniques followed the CNPS recommended guidelines. Photographs taken during field surveys are included in Appendix D, *Biota Report*, and Appendix N, *Original Technical Studies*.

4.4.2 Environmental Setting

The proposed Project is situated in the southern San Joaquin Valley in Kern County, California. The Project site consists of approximately 314.30 acres, generally located north of Houghton Road, east of State Route (SR) 99, west of South Union Avenue (SR-204), and south of DiGiorgio Road, approximately 1.10 miles southeast of the City of Bakersfield, and within the unincorporated area of Kern County, California.

The 314.30-acre Project site is mostly vacant; however, the site does contain a steel storage building associated with agricultural activities, one plugged and abandoned oil well, two active, diesel-powered irrigation wells, and one domestic well. Between the various fields are dirt roads, irrigation ditches, and an equipment/materials storage area. No undisturbed native habitat exists on the Project

site or adjacent properties. The surrounding land includes vacant land and agricultural lands, with a cluster of single-family residential to the east and an automobile wrecking yard to the south. Photographs record conditions that were observed on the project site (Appendix D and Appendix N).

The proposed Project site is located along the southwestern edge of the San Joaquin Valley; a broad, treeless plain in the rain shadow of the Inner Coast Ranges. The San Joaquin Valley is characterized by relatively low rainfall, averaging less than 10 inches per year, mostly between January and March. The west side of the Valley, near the coastal range receives an average of around 4 inches (10 centimeters) per year and the east side averages about 6 inches (15 centimeters) per year. Approximately 90 percent of the rainfall in the region occurs between November 1 and April 1. Drought cycles occur periodically, becoming severe enough that plant and animal populations can experience large fluctuations.

The Valley Region's climate can be characterized as Mediterranean; with hot, dry summers and cool, moist winters. Summer high temperatures typically exceed 100 °Fahrenheit (°F); with an average of 110 days per year over 90 °F. Winter temperatures in the San Joaquin Valley are mild, with an average of only 16 days per year with frost. The vegetation communities in the San Joaquin Valley are distinguishable due to tule fog, higher humidity, and isolation from continental climatic influences by mountain ranges.

The Kern County General Plan (KCGP) describes the Valley Region as "the southern San Joaquin Valley below an elevation of 1,000 feet [mean sea level] msl" within Kern County. The proposed Project area is located at elevations between 330 and 340 feet above msl.

Vegetation and General Botanical Surveys

Surveys of the Project site were conducted on October 31, November 1, and December 5, 2006 and again on March 10, 2016 (McIntosh & Associates 2009; McCormick Biological 2017). The Project site has been under agricultural production and currently consists entirely of land either currently under row crop agriculture or between crops.

At the time of the 2009 Biota Report, sheep were actively grazing on the areas that were fallow or previously alfalfa fields and the eastern portion of the site was active grain crops which had been recently tilled (McIntosh and Associates 2009). Ruderal habitats were identified along the paved perimeter roadways, dirt access roads, the fallowed and old alfalfa fields, and the banks of the irrigation ditches. No sensitive habitat types were identified within the Project site during the 2006 or the 2017 surveys. No federally-listed, or proposed, or state-listed plant species were identified within the proposed Project site during the 2006 or the 2017 surveys.

One agricultural sump at the southern boundary contained a few wetland-indicative plant species; however, due to regular maintenance activities and clearing, it is not considered a wetland-riparian habitat. A second agricultural sump, located in the eastern portion of the property, appeared to no longer function as an agricultural sump and was filled with non-native grasses and forbs, and discarded debris. It did not contain wetland plant species and is not considered a sensitive vegetative community. Lined and unlined irrigation ditches occur at various locations throughout the Project site; however, they do not provide sensitive habitat because of regular maintenance and clearing.

Other than these sites, potential wetland, riparian, or other aquatic habitat was not identified within the Project site. Table 4.4-1 *Special Status Plants Known to Occur in the Vicinity of the Project* lists sensitive plants, below.

Table 4.4-1. Special Status Plants Known to Occur in Vicinity of Project Site

Scientific Name Common Name	Status Fed/State/ CNPS	Survey Results/Regional or Nearest Occurrence*
Astragalus hornii var. *hornii* Horn's milk vetch	S/-/1B.1	No suitable soil or habitat is present on the project site. No impacts are anticipated.
Atriplex cordulata var. cordulata Heartscale	S/-/1B.2	No suitable soil or habitat is present on the project site. No impacts are anticipated
Atriplex coronate var. vallicola *Lost Hills crownscale*	S/-/1B.2	No suitable soil or habitat is present on the project site. No impacts are anticipated
Atriplex tularensis Bakersfield smallscale	-/E/1A	No suitable soil or habitat is present on the project site. No impacts are anticipated.
California macrophylla Round-leaved filaree	S/-/1B.1	No suitable soil or habitat is present on the project site. No impacts are anticipated.
Calochortus striatus Alkali mariposa lily	S/-/1B.2	No suitable soil or habitat is present on the project site. No impacts are anticipated.
Caulanthus californicus California jewelflower	E/E/1B.1	This species is believed extirpated from Kern County. This species is highly sensitive to disturbance. Although suitable soil is present of the project, the species is highly unlikely to occur given previous site disturbance and proximity to isolated, known occurrences. No impacts are anticipated.
Caulanthus lemmonii Lemmon's jewelflower	S/-/1B.2	No suitable soil or habitat is present on the project site. No impacts are anticipated
Chloropyron molle ssp. *hispidum* Hispid bird's-beak	S/-/1B.1	No suitable soil or habitat is present on the project site. No impacts are anticipated.
Delphinium recurvatum Recurved larkspur	S/-/1B.2	No suitable soil or habitat is present on the project site. No impacts are anticipated.
Eremalche parryi ssp. *kernensis* Kern mallow	E/-/1B.1	Suitable soils are present on the project site. Historic disturbance from row crop farming and subsequent discing for vegetation control would greatly reduce the potential for presence. No impacts are anticipated.
Eriastrum hooveri Hoover's woolly star	D/-/4.2	No suitable habitat is present on the project site. No impacts are anticipated.
Eschscholzia lemmonii ssp. *kernensis* Tejon poppy	-/-/1B.1	No suitable habitat is present on the project site. No impacts are anticipated
Imperata brevifolia California satintail	-/-/2.1	No suitable soil or habitat is present on the project site. No impacts are anticipated.
Lasthenia glabrata ssp. *coulteri* Coulter's goldfields	S/-/1B.1	No suitable habitat is present on the project site. No impacts are anticipated
Layia leucopappa Comanche Point layia	S/-/1B.1	No suitable habitat is present on the project site. No impacts are anticipated.
Monolopia congdonii San Joaquin woolly-threads	E/-/1B.2	No suitable habitat is present on the project site. No impacts are anticipated.
Navarretia setiloba Piute Mountains navarretia	S/-/1B.1	No suitable habitat is present on the project site. No impacts are anticipated.
Opuntia basilaris var. *treleasei* Bakersfield cactus	E/E/1B.1	No suitable habitat is present on the project site. No impacts are anticipated.

Table 4.4-1. Special Status Plants Known to Occur in Vicinity of Project Site

Scientific Name Common Name	Status Fed/State/ CNPS	Survey Results/Regional or Nearest Occurrence*
Puccinellia simplex California alkali grass	-/-/1B.1	No suitable habitat is present on the project site. No impacts are anticipated
Stylocline masonii Mason's neststraw	S/-/1B.1	No suitable habitat is present on the project site. No impacts are anticipated.

STATUS:
Federal and State Listing Code:
C = Candidate for Listing; D = Delisted; E = Federally or State-listed Endangered; S = BLM Sensitive Species;
T = Federally or State-listed Threatened

Additional State Listing Code:
CSC = California Species of Concern; SFP = State Fully Protected; WL = Watch List

CNPS Listing Codes
1A Plants presumed extirpated in California, and either rare or extinct elsewhere
1B.1 Plants considered rare, threatened, or endangered in California and elsewhere; seriously threatened in California
1B.2 Plants considered rare, threatened, or endangered in California and elsewhere; fairly threatened in California
1B.3 Plants considered rare, threatened, or endangered in California and elsewhere, not very threatened in California
2A Plants presumed extirpated in California, but more common elsewhere
2B.1 Plants considered rare, threatened, or endangered in California, but more common elsewhere; seriously threatened in California
2B.2 Plants considered rare, threatened, or endangered in California, but more common elsewhere; fairly threatened in California
2B.3 Plants considered rare, threatened, or endangered in California, but more common elsewhere; not very threatened in California
3 Plants about which more information is needed
3.1 Plants about which more information is needed; seriously threatened in California
3.2 Plants about which more information is needed; fairly threatened in California
3.3 Plants about which more information is needed; not very threatened in California
4.1 Plants of limited distribution in California; seriously threatened in California
4.2 Plants of limited distribution in California; fairly threatened in California
4.3 Plants of limited distribution in California; not very threatened in California
Source: McIntosh & Associates 2009; McCormick Biological 2017.

Wildlife Surveys

During the 2017 biological survey, small mammal burrows were noted during the surveys along the periphery of the Project site and dirt roads (McCormick Biological 2017). Direct and indirect evidence of several special-status wildlife species was noted during the surveys conducted on the Project site and buffer. Three special-status wildlife species (birds) were observed within the Project site during the 2006 biological surveys.

Amphibians

No special status amphibian species or signs of their inhabitance were observed on the proposed Project site. In addition, because of the sequential disturbance created by continued agricultural activities, special status species would not be expected to occur, particularly as no habitat is present. Bullfrogs were observed, and California toad scat was observed within the study area in 2006. No amphibians or signs of amphibians were observed during the 2017 survey.

Reptiles

The common side-blotched lizard was observed within the proposed Project boundaries, but this species is not a listed special status species. No special status species were observed within the proposed Project site and suitable on-site habitat for most of these species is absent. One special-status reptile, the silvery legless lizard has the potential to occur within the Project site.

Silvery legless lizard

Habitat for this species includes lightly vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks. They prefer warm, loose soil that is somewhat moist, and can often be found under leaf litter, rocks, boards, driftwood, and logs.

The silvery legless lizard is considered a California species of special concern and its range extends from Antioch in Contra Costa County, south through the Coastal, Transverse, and Peninsular Ranges, along the western edge of the Sierra Nevada Mountains, and parts of the San Joaquin Valley and Mojave Desert to El Consuelo in Baja California. Its elevation range extends from near sea level on the Monterey Peninsula to approximately 5,900 feet above sea level in the Sierra Nevada foothills.

Silvery legless lizard has been divided into five species, with four new species being described. The four new species have no status; however, each has a very restricted known range. The majority of the soils on the Project site are suitable for this species. Legless lizards are extremely difficult to detect and may be present in low numbers in the limited habitat on the project site.

Birds

Migratory bird special status species, such as the Grasshopper sparrow, Golden Eagle, Burrowing owl, and Loggerhead shrike, may occur in the proposed Project areas. The sharp-shinned hawk, burrowing owl, and northern harrier were observed during the 2006 surveys but were not identified during the 2017 surveys. Other raptors and birds of prey (barn owls, great horned owls and red-tailed hawks) may forage over agriculture fields. There are no trees suitable for nesting raptors within the Project boundary.

Grasshopper Sparrow

The grasshopper sparrow is a California species of special concern that is also protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code. The grasshopper sparrow is considered a rare summer resident of California from March to September, and little is known of its wintering status. The species is found in a variety of habitats within its known range, but its preference within California seems to include moderately open grasslands with short to moderate vegetation height and scattered shrubs such as California sagebrush (*Artemisia californica*). The bird's typical diet consists of grasshoppers and seeds. Seeds the grasshopper sparrow is known to eat come from knotweed (*Polygonum* spp.), campion (*Lychnis* spp.), oats (*Avena* spp.), and pigweed. The grasshopper sparrow's naturally patchy range in California has become even more fragmented due to agricultural and urban development

The grasshopper sparrow was not observed during any of the surveys. No potential nesting habitat is present on the Project site; however, the site does present potential foraging habitat and is within the range of the species.

Sharp-shinned Hawk

The sharp-shinned hawk prefers to nest on a horizontal branch against the main trunk of the tree in dense forest or riparian areas, typically on north facing slopes. They normally return to the same nesting area every year, but do not use the same nest. Sharp-shinned hawks hunt from perches or by rapid flapping flight. Approximately 90 percent of their diet consists of birds, specifically song birds. They are also known to occasionally take large insects, frogs, lizards, and small mammals.

The sharp-shinned hawk is a California species of special concern. The breeding population in California has experienced a decline, which the migrating populations appear to have rebounded from declines of the 1950s and early 1960s. Threats to the species include the falconry trade and logging.

An adult male sharp-shinned hawk was observed foraging after small passerine flocks throughout the Project site during all days of the biological surveys. The make sharp-shinned hawk was also observed perching in the trees lining South Union Avenue (SR-204) on the eastern boundary of the proposed Project.

Burrowing Owl

The burrowing owl is a California species of special concern, and documented population declines have occurred in the state since at least the 1970s. It has no federal listing but is protected by the MBTA.

Burrowing owls are diurnal, and during active periods of the year may be observed above ground in the vicinity of their burrows, roosting on the ground or nearby high spots such as berms, fence posts, or shrubs. They have a varied diet that includes insects, small rodents, birds, amphibians, reptiles, and carrion, and there is some evidence that population sizes of California vole (*Microtus californicus*) influence their survival and reproductive success. In California, the species is typically found in close association with California ground squirrels (*Otospermophilus beecheyi*). The squirrels create burrows that are used by burrowing owls as year-round shelter and seasonal nesting habitat; however, burrowing owls may also use human-made structures such as culverts, corrugated metal pipes, debris piles, or openings beneath pavement as shelter and nesting habitat.

Within California, it is found throughout the Central Valley, in the San Francisco Bay Area, Carrizo Plain, and Imperial Valley. The Central Valley population is a year-round resident in annual and perennial grasslands or other vegetation communities that support little to no tree or shrub cover. California is considered an important wintering ground for migrants, whose burrowing owl population is augmented during the winter season.

Burrowing owl primarily occur in open grasslands and desert habitats throughout California. Burrowing owl prey varies with availability, season, and location. Primary prey includes insects, small mammals and birds, reptiles and amphibians, and carrion. They utilize burrows abandoned by

mammals such as ground squirrels or badgers. In soft soil, they have been known to excavate their own burrows.

The burrowing owl is a federal and state species of concern. Burrowing owl populations have been declining over the past 60 years, with a rapid decline in the last five years. The initial reduction in numbers has been attributed to the conversion of grasslands to agriculture. The recent accelerated loss is believed to be due to increased habitat loss from residential and commercial development.

Three adult burrowing owls and one active burrow were identified in the central and eastern portion of the proposed Project site during the 2006 biological surveys. The burrow was located on the bank of an unlined irrigation ditch in association with a ground squirrel colony. The owls occurred in a recently tilled area used for row crops and the adjacent unlined irrigation ditch.

No burrowing owls were observed during the 2017 survey. No evidence of burrowing owl presence, such as feathers, tracks or pellets, was observed. The habitat observed along the road edges and other lightly disturbed areas including ground squirrel burrows on the project site, has potential for this species. Both nesting and foraging habitat was present and the species could occupy in the future.

Golden Eagle

In the western U.S., this species occurs primarily in open mountainous areas, rolling foothills, canyons, and plains. Nesting occurs in trees and on cliff faces, and their diet consists primarily of small mammals, birds, snakes, and carrion. The golden eagle is an uncommon permanent resident and migrant throughout California, except for the center of the Central Valley, and range from sea level up to 11,500 feet (3,505 meters). The species is fully protected in the state of California.

The golden eagle was not observed during any of the biological surveys. Golden eagles are expected to forage in the western foothills and occasionally on the Valley floor in the vicinity of the proposed Project site. No nesting habitat is present for this species within the Project site.

Northern Harrier

The northern harrier occurs from annual grassland to lodgepole pine forests and alpine meadows. The species frequents meadows, open rangelands, grasslands, desert sinks, prairies, fresh and saltwater emergent wetlands, and some types of croplands. They occur throughout the year within the Central Valley in suitable habitat but are more abundant during the winter months. Northern harriers fly low over open habitats in search of prey consisting primarily of voles, but including mice, birds, frogs, small reptiles, and invertebrates. Nests are built on the ground in shrubby vegetation.

The northern harrier is a California species of special concern. Habitat degradation appears to be a major reason for decline of the species in California. Destruction or disturbance of wetlands and mashes, as well as the burning, disking and plowing of grasslands during the breeding season has had a negative affect on the species.

One male northern harrier was observed on all days of the 2006 biological surveys. The northern harrier was foraging throughout the proposed Project boundaries. No northern harrier were observed

on-site during the 2017 survey. No nesting habitat was identified on-site during any of the biological surveys.

Loggerhead Shrike

The loggerhead shrike is considered a species of special concern in California. It is a robin-sized bird about nine inches in length with a raptor-like, hooked bill. Lacking talons, the shrike impales its prey to facilitate feeding, or to store it for future consumption. Its diet includes a variety of insects and spiders, small reptiles, rodents, and small birds. Nests are built on stable branches in densely-foliaged shrubs or trees, usually well-concealed.

This species prefers open habitats such as savannas and deserts, with scattered shrubs, trees, posts, fences, utility lines, or other perches. In California, the loggerhead shrike occurs as a resident over most of the state, being absent from high mountain regions.

Loggerhead shrike were not observed during any of the biological surveys. No suitable nesting substrate for this species occurs on the Project site; however, the species is known to occur across Kern County and the Project site and vicinity provide suitable foraging habitat.

Swainson's Hawk

Swainson's hawks prefer open areas including grasslands with scattered trees or shrubs for perching, irrigated meadows, and ecotones. Agricultural areas, particularly alfalfa fields, riparian areas, juniper-sage flats, and oak savannas are desired by the Swainson's hawk in California. During winter months and migration, the hawks primarily eat insects, but are known to consume birds, small mammals, reptiles, and amphibians during summer months. They are found to take advantage of certain agricultural practices, such as tilling, by following behind the tractor and capturing prey as it is disturbed by equipment. They are known to nest in trees, shrubs, and utility poles between four feet and 100 feet in height. In the Central Valley, they nest in riparian habitats as well.

The Swainson's hawk is a California threatened and a federal species of concern. Swainson's hawk population has declined by 90 percent since the 1940s due to the loss of nesting habitat.

Swainson's hawks were not observed during any of the biological surveys; however, perching locations and foraging habitat was identified. The large trees and utility poles adjacent to the proposed Project provide suitable perching locations. The Project site also contains suitable foraging habitat for the species. No nesting habitat occurs on-site.

Ground and Low Shrub Nesting Birds

Several common and special-status ground and low shrub bird species may forage in the vicinity of the proposed Project site. Some have a potential to nest on the site. In addition, many of the common species of birds protected by the MBTA could nest on the proposed project site during the next breeding/nesting season. No bird nests were observed during any of the biological survey on the Project site.

Mammals

The proposed Project site contains denning and foraging habitat for some mammal species. According to the Biota Report no special status animal species were observed on the proposed Project site. Five species, the Pallid bat, Tipton kangaroo rat, Western mastiff bat, Tulare grasshopper mouse, and San Joaquin kit fox, have the potential to occur in the Project area.

Tulare Grasshopper Mouse

The Tulare grasshopper mouse is considered a California species of special concern. Though the Tulare grasshopper mouse prefers to feed on small mammals and insects, its diet also includes other invertebrates and seeds.

Historically, the species ranged from western Merced and eastern San Benito Counties east to Madera County and south to the Tehachapi Mountains. Currently, they are known to occur along the western margin of the Tulare Basin including western Kern County; within the Carrizo Plain Natural Area; along the Cuyama Valley side of the Caliente Mountains in San Luis Obispo County; and the Ciervo-Panoche Region in Fresno and San Benito Counties.

Small mammal burrows suitable for use by Tulare grasshopper mouse were observed on the Project site during the 2017 survey. In addition, this species could be present along the project periphery.

Western Mastiff-Bat

Western mastiff bats are primarily cliff dwelling bats which roost under exfoliating rock slabs but have been found in tall buildings as well. Roosts are typically found more than 10 feet above the ground, allowing for a clear vertical drop below the entrance for flight. Though acoustic records in California document foraging or commuting at up to 10,000 feet in the southern Sierra Nevada, the species regularly forage at 100 to 200 feet and may forage in flocks. Bats may travel relatively far from roosting sites to forage, in one case being heard in open desert 15 miles from the nearest possible roosting site. The foraging habitat of the western mastiff bat includes dry desert washes, flood plains, chaparral, oak woodland, open Ponderosa pine forest, grassland, and agricultural areas. In California, it is most frequently encountered in broad open areas, with a diet primarily consisting of moths, beetles, crickets, and katydids.

Unlike most bats in this area, western mastiffs do not mate in the fall. This species breeds in late winter and births around July. Migrations are limited to small changes in roost locations and hibernation only occurs in short periods resulting in year-round activity.

The western mastiff bat is considered threatened by broad, excessive pesticide use which is thought to lower their prey base, loss of clean water sources, and public hysteria resulting in colony eradications. They are considered a California species of species concern.

No potential day roost habitat is present on or near the proposed Project site for this species. This species may forage in the vicinity of the Project site.

Pallid Bat

The pallid bat is currently considered a California species of special concern. They forage over open shrub-steppe grasslands, oak savannah grasslands, open Ponderosa pine forests, talus slopes, gravel roads, lava flows, fruit orchards, and vineyards, but diet and forage area preference is known to vary with population. This species breeds from October through February and birth from April through July. These bats are not migratory but may move around seasonally.

Pallid bats roost in a variety of natural and man-made structures such as rock outcrops or buildings, as well as under concrete slabs or other semi-solid to solid materials on the ground. The species may roost alone, in small groups of 2 to 20 bats, or in a group with hundreds of individuals. This species is susceptible to losses from disturbance of roosts, especially hibernation sites or where hundreds roost together, and pesticide use which lowers their prey base.

Minimal potential roosting habitat is present; however, the project site represents potential foraging habitat for the species.

San Joaquin Kit Fox

The San Joaquin kit fox (SJKF) is currently a federally-listed endangered and state-listed threatened species and is the largest subspecies of kit fox. SJKF occur in a variety of open grassland, oak savannah, and shrub vegetation types/habitats as well as agricultural and urban areas in Kern County. In the southern San Joaquin Valley portion of the range, SJKF are generally found in sparse, annual grassland and scrub communities (e.g., valley sink scrub, saltbush scrub). San Joaquin kit fox historically inhabited such native San Joaquin Valley plant communities as valley saltbush scrub, annual grassland, and valley sink scrub. The species occupied much of the San Joaquin Valley, from Contra Costa County to southern Kern County. Home ranges for the taxon have been reported by several authors to range from 1 to 12 square miles. Numerous anthropogenic factors, such as habitat loss, fragmentation and degradation, predation, road kills, suffocation, trapping, and electrocution, have contributed to the decline of the species within its historical range.

As these communities have diminished, the species have been found to occupy grasslands and scrublands of varying degrees of modification or disturbance. Kit fox have been observed within areas modified by oil extraction equipment, agricultural crop production, and cattle grazing. Kit fox utilize one to several underground dens throughout the year, which they require for temperature regulation and protection from predators and weather.

SJKF do not typically excavate their own dens, but rather enlarge the burrows of other species, such as California ground squirrels, and change dens on a regular basis. California ground squirrel, black-tailed jackrabbits, and white-footed mice are common prey species. They are also known to consume kangaroo rats, pocket mice, cottontails, San Joaquin antelope squirrels, ground-nesting birds, insects, and grasses.

Although, no SJKF dens were observed on the Project site during the biological surveys (2006 and 2017), the entire Project site represents potential denning and foraging habitat for this species along the periphery and margins of the Project. SJKF are known to occur throughout Kern County in similar habitat. During the 2006 survey San Joaquin kit fox tracks were identified in several locations

throughout the Project site and scat was observed in the southern portion of the site. During the 2017 survey, dens were identified during the biological survey. Several partially collapsed culverts within the proposed Project site provide suitable kit fox denning habitat, although none of the collapsed culverts showed signs of past or present occupation. The Project site also provides suitable kit fox foraging habitat. A culvert near the north boundary of the proposed Project passes under SR-99, connecting the proposed Project site with suitable habitat west of SR-99. In addition, the proposed Project is within the current mapped distribution of the San Joaquin kit fox. There are several known documented occurrences of the species approximately three miles north of the proposed Project. Table 4.4-2 *Special Status Wildlife That May Occur in the Vicinity of the Project Site* lists sensitive animals, below.

Table 4.4-2. Special Status Wildlife That May Occur in Vicinity of Project Site

Scientific Name Common Name	Status Federal/State	Survey Results/Regional or Nearest Occurrence*
Invertebrates		
Branchinecta lynchi Vernal pool fairy shrimp	T/-	No vernal pools are present on the project site. No impacts are anticipated.
Desmocerus californicus dimorphus Valley elderberry longhorn beetle	T/-	No host plant species are present on the project site or vicinity. No impacts are anticipated.
Fish		
Hypomesus transpacificus Delta smelt	T/T	The project site is beyond the range of the species. No suitable habitat is present and no downstream effects
Amphibians		
Lithobates pipiens *Northern leopard frog*	-/CSC	No suitable habitat is present on the project site. No impacts are anticipated
Rana draytonii California red-legged frog	T/-	The project site is beyond the published range of the species. No suitable habitat is present on the project site. No impacts are anticipated.
Spea hammondii Western spadefoot toad	-/ CSC	No suitable habitat is present on the project site. No impacts are anticipated
Reptiles		
Anniella pulchra pulchra Silvery legless lizard	-/CSC	Suitable soils for this species exist on the project site. Although individual silvery legless lizards may be impacted, the number is likely to be extremely limited based on discing conducted over four consecutive years and no previously known occurrences on the site or in the vicinity. Consequently, impacts to this species are considered less than significant.
Emys marmorata *Western pond turtle*	-/CSC	No suitable habitat is present on the project site. No impacts are anticipated
Gambelia sila Blunt-nosed leopard lizard (BNLL)	E/E,SFP	The undisturbed habitat of the site is appropriate and the project is within the range of the species. As communicated by SJRC personnel, the site has been disced annually for at least four years prior to 2015. No impacts are anticipated.
Masticophis flagellum ruddocki San Joaquin coachwhip	-/CSC	Project site does not represent suitable habitat for this species due to discing, and isolated location relative to suitable habitat. No impacts are anticipated.

Table 4.4-2. Special Status Wildlife That May Occur in Vicinity of Project Site

Scientific Name Common Name	Status Federal/State	Survey Results/Regional or Nearest Occurrence*
Phrynosoma blainvillii Coast horned lizard	-/CSC	Suitable soils are present on the project site. Although individual Coast horned lizards may be impacted, the number is likely to be extremely limited based on discing conducted over four consecutive years and no previously known occurrences on the site or in the vicinity. Consequently, impacts to this species are considered less than significant.
Thamnophis gigas Giant garter snake	T/-	This species is likely extirpated from Kern County. Project site does not represent suitable habitat for this species. No impacts are anticipated
Birds		
Agelaius tricolor Tricolored blackbird	S/CSC	No suitable nesting or foraging habitat is present on the project site. No impacts are anticipated.
Aquila chrysaetos Golden eagle	-/SFP	No suitable nesting habitat is present on the project site. No impacts are anticipated.
Athene cunicularia Burrowing owl	-/CSC	Species not observed during fieldwork. No owl burrows identified. The project site represents suitable foraging and nesting habitat for the species based on the presence of California ground squirrel burrows.
Buteo swainsoni Swainson's hawk	-/T	No trees suitable for raptor nesting exist in the vicinity of the project. No stick nests observed. No impacts are anticipated.
Circus cyaneus Northern harrier	-/CSC	No trees suitable for raptor nesting exist in the vicinity of the project. No stick nests observed. No impacts are anticipated.
Elanus leucurus *White tailed kite*	-/SFP	No trees suitable for nesting exist on the project. The site represents marginal foraging habitat. No impacts are anticipated.
Eremophila alpestris actia California horned lark	-/WL	The site is within the range of the species and represents suitable nesting and foraging habitat. None were observed.
Falco mexicanus Prairie falcon	-/WL	A prairie falcon was observed soaring during the field survey. No suitable nesting sites exits on the project. The site represents marginal foraging habitat for the species. No impacts anticipated given the project size relative to surrounding, similar habitat suitable for foraging.
Gymnogyps californianus California condor	E/E, SFP	No suitable nesting or foraging habitat exists on the project site. No impacts are anticipated.
Lanius ludovicianus Loggerhead shrike	-/CSC	No loggerhead shrike was observed during the field survey. No suitable nesting sites exits on the project. The site represents marginal foraging habitat for the species. No impacts anticipated given the project size relative to surrounding, similar habitat suitable for foraging.
Mammals		
Ammospermophilus nelsoni San Joaquin antelope squirrel	-/T	The project site is beyond the current published range of the species. The survey was conducted under suitable conditions for observation of the species and no individuals were recorded. No impacts are anticipated

Table 4.4-2. Special Status Wildlife That May Occur in Vicinity of Project Site

Scientific Name Common Name	Status Federal/State	Survey Results/Regional or Nearest Occurrence*
Antrozous pallidus Pallid bat	-/CSC	No suitable roosting habitat exists on the project site. The site represents marginal foraging habitat for the species. No impacts anticipated given the project size relative to surrounding, similar habitat suitable for foraging
Dipodomys ingens Giant kangaroo rat	E/E	Historic row-crop farming precludes occupation although individuals have been known to persist on the periphery of agriculture. No burrows typical of Dipodomys sp. were observed during the field survey. No impacts are anticipated.
Dipodomys nitratoides nitratoides Tipton kangaroo rat	E/E	The project site is within the range of the species. Historic row-crop farming and subsequent discing would generally preclude occupation although individuals have been known to persist on the periphery of agriculture. No burrows typical of *Dipodomys* sp. were observed during the field survey. No impacts are anticipated.
Eumops perotis californicus Greater western mastiff bat	-/CSC	No suitable roosting habitat exists on the project site. The site represents marginal foraging habitat for the species. No impacts anticipated given the project size relative to surrounding, similar habitat suitable for foraging.
Onychomys torridus tularensis Tulare grasshopper mouse	-/CSC	Suitable habitat is present on the project site. Although individual Tulare grasshopper mice may be impacted, the number is likely to be extremely limited based on discing conducted over four consecutive years and no previously known occurrences on the site or in the vicinity. Consequently, impacts to this species are considered less than significant.
Perognathus inornatus inornatus	S/-	Suitable habitat is present on the project site. Although individual San Joaquin pocket mice may be impacted, the number is likely to be extremely limited based on discing conducted over four consecutive years and no previously known occurrences on the site or in the vicinity. Consequently, impacts to this species are considered less than significant.
Sorex ornatus relictus Buena Vista Lake shrew	E/-	No suitable habitat is present on the project site. No impacts are anticipated.
Taxidea taxus American badger	-/CSC	No suitable habitat is present on the project site. No impacts are anticipated. See additional discussion
Vulpes macrotis mutica San Joaquin kit fox (SJKF)	E/T	The site represents suitable habitat for the species. SJKF dens were identified during fieldwork.

Federal
S Listed as BLM Sensitive Species
D Delisted
E Listed as Endangered
PT Proposed as Threatened
T Listed as Threatened

State
CSC California Department of Fish and Wildlife Designated Species of Special Concern
D Delisted
E Listed as Endangered
SFP California Department of Fish and Wildlife Designated Fully Protected
T Listed as Threatened

Wetlands and Jurisdictional Waters of the United States

No riparian habitat is present on the Project site. A search of the USFWS National Wetlands Inventory resulted in no wetlands mapped within the project site vicinity (McIntosh & Associates 2009; McCormick Biological 2017). These results are consistent with the observed conditions within the survey area.

4.4.3 Regulatory Setting

The CDFG and USFWS lists Threatened and Endangered taxa (e.g., species, subspecies or variety) in the proposed Project area. The electronic Inventory of Rare and Endangered Vascular Plants of California of the California Native Plant Society's (CNPS 2006) and the California Natural Diversity Database (CNDDB) (McIntosh & Associates 2009; McCormick Biological 2017) identify special-status plants, wildlife, and habitats known to occur in the vicinity of the Project site.

Federal

The Federal Endangered Species Act (FESA)

The FESA of 1973 (50 SFR 17) provides legislation to protect plant and animal taxa considered at risk of extinction and classified as either threatened or endangered. Section 9 of the FESA prohibits any person or entity from the "taking" of any endangered fish or wildlife species. Impacts to listed species resulting from project implementation would require the responsible agency or individual to consult the USFWS. Formal consultations must take place with the USFWS pursuant to Sections 7 and 10 of the FESA, with the USFWS then making a determination as to the extent of impact to a particular species. If the USFWS determines that impacts to a species would likely occur, then alternatives and measures to avoid or reduce impacts must be identified.

Section 4 requires Federal agencies to, among other things, prepare recovery plans for newly listed species unless USFWS determines such a plan would not promote the conservation of the species.

Section 7 requires Federal agencies, in consultation with, and with the assistance of the Secretary of the Interior or the Secretary of Commerce, as appropriate, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of critical habitat for these species. The USFWS and National Marine Fisheries Service (NMFS) share responsibilities for administering FESA. Regulations governing interagency cooperation under Section 7 are found at 50 CFR Part 402. The opinion issued at the conclusion of consultation will include a statement authorizing a take that may occur incidental to an otherwise legal activity.

Section 9 lists those actions that are prohibited under FESA. Take of a species listed in accordance with FESA is prohibited. Section 9 of FESA prohibits take (i.e., to harass, harm, pursue, hunt, wound, kill, etc.) of listed species of fish, wildlife, and plants without special exemption. "Harm" is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or shelter. "Harass" is further defined as actions that create the likelihood of injury to listed species to an extent

as significantly disrupt normal behavior patterns which include, but not limited to, breeding, feeding, and shelter.

Section 10 provides a means whereby a non-Federal action with a potential to result in the take of a listed species could be allowed under an incidental take permit. Application procedures are found at 50 CFR Parts 13 and 17 for species under the jurisdiction of USFWS and 50 CFR Parts 217, 220, and 222 for species under the jurisdiction of NMFS.

San Joaquin Valley Upland Species Recovery Plan

The San Joaquin Valley Upland Species Recovery Plan (Upland Species Recovery Plan) covers 34 species of plants and animals that occur in the San Joaquin Valley. The plan's 11 listed species comprise the following.

Five plant species are listed as endangered under FESA:

- California jewelflower (Caulanthus californicus),
- Palmate-bracted bird's-beak (Cordylanthus palmatus),
- Kern mallow (Eremalche parryi ssp. kernensis),
- San Joaquin woolly-threads (Lembertia congdonii), and
- Bakersfield cactus (Opuntia basilaris var. treleasei);

Five animal species are listed as endangered:

- Giant kangaroo rat (*Dipodomys ingens*),
- Fresno kangaroo rat (*Dipodomys nitratoides exilis*),
- Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*),
- Blunt-nosed leopard lizard (*Gambelia silus*), and
- San Joaquin kit fox (*Vulpes macrotis mutica*).

One plant species is listed as threatened:

- Hoover's wooly-star (*Eriastrum hooveri*); and

Twenty-three plant and animal species are listed as candidates or species of concern are as follows:

- Lesser saltscale (*Atriplex minuscula*),
- Bakersfield smallscale (*Atriplex tularensis*),

- Lost Hills saltbush (*Atriplex vallicola*),
- Vasek's clarkia (*Clarkia tembloriensis Vasek* ssp. *calientensis*),
- Temblor buckwheat (*Eriogonum temblorense*),
- Tejon poppy (*Eschscholzia lemmonii* ssp. *kernensis*),
- Diamond-petaled California poppy (*Eschscholzia rhombipetala*),
- Comanche Point layia (*Layia leucopappa*),
- Munz's tidy-tips (*Layia munzii*),
- Jared's peppergrass (*Lepidium jaredii*),
- Merced monardella (*Monardella leucocephala*),
- Merced phacelia (*Phacelia ciliata* var. *opaca*), and
- Oil neststraw (*Stylocline citroleum*).
- Ciervo aegialian scarab beetle (*Aegialia concinna*),
- San Joaquin dune beetle (*Coelus gracilis*),
- Doyen's dune weevil (*Trigonoscuta* sp.),
- San Joaquin antelope squirrel (*Ammospermophilus nelsoni*),
- Short-nosed kangaroo rat (*Dipodomys nitratoides brevinasus*),
- Riparian woodrat (*Neotoma fuscipes riparia*),
- Tulare grasshopper mouse (*Onychomys torridus tularensis*),
- Buena Vista Lake shrew (*Sorex ornatus relictus*),
- Riparian brush rabbit (*Sylvilagus bachmani riparius*), and
- San Joaquin Le Conte's thrasher (*Toxostoma lecontei lecontei*).

The ultimate goal of this recovery plan is to delist the 11 endangered and threatened species and ensure the long-term conservation of the 23 candidates and species of concern. An interim goal is to reclassify the endangered species to threatened status. USFWS is responsible for implementation of the Upland Species Recovery Plan.

Migratory Bird Treaty Act

With the presence of certain habitats present within, and adjacent to, the proposed Project site, the potential exists for migratory birds, including raptors to utilize the vegetation for nesting. The Migratory Bird Treaty Act (MBTA) is a law that fully protects all migratory birds and their respective parts (i.e., eggs, nests and feathers). The MBTA protects migratory birds through conventions that are common to Canada, Japan, Mexico, Russia, and the United States.

Bald and Golden Eagle Protection Act of 1940 (16 U.S.C. 668, enacted by 54 Stat. 250)

The Bald and Golden Eagle Protection Act (BGEPA) of 1940 protects bald and golden eagles by prohibiting the taking, possession, and commerce of such birds and establishes civil penalties for violation of this Act. Take of bald and golden eagles is defined as follows: "disturb means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available: (1) injury to an eagle; (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior; or, (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior'' (72 FR 31132; 50 CFR 22.3).

On November 10, 2009, USFWS implemented new rules (74 FR 46835) governing the "take" of golden and bald eagles. The rules were released under the existing BGEPA which has been the primary regulatory protection for unlisted eagle populations since 1940. All activities that may disturb or incidentally take an eagle or its nest as a result of an otherwise legal activity must be permitted by the USFWS under this act.

A programmatic permit would be available to industries or agencies undertaking activities that may disturb or otherwise take eagles on an ongoing operational basis. The USFWS has defined programmatic take as "take that (1) is recurring, but not caused solely by indirect effects, and (2) occurs over the long term and/or in a location or locations that cannot be specifically identified." The second criterion is the key factor that distinguishes programmatic take from any other take that has indirect effects that continue to cause take after the initial action.

In April 2012, a proposed rule change was published by the USFWS regarding take permits for golden eagles that would extend the maximum allowable permit life of a programmatic take permit from 5 to 30 years. The rule would also increase the associated fees to cover the actual costs of processing the permit application. The USFWS is studying the proposal pursuant to the National Environmental Policy Act (NEPA).

State

California Environmental Quality Act (CEQA) (Public Resource Code Section 21000 et seq.)

The California Environmental Quality Act (CEQA) was adopted in 1970 and applies to actions directly undertaken, financed, or permitted by State and local lead agencies. CEQA requires that

agencies inform themselves about the environmental effects of their proposed actions, consider all relevant information, provide the public an opportunity to comment on the environmental issues, and avoid or reduce potential environmental harm whenever feasible. CEQA establishes State policy to prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures. Regulations for implementation are found in the CEQA Guidelines published by the Resources Agency. These guidelines establish an overall process for the environmental evaluation of projects.

Section 15380. Although threatened and endangered species are protected by specific federal and State statutes, CEQA Guidelines Section 15380(b) provides that a species not listed on the federal or State list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definition in the FESA and the section of the California Fish and Game Code dealing with rare or endangered plants or animals. This section was included in CEQA primarily to deal with situations in which a public agency is reviewing a project that may have a significant effect on, for example, a candidate species that has not been listed by either USFWS or CDFW. Thus, CEQA provides an agency with the ability to protect a species from the potential impacts of a project until the respective government agencies have an opportunity to designate the species as protected, if warranted. CEQA also calls for the protection of other locally or regionally significant resources, including natural communities. Although natural communities do not at present have legal protection of any kind, CEQA calls for an assessment of whether any such resources would be affected and requires findings of significance if there would be substantial losses. Natural communities listed by CNDDB as sensitive are considered by CDFW to be significant resources and fall under the CEQA Guidelines for addressing impacts. Local planning documents such as general plans often identify these resources as well.

California Endangered Species Act (CESA)

California has a parallel mandate to the FESA, which is the CESA of 1984 and the California Native Plant Protection Act of 1977. These laws regulate the listing and take of plant and animal species designated as endangered, threatened or rare. The State of California also lists Species of Special Concern based on limited distribution, declining populations, diminishing habitat or unusual scientific, recreational or educational value. Under state law, the CDFG is empowered to review projects for their potential to impact listed species and their habitats.

Section 2080. Section 2080 of the California State Fish and Game Code states, "No person shall import into this State [California], export out of this State, or take, possess, purchase, or sell within this State, any species, or any part or product thereof, that the Commission [State Fish and Game Commission] determines to be an endangered species or threatened species, or attempt any of those acts, except as otherwise provided in this chapter, or the Native Plant Protection Act, or the California Desert Native Plants Act." Pursuant to Section 2081 of the California State Fish and Game Code, the CDFW may authorize individuals or public agencies to import, export, take, or possess, any State-listed endangered, threatened, or candidate species as long as they do not have State Fully Protected status. These otherwise prohibited acts may be authorized through permits or a memorandum of understanding (MOU) if: (1) the take is incidental to an otherwise lawful activity; (2) impacts of the authorized take are minimized and fully mitigated; (3) the permit is consistent with any regulations adopted pursuant to any recovery plan for the species; and, (4) the project proponent ensures adequate

funding to implement the measures required by the CDFW. The CDFW makes this determination based on available scientific information and considers the ability of the species to survive and reproduce.

Fully Protected Species. The State of California first began to designate species as "Fully Protected" prior to the creation of the CESA. Lists of Fully Protected species were initially developed to provide protection to those animals that were rare or faced possible extinction, and included fish, mammals, amphibians and reptiles, birds, and mammals. Most Fully Protected species have since been listed as threatened or endangered under the CESA and/or ESA. The regulations that implement the Fully Protected Species Statute (Fish and Game Code Sections 3511, 4700, 5050, 5515) provide that Fully Protected species may not be taken or possessed at any time. Furthermore, the statute prohibits any State agency from issuing incidental take permits for Fully Protected species, except for scientific research or relocation of the bird species for the protection of livestock pursuant to Section 670.7 of the California Code of Regulations or Section 2835 of the Fish and Game Code.

Fish and Game Code

The CDFW is responsible for conserving, protecting and managing California's fish, wildlife and native plant resources. Protected species may not be "taken" or possessed without a permit from the Fish and Game Commission and/or the CDFW. Information on these species can be found within Section 3511 (birds), Section 4700 (mammals), Section 5050 (reptiles and amphibians) and Section 5515 (fish) of the Fish and Game Code. It is unlawful to take the nest or eggs of any bird, or to take any bird of prey per Section 3503 of the Fish and Game Code.

Local

Metropolitan Bakersfield General Plan

The Metropolitan Bakersfield General Plan cites policies to provide decision-makers with long-range guidance affecting the future character of the Metropolitan Bakersfield planning area. The elements within the Metropolitan Bakersfield General Plan provide goals, policies, and implementation measures in order to reduce impacts to biological resources. Applicable goals relative to the proposed Project within the Biological Resources Element are listed in Table 4.4-3, *Metropolitan Bakersfield General Plan Goals and Policies for Biological Resources*, below.

Table 4.4-3. Metropolitan Bakersfield General Plan Goals and Policies for Biological Resources

Goals and Policies: Conservation/Biological Resources Element
Conservation/Biological Resources Goal #1: "Conserve and enhance Bakersfield's biological resources in a manner which facilitates orderly development and reflects the sensitivities and constraints of these resources."
Conservation/Biological Resources Goal #2: "To conserve and enhance habitat areas for designated 'sensitive' animal and plant species."
Conservation/Biological Resources Policy #1: "Direct development away from 'sensitive biological resource' areas, unless effective mitigation measures can be implemented."

Table 4.4-3. Metropolitan Bakersfield General Plan Goals and Policies for Biological Resources
Goals and Policies: Conservation/Biological Resources Element
Conservation/Biological Resources Policy #2: "Preserve areas of riparian vegetation and wildlife habitat within floodways along rivers and streams, in accordance with the Kern River Plan Element and channel maintenance programs designed to maintain flood flow discharge capacity."
Conservation/Biological Resources Policy #3: "Discourage, where appropriate, the use of off-road vehicles to protect designated sensitive biological and natural resources."
Conservation/Biological Resources Policy #4: "Determine the feasibility of enhancing sensitive biological habitat and establishing additional wildlife habitat in the study area with State and/or Federal assistance."
Conservation/Biological Resources Policy #5: "Determine the locations and extent of suitable habitat areas required for the effective conservation management of designated "sensitive" plant and animal species."
Conservation/Biological Resources Policy #6: "Investigate the feasibility of including natural areas selected for the habitat conservation plan as a component of the regional park system."

Metropolitan Bakersfield Habitat Conservation Plan (MBHCP)

Kern County and the City of Bakersfield developed the MBHCP to acquire permits that allow take of Federally and State listed species included in the MBHCP area. The permits acquired include a permit under Section 10(a)(1)(B), of the Federal Endangered Species Act (hereafter referred to as a 10(a) permit), and a permit under Section 2081 of the CESA (CESA 9322). The MBHCP is designed to offset impacts resulting from the incidental take of listed species and the loss of habitat incurred through the authorization of otherwise lawful activities. The goal of the MBHCP is to acquire, preserve and enhance native habitats that support special status species while allowing development to proceed as set forth in the Metropolitan Bakersfield General Plan. The study area covered by the MBHCP contains both the City of Bakersfield and Kern County jurisdictions.

The proposed Project is within the boundaries of the adopted MBHCP. The MBHCP meets the requirements of both state and federal endangered species acts and fully complies with state and federal environmental regulations set forth in NEPA and CEQA. Upon payment of the required mitigation fees, currently $2,145 per gross acre, and receipt of project approval, a developer/applicant becomes a subpermittee and is allowed the incidental take of the covered species of the San Joaquin kit fox and Bakersfield cactus in accordance with state and federal endangered species laws. Mitigation fees are used for the acquisition and management of lands for conservation. The lands are held in perpetuity. The MBHCP program has preserved approximately 18,000 acres of endangered species habitat and contributed over six million dollars toward management of preserve areas.

4.4.4 Impacts and Mitigation Measures

Methodology

The potential impacts associated with the proposed Project are evaluated on a qualitative and quantitative basis through a comparison of the anticipated Project effects on biological habitat. The change in the land use is significant if the effects described below occur. The evaluation of proposed Project impacts as based on professional judgment, analysis of the County's biological resources polices and adopted Kern County thresholds in the Kern County CEQA Implementation Document.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the CEQA Guidelines, to determine if a project could potentially have a significant impact. Such an impact would occur if the proposed project would

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulations or by the CDFG or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFG or USFWS;
- Have a substantial adverse effect on Federally protected wetlands, as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and/or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan.

Project Impacts

Impact 4.4-1: The Project Would Have a Substantial Adverse Effect, Either Directly or Through Habitat Modifications, on Any Species Identified as a Candidate, Sensitive or Special Status Species in Local or Regional Plans, Policies or Regulations, or by the CDFW or USFWS.

Special Status Plants

According to the Biota Report, the literature review, and based on general habitat conditions (given the decades of intensive row crop farming of the site and adjacent properties), out of 21 special-status plant species that occur in the region of the Project, no plants were determined to potentially exist on the Project site. Therefore, less than significant impacts to special-status plant species are anticipated.

Special Status Wildlife

Of the 32 wildlife species identified as potentially occurring in the region of the project site, 10 of these were determined to have the potential to be affected by the Project. Direct impacts could occur with the construction and development of the proposed Project, which could result in an "incidental take" of a threatened, endangered, or otherwise protected species. Indirect impacts, in the form of loss of foraging habitat associated with a threatened, endangered, or otherwise protected species, may also occur as a result of the development of the proposed Project.

San Joaquin kit fox. No San Joaquin kit fox were observed during the biological surveys of the proposed Project site; however, the Project site represents suitable habitat. Additionally, dens were identified during the 2017 biological survey. The proposed Project site also provides suitable foraging habitat for the species and is within the mapped distribution for the species. In addition, the CNDDB documents the presence of the species in the vicinity of the proposed Project.

Potential direct adverse impacts to the San Joaquin kit fox include direct mortality from vehicle collision, entrapment in open pipes, trenches or pits and contamination. Habitat loss, degradation, and fragmentation are also potential impacts to the species resulting from the proposed Project. Potential indirect impacts to the San Joaquin kit fox resulting from the implementation of the proposed Project include those associated with human habitation of the agricultural property, such as increased traffic, refuse, domestic pets and pedestrian use of adjacent open lands. Such potential impacts to the species resulting from the proposed Project would result in a "take" of the San Joaquin kit fox and be considered a significant impact.

Tulare Grasshopper. No Tulare grasshopper mice were observed during the biological surveys of the proposed Project site. Suitable habitat is present on the project site. Although individual Tulare grasshopper mice may be impacted, the number is likely to be extremely limited based on discing conducted over four consecutive years and no previously known occurrences on the site or in the vicinity. Consequently, impacts to this species are considered less than significant.

Pallid Bat. No Pallid bats were observed during the biological surveys of the proposed Project site. Additionally, no suitable roosting habitat exists on the project site and the site represents marginal foraging habitat for the species. Therefore, no impacts are anticipated given the project size relative to surrounding area which contains similar habitat suitable for foraging.

Greater Wester Mastiff Bat. No Greater western mastiff bats were observed during the biological surveys of the proposed Project site. Additionally, no suitable roosting habitat exists on the project site and the site represents marginal foraging habitat for the species. Therefore, no impacts are anticipated given the project size relative to surrounding area which contains similar habitat suitable for foraging.

Silvery Legless Lizard. No Silvery legless lizards were observed during the biological surveys of the proposed Project site. Although suitable soils for this species exist on the project site and individual silvery legless lizards may be impacted, the number is likely to be extremely limited based on past history of agriculture and disking conducted over four consecutive years. Additionally, no previously known occurrences on the site or in the vicinity. Consequently, impacts to this species are considered less than significant.

However, because the proposed Project lies within the MBHCP area, mitigation and compensation requirements of the implemented MBHCP would reduce listed potential impacts to a less than significant level. Several special status birds have potential, or have been observed, to occur within the proposed Project site. Disturbance of the sensitive bird species would be prohibited under CEQA, CDFG Code, CESA and/or the MBTA. Although the site may represent marginal foraging habitat, it is unlikely that any of these species, except the burrowing owl, use the Project site for nesting purposes due to the lack of suitable nesting habitat. The proposed Project would result in adverse impacts to burrowing owl foraging and nesting habitat.

To reduce impacts to special status species that may occur on the Project site, mitigation provided by the MBHCP would mitigate for the loss of foraging habitat. Compliance with the MBHCP is intended to conserve entire communities and ecosystems. Impacts on habitat for special status species, including San Joaquin kit fox, will be mitigated through the payment of a one-time mitigation fee due prior to disturbance and payable to Kern County at the time grading plans are approved or building permits are issued. The MBHCP mitigation fee is currently $2,145 per gross acre, although it may be increased in the future to keep pace with inflation. The mitigation fee will apply to the acres of all vegetation types directly impacted by the proposed Project. In addition to the MBHCP, conformance to other species protection regulations, such as compliance with Section 3503 of the California Fish and Game Code, which prohibits the disturbance of nesting birds, would ensure impacts to these species are less than significant.

Burrowing Owl. Although no burrowing owls were observed, because the site contains ground squirrel burrows, the site does represent suitable nesting habitat for burrowing owl. Therefore, Project implementation would result in adverse impacts to burrowing owl foraging and nesting habitat. Because the burrowing owl is not covered by the MBHCP, additional avoidance and mitigation measures would be required to avoid violations of the MBTA and California Fish and Game Code.

Northern Harrier Hawk, Sharp-Shinned Hawk and other raptors. Although northern harrier and sharp-shinned hawk were observed during the 2009 biological surveys, Project implementation is not expected to result in adverse impacts to these species as nesting habitat does not occur on-site.

The proposed Project would result in adverse impacts to foraging habitat for sensitive bird species and raptors. American kestrels have been observed foraging on-site and owl and red-tailed hawk roosts were identified within the proposed Project boundaries during the surveys. Mitigation provided by the MBHCP for other sensitive species would mitigate for the loss of foraging habitat because of project implementation. Disturbance of nesting birds, sensitive and non-sensitive, is prohibited by Section 3503 of the California Fish and Game Code. An owl nest and a rock pigeon nest were identified in the eastern portion of the site, during the biological surveys. These species are not considered sensitive species; however, the CDFG Code prohibits disturbance of a nest site until the young have fledged.

Therefore, implementation of mitigation measures and compliance with federal, State, and County guidelines would reduce impacts to special-status species potentially occurring in the vicinity of the project to a less than significant level.

Mitigation Measures

MM 4.4-1: **Biological Monitoring.** Prior to initiation of any site preparation and/or construction activities, the project proponent shall retain a Lead Biologist who shall be approved prior to conducting pre-construction surveys by the Kern County Planning and Natural Resources Department with a submitted resume. The Lead Biologist will have oversight over implementation of all necessary avoidance and minimization efforts and will have the authority to stop construction activities, if any of the requirements associated with these measures are not being fulfilled. If the biologist has requested work activities stop due to take of any listed species, the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife will be notified within 1 day via email and telephone. In addition to the Lead Biologist, all other qualified biologists or monitors working on site, conducting evaluations, etc., shall submit resumes for approval to the Kern County Planning and Natural Resources Department.

MM 4.4-2: **Environmental Awareness Training and Education Program.** Prior to the issuance of grading or building permits and for the duration of construction activities, all new construction workers at the project site shall attend an Environmental Awareness Training and Education Program (WEAP), developed and presented by the Lead Biologist. Any employee responsible for the operations and maintenance or decommissioning of the project facilities shall also attend the Environmental Awareness Training and Education Program.

a. The Training Program shall include, but not be limited to, information on the life history of species including the blunt-nosed leopard lizard, San Joaquin whipsnake, coast horned lizard, burrowing owl, Swainson's hawk, prairie falcon, Le Conte's thresher, Nelson's antelope squirrel, giant kangaroo rat, short-nosed kangaroo rat, Tipton kangaroo rat, Tulare grasshopper mouse, San Joaquin pocket mouse, American badger, nesting birds, and San Joaquin kit fox, as well as other wildlife and plant species that may be encountered during construction activities, their legal protections, the definition of "take" under the Endangered Species Act, measures to protect the species, reporting requirements, specific measures that each worker shall employ to avoid take of wildlife species, and penalties for violation of the Act.

b. To ensure employees and contractors understand their roles and responsibilities, training may be conducted in languages other than English.

    1. An acknowledgement form signed by each worker indicating that Environmental Awareness Training and Education Program has been completed would be kept on record;

    2. A sticker shall be placed on hard hats indicating that the worker has completed the Environmental Awareness Training and Education Program. Construction workers shall not be permitted to operate equipment within the construction areas unless they have attended the

Environmental Awareness Training and Education Program and are wearing hard hats with the required sticker;

3. A copy of the training transcript and/or training video, as well as a list of the names of all personnel who attended the Environmental Awareness Training and Education Program and copies of the signed acknowledgement forms shall be submitted to the Kern County Planning and Natural Resources Department; and,

4. The construction crews and contractor(s) shall be responsible for unauthorized impacts from construction activities to sensitive biological resources that are outside the areas defined as subject to impacts by project permits.

5. An Operation and Maintenance-phase version of the WEAP will be maintained within the onsite O&M facility for review as may be necessary during the life of the project.

6. All vehicles will be directed to exercise caution when commuting within the project area. A 15-mile per hour speed limit will be enforced on unpaved roads.

7. Project employees will be provided with written guidance governing vehicle use, speed limits on unpaved roads, fire prevention, and other hazards.

8. A litter control program shall be instituted at the project site. All workers shall ensure their food scraps, paper wrappers, food containers, cans, bottles, and other trash from the project area are deposited in covered or closed trash containers. The trash containers shall be removed from the project area at the end of each working day.

9. No canine or feline pets or firearms (except for federal, state, or local law enforcement officers and security personnel) shall be permitted on construction sites to avoid harassment, killing, or injuring of listed species.

10. Maintenance and construction excavations greater than 2 feet deep shall be covered, filled in at the end of each working day, or have earthen escape ramps no greater than 200 feet apart provided to prevent entrapment of listed species.

11. All construction activities shall be confined within the project construction area, which may include temporary access roads, haul roads, and staging areas specifically designated and marked for these purposes. At no time shall equipment or personnel be allowed to adversely affect areas outside the project site.

12. Because dusk and dawn are often the times when listed species are most actively foraging, all construction activities will cease 0.5 hour before sunset and will not begin prior to 0.5 hour before sunrise. Except when necessary for driver or pedestrian safety, lighting of the project site by artificial lighting during nighttime hours is prohibited.

13. Tightly woven fiber netting or similar material shall be used for erosion control or other purposes at the project site to ensure that special-status species do not get trapped. This limitation will be communicated to the contractor through use of Special Provisions included in the bid solicitation package.

14. Use of rodenticides and herbicides at the project site shall be avoided to the maximum extent feasible. If use is unavoidable, rodenticides and/or herbicides shall be utilized in such a manner to prevent primary or secondary poisoning of special-status species and depletion of prey populations on which they depend. All uses of such compounds shall observe labels and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Pesticide Regulation, and other appropriate state and federal regulations as well as additional project-related restrictions deemed necessary by the U.S. Fish and Wildlife Service or California Department of Fish and Wildlife.

MM 4.4-3: **Preconstruction Surveys.** A pre-construction survey by a qualified biologist or monitor shall be conducted no more than 30 days and no less than 14 days prior to the commencement of any site preparation, ground disturbance, and/or construction activities in previously undisturbed areas of the project site. If any evidence of occupation of that portion of the project site by listed or other special-status plant or animal species is observed, a buffer shall be established by a qualified biologist that results in sufficient avoidance to comply with applicable regulations. If sufficient avoidance cannot be established, the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife shall be contacted for further guidance and consultation on additional measures. The project proponent or operator shall obtain any required permits from the appropriate wildlife agency. Copies of the pre-construction survey and results, as well as all permits and evidence of compliance with applicable regulations, shall be submitted to the Kern County Planning and Natural Resources Department.

The following buffer distances shall be established prior to commencement of any site preparation and/or construction activities, if any listed or other special status plant or animal species is observed:

a. San Joaquin kit fox or American badger potential den: 50 feet;

b. San Joaquin kit fox or American badger known den: 100 feet;

c. San Joaquin kit fox or American badger pupping den: contact the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife;

d. Burrowing owl burrow outside of breeding season: as recommended by the California Department of Fish and Wildlife Staff Report 2012;

e. Burrowing owl burrow during breeding season: as recommended by the California Department of Fish and Wildlife Staff Report 2012;

f. Swainson's hawk nest during breeding season: 0.5 mile;

g. Other protected raptor nests during the breeding season: as recommended by a qualified biologist;

h. Other protected nesting migratory bird nests during the breeding season: as recommended by a qualified biologist; and

i. Coast horned lizard, San Joaquin whipsnake, and other special-status wildlife species: as recommended by a qualified biologist.

MM 4.4-4: If construction activities are conducted during the typical nesting bird season (February 15 through September 15), pre-construction surveys shall be conducted by a qualified biologist prior to any site preparation and/or construction activity to identify potential nesting bird activity. The survey area shall include a 500-foot buffer surrounding the property. If no active nests are found within the survey area, no further mitigation is required. If nesting activity is identified during the pre-construction survey process, the following measures will be implemented:

a. If active nest sites of bird species protected under the Migratory Bird Treaty Act and/or California Fish and Game Code are observed within the project site, then the project will be modified and/or delayed as necessary to avoid direct take of the identified nests, eggs, and/or young;

b. If active nest sites of raptors and/or bird species of special concern are observed within the vicinity of the project site, then the appropriate buffer around the nest site (typically 250 feet for passerines and 500 feet for raptors) will be established. Construction activities in the buffer zone will be prohibited until the young have fledged the nest and achieved independence; and,

c. Active nests shall be documented by a qualified biologist, and a letter report shall be submitted to the Kern County Planning and Natural Resources Department documenting project compliance with the Migratory Bird Treaty Act and California Fish and Game Code.

MM 4.4-5: Within 6 months prior to commencement of site preparation and/or construction activities, the project proponent shall ensure that a U.S. Fish and Wildlife Service-approved biologist conducts a protocol survey for blunt-nosed leopard lizard in

accordance with the guidelines published by the California Department of Fish and Wildlife, Region 4, Fresno Office (CDFW 2004). If blunt-nosed leopard lizards are located within the action area, the U.S. Fish and Wildlife Service will be contacted to discuss methods for proceeding with the project in a manner which will avoid take.

MM 4.4-6: **Burrowing Owl.** The project proponent shall implement the following measures, based on the recently updated California Department of Fish and Game (now California Department of Fish and Wildlife) 2012 Staff Report on Burrowing Owl Mitigation, to ensure potential impacts to burrowing owl resulting from project implementation will be avoided and minimized to less-than-significant levels:

a. A qualified wildlife biologist (i.e., a wildlife biologist with previous burrowing owl survey experience) shall conduct pre-construction surveys of the permanent and temporary impacts areas, plus an ISO-meter (approximately 492-foot) buffer, to locate active breeding or wintering burrowing owl burrows no less than 14 days prior to construction. The survey methodology will be consistent with the methods outlined in the Staff Report and will consist of walking parallel transects 7 to 20 meters apart, adjusting for vegetation height and density as needed, and noting any potential burrows with fresh burrowing owl sign or presence of burrowing. As each burrow is investigated, biologists will also look for signs of American badger and kit fox. Copies of the survey results shall be submitted to the California Department of Fish and Wildlife and Kern County Planning and Natural Resources Department.

If burrowing owls are detected, no ground-disturbing activities, such as road construction or ancillary facilities, shall be permitted within the distances listed below in the table titled "Burrowing Owl Burrow Buffers," unless otherwise authorized by California Department of Fish and Wildlife. Burrowing owls shall not be moved or excluded from burrows during the breeding season.

If avoidance of active burrows is infeasible, the owls can be passively displaced from their burrows according to recommendations made in the 2012 Staff Report on Burrowing Owl Mitigation. Burrowing owls should not be excluded from burrows unless or until:

a. Occupied burrows shall not be disturbed during the nesting season unless a qualified biologist meeting the Biologist Qualifications set forth in the May 2012 California Department of Fish and Wildlife Staff Report, verifies through noninvasive methods that either: (1) the owls have not begun egg-laying and incubation; or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. Burrowing owls will not be moved or excluded from burrows during the breeding season.

A Burrowing Owl Exclusion Plan is developed and approved by the applicable local California Department of Fish and Wildlife office and submitted to the Kern

County Planning and Natural Resources Department. The plan shall include, at a minimum:

a. Confirm by site surveillance that the burrow(s) is empty of burrowing owls and other species preceding burrow scoping;

b. Type of scope and appropriate timing of scoping to avoid impacts;

c. Occupancy factors to look for and what will guide determination of vacancy and excavation timing (one-way doors should be left in place 48 hours to ensure burrowing owls have left the burrow before excavation, visited twice daily, and monitored for evidence that owls are inside and can't escape, i.e., look for sign immediately inside the door);

d. How the burrow(s) will be excavated. Excavation using hand tools with refilling to prevent reoccupation is preferable whenever possible (may include using piping to stabilize the burrow to prevent collapsing until the entire burrow has been excavated and it can be determined that owls reside the burrow);

e. Removal of other potential owl burrow surrogates or refugia on-site;

f. Photographing the excavation and closure of the burrow to demonstrate success and sufficiency;

g. Monitoring of the site to evaluate success and, if needed, to implement remedial measures to prevent subsequent owl use to avoid take;

h. How the impacted site will continually be made inhospitable to burrowing owls and fossorial mammals (e.g., by allowing vegetation to grow tall, heavy disking, or immediate and continuous grading) until development is complete.

Permanent loss of occupied burrow(s) and habitat is mitigated in accordance with the measures described below.

Temporary exclusion is mitigated in accordance with the measures described below.

Site monitoring is conducted prior to, during, and after exclusion of burrowing owls from their burrows sufficient to ensure take is avoided. Conduct daily monitoring for 1 week to confirm young of the year have fledged if the exclusion will occur immediately after the end of the breeding season.

Excluded burrowing owls are documented using artificial or natural burrows on an adjoining mitigation site (if able to confirm by band re-sight).

In accordance with the Burrowing Owl Exclusion Plan, a qualified wildlife biologist shall excavate burrows using hand tools. Sections of flexible plastic pipe or burlap bag shall be inserted into the tunnels during excavation to maintain an escape route for any animals inside the burrow. One-way doors shall be installed at the entrance to the active burrow and other potentially active burrows within 160 feet of the active burrow. The one-way doors can be removed 48 hours after installation, and ground-disturbing activities can proceed. Alternatively, burrows can be filled to prevent reoccupation.

During construction activities, monthly and final compliance reports shall be provided to the California Department of Fish and Wildlife, Kern County Planning and Natural Resources Department, and other applicable resources agencies documenting the effectiveness of mitigation measures and the level of burrowing owl take associated with the proposed project.

Should burrowing owls be found on-site, compensatory mitigation for lost breeding and/or wintering habitat shall be implemented on-site or off-site in accordance with Burrowing Owl Staff Report guidance and in consultation with the California Department of Fish and Wildlife. At a minimum, the following recommendations shall be implemented:

a. Temporarily disturbed habitat shall be restored, if feasible, to pre-project conditions, including decompacting soil and revegetating. If restoration is not feasible, then the project proponent shall implement (2) below.

Permanent impacts to nesting, occupied, and satellite burrows and/or burrowing owl habitat will be mitigated such that the habitat acreage, number of burrows, and burrowing owls impacted are replaced based on a site-specific analysis and shall include:

a. Permanent conservation of similar vegetation communities (grassland, scrublands, desert, urban, and agriculture) to provide for burrowing owl nesting, foraging, wintering, and dispersal (i.e., during breeding and non-breeding seasons) comparable to or better than that of the impact area, and with sufficiently large acreage, and presence of fossorial mammals. Conversation shall occur in areas that support burrowing owl habitat and can be enhanced to support more burrowing owls.

Permanently protect mitigation land through a conservation easement deeded to a nonprofit conservation organization or public agency with a conservation mission. If the project is located within the service area of a California Department of Fish and Wildlife-approved burrowing owl conservation bank, the project operator may purchase available burrowing owl conservation bank credits.

Develop and implement a mitigation land management plan in accordance with Burrowing Owl Staff Report guidelines to address long-term ecological sustainability and maintenance of the site for burrowing owls.

Fund the maintenance and management of mitigation land through the establishment of a long-term funding mechanism such as an endowment.

Habitat shall not be altered or destroyed, and burrowing owls shall not be excluded from burrows, until mitigation lands have been legally secured, are managed for the benefit of burrowing owls according to California Department of Fish and Wildlife-approved management, monitoring and reporting plans, and the endowment or other long-term funding mechanism is in place or security is provided until these measures are completed.

Mitigation lands should be on, adjacent to, or in proximity to the impact site, where feasible, and where habitat is sufficient to support burrowing owls.

Consult with the California Department of Fish and Wildlife when determining off-site mitigation acreages.

MM 4.4-7: **Burrowing Owl Buffers.** The project proponent shall continuously comply with the following: If any burrowing owl burrows are observed during the pre-construction survey, avoidance measures shall be consistent with those included in the California Department of Fish and Wildlife staff report on burrowing owl mitigation (CDFG, 2012).

If occupied burrowing owl burrows are observed outside of the breeding season, a passive relocation effort may be instituted in accordance with the guidelines established by the California Burrowing Owl Consortium (1993) and the California Department of Fish and Wildlife (CDFG, 2012) (Table 1). During the breeding season, a buffer zone, as noted in Table 1, shall be maintained unless a qualified biologist verifies through noninvasive methods that either the birds have not begun egg laying and incubation or that juveniles from the occupied burrows are foraging independently and are capable of independent survival. Buffer zones may be reduced in size through consultation with appropriate agencies and the project biologist to determine if avoidance would still be achieved. The Kern County Planning and Natural Resources Department shall be kept apprised of meetings and correspondence for any consultation.

Table 4.4-4. Burrowing Owl Burrow Buffers (CDFG Staff Report, 2012)

Location	Time of Year	Level of Disturbance		
		Low	Medium	High
Nesting Sites	April 1-Aug 15	656 ft	1,640 ft	1,640 ft
Nesting Sites	Aug 16-Oct 15	656 ft	656 ft	1,640 ft
Any Occupied Burrow	Oct 16-Mar 31	164 ft	328 ft	1,640 ft

MM 4.4-8: **Trash Abatement.** Prior to issuance of grading or building permits, a long-term trash abatement program shall be established for construction, operations and maintenance. Trash and food items shall be contained in closed containers and removed daily.

MM 4.4-9: **Trash Abatement and Trench Monitoring Requirements.** Prior to and during construction activities, the project proponent shall ensure the project complies with the following:

a. Any pipe, culvert, or similar structure with a diameter of 4 inches or greater, stored onsite for one or more nights shall be inspected to ensure kit foxes or other wildlife have not become entrapped or buried in the pipes. If the pipes, culverts, or similar structures with a diameter of 4 inches or greater are not capped or otherwise covered, they shall be inspected twice daily, in the morning and evening, and prior to burial or closure, to ensure no kit foxes or other wildlife become entrapped or buried in the pipes.

b. All food, garbage, and plastic shall be disposed of in closed containers and regularly removed from the site to minimize attracting ranging kit fox, or other wildlife to the site where they may be harmed. All trash shall be removed and disposed of regularly in accordance with state and local laws and regulations.

MM 4.4-10: **San Joaquin kit fox.** Prior to and during construction activities:

a. If any San Joaquin kit fox dens are found during pre-construction surveys, the status of the dens shall be evaluated no more than 14 days prior to project ground disturbance. Provided that no evidence of kit fox occupation is observed, potential dens shall be marked and a 50-foot avoidance buffer delineated using stakes and flagging or other similar material to prevent inadvertent damage to the potential den. If a potential den cannot be avoided, it may be hand-excavated following United States Fish and Wildlife Service standardized recommendations for protection of the San Joaquin kit fox prior to or during ground disturbance by the lead biologist. If kit fox activity is observed at a den, the den status shall change to "known" per United States Fish and Wildlife Service guidelines (1999), and the buffer distance shall be increased to 100 feet. Absolutely no excavation of San Joaquin kit fox known or pupping dens shall occur without prior authorization from the United States Fish and Wildlife Service and California Department of Fish and Wildlife.

b. To enable kit foxes and other wildlife (e.g., American badger) to pass through the project site during construction, the perimeter security fence shall leave a 5-inch opening between the fence mesh and the ground or the fence shall be raised 5 inches above the ground. The bottom of the fence fabric shall be knuckled (wrapped back to form a smooth edge) to protect wildlife that passes under the fence.

c. All pipes, culverts, or similar structures with a diameter of four inches or more that are stored at a construction site for one or more overnight periods shall be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe shall not be moved until the United States Fish and Wildlife Service has been consulted. If necessary, under the direct supervision

of the biologist, the pipe may be moved once to remove it from the path of construction activity until the fox has escaped.

d. To prevent inadvertent entrapment of San Joaquin kit foxes, badgers, or other animals during construction, all excavated, steep-walled holes or trenches more than two feet deep shall be covered with plywood or similar materials at the close of each working day, or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If trapped animals are observed, escape ramps or structures shall be installed immediately to allow escape. If listed species are trapped, the United States Fish and Wildlife Service and California Department of Fish and Wildlife shall be contacted.

e. All vertical tubes used in project construction, such as chain link fencing poles shall be temporarily or permanently capped at the time they are installed to avoid the entrapment and death of special-status birds.

MM 4.4-11: **Nesting Birds.** A pre-construction protocol-level surveys by a qualified biologist for nesting birds shall be required if construction activities are scheduled to occur during the breeding season for raptors and other migratory birds (February 1–August 31), to reduce potential impacts to nesting birds and raptors. The survey shall be conducted within 30 days of ground disturbance activities.

a. If any nesting birds/raptors are observed, a qualified biologist shall determine buffer distances and/or the timing of project activities so that the proposed project does not cause nest abandonment or destruction of eggs or young. This measure shall be implemented so that the proposed project remains in compliance with the Migratory Bird Treaty Act and applicable State regulations.

MM 4.4-12: Prior to any vegetation removal during site preparation, the areas required for construction shall be surveyed for actively nesting birds. If any wildlife is encountered during the course of construction, the wildlife shall be allowed to leave the construction area unharmed. Should any active bird nests be identified, the vegetation shall not be removed in areas that contain actively nesting birds. A biological monitor shall survey the areas of vegetation slated for removal, a report shall be submitted to the Kern County Planning and Natural Resources Department for review prior to site preparation.

MM 4.4-13: The measures below shall be implemented throughout construction and operation of the project:

a. Project-related vehicles shall observe a 15 mile-per-hour speed limit in all project areas, except on county roads and State and federal highways. Construction after sundown shall be prohibited. Off-road traffic outside of designated project areas shall be prohibited.

b. No pets shall be allowed in project areas, except for trained canine animals related to security and operation of the facility.

c. All uses of such herbicidal and rodenticide compounds shall observe label and other restrictions mandated by the United States Environmental Protection Agency, California Department of Food and Agriculture, and federal and State legislation as well as additional project-related restrictions deemed necessary by the California Department of Fish and Wildlife and/or the United States Fish and Wildlife Service.

d. No plants or wildlife shall be collected, taken, or removed from the construction areas or areas of off-site improvements, except as necessary for project-related vegetation removal or wildlife relocation. Salvage of native vegetation to be removed from construction areas is encouraged but shall only be performed by qualified biologists and with written approval from the California Department of Fish and Wildlife.

e. If San Joaquin kit fox known or pupping dens are observed in project areas, the project proponent shall contact the United States Fish and Wildlife Service and California Department of Fish and Wildlife to discuss appropriate actions.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.4-2: The Project Would Have a Substantial Adverse Effect on any Riparian Habitat or Other Sensitive Natural Community Identified in Local or Regional Plans, Policies, Regulations, or by the CDFG or USFWS.

The proposed Project site does not contain any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS. Two agricultural sumps were identified within the proposed Project boundaries; however, they are not considered a wetland-riparian habitat. Lined and unlined irrigation ditches throughout the Project site; however, they do not provide sensitive habitat because of regular maintenance and clearing. Accordingly, potential wetland, riparian, or other aquatic habitats were not identified on-site during the biological surveys or reviews of regional plans. Consequently, no substantial adverse effect will occur as a result of the development of the project. Impacts would be considered less than significant and additional mitigation is not required

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.4-3: The Project Would Have a Substantial Adverse Effect on Federally Protected Wetlands, as Defined by Section 404 of the CWA (Including, But Not Limited to, Marsh, Vernal Pool, Coastal, etc.) Through Direct Removal, Filling, Hydrological Interruption or Other Means.

The proposed Project does not contain any features identified in wetland categories appear on the USFWS National Wetlands Inventory mapping (McIntosh & Associates 2009; McCormick Biological 2017). Therefore, the proposed Project would not result in the disturbance to any wetland, no impacts would occur, and additional mitigation is not required.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.4-4: The Project Would Interfere Substantially with the Movement of Any Native or Migratory Fish or Wildlife Species or With Established Native Resident or Migratory Wildlife Corridors or Impede the Use of Native Wildlife Nursery Sites.

The entire Project site is highly disturbed in nature due to agricultural activities and the proposed Project site does not contain any wildlife movement corridors. Wildlife corridors can be defined as connections between wildlife blocks that meet specific habitat needs for species movement generally during migratory periods but seasonally as well. While wildlife corridor width requirements can vary based on the needs of the species utilizing them, wildlife corridors generally contain habitat dissimilar to the surrounding vicinity and include examples such as riparian areas along rivers and streams, washes, canyons, or otherwise undisturbed areas within urbanization. The Project site does not contain any of these types of habitats and contains no water bodies that would be used by any fish species. Land uses on properties surrounding the proposed Project consist of residential or other agricultural uses. Overall, the proposed Project is not anticipated to significantly impair or impact movement or migration of wildlife species. However, the proposed Project contains open areas (vacant land) that is adjacent to properties that contain open areas. Therefore, there is the potential for wildlife species to traverse the Project site. Mitigation Measures MM 4.4-1 through MM 4.4-12 would be implemented as part of the proposed Project and ensure impacts remain less than significant.

Mitigation Measures

Implement Mitigation Measures MM 4.4-1 through MM 4.4-12, above.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.4-5: The Project Would Conflict With Any Local Policies or Ordinances Protecting Biological Resources, Such as a Tree Preservation Policy or Ordinance.

The proposed Project is required to comply with the MBHCP and all requirements in the Kern County Ordinance Codes and the Metropolitan Bakersfield General Plan. There are no biological resources on the Project site that are protected by local policies. Therefore, the proposed Project would not conflict with any local policies or ordinances that protect biological resources.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.4-6: The Project Would Conflict with the Provisions of an Adopted Habitat Conservation Plan, Natural Community Conservation Plan or Other Approved Local, Regional or State Habitat Conservation Plan.

As discussed above, the proposed Project is located within the MBHCP. The proposed Project would implement the policies required by the MBHCP, which provides mitigation sufficient to reduce potential impacts to a less than significant level. Conformance to the requirements, including payment of fees, would ensure that no conflict with any HCP, NCCP, or other approved local, regional, or state habitat conservation plan occurs. Additionally, consultation with USFWS and CDFW regarding special-status species is not required due to the implementation of the MBHCP. Therefore, the Project will not conflict with the provisions of the MBHCP. Impacts would be less than significant, and no additional mitigation is required included.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Cumulative Impacts

Ecological Communities Previously Occurring within the Metropolitan Bakersfield General Plan Area

The proposed Project would not result in cumulative impacts to wetlands or other sensitive habitats, special status plants, violation of local or ordinances protecting biological resources, or conflict with an adopted HCPs, NCCPs, or other approved local, regional, or State HCPs. The Metropolitan Bakersfield General Plan lists 21 sensitive natural communities know to occur or potentially occur in

the Bakersfield area. Of these 21 sensitive ecological communities, no sensitive natural communities occur within the proposed Project boundaries. The proposed Project boundaries include agricultural and ruderal habitat types.

Because no sensitive natural communities are present within the proposed Project boundaries, impacts would be less than significant. However, as a byproduct of the applicant paying mitigation fees to acquire habitat to support San Joaquin kit fox, some grasslands are anticipated to be acquired, leading to a potential for a net benefit to this resource.

Mitigation Measures

Implement Mitigation Measures MM 4.4-1 through MM 4.4-12, above.

Level of Significance after Mitigation

Impacts would be less than significant.

Species of Concern Occurring within the Metropolitan Bakersfield General Plan Area

Plants

Ten special-status plant species were identified within the boundaries of the Metropolitan Bakersfield General Plan area:

- Bakersfield cactus (*Opuntia treleasei*),
- Bakersfield saltbush (*Atriplex tularensis*),
- Hoover's wooly-star (*Eriastrum hooveri*),
- California jewel flower (*Caulanthus californicus*),
- Kern mallow (*Ermalche kernensis*),
- Tulare pseudobahia (*Pseudobahai peirsonii*),
- Striped adobe lily (*Fritillaria straita*),
- Slough thistle (*Cirsium crassicule*),
- Recurved larkspur (*Delphinium recuvatum*), and
- San Joaquin wooly-threads (*Lembertia congdonii*).

Of the above listed plants, no species were identified as occurring on the proposed Project site. The Applicant's contribution to purchase mitigation habitat that supports San Joaquin kit fox (per requirements of the MBHCP) would, as a beneficial side-effect of acquiring undeveloped property to protect that species, acquire property that could support one or more of the seven special-status plant species listed above.

Wildlife

Seven special-status wildlife species were identified within the boundaries of the Metropolitan Bakersfield General Plan area:

- San Joaquin kit fox,
- Blunt-nosed leopard lizard,
- Tipton kangaroo rat,
- Short-nosed kangaroo rat,
- Giant kangaroo rat,
- San Joaquin antelope ground squirrel, and
- San Joaquin pocket mouse.

Of the above lists wildlife species, only evidence of San Joaquin kit fox was identified on the Project site. The San Joaquin kit fox is known to occur in the vicinity of the proposed Project site and although none were observed, dens were identified within the proposed Project boundaries. The Applicant will be required to pay a fee pursuant to the MBHCP to purchase habitat to support the lifecycle needs of this species. The Applicant's contribution to purchase mitigation habitat that supports San Joaquin kit fox will, as a beneficial side effect, acquire property that could support one or more of the other six special-status wildlife species listed above. No significant cumulative impacts are anticipated.

Mitigation Measures

Implement Mitigation Measures MM 4.4-1 through MM 4.4-12, above.

Level of Significance after Mitigation

Impacts would be less than significant.

Section 4.5

Cultural Resources

Section 4.5
Cultural Resources

4.5.1 Introduction

This section of the RDEIR addresses the potential cultural resources impacts associated with construction and operation of the proposed Project. It describes the cultural background and setting of the Project area, discusses the regulatory setting, and provides the results of cultural resources surveys and analyses conducted for the proposed Project. Potential impacts on cultural resources that could result from the proposed Project, including prehistorical and historical archaeological sites and paleontological discoveries, are also discussed and feasible mitigation measures are provided.

The purpose of this section is to identify the potential for cultural resources to occur on the property and to assess the significance of such resources. A Phase I Cultural Resource Survey was prepared by Hudlow Cultural Resource Associates in October of 2008 and revised in May 2009. Included in the original report is information from two records searches and complete site survey of the Project area completed between February and March 2006. A subsequent Field Check and Record Search was prepared by Hudlow Cultural Resource Associates in March 2016 and revised in July 2017. See Appendix E, *Cultural Resources*. And Appendix N, *Original Technical Studies.*

The analysis in this section has been prepared in accordance with Section 15064.5 of the California Quality Act (CEQA) Guidelines, which considers potential impacts on prehistoric, historic, and paleontological resources.

4.5.2 Environmental Setting

The proposed Project is situated in the southern San Joaquin Valley in Kern County, California. The Project site consists of approximately 314.30 acres, generally located north of Houghton Road, east of State Route (SR) 99, west of South Union Avenue, and south of DiGiorgio Road, within the unincorporated area of Kern County, California.

The approximately 314.30-acre Project site consists of vacant, disked land that has been utilized for row-crop agriculture. The proposed Project site is mostly vacant; however, the site does contain a steel storage building associated with agricultural activities, one plugged and abandoned oil well, two active, diesel-powered irrigation wells, and one domestic well. The surrounding land uses includes vacant and agricultural lands and a cluster of single-family residential to the east and an automobile wrecking yard to the south.

The proposed Project is located along the southwestern edge of the San Joaquin Valley. The San Joaquin Valley is characterized by relatively low rainfall, averaging less than 10 inches per year, mostly between January and March. Average temperatures are relatively high, and total evaporation exceeds total precipitation. Summers are mostly cloudless, hot, and dry, with daytime temperatures frequently above 100 °Fahrenheit (°F). Winters are generally cool and foggy, but occasionally freezing temperatures occur.

The Kern County General Plan (KCGP) describes the Valley Region as "the southern San Joaquin Valley below an elevation of 1,000 feet [mean sea level] msl" within Kern County. The proposed Project area is located at elevations between 330 and 340 feet above msl.

Ethnographic and Archaeological Context

The proposed Project is located within the territory historically occupied by the Yokuts. The Yokuts were a California Penutian family of languages population who were allied linguistically with other Penutian speakers of the Uto-Aztecan linguistic stock such as the Miwok, Costanoan, Maiduan and Wintuan. The word "Yokuts" is an English version of the term for "person" or "people" in the Yawelmani dialect, while the word "Yawelmani" itself means "where the animal hole is, at the animal hole". The Yokuts are unique among California natives in that they are divided into true tribes. Each tribe has a name, a dialect, and a territory. The Yokuts occupied the majority of the San Joaquin Valley, as well as some of the foothills of the Sierra Nevada. Distinction has been made between the Southern Valley Yokuts, who inhabited the San Joaquin Valley from the lower Kings River in the north to the Tehachapi Mountains in the South, and the Northern Valley Yokuts who inhabited the Valley from the southern extent of the San Joaquin River to slightly north of the Calaveras River. Additionally, the Foothill Yokuts occupied the foothills of the Sierra Nevada between the Fresno and Kern Rivers. The tribe of the Southern Valley Yokuts that inhabited the Project area was the Yawelmani or Yaudimni, who occupied the village of Woilo ("planting place", "sowing place" – the name was given after mission influences began to reach them) that was situated on the site of present day Bakersfield. Below the City, on one of the channels of the river draining toward Kern Lake was the village of Kuyo and Halau.

Prior to the introduction of European agricultural practices, the San Joaquin Valley was a vast wetland area, comprised on interconnected lakes, sloughs, and rivers, interspersed with marshes of tules and dry ground. This unique environment provided the Yokuts with a great abundance of resources. Waterfowl, fish, turtles, and freshwater mussels were hunted or gathered by the Yokuts from the wetlands, while surrounding plains provided large mammals such as tule elk and pronghorn antelope. The starchy tule root was utilized for food, as were a variety of other plants. Single-family structures were built of tule mats covering a wooden framework; larger communal houses were similarly constructed. Canoes for transport were constructed of bundled balsas or dried tules. The political organization of Southern Valley Yokuts was characterized by small groups or tribes. No overall political unity existed within the several Southern Valley Yokuts tribes. Rather they were split into self-governing local groups or miniature tribes, averaging 350 members. Each had a special name and spoke a different dialect. A strip of territory of approximately 250 square miles belonged to each tribe. The land was owned collectively, and every tribal member utilized its resources. In some localities, tracts that yielded plentiful supplies of seeds were claimed by individual women.

There are three general archaeological periods: The Proto-Archaic, Archaic, and the Post-Archaic. The Proto-Archaic period dates back 11,000 to 8,000 years ago. A deeply buried stratum on the western shore of Buena Vista Lake was radiocarbon-dated at 6,000 B.C. The site was found to contain a meager range of stone artifacts used for the killing and butchering of big game. Thereafter, bands of hunters frequented the area at an early date, exploiting the herds of large game animals. Subsequently, tools uncovered in sites on Buena Vista Lake included seed-grinding implements, which suggested a shift from hunting to a food-collecting economy. The third archaeological period,

the Post Archaic, includes the cultures of the Yokuts and their immediate antecedents. By this period, the native inhabitants had developed a diverse subsistence pattern through greater exploitation of the natural foods from the lakes and marshes. At this time, the people had developed a culture of greater material wealth and lived in larger settlements. It has been estimated that the total Yokut population was about 5,250 for the 15 southern Joaquin Valley tribes. The ancestral Yokuts have possibly been in the valley for the last three-thousand years, and by the eighteenth century were the largest pre-contact population, approximately 40,000 individuals, in California (Hudlow Cultural Resource Associate 2009).

Historical Context

Contact with Europeans began in 1772, when Pedro Fages entered the southern San Joaquin Valley via Tejon Pass with a band of soldiers. Subsequent contact with the Spanish had little effect on the Yokuts' way of life. Unlike other groups, such as the Tongva to the south or the Chumash to the west, the Yokuts were modestly affected by missionization. By the first half of the 19th century, the southern San Joaquin Valley witnessed an influx of Native Americans from other areas seeking to escape mission control. However, the influx of settlers into the San Joaquin Valley after the annexation of California by the United States ended the traditional Yokut way of life. In 1851, the tribes agreed to relinquish their lands, but the United States never ratified the treaty. Subsequently, many of the Yokuts people went to the Tejon and Fresno reservations.

After California's inclusion into the United States, the San Joaquin Valley was utilized for various purposes, which greatly altered the landscape. Cattle ranching was the predominant land use between 1850 and 1867, with grain farming predominate from 1867 until 1900. The arrival of the Southern Pacific Railroad in the 1870s also contributed to economic expansion of the region.

The most important economic factor of the region was the discovery of "black gold" in the Southern San Joaquin Valley. The production of petroleum became a significant factor in the region with the opening of the McKittrick field in 1887 and the Kern River field in 1899. The Kern River field was discovered in a shallow hand dug well on the west bank of the Kern River. The Kern River discovery started an oil boom in the region and numerous wooden oil derricks sprang up overnight on the flood plain just north of Bakersfield. Soon thereafter, the Kern River production accounted for seven out of 10 barrels of oil that came from California. Between 1900 and 1936, the production from this area made California the nation's leading petroleum producer and the second ranking producer in 1958. After the Kern River findings, many discoveries followed including a string of gushers at Coalinga, McKittrick, and Midway-Sunset fields. According to the San Joaquin Geological Society, Kern County has 18 giant oil fields that have produced over 100 million barrels of oil each, including four "super giants" that have each produced over one billion barrels of oil. Among the "super giants" are the Midway-Sunset, the largest oil field in the lower 49 states, and Elk Hills, the former United States Naval Petroleum Reserve.

The 20th Century witnessed the rise of irrigation agriculture in the San Joaquin Valley, along with mechanized farming practices and a diversity of crops. Today, lands once used primarily for oil production and agricultural purposes are rapidly giving way to an expanding suburban community.

4.5.3 Regulatory Setting

Federal

Section 106 of the National Historic Preservation Act (NHPA)

Archaeological resources are protected through the National Historic Preservation Act (NHPA) of 1966, as amended (54 USC 300101 et seq.); and its implementing regulation, Protection of Historic Properties (36 CFR Part 800), the Archaeological and Historic Preservation Act of 1974, and the Archaeological Resources Protection Act of 1979. The NHPA authorized the expansion and maintenance of the National Register of Historic Placed (NRHP), established the position of State Historic Preservation Officer (SHPO), and provided for the designation of State Review Boards, set up a mechanism to certify local governments to carry out the purposes of the NHPA, assisted Native American tribes to preserve their cultural heritage, and created the Advisory Council on Historic Preservation (ACHP). Prior to implementing an "undertaking" (e.g., issuing a federal permit), Section 106 of the NHPA requires federal agencies to consider the effects of the undertaking on historic properties and to afford the ACHP and the SHPO a reasonable opportunity to comment on any undertaking that would adversely affect properties eligible for listing in the National Register of Historic Places (NRHP). As indicated in Section 101(d)(6)(A) of the NHPA, properties of traditional religious and cultural importance to a tribe are eligible for inclusion in the NRHP. Under the NHPA, a resource is considered significant if it meets the NRHP listing criteria at 36 Code of Federal Regulations (CFR) 60.4.

National Register of Historic Places (NRHP)

The NRHP was established by the NHPA of 1966, as "an authoritative guide to be used by federal, state, and local governments, private groups, and citizens to identify the Nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment" (CFR 36 Section 60.2). The NRHP recognizes both historic-period and prehistoric archaeological properties that are significant at the national, State, and local levels.

To be eligible for listing in the NRHP, a resource must be significant in American history, architecture, archaeology, engineering, or culture. A property (districts, sites, buildings, structures, and objects of potential significance) is eligible for the NRHP if it is significant under one or more of the following four established criteria:

- **Criterion A:** It is associated with events that have made a significant contribution to the broad patterns of our history.
- **Criterion B:** It is associated with the lives of persons who are significant in our past.
- **Criterion C:** It embodies the distinctive characteristics of a type, period, or method of construction; represents the work of a master; possesses high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction.
- **Criterion D:** It has yielded, or may be likely to yield, information important in prehistory or history.

Cemeteries, birthplaces, or graves of historic figures; properties owned by religious institutions or used for religious purposes; structures that have been moved from their original locations; reconstructed historic buildings; and properties that are primarily commemorative in nature are not considered eligible for the NRHP unless they satisfy certain conditions. In general, a resource must be at least 50 years of age to be considered for the NRHP, unless it satisfies a standard of exceptional importance.

In addition to meeting the criteria of significance, a property must have integrity. Integrity is defined as "the ability of a property to convey its significance." The NRHP recognizes seven qualities that, in various combinations, define integrity. To retain historic integrity a property must possess several, and usually most, of these seven aspects. Thus, the retention of the specific aspects of integrity is paramount for a property to convey its significance. The seven factors that define integrity are location, design, setting, materials, workmanship, feeling, and association.

Native American Graves Protection and Repatriation Act of 1990

The Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 sets provisions for the intentional removal and inadvertent discovery of human remains and other cultural items from federal and tribal lands. It clarifies the ownership of human remains and sets forth a process for repatriation of human remains and associated funerary objects and sacred religious objects to the Native American groups claiming to be lineal descendants or culturally affiliated with the remains or objects. It requires any federally funded institution housing Native American remains or artifacts to compile an inventory of all cultural items within the museum or with its agency and to provide a summary to any Native American tribe claiming affiliation.

State

California Environmental Quality Act (CEQA)

CEQA is the principal statute governing environmental review of projects occurring in the State and is codified at Public Resources Code (PRC) Section 21000 et seq. CEQA requires lead agencies to determine if a proposed project would have a significant effect on the environment, including significant effects on historical or archaeological resources.

Under CEQA (PRC Section 21084.1), a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment. The CEQA Guidelines (14 California Code of Regulations [CCR] 15064.4) recognizes that historical resources include:

1. A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR;

2. A resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); and

3. Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

The fact that a resource does not meet the three criteria outlined above does not preclude the lead agency from determining that the resource may be a historical resource as defined in PRC Sections 5020.1(j) or 5024.1.

If a lead agency determines that an archaeological site is a historical resource, the provisions of PRC Section 21084.1 of CEQA and 14 CCR 15064.4 of the CEQA Guidelines apply. If a project may cause a substantial adverse change (defined as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired) in the significance of a historical resource, the lead agency must identify potentially feasible measures to mitigate these effects (14 CCR 15064.4(b)(1), 15064.4(b)(4)).

If an archaeological site does not meet the historical resource criteria contained in the CEQA Guidelines, then the site may be treated as a unique archaeological resource in accordance with the provisions of PRC Section 21083. As defined in PRC Section 21083.2 of CEQA, a unique archaeological resource is an archaeological artifact, object, or site for which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information;
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or,
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

If an archaeological site meets the criteria for a unique archaeological resource as defined in PRC Section 21083.2, then the site is to be treated in accordance with the provisions of PRC Section 21083.2, which state that if the lead agency determines that a project would have a significant effect on unique archaeological resources, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place (PRC Section 21083.1(a)). If preservation in place is not feasible, mitigation measures shall be required.

The CEQA Guidelines note that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment (14 CCR 15064.4(c)(4)).

California Register of Historical Resources (CRHR)

Created in 1992 and implemented in 1998, the California Register of Historical Resources (CRHR) as "an authoritative guide in California to be used by State and local agencies, private groups, and citizens to identify the State's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change." Certain properties, including those listed in or formally determined eligible for listing in the NRHP and California Historical Landmarks numbered 770 and higher, are automatically included in the CRHR. Other properties recognized under the California Points of Historical Interest program, identified as significant in historical resources surveys or designated by local landmarks programs, may be nominated for inclusion in the CRHR. A resource, either an individual property or a contributor to a historic district, may be listed in the CRHR if the State Historical Resources Commission (SHRC) determines that it meets one or more of the following criteria, which are modeled on NRHP criteria:

- **Criterion 1:** It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- **Criterion 2:** It is associated with the lives of persons important in our past.
- **Criterion 3:** It embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of an important creative individual; or possesses high artistic values.
- **Criterion 4:** It has yielded, or may be likely to yield, information important in history or prehistory.

Furthermore, under PRC 5024.1, 14 CCR, Section 4852(c), a cultural resource must retain integrity to be considered eligible for the CRHR. Specifically, it must retain sufficient character or appearance to be recognizable as a historical resource and convey reasons of significance. Integrity is evaluated with regard to retention of such factors as location, design, setting, materials, workmanship, feeling, and association. Cultural sites that have been affected by ground-disturbing activities, such as grazing and off-road vehicle use (both of which occur within the project site), often lack integrity because they have been directly damaged or removed from their original location, among other changes.

Typically, a prehistoric archaeological site in California is recommended eligible for listing in the CRHR based on its potential to yield information important in prehistory or history (Criterion 4). Important information includes chronological markers such as projectile point styles or obsidian artifacts that can be subjected to dating methods or undisturbed deposits that retain their stratigraphic integrity. Sites such as these have the ability to address research questions.

California Historical Landmarks (CHLs)

California Historical Landmarks (CHLs) are buildings, structures, sites, or places that have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value and that have been determined to have statewide historical significance by meeting at least one of the criteria listed below. The resource also must be approved for designation by the County Board of Supervisors (or the city or town council in whose jurisdiction it is located); be recommended by the SHRC; and be officially designated by the Director of California State Parks.

To be eligible for designation as a landmark, a resource must meet at least one of the following criteria:

- It is the first, last, only, or most significant of its type in the State or within a large geographic region (Northern, Central, or Southern California);
- It is associated with an individual or group having a profound influence on the history of California; or
- It is a prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in a region of a pioneer architect, designer, or master builder.

California Points of Historical Interest

California Points of Historical Interest are sites, buildings, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. Points of historical interest designated after December 1997 and recommended by the SHRC are also listed in the CRHR. No historic resource may be designated as both a landmark and a point. If a point is later granted status as a landmark, the point designation will be retired. In practice, the point designation program is most often used in localities that do not have a locally enacted cultural heritage or preservation ordinance.

To be eligible for designation as a point of historical interest, a resource must meet at least one of the following criteria:

- It is the first, last, only, or most significant of its type within the local geographic region (city or county);
- It is associated with an individual or group having a profound influence on the history of the local area; or
- It is a prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in the local region of a pioneer architect, designer, or master builder.

Native American Heritage Commission (NAHC)

PRC Section 5097.91 established the Native American Heritage Commission (NAHC), the duties of which include inventorying of places of religious or social significance to Native Americans and identifying known graves and cemeteries of Native Americans on private lands. PRC Section 5097.98 specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner.

California Public Records Act

Sections 6254(r) and 6254.10 of the California Public Records Act were enacted to protect archaeological sites from unauthorized excavation, looting, or vandalism. Section 6254(r) explicitly authorizes public agencies to withhold information from the public relating to "Native American graves, cemeteries, and sacred places maintained by the Native American Heritage Commission." Section 6254.10 specifically exempts from disclosure requests for "records that relate to

archaeological site information and reports, maintained by, or in the possession of the Department of Parks and Recreation, the State Historical Resources Commission, the State Lands Commission, the NAHC, another State agency, or a local agency, including the records that the agency obtains through a consultation process between a Native American tribe and a State or local agency."

California Health and Safety Code, Sections 7050 and 7052

Health and Safety Code, Section 7050.5, declares that, in the event of the discovery of human remains outside of a dedicated cemetery, all ground disturbance must cease and the county coroner must be notified. Section 7052 establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except by relatives.

California Penal Code, Section 622.5

The California Penal Code, Section 622.5, provides misdemeanor penalties for injuring or destroying objects of historic or archaeological interest located on public or private lands, but specifically excludes the landowner.

Public Resources Code, Section 5097.5

PRC Section 5097.5 defines as a misdemeanor the unauthorized disturbance or removal of archaeological, historic, or paleontological resources located on public lands.

Senate Bill (SB) 18

Senate Bill 18 (SB 18), which went into effect January 1, 2005, requires local governments (city and county) to consult with Native American tribes before making certain planning decisions and to provide notice to tribes at certain key points in the planning process. The intent is to "provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places."

The purpose of involving tribes at these early planning stages is to allow consideration of cultural places in the context of broad local land use policy, before individual site-specific, project-level, land use designations are made by a local government. The consultation requirements of SB 18 apply to general plan or specific plan processes proposed on or after March 1, 2005.

According to the Tribal Consultation Guidelines: Supplement to General Plan Guidelines published by the Governor's Office of Planning and Research, the following are the contact and notification responsibilities of local governments:

- Prior to the adoption or any amendment of a general plan or specific plan, a local government must notify the appropriate tribes (on the contact list maintained by the Native American Heritage Commission [NAHC]) of the opportunity to conduct consultations for the purpose of preserving, or mitigating impacts to, cultural places located on land within the local government's jurisdiction that is affected by the proposed plan adoption or amendment. Tribes have 90 days from the date on which they receive notification to request consultation, unless a shorter timeframe has been agreed to by the tribe (Government Code Section 65352.3).

- Prior to the adoption or substantial amendment of a general plan or specific plan, a local government must refer the proposed action to those tribes that are on the NAHC contact list and have traditional lands located within the city or county's jurisdiction. The referral must allow a 45-day comment period (Government Code Section 65352). Notice must be sent regardless of whether prior consultation has taken place. Such notice does not initiate a new consultation process.
- Local government must send a notice of a public hearing, at least ten (10) days prior to the hearing, to tribes who have filed a written request for such notice (Government Code Section 65092).

In accordance with Senate Bill 18 and the California Tribal Consultation guidelines, the appropriate native groups were consulted with respect to the project's potential impacts on Native American places, features, and objects. As of the writing of this report, Staff has not received any comments from consulted tribes in regards to the department's SB 18 request. Staff notes consultation with appropriate Native American groups per Senate Bill 18 requirements has occurred.

Assembly Bill (AB) 52

AB 52, which went into effect on July 1, 2015, requires CEQA lead agencies to engage in early consultation with California Native American Tribes on all projects. AB 52 creates a new CEQA resource: Tribal Cultural Resources, which include sites, features, places, cultural landscapes, sacred place, objects, or archeological resources with cultural value to a California Native American Tribe that is listed or eligible for listing in the national, California or local registers.

AB 52 requires lead agencies to consider whether a project may cause a substantial adverse change in the significance of a Tribal Cultural Resource and to consider a tribe's cultural values when determining the appropriate environmental assessment, impacts and mitigation. AB 52 can draw upon SB 18's guidelines and can be completed in tandem.

AB 52 applies to projects with a Notice of Preparation (NOP) or notice of a Negative Declaration or Mitigated Negative Declaration issued on or after July 1, 2015. The OPR must propose and CNRA must adopt revisions to the CEQA Guidelines by July 1, 2016 in order to: (1) separate the consideration of paleontological resources from Tribal Cultural Resources and update the relevant sample questions and (2) add consideration of Tribal Cultural Resources with relevant sample questions. The NOP for this proposed Project was issued on May 1, 2009; therefore, AB 52 does not apply to this proposed Project.

Local

Metropolitan Bakersfield General Plan

The Metropolitan Bakersfield General Plan Land Use Element includes the following relevant goal and policies related to cultural resources (refer to Table 4.5-1, *Metropolitan Bakersfield General Plan Goals and Policies for Cultural Resources*):

Table 4.5-1. Metropolitan Bakersfield General Plan Goals and Policies for Cultural Resources
Goals and Policies: Land Use Element
Goal #6: Accommodate new development that is sensitive to the natural environment, and accounts for environmental hazards.
Policy #105: Development on land containing known archaeological resources (i.e., high sensitivity areas) shall utilize methodology set forth as described necessary by a qualified archaeologist to locate proposed structures, paving, landscaping and fill dirt in such a way as to preserve these resources undamaged for future generations when it is the recommendation of a qualified archaeologist that said resources be preserved in situ.
Policy #107: The preservation of historical resources shall be promoted and other public agencies or private organizations shall be encouraged to assist in the purchase and/or relocation of sites, buildings, and structures deemed to be of historical significance.

4.5.4 Impacts and Mitigation Measures

This section describes the impact analysis relating to cultural resources for the proposed Project. It describes the methods used to determine the proposed Project's impacts, lists the thresholds used to conclude whether an impact would be significant, and discusses the impacts of the proposed Project based on these thresholds.

Methodology

The potential impacts associated with the proposed Project are evaluated on a qualitative and quantitative basis through a comparison of the anticipated Project effects on cultural resources. The change in the land use is significant if the effects described below occur. The evaluation of proposed Project impacts as based on professional judgment, analysis of the County's cultural resource polices and the significance criteria established by Appendix G of the State CEQA Guidelines, which the County has determined to be appropriate criteria for this Recirculated Draft EIR.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the CEQA Guidelines, to determine if a project could potentially have a significant impact. Such an impact would occur if the proposed project would:

- Cause a substantial adverse change in the significance of a historical resource, as defined in CEQA Guidelines Section 15064.5;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- Disturb any human remains, including those interred outside of formal cemeteries.

Section 21083.2(g) of CEQA further defines "unique archaeological resource" for purposes of determination as to whether a project may have a significant effect on archaeological resources. As used in this section "unique archaeological resource" means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
- Has a special and particular quality such as being the oldest of its type or the best available of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

CEQA does not define a unique paleontological resource but for purposes of this EIR, a paleontological resource or site is considered "unique" where it meets any of the following criteria:

- It is the best example of its kind locally or regionally;
- Illustrates a geologic principle;
- Provides a critical piece of paleobiological data;
- Encompasses any part of a "type locality" of a fossil or rock unit/formation;
- Contains a unique or particularly unusual assemblage of fossils;
- Occupies a unique position stratigraphically; and/or
- Occupies a unique position, proximally, distally or laterally within a rock unit/formation's extent or distribution.

According to CEQA Guidelines, California Code of Regulations (CCR) Title 14, 15064.5, a project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment (CCR Title 14, 15064.5(b)). The guidelines further state that a substantial adverse change in the significance of a resource means the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historic resource would be materially impaired. Actions that would materially impair the significance of a historical resource are any actions that would demolish or adversely alter those physical characteristics of a historical resource that convey its historical significance and qualify it for inclusion in the CRHR or in a local register or survey that meet the requirements of PRC Sections 5020.1(k) and 5024.1(g).

Project Impacts

Impact 4.5-1: The Project Would Cause a Substantial Adverse Change in the Significance of a Historical or Archaeological Resource.

No historical or archaeological resources were identified within the proposed Project boundaries during the archaeological resources studies completed for the project site. A Phase I Cultural Resource Survey was prepared in October of 2008 and revised in May 2009. Included in the original report is information from two records searches and complete site survey of the Project area completed between February and March 2006. A subsequent Field Check conducted on-site, and a subsequent records search was performed between February and March 2016. Neither the site survey, field check, or records searches conducted by Hudlow Cultural Resource Associates identified any historical or archaeological resources (Hudlow Cultural Resources Associates 2017). The records searches of the proposed Project and surrounding area were conducted at the Southern San Joaquin Archaeological Information Center (SSJAIC) at California State University, Bakersfield in February 2006 and March 2016. The SSJAIC is the designated repository of the California Historical Resources Information System (CHRIS) for records concerning archaeological and other cultural resources in Kern County. No cultural resources were identified within one mile of the Project site (Hudlow Cultural Resource Associates 2009 and 2017).

As discussed above, pedestrian field surveys were conducted between February 6 and March 8, 2006 and on March 5, 2016. The pedestrian surveys covered the entire Project site and was conducted by walking north/south and east/west transects across the entire site at 15-meter intervals. No archaeological resources were identified.

However; because the potential remains that buried or otherwise hidden historical resources and/or archaeological deposits or isolate artifacts could be located on the Project site, development of the proposed Project has the potential to disturb or destroy undocumented historical and/or archaeological resources. Implementation of mitigation measures would reduce potential impacts to undocumented historical and/or archaeological resources to less than significant levels.

Mitigation Measures

MM 4.5-1: **Archaeological Resources.** Prior to ground disturbance, or the issuance of grading or building permits, the project proponent shall retain a qualified lead archaeologist to carry out all mitigation measures related to archaeological resources.

1. The approved monitor shall monitor all initial ground-disturbing activities (such as site preparation and initial grading) and excavations on the project site.

2. If archaeological resources are encountered during implementation of the project, ground-disturbing activities will cease within the immediate vicinity of the find. The lead archaeologist shall establish a buffer area around the find and make an evaluation of the find to determine appropriate treatment that may

include the development and implementation of a data recovery investigation or preservation in place.

3. All cultural resources recovered will be documented on California Department of Parks and Recreation Site Forms to be filed with the California Historic Resources Information System (CHRIS). The archaeologist will prepare a final report about the find to be filed with the Applicant/landowner and the CHRIS. The report will include documentation and interpretation of resources recovered. Interpretation will include full evaluation of the eligibility with respect to the National Register of Historic Places and California Register of Historical Resources and CEQA. The developer, in consultation with the Lead Agency and Project Archaeologist, will designate repositories in the event that resources are recovered.

MM 4.5-2: **Paleontological Resources.** During project construction, if a paleontological resource is found, the project contractor shall cease ground-disturbing activities within 50 feet of the find. A qualified paleontologist shall be obtained to evaluate the significance of the resource(s) and recommend appropriate treatment measures. Any fossils encountered and recovered shall be catalogued and donated to a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County. Accompanying notes, maps, and photographs shall also be filed at the repository.

MM 4.5-3: **Historical Resources.** Prior to the issuance of grading or building permits, the project proponent shall ensure the following measures are implemented for resources, which are discretionarily considered historical resources for the purposes of this project:

1. The construction zone shall be narrowed or otherwise altered to avoid resources. All avoidance areas delineated on the site plan shall be coordinated through the lead archeologist and submitted to the Kern County Planning and Natural Resources Department for approval.

2. In coordination with the qualified archaeologist avoidance shall be ensured by the delineation of environmentally sensitive areas. Protective fencing shall not identify the protected area as a cultural resource area in order to discourage unauthorized disturbance or collection of artifacts.

3. Consistent with Mitigation Measure 4.5-1 (above) a qualified archaeological monitor and Native American Monitor, shall monitor all project-related ground disturbing activities within 150 feet of the environmentally sensitive areas, in order to ensure avoidance.

4. If avoidance is demonstrated to be infeasible, the resource shall be collected and curated at an appropriate curatorial facility. Or if avoidance is demonstrated to be infeasible, a detailed Cultural Resources Treatment Plan shall be prepared and implemented by a qualified archaeologist. The Cultural

Resources Treatment Plan shall include a research design and a scope of work for data recovery of the portion(s) to be impacted by the project. Treatment may consist of (but would not be limited to):

a. a sufficient avoidance buffer to protect the resource until data recovery and/or removal is completed;

b. sample excavation;

c. surface artifact collection;

d. site documentation; and,

e. historical research, with the aim to target the recovery of important scientific data contained in the portion of the significant resource to be impacted by the project.

5. The Cultural Resources Treatment Plan shall also include provisions for analysis of data in a regional context, reporting of results within a timely manner, and curation of artifacts and data at an approved facility. The reports documenting the implementation of the Cultural Resources Treatment Plan shall be submitted to and approved by the Kern County Planning and Natural Resources Director and shall also be submitted to the Southern San Joaquin Valley Information Center at California State University, Bakersfield.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.5-2: The Project Would Directly or Indirectly Destroy a Unique Paleontological Resource or Site or Unique Geologic Feature.

According to the KCGP and the Metropolitan Bakersfield General Plan, the areas of paleontological resources within Metropolitan Bakersfield are located at the Maricopa and Citric Brea Tar Pits, the Bean Hills Petrified Forest and Shark Tooth Hill at Round Mountain. The proposed Project is not located in or near any of these areas. Furthermore, according to the Metropolitan Bakersfield General Plan, geological records of the region indicate that the proposed Project site is underlain by recent alluvial deposits to all depths likely to be reached by excavations associated with development. These deposits appear to be too young geologically to contain significant fossil remains. However, the destruction of any unique fossil resource would be a significant impact.

Implementation of mitigation measure would reduce potential proposed Project-related adverse impacts to unknown and unidentified paleontological resources encountered during construction of the proposed Project.

Mitigation Measures

MM 4.5-4: **Found Paleontological Resource.** During implementation of the proposed project, if a paleontological resource is found, the project contractor shall cease ground-disturbing activities within 50 feet of the find.

1. A qualified paleontologist shall evaluate the significance of the resource(s) and recommend appropriate treatment measures.

    a. At each fossil locality, field data forms shall be used to record pertinent geologic data, stratigraphic sections shall be measured, and appropriate sediment samples shall be collected and submitted for analysis.

    b. Any fossils encountered and recovered shall be catalogued and donated to a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County. Accompanying notes, maps, and photographs shall also be filed at the repository.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.5-3: The Project Would Disturb Any Human Remains, Including Those Interred Outside of Formal Cemeteries.

Ground-disturbing activities are anticipated to include excavation and grading at shallow depths during proposed Project construction. Ground-disturbing activities associated with development of the proposed Project could unearth previously undocumented human remains. Therefore, development of the proposed Project has the potential to disturb or destroy undocumented human remains. Implementation of the mitigation measure identified below would reduce potential impacts to less than significant levels.

Mitigation Measures

MM 4.5-5: **Found Human Remains.** If human remains are uncovered during project construction, the project proponent shall immediately halt work, contact the Kern County Coroner to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.4 (e)(1) of the California Environmental Quality Act Guidelines. If the County Coroner determines the remains are Native American, the coroner shall contact the Native American Heritage Commission, in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 (as amended by Assembly Bill 2641). The Native American Heritage Commission shall designate a Most Likely Descendent (MLD) for the remains per Public Resources Code 5097.98. Per Public Resources Code 5097.98, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains

are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendent regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. If the remains are determined to be neither of forensic value to the Coroner, nor of Native American origin, provisions of the California Health and Safety Code (7100 et. seq.) directing identification of the next-of-kin will apply.

The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

Level of Significance after Mitigation

Impacts would be less than significant.

Cumulative Impacts

Potential historical, archaeological, and paleontological impacts are considered and evaluated on a project specific basis. Each incremental development would be required to comply with all applicable State, Federal, and County regulations concerning preservation, salvage, or handling of cultural resources including compliance with required mitigation. In consideration and through implementation of these regulations, potential cumulative impacts upon historical, archaeological, and paleontological resources would not be considered significant.

Mitigation Measures

Implement Mitigation Measures MM 4.5-1 through MM 4.5-5, above.

Level of Significance after Mitigation

Impacts would be less than significant.

This Page Intentionally Left Blank

Section 4.6

Energy

Section 4.6
Energy

4.6.1 Introduction

This section of the Recirculated Draft Environmental Impact Report (RDEIR) evaluates potential energy impacts associated with implementation of the proposed Project. The analysis in this section relies of some information previously discussed and disclosed in Section 4.3, Air Quality and Section 4.8, Greenhouse Gas (GHG) Emissions, which in part analyzes GHGs emitted from use of energy. The analysis in this Section considers whether implementation of the proposed project would result in wasteful, and unnecessary consumption of energy. This analysis considers the electricity, natural gas, and transportation fuel (petroleum) demands of the Project, as well as potential service delivery impacts. This section also includes where appropriate and feasible mitigation measures based on the Energy Assessment – Energy Mitigation for 99 Houghton Industrial Park, prepared by McIntosh Associates, April 23, 2019 and attached as Appendix O. This section of the RDEIR is closely related to Section 4.8, Greenhouse Gases. Where appropriate, and to minimize redundancy, cross references to the applicable analysis contained within the Section 4.8, Greenhouse Gases is provided.

4.6.2 Environmental Setting

The Environmental Setting describes the existing setting of the Project site as it relates to energy conservation.

California's Energy Use and Supply

Californians consumed 290,567 gigawatt hours (GWh) of electricity in 2016, which is the most recent year for which data is available. Of this total, Kern County consumed 18,440 GWh (CEC, 2017a). In 2016, the California electricity mix included natural gas (33.67 percent), coal (4.13 percent), large hydroelectric plants (14.72 percent), nuclear (9.08 percent), oil (0.01 percent), petroleum coke/waste heat (0.14 percent) and unspecified sources of power (9.25 percent). The remaining 29 percent was supplied from renewable resources, such as wind, solar, geothermal, biomass, and small hydroelectric facilities (CEC, 2017b). In 2017, the state consumed 2,110,829 million cubic feet of natural gas.

Energy usage is typically quantified using the British Thermal Unit (BTU). Total energy usage in California was 7,830 trillion BTU in 2016 (the most recent year for which this specific data is available), which equates to an average of 199 million BTU per capita (EIA, 2017b). Of California's total energy usage, the breakdown by sector is 39 percent transportation, 24 percent industrial, 19 percent commercial, and 18 percent residential. Electricity and natural gas in California are generally consumed by stationary users such as residences and commercial and industrial facilities, whereas petroleum consumption is generally accounted for by transportation-related energy use. In 2017, taxable gasoline sales (including aviation gasoline) in California accounted for 15,540,154,774 gallons of gasoline.

Current Energy Provider

Electricity in Kern County is primarily provided by the Pacific Gas and Electric Company (PG&E). The PG&E 2017 power mix was as follows: 20 percent natural gas, 27 percent nuclear, 33 percent renewables, 18 percent large hydroelectric, and 2 percent unspecified power (PG&E, 2019b).

The electricity consumption attributable to Kern County from 2007 to 2017 is shown in Table 4.6-1 (Electricity Consumption in Kern County 2007-2017). As indicated in Table 4.6-1, energy consumption in Kern County remained relatively constant between 2007 and 2017, with no substantial increase.

Table 4.6-1. Electricity Consumption in Kern County 2007-2018

Year	Electricity Consumption (in millions of kilowatt hours)
2007	17,243
2008	15,450
2009	14,443
2010	14,955
2011	15,953
2012	16,675
2013	15,023
2014	14,295
2015	15,170
2016	16,530
2017	18,440
2018	15,805

Source: CEC, Electricity Consumption by County, 2018 and 2019.

PG&E operates one of the largest natural gas distribution networks in the country, including approximately 42,142 miles of natural gas transmission and distribution pipelines (PG&E, 2019a). In all, PG&E delivers gas to approximately 4.3 million customer accounts and approximately 5.4 million electric customer accounts in Northern and Central California, including in Kern County.

The natural gas consumption in Kern County from 2007 to 2017 is shown in Table 4.6-2 (Natural Gas Consumption in Kern County 2007-2017). Similar to energy consumption, natural gas consumption in Kern County remained relatively constant between 2007 and 2017, with no substantial increase.

The CPUC regulates California natural gas rates and natural gas services, including in-state transportation over transmission and distribution pipeline systems, storage, procurement, metering, and billing. Most of the natural gas used in California comes from out-of-state natural gas basins.

California's regulated utilities do not own any natural gas production facilities. All natural gas sold by these utilities must be purchased from suppliers or marketers. The price of natural gas sold by suppliers and marketers was deregulated by the Federal Energy Regulatory Commission in the mid-1980s and is determined by market forces. However, the CPUC decides whether California's utilities

have taken reasonable steps to minimize the cost of natural gas purchased on behalf of its core customers (CPUC 2017).

Table 4.6-2. Natural Gas Consumption in Kern County 2007-2018

Year	Natural Gas Consumption (in millions of therms)
2007	2,636
2008	2,591
2009	2,497
2010	2,327
2011	2,376
2012	2,326
2013	2,697
2014	2,715
2015	2,762
2016	2,520
2017	2,397
2018	2,427

Source: CEC, Natural Gas Consumption by County, 2018 and 2019.

As indicated in the preceding discussion, natural gas is available from a variety of in-state and out-of-state sources, and is provided throughout the state in response to market supply and demand. Complementing available natural gas resources, biogas may soon be available through existing delivery systems, thereby increasing the availability and reliability of resources.

Existing Infrastructure

The Project site is within Pacific Gas and Electric Company (PG&E) service area. Electric power supply and distribution and natural gas for the proposed Project area is furnished by PG&E. Two PG&E substations, Old River Substation and Panama Substation presently serve the proposed Project area. Existing PG&E electrical distribution facilities are located on the south side of DiGiorgio Road, on the northeast side of SR-99, along the north side of Houghton Road, and on the west side of South Union Avenue with a little intrusion into the area from South Union Avenue and Houghton Road. Currently, there is approximately 5,000 linear feet of PG&E Transmission Line 300B located in the northeast corner of the proposed Project. There is also a six-inch diameter gas distribution line located on the east side of the proposed Project.

Four pole-mounted electrical transformer locations were observed on the proposed Project site. PG&E is the owner of the transformers and should be contacted for their removal prior to Project site development.

Transportation Fuels

California's transportation sector uses roughly half of the energy consumed in the state. In 2016, Californians consumed approximately 15.1 billion gallons of gasoline and 3 billion gallons of diesel fuel, which were down from 15 billion gallons of gasoline and 2.8 billion gallons of diesel in 2008 (BOE, 2017a; 2017b).

FUEL CONSUMPTION

Automotive fuel consumption in Kern County from 2007 to 2019 is shown in Table 4.6-3 (Automotive Fuel Consumption in Kern County 2007-2019) (projections for the year 2019 are also shown). As shown in Table 4.6-3, on-road automotive fuel consumption in Kern County has declined steadily from 2007, although 2014 through 2017 were increased. Heavy-duty vehicle fuel consumption has been increasing since 2012.

Table 4.6-3. Automotive Fuel Consumption in Kern County 2007-2019

Year	On-Road Automotive Fuel Consumption (Gallons)	Heavy-Duty Vehicle/Diesel Fuel Consumption (Gallons)
2007	482,802,885	305,057,882
2008	467,282,258	275,614,151
2009	457,753,568	254,307,817
2010	459,769,506	255,617,083
2011	453,029,571	256,460,303
2012	452,705,414	256,810,320
2013	454,062,915	275,920,754
2014	458,973,481	281,393,333
2015	469,620,303	284,648,995
2016	476,390,995	301,260,345
2017	463,754,740	304,118,169
2018	454,207,143	308,064,466
2019 (projected)	445,151,657	311,403,744

Source: California Air Resources Board, EMFAC2017.

4.6.3 Regulatory Setting

Federal, state, and local agencies regulate energy use and consumption through various means and programs. On the federal level, the U.S. Department of Transportation, the U.S. Department of Energy, and the U.S. Environmental Protection Agency are three federal agencies with substantial influence over energy policies and programs. On the state level, the CPUC and CEC are two agencies with authority over different aspects of energy. Relevant federal, state, and local energy-related regulations are summarized below.

Federal

National Energy Policy and Conservation Act

The National Energy Conservation Policy Act serves as the underlying authority for Federal energy management goals and requirements. Signed into law in 1975, it has been regularly updated and amended by subsequent laws and regulations. Pursuant to the act, the National Highway Traffic Safety Administration is responsible for establishing additional vehicle standards. In 2012, new fuel economy standards for passenger cars and light trucks were approved for model years 2017 through 2021 (77 FR 62624–63200). Fuel economy is determined based on each manufacturer's average fuel economy for the fleet of vehicles available for sale in the United States.

Energy Policy Act of 2005

The Energy Policy Act of 2005 sets equipment energy efficiency standards and seeks to reduce reliance on non-renewable energy resources and provide incentives to reduce current demand on these resources. For example, under the Act, consumers and businesses can attain Federal tax credits for purchasing fuel-efficient appliances and products, including hybrid vehicles; constructing energy-efficient buildings; and improving the energy efficiency of commercial buildings. Additionally, tax credits are available for the installation of qualified fuel cells, stationary micro-turbine power plants, and solar power equipment.

Energy and Independence Security Act of 2007

The Energy and Independence Security Act of 2007 sets Federal energy management requirements in several areas, including energy reduction goals for Federal buildings, facility management and benchmarking, performance and standards for new buildings and major renovations, high-performance buildings, energy savings performance contracts, metering, energy-efficient product procurement, and reduction in petroleum use and increase in alternative fuel use. This act also amends portions of the National Energy Policy and Conservation Act. In addition to setting increased Corporate Average Fuel Economy standards for motor vehicles, the EISA includes the following other provisions related to energy efficiency:

- Renewable Fuel Standard (RFS) (Section 202)
- Appliance and Lighting Efficiency Standards (Sections 301–325)
- Building Energy Efficiency (Sections 411–441)

State

Assembly Bill (AB) 32 and Senate Bill 32

California's major initiative for reducing GHG emissions is outlined in Assembly Bill 32 (AB 32), the "California Global Warming Solutions Act of 2006." AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 (essentially a 15 percent reduction below 2005 emission levels; the same requirement as under S-3-05), and requires CARB to prepare a Scoping

Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions. Reductions in overall energy consumption have been implemented to reduce emissions. See Section 4.8, Greenhouse Gas Emissions, for a further discussion of AB 32.

In September 2016, the Governor signed into legislation SB 32, which builds on AB 32 and requires the state to cut GHG emissions to 40 percent below 1990 levels by 2030. With SB 32, the Legislature also passed AB 197, which provides additional direction for updating the Scoping Plan to meet the 2030 GHG reduction target codified in SB 32. CARB has published a draft update to the Scoping Plan and has received public comments on this draft but has not released the final version.

Additional energy efficiency measures beyond the current regulations are needed to meet these goals as well as the AB 32 greenhouse gas (GHG) reduction goal of reducing statewide GHG emissions to 1990 levels by 2020 and the SB 32 goal of 40 percent below 1990 levels by 2030 (see Section 4.8, Greenhouse Gas Emissions, for a discussion of AB 32 and SB 32). Part of the effort in meeting California's long-term reduction goals include reducing petroleum use in cars and trucks by 50 percent, increasing from one-third to more than one-half of California's electricity derived from renewable sources, doubling the efficiency savings achieved at existing buildings and making heating fuels cleaner; reducing the release of methane, black carbon, and other short-lived climate pollutants, and managing farm and rangelands, forests, and wetlands so they can store carbon.

2008 California Energy Action Plan Update

The 2008 Energy Action Plan Update provides a status update to the 2005 Energy Action Plan II, which is the State's principal energy planning and policy document (CPUC and CEC, 2008). The plan continues the goals of the original Energy Action Plan, describes a coordinated implementation plan for State energy policies, and identifies specific action areas to ensure that California's energy is adequate, affordable, technologically advanced, and environmentally sound. First-priority actions to address California's increasing energy demands are energy efficiency, demand response (i.e., reduction of customer energy usage during peak periods in order to address system reliability and support the best use of energy infrastructure), and the use of renewable sources of power. If these actions are unable to satisfy the increasing energy and capacity needs, the plan supports clean and efficient fossil-fired generation.

California Buildings Standards

CALIFORNIA GREEN BUILDING STANDARDS CODE

The California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the CALGreen Code, is a statewide mandatory construction code that was developed and adopted by the California Building Standards Commission and the California Department of Housing and Community Development. CALGreen standards require new residential and commercial buildings to comply with mandatory measures under five topical areas: planning and design; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; and environmental quality. CALGreen also provides voluntary measures (CALGreen Tier 1 and Tier 2) that local governments may adopt which encourage or require additional measures in

the five green building topics. The most recent update to the CALGreen Code was adopted in 2016 and went into effect January 1, 2017.

Among the key mandatory provisions are requirements that new buildings:

- Reduce indoor potable water use by at least 20 percent below current standards;
- Recycle or salvage at least 50 percent of construction waste;
- Utilize low VOC-emitting finish materials and flooring systems;
- Install separate water meters tracking non-residential buildings' indoor and outdoor water use;
- Utilize moisture-sensing irrigation systems for larger landscape areas;
- Receive mandatory inspections by local officials of building energy systems, such as heating, ventilation, and air conditioning (HVAC) and mechanical equipment, to verify performance in accordance with specifications in non-residential buildings exceeding 10,000 square feet; and
- Earmark parking for fuel-efficient and carpool vehicles.

BUILDING ENERGY EFFICIENCY STANDARDS

The Energy Efficiency Standards for Residential and Nonresidential Buildings, as specified in Title 24, Part 6, of the California Code of Regulations, were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The 2016 Title 24 standards are the current applicable building energy efficiency standards, and became effective on January 1, 2017. The 2019 Building Energy Efficiency Standards will continue to improve upon the 2016 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The 2019 Building Energy Efficiency Standards were adopted on May 9, 2018 and take effect on January 1, 2020. Under the 2019 standards, homes will use about 53 percent less energy and nonresidential buildings will use about 30 percent less energy than buildings under the 2016 Title 24 standards.

2006 APPLIANCE EFFICIENCY REGULATIONS

The California Energy Commission adopted Appliance Efficiency Regulations (Title 20, CCR Sections 1601 through 1608) on October 11, 2006. The regulations were approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both Federally regulated appliances and non-Federally regulated appliances. While these regulations are now often viewed as "business-as-usual," they exceed the standards imposed by all other states and they reduce GHG emissions by reducing energy demand.

SENATE BILL 1078 AND 107; EXECUTIVE ORDER S-14-08, S-21-09, AND SB 2X

SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) accelerated the due date of the 20 percent mandate to 2010 instead of 2017. These mandates apply directly to investor-owned

utilities. In November 2008, then-Governor Schwarzenegger signed Executive Order S-14-08, which expands the state's Renewable Portfolio Standard to 33 percent renewable power by 2020. In September 2009, then-Governor Schwarzenegger continued California's commitment to the Renewable Portfolio Standard by signing Executive Order S-21-09, which directs the CARB under its AB 32 authority to enact regulations to help the state meet its Renewable Portfolio Standard goal of 33 percent renewable energy by 2020. CARB approved the Renewable Electricity Standard on September 23, 2010 by Resolution 10-23. SBX1-2 (2011) codified the 33 percent by 2020 goal.

EXECUTIVE ORDER B-30-15; SENATE BILL 100 AND 350

In April 2015, the Governor issued Executive Order B-30-15, which established a GHG reduction target of 40 percent below 1990 levels by 2030. SB 350 (Chapter 547, Statutes of 2015) advanced these goals through two measures. First, the law increases the renewable power goal from 33 percent renewables by 2020 to 50 percent by 2030. Second, the law requires the CEC to establish annual targets to double energy efficiency in buildings by 2030. The law also requires the California Public Utilities Commission (CPUC) to direct electric utilities to establish annual efficiency targets and implement demand-reduction measures to achieve this goal. In 2018, SB 100 revised the goal of the program to achieve the 50 percent renewable resources target by December 31, 2026, and to achieve a 60 percent target by December 31, 2030. SB 100 also established a further goal to have an electric grid that is entirely powered by clean energy by 2045.

STATE VEHICLE STANDARDS (AB 1493)

AB 1493 (Pavley Regulations and Fuel Efficiency Standards), enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation waiver. The EPA subsequently granted the requested waiver in 2009, which was upheld by the by the U.S. District Court for the District of Columbia in 2011. The regulations establish one set of emission standards for model years 2009–2016 and a second set of emissions standards for model years 2017 to 2025. By 2025, when all rules will be fully implemented, new automobiles will emit 34 percent fewer CO2e emissions and 75 percent fewer smog-forming emissions.

SUSTAINABLE COMMUNITIES STRATEGY

The Sustainable Communities and Climate Protection Act of 2008, or SB 375, coordinates land use planning, regional transportation plans, and funding priorities to help California meet its GHG emissions reduction mandates. As codified in California Government Code Section 65080, SB 375 requires metropolitan planning organizations (e.g., ABAG) to include a Sustainable Communities Strategy in their regional transportation plan. The main focus of the Sustainable Communities Strategy is to plan for growth in a fashion that will ultimately reduce GHG emissions, but the strategy is also part of a bigger effort to address other development issues, including transit and VMT, which influence the consumption of petroleum-based fuels.

RENEWABLE PORTFOLIO STANDARD

In 2002, California established its Renewable Portfolio Standard program with the goal of increasing the annual percentage of renewable energy in the state's electricity mix by the equivalent of at least 1 percent of sales, with an aggregate total of 20 percent by 2017. The California Public Utilities Commission subsequently accelerated that goal to 2010 for retail sellers of electricity (Public Utilities Code Section 399.15(b)(1)). Then-Governor Schwarzenegger signed Executive Order S-14-08 in

2008, increasing the target to 33 percent renewable energy by 2020. In September 2009, then-Governor Schwarzenegger continued California's commitment to the Renewable Portfolio Standard by signing Executive Order S-21-09, which directs the California Air Resources Board under its AB 32 authority to enact regulations to help the State meet its Renewable Portfolio Standard goal of 33 percent renewable energy by 2020. In September 2010, the California Air Resources Board adopted its Renewable Electricity Standard regulations, which require all of the state's load-serving entities to meet this target. In October 2015, then-Governor Jerry Brown signed into legislation Senate Bill 350, which requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from eligible renewable energy resources by 2030. Signed in 2018, SB 100 revised the goal of the program to achieve the 50 percent renewable resources target by December 31, 2026, and to achieve a 60 percent target by December 31, 2030. SB 100 also established a further goal to have an electric grid that is entirely powered by clean energy by 2045.

Local

Kern County General Plan Energy Element

The Kern County General Plan Energy Element primarily discusses the County's wealth of existing and potential energy resources which include oil, natural gas, and renewable electricity producer. The Energy Element has three objectives: resource management and protection; establishing development standards to provide for the protection of the environment, public health, and safety; and promoting and facilitating energy development. However, the policies listed in the Energy Element are primarily directed at the County and are municipal policies rather than project specific.

Metropolitan Bakersfield General Plan

The Metropolitan Bakersfield General Plan cites policies to provide decision-makers with long-range guidance affecting the future character of the Metropolitan Bakersfield planning area. The elements within the Metropolitan Bakersfield General Plan provide goals, policies, and implementation measures in order to encourage the conservation of energy by reducing impacts of project on air quality. Applicable goals relative to the proposed Project site within these elements are listed in Table 4.7-4, *Metropolitan Bakersfield General Plan Goals and Policies for Air Quality*, below.

Table 4.6-4. Metropolitan Bakersfield General Plan Goals and Policies for Air Quality

Goals and Policies: Air Quality
Conservation/Air Quality Policy #12: "Encourage the use of mass transit, carpooling and other transportation options to reduce vehicle miles traveled."
Conservation/Air Quality Policy #13: "Consider establishing priority parking areas for carpoolers in projects with relatively large numbers of employees to reduce vehicle miles traveled and improve air quality."
Conservation/Air Quality Policy #14: "Establish park and ride facilities to encourage carpooling and the use of mass transit."
Conservation/Air Quality Policy #16: "Cooperate with Golden Empire Transit [GET] and Kern Regional Transit to provide a comprehensive mass transit system for Bakersfield; require large-scale new development to provide related improvements, such as bus stop shelters and turnouts."

Table 4.6-4. Metropolitan Bakersfield General Plan Goals and Policies for Air Quality
Goals and Policies: Air Quality
Conservation/Air Quality Policy #18: "Encourage walking for short distance trips through the creation of pedestrian friendly sidewalks and street crossings."
Conservation/Air Quality Policy #19: "Promote a pattern of land uses which locates residential uses in close proximity to employment and commercial services to minimize vehicular travel."

4.6.4 Impacts and Mitigation Measures

This section describes energy consumption on three sources of energy that are relevant to the proposed project: electricity, natural gas, and transportation fuel for vehicle trips associated with new development, as well as fuel necessary for project construction.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the CEQA Guidelines, to determine if a project could potentially have a significant impact. Appendix F does not prescribe a threshold for the determination of significance, but focuses on reducing and minimizing inefficient, wasteful, and unnecessary consumption of energy. Such an impact would occur if the proposed project would:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
- Conflict with or obstruct state or local plan for renewable energy or energy efficiency.

The analysis below generally follows Appendix F of the State CEQA Guidelines, which states that the goal of conserving energy includes decreasing overall per capita energy consumption; decreasing reliance on fossil fuels such as coal, natural gas, and oil; and increasing reliance on renewable energy.

Impact Assessment Methodology

In determining whether implementation of the Project would result in the inefficient, wasteful or unnecessary consumption of fuel or energy, this analysis considers the recommendations of Appendix F (as described above), which states that environmental impact analyses of energy conservation may include:

1. The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project's life cycle including construction, operation, maintenance and/or removal. If appropriate, the energy intensiveness of materials maybe discussed.
2. The effects of the project on local and regional energy supplies and on requirements for additional capacity.
3. The degree to which the project complies with existing energy standards.

4. The effects of the project on energy resources.

5. The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

This section analyzes energy consumption on three sources of energy that are relevant to the proposed Project: electricity, natural gas, and transportation fuel for vehicle trips associated with new development, as well as the fuel necessary for project construction.

- The analysis of project electricity/natural gas usage is based on California Emissions Estimator Model (CalEEMod) modeling, which quantifies energy use for occupancy. The results of the CalEEMod modeling are included in Appendix "C" (Air Quality and GHG Data) of this Recirculated Draft EIR.

- Modeling related to transportation fuel consumption was based primarily on the default settings in the computer program for Kern County. The amount of operational fuel use was estimated using CalEEMod outputs for the proposed Project and the California Air Resources Board's Emissions Factor 2017 (EMFAC2017) computer program for typical daily fuel usage in Kern County. Construction fuel consumption was calculated based on CalEEMod emissions outputs and conversion ratios from the Climate Registry. The results of EMFAC2017 modeling and construction fuel estimates are included in Appendix "C", Air Quality and GHG Data.

Project Impacts

Impact 4.6-1: The Project Would Result in Potentially Significant Environmental Impact Due to Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources, During Project Construction or Operation.

Construction (Short-Term)

The energy consumption associated with buildout of the proposed Project includes electricity usage, fuel consumption for construction diesel and gasoline powered equipment, and fuel consumption from on-road worker commute and vendor trips. Temporary electric power for as-necessary lighting and electronic equipment (such as computers inside temporary construction trailers, and heating, ventilation, and air conditioning) would be powered by a generator or temporary electricity connection. The amount of electricity used during construction would be minimal; typical demand would stem from the use of electrically powered hand tools and several construction trailers by managerial staff during the hours of construction activities. The majority of the energy used during construction would be from petroleum. The electricity used for construction activities would be temporary and minimal. The methodology for each category is discussed below. This analysis relies in part on the construction equipment list and operational characteristics, as stated in Chapter 4.3 Air Quality) and Chapter 4.8 Greenhouse Gas Emissions, as well as, Appendix C - Air Quality Impact Analysis of this RDEIR. Quantifications of energy consumption are provided for the proposed Project, followed by an analysis of impacts based on those quantifications.

ELECTRICITY USAGE

Water Consumption for Construction Dust Control

Electricity use associated with water use for construction dust control is calculated based on total water use and the energy intensity for supply, distribution, and treatment of water.

The total number of gallons of water usage is calculated based on acreage disturbed during grading and site preparation, as well as the daily water consumption rate per acre disturbed.

- The total acres disturbed are calculated using the methodology described in Chapter 4.2 of Appendix A of the CalEEMod® User's Guide (Grading Equipment Passes).
- The water application rate of 3,020 gallons per acre per day is from Air and Waste Management Association's Air Pollution Engineering Manual.

The energy intensity value is based on the CalEEMod® default energy intensity per gallon of water for Kern County.

As summarized in Table 4.6-5 (Project Energy Consumption During Construction), the total electricity consumption associated with water consumption for construction dust control would be approximately 579,342 kWh (579 megawatt hours [MWh]) over the duration of buildout of the proposed Project.

PETROLEUM FUEL USAGE

On-Road Diesel Construction Trips

The diesel usage associated with on-road construction mobile trips is calculated based on vehicle miles traveled (VMT) from vehicle trips (i.e., worker, vendor, and hauling), the CalEEMod default diesel fleet percentage, and vehicle fuel efficiency in miles per gallon. Fuel consumption is based on VMT for the entire construction period. Construction fuel consumption was calculated based on CalEEMod emissions outputs and conversion ratios from the Climate Registry. The CalEEMod emissions are specific to construction year and include fleet adjustments based on current regulations and equipment turnover.

As summarized in *Table 4.6-5, Project Energy Consumption During Construction*, the total diesel consumption associated with on-road construction trips would be approximately 108,473 gallons over the duration of buildout of the proposed Project. The exact timing and duration of construction phases are currently unknown and would depend on various market factors. As discussed in the Project Description, the Project is planned to be developed in phases over a twenty-five-year period. The modeled construction timing and phasing is conservative, but represents a realistic worst-case scenario. As such, the analysis accounts for minor modifications as project plans evolve from conceptual planning to final mapping. If construction phases start at a later time, or phases have a longer duration, construction fuel consumption would be lower on an annual basis because the

intensity of construction activities would be lower and spread out over a longer period of time. Construction equipment in future years would also be required to comply with more stringent fuel efficiency standards. Project construction fuel demand would have a lower effect on regional energy supplies.

Off-Road Diesel Construction Equipment

Table 4.6-5. Project Energy Consumption During Construction

Source	Project Construction Usage	Kern County Annual Energy Consumption	Percentage Increase Countywide
Electricity Use	**Megawatt Hours (MWh)**		
Water Consumption [a]	579	18,439,672	0.0031%
Construction Electricity Total	**579**		**0.0031%**
Diesel Use	**Gallons**		
On-Road Construction Trips [b]	108,473	311,043,744	0.0349%
Off-Road Construction Equipment [c]	214,975		0.0691%
Construction Diesel Total	**323,448**		**0.1040%**
Gasoline	**Gallons**		
On-Road Construction Trips [b]	105,562	445,151,657	0.0237%
Construction Gasoline Total	**105,562**		**0.0237%**

Notes:
a. Construction water use estimated based on acres disturbed per day per construction sequencing and estimated water use per acre (AWMA 1992).
b. On-road mobile source fuel use based on vehicle miles traveled (VMT) from CalEEMod and fleet-average fuel consumption in gallons per mile from EMFAC2017 in Placer County. Electricity demand based on VMT and calculated average electric vehicle fuel economy for 2015 models (in kWh per mile) from the DOE Fuel Economy Guide.
c. Construction fuel consumption was calculated based on CalEEMod emissions outputs and conversion ratios from the Climate Registry.
Abbreviations:
CalEEMod: California Emission Estimation Model; EMFAC: Emission Factor Model 2017; kWh: kilowatt-hour; MWh: megawatt-hour.
Sources: AWMA, 1992; DOE 2016; USEPA 1996.

The construction diesel usage associated with the off-road construction equipment is calculated based on CalEEMod emissions outputs and conversion ratios from the Climate Registry. In addition, Mitigation Measure 4.3-1 (Air Quality) would require the Project to minimize personnel and public exposure to potential Valley Fever-containing dust both on- and off-site. As summarized in Table 4.6-5, the total diesel consumption associated with off-road construction equipment is approximately 214,975 gallons for duration of buildout the proposed Project.

GASOLINE USAGE

On-Road Gasoline Construction Trips

The gasoline usage associated with on-road construction mobile trips is calculated based on VMT from vehicle trips (i.e., worker, vendor, and hauling), the CalEEMod default gasoline fleet percentage, and vehicle fuel efficiency in miles per gallon using the same methodology as the construction on-road trip diesel usage calculation discussed above. As summarized in Table 4.6-5, the total gasoline consumption associated with on-road construction trips would be approximately 105,562 gallons over the duration of buildout the proposed Project.

CONSTRUCTION ANALYSIS

Construction activities for the proposed Project are needed to grade and modify the approximate 314-acre site for the construction of 22 acres of GC (General Commercial), 108 acres of LI (Light Industrial), 159 acres SI (Service Industrial), and 25 acres of HC (Highway Commercial). Construction would occur over several phases over a twenty-five-year period and energy use is shown in Table 4.6-5 Project Energy Consumption During Construction. Although the specific layout for the proposed uses are unknown, the uses would be in the amount listed above and the approximate construction period used for analysis purposes represents the most conservative construction phasing impacts). Construction would include the use of fuels and electricity to operate equipment and machinery including graders, scrapers, and other earthmoving equipment, employee vehicles needed for transportation to and from the project site, operation of hand tools, and other common equipment used on construction sites.

Large-scale construction activities can consume a substantial amount of electricity, but the exact level of consumption will vary on a case by case basis depending on the nature and extent of the activities. While smaller scale projects will typically incur fewer construction related energy costs, due to the due to increasing transportation costs and fuel prices and the overall increase in expense of energy needed to run machinery and perform necessary tasks, these construction activities strive to be energy efficient, in part, because contractors and owners have a strong financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy. There is growing recognition among developers and retailers that sustainable construction is not prohibitively expensive, and that there is a significant cost-savings potential in green building practices and materials. Substantial reductions in energy inputs for construction materials can be achieved by selecting building materials composed of recycled materials that require substantially less energy to produce than non-recycled materials. The incremental increase in the use of energy from the proposed Project for construction materials such as asphalt, steel, concrete, pipes, and manufactured or processed materials (e.g., lumber and gas) would not substantially increase demand for energy compared to overall local and regional demand for construction materials. It is reasonable to assume that production of building materials such as concrete, steel, etc., would employ all available and reasonable energy conservation practices in the interest in minimizing the cost of doing business.

As indicated in the environmental setting above, Kern County consumed 18,439,672 MWh of electricity in 2017 (CEC, 2017a). The proposed Project is estimated to consume 579 MWh of electricity through water consumption which would represent approximately 0.0031 percent of the County's electricity use. This consumption would cease upon completion of construction activities. Therefore, it is anticipated that construction electricity consumption associated with the proposed Project would not be inefficient, wasteful, or unnecessary.

Additionally, Kern County consumed approximately 445,151,657 gallons of gasoline and 311,043,744 gallons of diesel fuel over the same time-period. Kern County occupies approximately 8,163 square miles and has a population of 916,464 people. The proposed Project would require the consumption of approximately 579 MWh of electricity, 323,448 gallons of diesel, and 105,562 gallons of gasoline. As described above, the proposed Project's fuel from the entire construction period would increase fuel use in the Kern County by approximately 0.10 percent for diesel and 0.02 percent for gasoline. Based on the total Project's relatively low construction fuel use proportional to

annual State and County use, the Project would not substantially affect existing energy fuel supplies or resources. As noted above, fuel consumption is based on a conservative construction phasing and conservative estimates for annual construction fuel consumption. Longer phases would result in lower construction intensity and a lower annual fuel consumption, resulting in lower annual demand on energy supplies. Additionally, use of construction fuel would cease once the Project is fully developed. Additionally, it can be expected that over the 25-year build-out scenario that equipment and machinery will become more fuel and energy efficient thereby reducing energy consumption over the long term. As such, Project construction would have a nominal effect on the local and regional energy supplies.

Furthermore, there are no unusual project characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in the region or state. In addition, some incidental energy conservation would occur during construction through compliance with State requirements that equipment not in use for more than five minutes be turned off. Project construction equipment would also be required to comply with the latest EPA and CARB engine emissions standards. These engines use highly efficient combustion engines to minimize unnecessary fuel consumption. Contractors would be required to minimize air quality emissions of construction activities with MM 4.3-1 (Air Quality).

Therefore, it is anticipated that construction fuel consumption associated with the proposed Project would not be inefficient, wasteful, or unnecessary. The proposed Project would not substantially affect existing energy or fuel supplies, or resources and new capacity would not be required. With the listed mitigation, impacts would be less than significant in this regard.

Operations (Long-Term)

The energy consumption associated with operation of uses pursuant to the proposed Project would include building electricity, water, and natural gas usage, as well as fuel usage from on-road vehicles. The methodology for each category is discussed below. Note that this energy resources analysis is consistent with the analysis presented in Chapter 4.3 Air Quality and Chapter 4.8 Greenhouse Gas Emissions. Quantifications of operational energy consumption are provided for the proposed Project.

PETROLEUM FUEL

The gasoline and diesel usage associated with on-road vehicular trips is calculated based on total VMT from the CalEEMod analyses, as well as the average fuel efficiency from EMFAC2017 model. The EMFAC2017 fuel efficiency data incorporates the Pavley Clean Car Standards and the Advanced Clean Cars Program. As summarized in Table 4.6-6 (Project Annual Energy Consumption During Operations), the total gasoline and diesel consumption associated with on-road trips would be approximately 2,423,099 gallons per year and 2,430,168 gallons per year, respectively.

ELECTRICITY USAGE

The electricity usage associated with operation of the proposed Project is based on CalEEMod defaults for the proposed uses, including, for the 314-acre site for the construction of 22 acres of GC (General Commercial), 108 acres of LI (Light Industrial), 159 acres SI (Service Industrial), and 25

acres of HC (Highway Commercial. As summarized in Table 4.6-6, Project Annual Energy Consumption During Operations, the buildings would increase 26,930 MWh per year.

The electricity usage associated with operational water consumption is estimated based on the default annual water consumption and the energy intensity factor in CalEEMod for Kern County. Project area water use is based on water demand per square foot factors in CalEEMod. The Project would use approximately 594 million gallons annually (571 million gallons for indoor uses and 23 million gallons for outdoor uses) of water annually which would require 3.2 GWh per year for conveyance and treatment. It should be noted that the CalEEMod water consumption estimates are more conservative than the Project water consumption calculated in the Water Supply Assessment (i.e., the Water Supply Assessment noted the project would use 544.5 acre feet per year, which is equivalent to 177 million gallons per year; refer to Section 4.16). Additionally, the proposed Project would require approximately 187.5 acre feet per year less water than the existing uses. Energy usage based on CalEEMod water consumption estimates were used to provide a conservative analysis.

NATURAL GAS USAGE

The methodology used to calculate the natural gas usage associated with the building envelopes constructed pursuant to the proposed Project is based on CalEEMod default usage rates. As summarized in Table 4.6-6 Project Annual Energy Consumption During Operations, the building area would use 55,841,900 thousand British Thermal Units (kBTU) (558,419 therms) of natural gas per year.

Table 4.6-6. Project Annual Energy Consumption During Operations

Source	Project Operational Usage	Kern County Annual Energy Consumption	Percentage Increase Countywide
Electricity Use		**Megawatt Hour/Year (MWh/year)**	
Building [a]	26,930	18,439,672	0.1460%
Water [a]	3,169		0.0172%
Total Electricity	**30,099**		0.1632%
Natural Gas Use		**Therms/year**	
Building [a]	558,419	2,397,138,219	0.0233%
Diesel Use		**Gallons/Year**	
Mobile [b]	2,430,168	311,403,744	0.7804%
Gasoline Use		**Gallons/Year**	
Mobile [b]	2,423,099	445,151,675	0.544

Notes:
a. The electricity, natural gas, and water usage are based on project-specific estimates and CalEEMod defaults.
b. Calculated based on the mobile source fuel use based on vehicle miles traveled (VMT) and fleet-average fuel consumption (in gallons per mile) from EMFAC2017. For electric vehicles, model year 2015 electric vehicle fuel economy is used from the DOE Fuel Economy Guide.

Abbreviations: CalEEMod: California Emission Estimation Model; EMFAC2017: California Air Resources Board Emission Factor Model; kBTU: thousand British Thermal Units; kWh: kilowatt-hour; MWh: Megawatt-hour.

ANALYSIS

Operation of uses implemented pursuant to the proposed Project would consume approximately 30,099 MWh of electricity and 558,419 therms of natural gas annually. Project operations would consume approximately 2,430,168 gallons of diesel, and 2,423,099 gallons of gasoline.

Kern County consumed 18,439,672 MWh of electricity in 2017 (CEC, 2017a). The proposed Project's operational electricity consumption would represent 0.16 percent of the energy consumption in Kern County. Regarding natural gas, Kern County consumed 2,397 million therms (or 239,714 million kBTU) of natural gas in 2017. Therefore, the proposed Project's operational natural gas consumption would represent 0.02 percent of the natural gas consumption in the County.

In 2018, Californians consumed approximately 15,589,042,965 gallons of gasoline and approximately 3,107,823,655 gallons of diesel fuel. Kern County annual gasoline fuel use in 2018 was 445,151,675 gallons and diesel fuel use was 311,403,744 gallons. Expected proposed Project operational use of gasoline and diesel would represent 0.54 percent of current gasoline use and 0.78 percent of current diesel use in the County.

None of the project energy uses exceed one percent of Kern County use. Therefore, proposed Project operations would not substantially affect existing energy or fuel supplies or resources. The Project would comply with applicable energy standards and new capacity would not be required. Impacts would be less than significant in this regard.

ENERGY EFFICIENCY MEASURES

Mitigation Measure 4.6-1 requires the proposed Project to be designed to include various design features that would improve energy efficiency but at this time, the exact level of design and implementation is not yet know. This is due in part because the final designs of the proposed Project have not been developed and over the expected twenty-five year and it is not known what technology will be available. Over the life of project construction, the proposed Project would promote and encourage green building practices to and to encourage innovative and sustainable design and construction techniques that reduce energy consumption. Therefore, benefits associated with these have not been quantified, which provides a conservative (or "worst case") estimate of impacts

As discussed above, California's Energy Efficiency Standards for Non-Residential Buildings create uniform building codes to reduce California's energy consumption, and provide energy efficiency standards for residential and non-residential buildings. These standards are incorporated within the California Building Code and are expected to substantially reduce electricity and natural gas use. For example, requirements for energy efficient lighting, heating and cooling systems, and green building materials are expected to save additional electricity and natural gas. These savings are cumulative, doubling as years go by. The proposed Project includes MM-4.6-1, which includes energy conservation and design features such as encouraging solar panel installation, including bicycle friendly features, installing LED lights, and including electric vehicle (EV) charging stations.

Title 24 measures would be used to minimize overall energy consumption. Renewable energy generation would be required and shortfalls in renewable energy generation can be offset with excess renewable energy generation from other buildings. Regarding water energy conservation, the proposed Project would incorporate water-conserving landscaping on the site and reduce lawn and turf areas. Water-efficient irrigation controls would also be used in landscape areas as well as recycled water for irrigation. Buildings would incorporate water-efficient fixtures and appliances, to comply with Title 24.

Furthermore, the electricity provider, PG&E, is subject to California's Renewables Portfolio Standard (RPS). The RPS requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 33 percent of total procurement by 2020 and to 50 percent of total procurement by 2030. SB 100 revised the goal of the program to achieve the 50 percent renewable resources target by December 31, 2026, and to achieve a 60 percent target by December 31, 2030. SB 100 also established a further goal to have an electric grid that is entirely powered by clean energy by 2045. Renewable energy is generally defined as energy that comes from resources which are naturally replenished within a human timescale such as sunlight, wind, tides, waves, and geothermal heat.

Mitigation Measures

MM 4.6-1: The proposed Project, shall to the extent feasible and to the satisfaction of the Kern County Planning Department incorporate the following energy conservation and design features to reduce the level of energy consumption of the proposed Project. The following list is non-inclusive of all potential mitigation that may be included and may be added to at the discretion of Kern County as new technologies become available and feasible to be incorporated:

- Solar photovoltaics (PV) mounted on proposed structure's roofs to provide a portion of the future electrical demand and offset emissions from fossil fuel fired power plants. Encourage green building measures that contribute to reducing energy use to 25% less than Title 24 requirements;
- Solar water heating to provide non-industrial water heating;
- Ground mounted solar PV arrays to provide a portion of the estimated electrical demand for the proposed Wastewater Treatment and Recycle Facility;
- Commercial buildings shall be designed to meet LEED Silver standards;
- Roofs on all buildings shall be of a light color to reduce heat generation;
- Portions of parking lots (drive aisles) may be paved with concrete versus asphalt to reduce initial solar reflectance;
- Depending on the usage, portions of parking lots may be covered, and the parking lot roofs contain solar PV;
- Use LED lighting fixtures on all public streets and site lighting;
- Include dedicated EV parking at a rate more than required by current codes;
- Include EV charging facilities to encourage the usage of electric vehicles;
- Encourage the utilization of electric forklifts and other material handling vehicles to reduce usage of fossil fuels;

- Design circulation features into the public street improvements to include bus stops and/or other public transportation.
- Include bicycle friendly features to reduce Vehicle Miles Traveled (VMT) and to encourage non-vehicular transportation;
- Encourage the usage of high efficiency electric motors for the industrial uses and the wastewater treatment plant.

Level of Significance after Mitigation

As discussed above, the proposed Project would be required to adhere to all Federal, State, and Local requirements for energy efficiency, including the latest Title 24 standards. Considering these requirements in addition mitigation measure 4.6-1 described above, the Project would not result in the inefficient, wasteful, or unnecessary use of building energy. Therefore, potential impacts are less than significant.

Impact 4.6-2: The Project Would Conflict with or Obstruct State or Local Plan for Renewable Energy or Energy Efficiency.

At of the time of this writing, the Kern County does not have an adopted Energy Plan. Kern County does have an Energy Element in their General Plan, but focuses primarily on the County's energy resources and municipal measures such as encouraging the County to seek State and federal energy grants, have discussions with various energy industries, and developing long-term compensation for wildlife habitat to name a few. The proposed Project design conforms to, and operation would comply with, State Building Energy Efficiency Standards, appliance efficiency regulations, and green building standards. Conformance to the State requirements would substantially reduce the energy consumption from fossil fuels and shift consumption to renewable sources. MM 4.6-1 requires design features such as incorporating passive solar design, heat island mitigation, energy efficient low voltage lighting, and encouraging electric forklifts and other material handling vehicles to name a few. Additionally, implementation of the identified mitigation measures to reduce GHG emissions by 29 percent (MM 4.3-1) would further reduce energy consumption.

The proposed Project would not conflict with or obstruct the implementation of any state or local plan for renewable or energy efficiency. Implementation of the proposed Project would not conflict with existing energy standards, including standards for energy conservation. However, approval of and future implementation of the proposed Project would increase electricity demand over baseline conditions in the County. Electric and natural gas services are provided upon demand from consumers and consistent with local, state, and federal regulations, these services are expanded based on demand. As discussed above in Impact ER-1, development of the proposed Project would not cause inefficient, wasteful or unnecessary energy use, and impacts would be less than significant. Therefore, the project would not conflict with or obstruct state or regional plans and impacts would be less than significant.

Mitigation Measures

Implement Mitigation Measures MM 4.3-1, as described in Section 4.3, *Air Quality*; MM 4.6-1, as described in Section 4.6, *Energy.*

Level of Significance after Mitigation

Impacts would be less than significant.

Cumulative Impacts

Construction and operation associated with implementation of the proposed Project would result in the consumption of fuel and energy, but it would not do so in a wasteful manner, as discussed above. The consumption of fuel and energy would not be substantial in comparison to statewide electricity, natural gas, gasoline, and diesel demand; refer to Table 4.6-5 and Table 4.6-6. New capacity or supplies of energy resources would not be required. Additionally, the proposed Project would be subject to compliance with all Federal, State, and local requirements for energy efficiency.

The anticipated project impacts, in conjunction with cumulative development in the site vicinity, would increase urbanization and result in increased energy consumption. Potential land use impacts are site-specific and require evaluation on a case-by-case basis. Each cumulative project would require separate discretionary approval and CEQA assessment, which would address potential energy consumption impacts and identify necessary mitigation measures, where appropriate.

As noted above, the proposed Project would not result in significant energy consumption impacts. The proposed Project would not be considered inefficient, wasteful, or unnecessary with regard to energy. Thus, the proposed Project and identified cumulative projects are not anticipated to result in a significant cumulative impact.

Mitigation Measures

Implement Mitigation Measures MM 4.3-1, as described in Section 4.3, *Air Quality*; MM 4.6-1, as described in Section 4.6, *Energy.*

Level of Significance after Mitigation

Impacts would be less than significant.

Section 4.7

Geologic and Seismic Hazards

Section 4.7
Geologic and Seismic Hazards

4.7.1 Introduction

The purpose of this section is to describe the geologic and seismic setting of the proposed Project area, identify potential impacts associated with implementation of the proposed Project and recommend mitigation to reduce the significance of impacts. The issues addressed in this section are risks associated with faults, strong seismic ground shaking, seismic-related ground failure such as liquefaction, landslides, subsidence and earthquake induced dam failure and flooding. A Hazardous Materials Evaluation was prepared by McIntosh & Associates in November 2008 (refer to Appendix N) to address hazardous materials and conditions on the Project site. A subsequent Hazardous Materials Evaluation was prepared by McIntosh & Associates in July 2017. Although these evaluations do not directly address seismic hazards, some of the information is relevant to this section and included in the discussion below. See Appendix F, *Hazardous Materials Evaluation*, and Appendix N, *Original Technical Studies.*

4.7.2 Environmental Setting

Regional Geologic Setting

The proposed Project is located in the Great Valley Geomorphic Province of California, which is an alluvial plain, about 50 miles wide and 400 miles long, between the Coast and Sierra Nevada Mountain Ranges. The Great Valley is drained by the Sacramento and San Joaquin rivers, which ultimately drain in the San Francisco Bay. The Great Valley is a northwesterly trending trough filled with approximately 40,000 feet of sediments deposited by the surrounding mountains. Streams flowing from the Sierra Nevada to the west have formed alluvial fans at the surface. The Kern River fan is the largest, covering about 300 square miles of the Valley, beginning as an incised channel north of downtown Bakersfield.

Local Geologic Setting

Geologic Structure

According to the United States Geological Survey (USGS) 7.5-Minute Topographic Quadrangle Maps, Gosford and Conner, California (1954, photorevised 1968, photoinspected 1973) the topography of the proposed Project site is relatively level, sloping southwesterly at an average rate of approximately 7.5 feet per mile, at an elevation ranging from approximately 331 to 340 feet above mean sea level (msl).

The Project site rests on alluvial fan deposits of Holocene (Recent) age, having been deposited on this part of the valley floor during the last 11,000 years. Near surface soils within the proposed Project area consist of interbedded sand, silt, gravels and clay overlying marine and continental sedimentary formations, which rest on a crystalline basement complex. This basement complex is estimated to

underlie the proposed Project at approximately 12,000 feet below the surface layer (McIntosh & Associates, 2017).

Soils

The following information regarding soils is based on the Custom Soil Survey of Kern County, California, Southwestern Part prepared by the United States Department of Agriculture (USDA), the Farmland Conversion Study, and the Hazardous Materials Evaluation. The proposed Project is entirely underlain by the Bakersfield fine sandy loam, drained, 0 to 1 percent slopes and Cajon sandy loam series, 0 to 2 percent slopes, overwash. The following are brief descriptions of the soil types on-site:

Bakersfield fine sandy loam, drained, 0 to 1 percent slopes: This soil is very deep, poorly drained on alluvium weathered from granite. The soil was derived predominately from granitic rock at elevations generally from 300 to 475 feet. Permeability is moderately slow, runoff is slow, available water capacity is high and the hazard of water erosion is slight and wind erosion is moderate. The shrink-swell potential is low and the corrosivity class is high for steel and moderate for concrete. The soil occurs on approximately 60 percent of the proposed Project site.

Cajon sandy loam, 0 to 2 percent slopes, overwash: This soil is deep, somewhat excessively drained on sandy alluvium dominantly granitic rocks. The soil was derived predominately from granitic sources at elevations generally from 320 to 400 feet. Permeability is moderate, available water capacity is low, runoff is very slow, and the hazard of water erosion is slight and wind erosion is severe. The shrink-swell potential is low and the corrosivity class is high for steel and low for concrete. The soil occurs on approximately 40 percent of the proposed Project site, traversing the middle of the site from the northeast corner to the southwest corner.

Faults

A fault is a fracture in the crust of the earth along which land on one side has moved relative to land on the other side. Most faults are the result of repeated displacements over a long period of time. A fault trace is the line on the earth's surface defining the fault.

An active fault is defined by the State Mining and Geology Board as a fault that has "had surface displacement within Holocene times (about the last 11,000 years)." This definition does not mean that faults lacking evidence of surface displacement within Holocene times are necessarily inactive. A fault may be presumed to be inactive based on satisfactory geologic evidence; however, the evidence necessary to prove inactivity is sometimes difficult to obtain and locally may not exist. A potentially active fault is a fault that shows evidence of surface displacement during Quaternary time (last 1.6 million years).

The Alquist-Priolo Earthquake Fault Zoning Act, passed in 1972, is primarily intended to prevent the construction of buildings used for human occupancy on the surface traces of active faults. The Act addresses only the hazard of surface fault rupture and not other earthquake hazards. The law required the State Geologist to establish regulatory zones known as "Earthquake Fault Zone" around the surface traces of active faults and to issue appropriate maps.

There are numerous geologic fractures in the earth's crust within the San Joaquin Valley, with the San Andreas Fault being the most prominent. Other fault systems occur in the Bakersfield region, as in most of California, due to the continual and historical convergence of the continental plates. Several active fault systems are located within a 50-mile radius of the proposed Project site (refer to Figure 4.7-1, *Fault Locations Map*). They include the Garlock Fault, located approximately 35 miles to the southeast, the Breckenridge-Kern Canyon Fault located approximately 30 miles to the northeast, the White Wolf Fault located approximately 12 miles to the south and the Pond Poso Fault located approximately 20 miles to the north of the proposed Project site.

White Wolf Fault

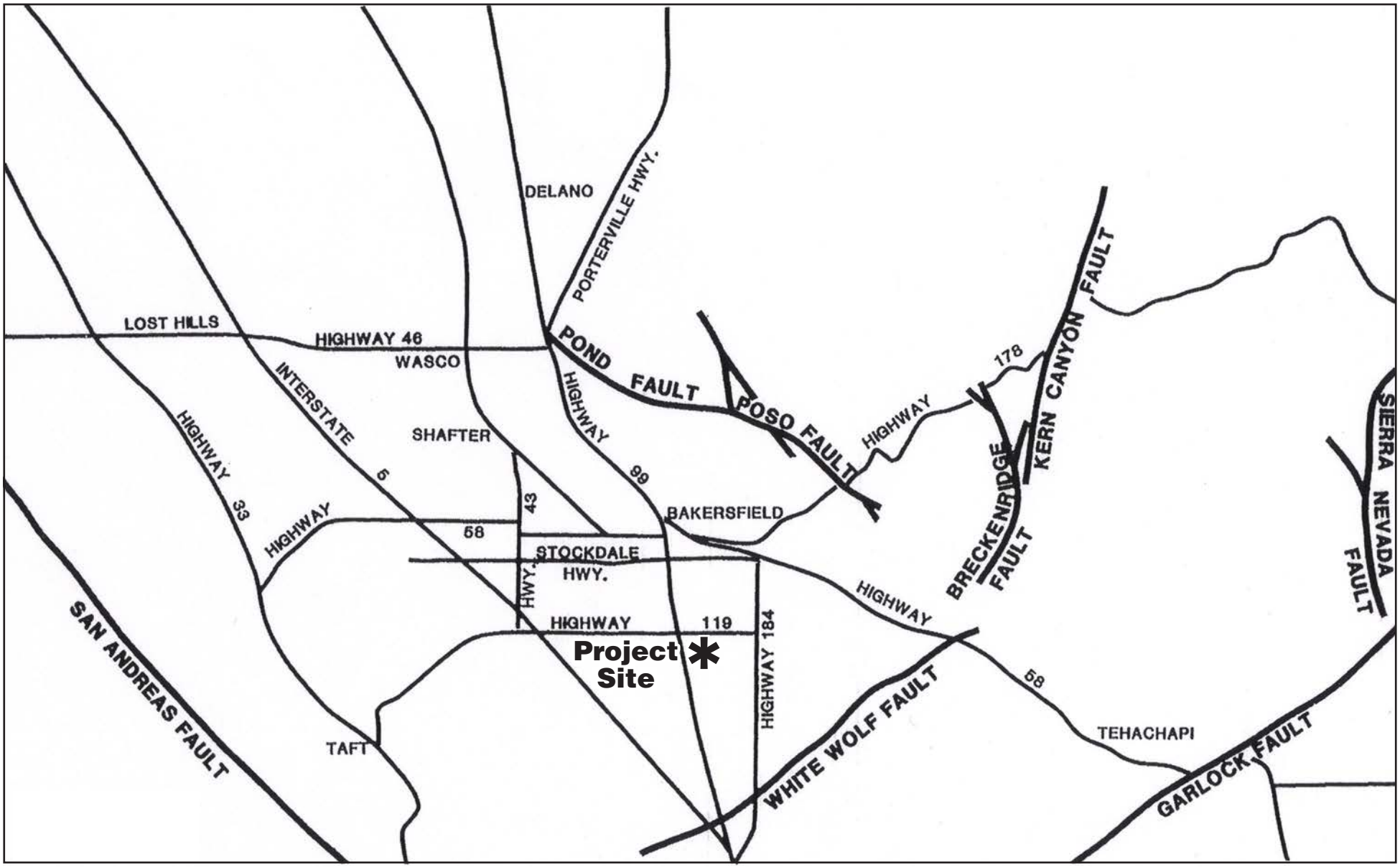
The White Wolf fault is a southeast dipping, left-lateral, oblique, reverse fault with a length of approximately 45 miles. This fault is located approximately 6 miles south of the Project site and traverses the southeastern end of the San Joaquin Valley, from Wheeler Ridge to northeast of Caliente. On July 21, 1952, the White Wolf fault ruptured, producing an earthquake of magnitude 7.5 and subsequently an extensive sequence of aftershocks. Although surface rupture formed along only 17 miles of the surface trace of this fault, rupture probably occurred along most of its length. The magnitude 7.5 of 1952 on the White Wolf Fault has been the only event in historic time. Significant features caused by the fault are the valley at the junction of Highways 58 and 223 (sometimes called "White Wolf Valley"), and the Arvin cutoff along State Route 223. This fault has been designated by the State as an Alquist-Priolo Special Studies Zone.

Breckenridge-Kern Canyon Fault

The Breckenridge-Kern Canyon fault is located in the southern Sierra Nevada Mountains, approximately 25 miles east of the Project site. It trends northward from the north end of Walker Basin to the north of Mount Whitney, a distance of approximately 100 miles. Uncertainty exists as to the degree of activity of this fault system and its classification. It is designated as active with a maximum credible earthquake of 8.0. This fault is capable of damaging the Bakersfield area. Areas along this fault have been designated by the State as Alquist-Priolo Special Studies Zones.

Pond Poso Fault

The Pond Poso Fault is located approximately 19 miles north of the Project site. It trends in a northwesterly direction. The Pond Poso Fault consists of four parallel breaks, forming a zone approximately two-thirds of a mile wide. This fault is designated as active with a maximum credible earthquake of 7.0. This is an active fault capable of damaging the Bakersfield area. Areas along the Pond Poso Fault have been designated by the State as Alquist-Priolo Special Studies Zones.



Source: Metropolitan Bakersfield, General Plan, December 11, 2002.

0 250,000'
APPROXIMA TE

99 HOUGHTON INDUSTRIAL PARK PROJECT
CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07
AGRICULTURAL PRESERVE #13 EXCLUSION

Fault Locations Map

Figure 4.7-1

San Andreas Fault

The San Andreas Fault is located approximately 30 miles southwest of the Project site. The fault is approximately 650 miles in length, reaching from the Mendocino Escarpment on the north to the Imperial Valley to the south. Along this extent, the San Andreas is considered to be the boundary between the North American Plate and the Pacific Plate. The segment of the San Andreas within Kern County is relatively short compared to its 650-mile length. However, it is important, since this segment breaks from the system's predominantly 350-degrees trending direction between the San Luis Obispo and Los Angeles County lines. The last great earthquake on this segment was the 1857 Fort Tejon earthquake, which is believed to have caused a rupture extending 200 miles or more. Geologists consider this fault as having the potential to generate an earthquake of magnitude 8.3 on the Richter scale, which is designated as the maximum credible earthquake. This is an active fault capable of damaging the proposed Project area. Areas along this fault have been designated by the State as Alquist-Priolo Special Studies Zones.

Garlock Fault

The Garlock fault extends eastward from its point of intersection with the San Andreas Fault, near Lebec, for a distance of approximately 150 miles. The fault is located approximately 30 miles southeast of the Project site. The Garlock fault zone is one of the most obvious geologic features in southern California, clearly marking the northern boundary of the area known as the Mojave Block, as well as the southern ends of the Sierra Nevada's and the valleys of the westernmost Basin and Range province. While no earthquake has produced surface rupture on the Garlock fault in historic times, there have been a few sizable quakes recorded along the Garlock fault zone. The most recent was a magnitude 5.7 near the town of Mojave on July 11, 1992. It was believed to have been triggered by the Landers earthquake, just two weeks earlier. At least one section of the fault has shown movement in recent years. This is an active fault capable of damaging the area. The slip rate is listed by the Southern California Earthquake Data Center to be between 2 and 11 millimeters per year (mm/yr), but averages approximately 7 mm/yr. Areas along this fault have been designated by the State as Alquist-Priolo Special Studies Zones.

Other Significant Faults

Other major fault systems in or near the Bakersfield area consist of the Sierra Nevada, Edison, and Kern Front systems.

Seismic Hazards

Seismicity is the geographic and historical distribution of earthquakes, including their frequency, intensity, and distribution. Seismic hazards include surface rupture, ground shaking, liquefaction, landslides, subsidence, expansive soils, and soils and soil erosion.

As described above, the southern end of the San Joaquin Valley is bordered by major active fault systems, making Kern County a historically active seismic area. To evaluate the effect a major earthquake might have on the site, the Metropolitan Bakersfield General Plan indicates which faults have been identified in the vicinity of Bakersfield capable of causing damage to the Bakersfield area; refer to Table 4.7-1, *Possible Damage Inducing Faults*.

Table 4.7-1. Possible Damage Inducing Faults

Fault	Approximate Distance from Project Site (mi)	Maximum Earthquake Magnitude	Maximum Credible Bedrock Acceleration (g)
San Andreas	30	8.0-8.3	0.2-0.25
Sierra Nevada	60	6.5-8.25	0.07-0.12
Garlock	35	7.5-8.0	0.17-0.18
Breckenridge-Kern Canyon	30	6.0-8.0	0.09-0.47
White Wolf	12	7.5-8.0	0.28-0.45
Pond Poso	20	7.0	0.31-0.48

Source: Metropolitan Bakersfield General Plan EIR, June 26, 2002.
Approximate Distance from Project Site is measured in miles (mi)
Maximum Credible Bedrock Acceleration is measured in terms of gravitation force (g)

Table 4.7-1 indicates that a maximum peak ground acceleration of 0.48g would be felt at the proposed Project site as a result of a maximum earthquake of magnitude 7.0 on the Pond Poso Fault approximately 20 miles away. A maximum probable earthquake of magnitude 8.0 on the White Wolf Fault would create a maximum credible bedrock acceleration of 0.45g at the Project site. A maximum probable earthquake of magnitude 8.3 on the San Andreas Fault would create a peak site ground acceleration of 0.25g at the proposed Project site. Due to the numerous geologic fractures in the earth's crust within the San Joaquin Valley, all development within the Metropolitan Bakersfield area is subject to seismic hazards.

Fault Rupture

Surface rupture occurs when movement on a fault deep within the earth breaks through to the surface. Fault ruptures almost always follow pre-existing faults that are zones of weakness. Rupture may occur suddenly during an earthquake or slowly in the form of fault creep. Sudden displacements are more damaging to structures because they are accompanied by shaking. Fault creep is the slow rupture of the earth's crust. It is not likely that rupture would occur at the Project site because it is not located within 500-feet of a known active fault trace.

Ground Shaking

The southern California region is characterized by, and has a history of, faults and associated seismic activity. Earthquakes are classified by their magnitude, a measure of the amount of energy released during an event. During a seismic event, the proposed Project site may be subjected to high levels of ground shaking due to its proximity to active faults in the area. As explained above, several significant, active faults are in the vicinity of the proposed Project, including the San Andreas, Pond Poso, and White Wolf faults. The Project is not in the Alquist-Priolo Earthquake Fault Zones of any of these faults. The largest of these faults is San Andreas Fault, which is considered active. The maximum probable and credible earthquake magnitude near the proposed Project area would come from the San Andreas Fault at a magnitude 8.3 on the Richter scale. The maximum bedrock acceleration at the proposed Project site due to an earthquake from the San Andreas Fault is 0.25 times the rate of acceleration due to gravity.

Liquefaction

Liquefaction occurs when saturated, loose materials (e.g., sand or silty sand) are weakened and transformed from a solid to a near-liquid state due to increased pore water pressure. The increase in pressure is caused by strong ground motion from an earthquake. The proposed Project's susceptibility to liquefaction is a function of depth, density, and groundwater level, in addition to the magnitude of an earthquake. Liquefaction-related phenomena can include lateral spreading, ground oscillation, flow failure, loss of bearing strength, subsidence, and buoyancy effects.

The surficial soils described above consist generally of medium-dense sands and gravels. For liquefaction to occur, the soil must be saturated (i.e., shallow groundwater), and the soil must be relatively loose. Properly compacted structural fills are not susceptible to liquefaction, and the risk of liquefaction and associated lateral spread and/or ground lurching is low for areas within the proposed Project area.

Seismic ground shaking of relatively loose, granular soils that are saturated or submerged can cause the soils to liquefy and temporarily behave as a dense fluid. Liquefaction is caused by a sudden temporary increase in pore water pressure due to seismic densification or other displacement of submerged granular soils. Liquefaction more often occurs in areas underlain by young alluvium where the groundwater table is higher than 50 feet below ground surface (bgs). According to the Metropolitan Bakersfield General Plan, the proposed Project is not likely to be located within an area of high groundwater and loose soils. The depth to water at the Project site is approximately 165-175 feet bgs; therefore, the proposed Project is not anticipated to be located within an area of high groundwater (McIntosh & Associates, 2017).

Landslides and Rockfalls

Landslides are large movements of land downgradient. They can be induced by seismic events or wet, saturated soil conditions and can cause significant damage to life and property. The proposed Project area is flat and not susceptible to landslides.

The proposed Project is located on relatively flat topography and is not located adjacent to any steep slopes or areas that would otherwise be subject to landslides, debris flow and/or rockfall. According to the Metropolitan Bakersfield General Plan, the areas of Metropolitan Bakersfield with slopes subject to failure are predominantly found along the river terraces, bluffs and foothills to the northeast and east of the City of Bakersfield.

Subsidence

Land subsidence is the gradual, local setting or shrinking of the earth's surface with little or no horizontal motion. Subsidence is normally the result of gas, oil or water extraction, hydrocompaction, peat oxidation and not the result of landslide or ground failure. The Metropolitan Bakersfield General Plan has indicated that although subsidence is not a significant hazard, damage to wells, foundations and underground utilities may occur.

Due to the petroleum and groundwater withdrawal activities throughout Kern County, the potential for subsidence to occur exists. The amount of petroleum withdrawal in Kern County is too small an

amount to result in serious subsidence. The State Division of Oil, Gas and Geothermal Resources monitors subsidence in oil and gas fields and regulates oil and gas withdrawal and repressurizing of the field. If subsidence is noted, remediation is accomplished by raising the water table by injecting water or reducing the volume of groundwater being pumped. The remediation activities ensure that no significant impacts from subsidence would occur.

Dam Failure

Isabella Dam is located approximately 40 miles northeast of Bakersfield (approximately 45 miles from the proposed Project) and is built near a major earthquake fault. Isabella Dam is earth-filled and is approximately 185 feet high, 1,725 feet long, and can hold 570,000 acre-feet of water.

If an earthquake were to occur near Isabella Dam, it could result in a break in the dam. This could cause the entire lake storage to be released, which would flood 60 square miles of Bakersfield. The Metropolitan Bakersfield General Plan indicates the chances of the dam failing entirely, with the lake at capacity, was judged as one day in 10,000 years.

Flooding

The proposed Project is located in an area of potential surface waters and it is possible that some flooding would occur at this site during a major earthquake from an upstream catastrophe, such as a dam collapse. The proposed Project is located within the Federal Emergency Management Agency Flood Insurance Rate Map Zone X. Flood Zone X contains areas of minimal flooding. Therefore, the proposed Project is outside the 0.2 percent annual chance floodplain.

Expansive Soils

Expansive soils generally result from specific clay minerals that expand in volume when saturated and shrink in volume when dry. The presence of this soil type can damage structures when expansion and contraction of soil cracks rigid building materials (i.e., concrete, wood, drywall, etc.). The proposed Project area's substrate is mapped as Bakersfield fine sandy loam and Granoso sandy loam.

4.7.3 Regulatory Setting

Geologic resources and geotechnical hazards are governed primarily by local jurisdictions. The conservation elements and seismic safety elements of city and county general plans contain policies for the protection of geologic features and avoidance of hazards.

The California Environmental Quality Act (CEQA) is the major environmental statute that guides the design and construction of projects on non-Federal lands in California. This statute sets forth a specific process of environmental impact analysis and public review. In addition, the project proponent must comply with other applicable State and local applicable statutes, regulations and policies. Relevant and potentially relevant statutes, regulations, and policies are discussed below.

Federal

International Building Code (IBC)

Related to the proposed Project, the International Building Code (IBC), applies to the construction, use and occupancy, location, and maintenance of buildings and structures that would be constructed after project approval. Title 24 of the California Building Code (CBC) incorporates by adoption the 2015 IBC of the International Code Council (ICC) with necessary California amendments. The adoption of the IBC and relation to the CBC is discussed in additional detail under the State regulatory setting below. These development standards require the proposed Project to comply with appropriate seismic design criteria found in the IBC, adequate drainage facility design, and preconstruction soils and grading studies. Seismic design standards have been established to reduce many of the structural problems occurring because of major earthquakes, the significant design code and construction standards include:

- Upgrade the level of ground motion used in the seismic design of buildings;
- Add site amplification factors based on local soils conditions; and
- Improve the way ground motion is applied in detailed design.

Section 1613 of the IBC references modern earthquake construction standards and includes the American Society of Civil Engineers (ASCE) minimum design loads standard, specifically ASCE Standard 7, which bases seismic design on-site class (soil specific) and seismic design category (based on risk category).

Clean Water Act (CWA)

The Clean Water Act (CWA) (33 U.S.C. Section 1251 et seq.), formally the Federal Water Pollution Control Act of 1972, was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point source and certain non–point source discharges to surface water. Those discharges are regulated by the National Pollutant Discharge Elimination System (NPDES) permit process (CWA Section 402). Projects that disturb one or more acre of land are required to obtain NPDES coverage under the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (General Permit), State Water Resources Control Board Order No. 2009-0009-DWQ. The General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP), which includes Best Management Practices (BMPs) to protect stormwater runoff. Requirements of the Federal CWA and associated SWPPP requirements are described in further detail in Section 4.10, *Hydrology and Water Quality*.

Earthquake Hazards Reduction Act

The National Earthquake Hazards Reduction Program (NEHRP) was established by the U.S. Congress when it passed the Earthquake Hazards Reduction Act of 1977, Public Law (P.L.) 95–124. At the time of its creation, Congress' stated purpose for NEHRP was "to reduce the risks of life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards reduction program." Congress recognized that earthquake-related losses could be reduced through improved design and construction methods and practices, land use

controls and redevelopment, prediction techniques and early-warning systems, coordinated emergency preparedness plans, and public education and involvement programs. Since NEHRP's creation, it has become the federal government's coordinated long-term nationwide program to reduce risks to life and property in the United States that result from earthquakes. Four basic NEHRP goals are as follows:

- Develop effective practices and policies for earthquake loss reduction and accelerate their implementation
- Improve techniques for reducing earthquake vulnerabilities of facilities and systems
- Improve earthquake hazards identification and risk assessment methods, and their use
- Improve the understanding of earthquakes and their effects.

Congress has recognized that several key federal agencies can contribute to earthquake mitigation efforts. Today, there are four primary NEHRP agencies:

- Federal Emergency Management Agency (FEMA) of the Department of Homeland Security.
- National Institute of Standards and Technology (NIST) of the Department of Commerce (NIST is the lead NEHRP agency).
- National Science Foundation (NSF).
- USGS of the Department of the Interior.

Congress completed a review of NEHRP, resulting in the NEHRP Reauthorization Act of 2004, PL 108–360. PL 108–360 directed that NEHRP activities be designed to develop effective measures for earthquake hazard reduction; promote the adoption of earthquake hazards reduction measures by government agencies, standards and codes organizations, and others involved in planning and building infrastructure; improve the understanding of earthquakes and their effects through interdisciplinary research; and, develop, operate, and maintain both the Advanced National Seismic System (ANSS) and the George E. Brown, Jr. Network for Earthquake Engineering Simulation (NEES). In a major new initiative, PL 108–360 also directed that NEHRP support development and application of performance-based seismic design (PBSD).

State

California Building Code (CBC 2016)

The State of California provides minimum standards for building design through the California Building Code (CBC). The CBC is based on the International Building Code (IBC), which is used widely throughout the United States (generally adopted on a state-by-state or district-by-district basis) and has been modified for conditions within California. Starting in 1989, revised editions of California Code of Regulations (CCR) Title 24 has been published every three years. The 2016 edition of the CBC is based on the 2015 IBC published by the International Code Council. The current version of the CBC became effective January 1, 2017. Local agencies must ensure that development in their jurisdictions complies with guidelines contained in the CBC. Cities and counties can, however, adopt building standards beyond those provided in the code.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) was passed in 1972 to regulate development and construction of buildings intended for human occupancy to avoid the hazard of surface fault rupture. Under the Alquist-Priolo Act, the California State Geologist (CSG) identifies areas that are at risk of surface fault rupture. The primary purpose of the Alquist-Priolo Act is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. An active fault is defined by the State Mining and Geology Board (SMGB) as one which has "had surface displacement within Holocene time (about the last 11,000 years)." The CSG, previously known as the California Division of Mines and Geology (CDMG), has compiled Special Publication 42 – Fault Rupture Hazard Zones that delineates and defines active fault traces and zones that require specific studies to address rupture hazards with respect to "structure[s] for human occupancy." Any project that involves the construction of buildings or structures for human occupancy is subject to the Alquist-Priolo Act, and any structures for human occupancy must be located at least 50 feet from any active fault.

Seismic Hazards Mapping Act of 1990

In accordance with Public Resources Code, Chapter 7.8, Division 2, the CGS, formerly CDMG, is directed to delineate Seismic Hazard Zones through the Seismic Hazards Zonation Program. The purpose of the Act is to reduce the threat to public health and safety and to minimize the loss of life and property by identifying and mitigating seismic hazards, such as those associated with strong ground shaking, liquefaction, landslides, other ground failures, or other hazards caused by earthquakes. Cities, counties, and State agencies are directed to use seismic hazard zone maps developed by CGS in their land-use planning and permitting processes. In accordance with the Seismic Hazards Mapping Act, site-specific geotechnical investigations must be performed prior to permitting most urban development projects within seismic hazard zones.

Local

Metropolitan Bakersfield General Plan

The Metropolitan Bakersfield General Plan Safety Element has identified various implementation programs with respect to fault rupture. These programs specify various requirements, including:

- Detailed geologic investigations are to be conducted, in conformance with guidelines of the California Division of Mines and Geology (CDMG), for all construction designed for human occupancy in an Alquist-Priolo Fault Study Zone;
- Construction of buildings for human occupancy within 50 feet of the trace of an active fault is prohibited;
- Plans and permits for installation of major lifeline components such as highways, utilities and petroleum or chemical pipelines are to incorporate design features to accommodate potential fault movement in areas of active faults without prolonged disruption of an essential service or threat to health and safety;

- Field information is to be developed as part of any California Environmental Quality Act (CEQA) investigations, and geologic reports by the City and County geologists should be kept current and accessible for use in report preparation, geologic reviews, and policy development.

Active faults may potentially exist outside of the Special Studies Zones. As a result, development of critical and important facilities proposed outside of these zones would require additional fault investigation. The Safety Element has specified a policy that requires that the development of critical facilities be supported by documentation of thorough hazard investigation. Critical facilities are defined by the California Seismic Safety Commission as the following three basic types of facilities:

- "Essential facilities," whose continued functioning is necessary to maintain public health and safety following a disaster. These facilities include fire and police stations, communication facilities, emergency operation centers, hospitals, administrative buildings and schools designated as mass care shelters. Also included are key transportation facilities and utility "lifeline" facilities such as water supply, sewage disposal, oil and gas storage facilities and transmission lines and electric generation stations and transmission lines.
- Those facilities where damage or failure could pose hazards to life and property well beyond their immediate vicinity. This category includes such facilities as dams and reservoirs, petroleum storage facilities and nuclear waste processing and storage facilities.
- Public or private structures for housing or assembly of large populations, where failure could pose hazards to life and property within the structures and in their immediate vicinity. These high-occupancy facilities include schools, prisons, coliseums, theaters, conference and convention facilities, high-rise buildings, and similar facilities used by large numbers of people.

Further, the Safety Element of the Metropolitan Bakersfield General Plan has identified various implementation programs to be carried out by the City and County affecting seismic safety of critical facilities. These programs include:

- Detailed site studies for fault rupture potential are to be conducted as background to the design process for critical facilities under City and County discretionary approval.
- Existing critical facilities are to be reviewed for any significant siting, design or construction problems that would make them vulnerable in an earthquake;
- The findings shall be incorporated into emergency operations plans as well as addressed in longer-term programs of facilities upgrading or relocation; and
- Construction of critical facilities is prohibited within 300 feet of the trace of an active fault.

The Metropolitan Bakersfield General Plan sets forth goals and policies to ensure public safety during seismic events and potential geologic effects, including liquefaction and subsidence. The applicable goals and policies are discussed in Table 4.7-2, *Metropolitan Bakersfield General Plan Goals and Policies for Geologic and Seismic Hazards*, below.

Table 4.7-2. Metropolitan Bakersfield General Plan Goals and Policies for Geologic and Seismic Hazards
Goals and Policies: Safety Element - Seismic
Goal 1: Substantially reduce the level of death, injury, property damage, economic and social dislocation and disruption of vital services that would result from earthquake damage.
Goal 2: Ensure the availability and effective response of emergency services following an earthquake.
Goal 3: Prepare the Planning area for effective response to, and rapid, services following an earthquake.
Goal 7: Protect land uses from the risk of dam failure inundation including the assurances that: the functional capabilities of essential facilities are available in the event of a flood; hazardous materials are not released; effective measures for mitigation of dam failure inundation are incorporated into the design of critical facilities; and the rapid and orderly evacuation of populations in the inundation area will occur.
Policy 7: Continue to address seismically hazardous buildings pursuant to Chapter 12.2 (8875 et. Seq.), Division 1 of Title 2 of the Government Code.
Policy 8: Require seismic review of other potentially hazardous buildings upon any change in their use or occupancy status.
Policy 9: Adopt and maintain high standards for seismic performance of buildings, through prompt adoption and careful enforcement of the most current seismic standards of the Uniform Building Code.
Policy 10: Prohibit development designed for human occupancy within 50 feet of a known active fault and prohibit any building from being placed astride an active fault.
Policy 11: Require site-specific studies to locate and characterize specific fault traces within an Alquist-Priolo Earthquake Fault Zone for all construction designed for human occupancy.
Policy 12: Design significant lifeline installations such as highway, utilities and petrochemical pipelines which cross an active fault, to accommodate potential fault movement without prolonged disruption of an essential service or creating threat to health and safety.
Policy 13: Determine the liquefaction potential at sites in areas of high groundwater prior to development and determine specific mitigation to be incorporated into the foundation design, as necessary to prevent or reduce damage from liquefaction in an earthquake.
Policy 14: Route major lifeline installations around potential liquefaction areas or otherwise protect them against significant damage from liquefaction in an earthquake.
Policy 15: Compile information on areas of potential hazards and field information developed as part of CEQA investigations and geologic reports and keep geologic reviews and policy development current and accessible for use in report preparation.
Policy 18: Design discretionary critical facilities located within the potential inundation area for dam failure in order to: mitigate the effects of inundation on the facility; promote orderly shut-down and evacuation (as appropriate); and, prevent on-site hazards from affecting building occupants and the surrounding communities in the event of dam failure.
Policy 19: Design discretionary facilities in the potential dam inundation area used for the manufacture, storage or use of hazardous materials to prevent on-site hazards from affecting surrounding communities in the event of inundation.
Policy 20: Require emergency response plans for the Planning area to include specific procedures for the sequential and orderly evacuation of the potential dam inundation area.
Policy 21: Encourage critical and high-occupancy facilities as well as facilities for elderly, handicapped and other special care occupants located in the potential inundation area below the dam to develop and maintain plans for the orderly evacuation of their occupants.

Table 4.7-2. Metropolitan Bakersfield General Plan Goals and Policies for Geologic and Seismic Hazards
Goals and Policies: Safety Element - Flooding
Goal 1: Minimize hazards to planning area residents resulting from flooding.
Goal 2: Reduce the risk of flooding to land uses.
Policy 1: Ensure that the Bakersfield metropolitan area maintains a high level of public safety for its citizenry.
Policy 2: Ensure that adequate police and fire services and facilities are available to meet the needs of current and future metropolitan residents through the coordination of planning and development or metropolitan police and fire facilities and services.

Kern County Building and Construction Ordinance (Title 17 of the Ordinance Code of Kern County)

Chapter 17.08 Kern County Building Code

All construction in Kern County is required to conform to the Kern County Building Code (Chapter 17.08, Building Code, of the Ordinance Code of Kern County). Kern County has adopted the CBC, 2016 Edition, with some modifications and amendments.

Chapter 17.28 of Kern County Grading Code

The purpose of the Kern County Grading Code is to safeguard life, limb, property, and the public welfare by regulating grading on private property. All requirements of the Kern County Grading Code will be applied during implementation of the project. All required grading permit(s) shall be obtained prior to commencement of construction activities. Sections of the Grading Code that are particularly relevant to geology and soils are provided below.

Section 17.28.140 Erosion Control

A. Slopes. The faces of cut and fill slopes shall be prepared and maintained to control against erosion. This control may consist of effective planting. The protection for the slopes shall be installed as soon as practicable and prior to calling for final approval. Where cut slopes are not subject to erosion due to the erosion-resistant character of the materials, such protection may be omitted.

B. Other Devices. Where necessary, check dams, cribbing, riprap or other devices or methods shall be employed to control erosion and provide safety.

C. Temporary Devices. Temporary drainage and erosion control shall be provided as needed at the end of each work day during grading operations, such that existing drainage channels would not be blocked. Dust control shall be applied to all graded areas and materials and shall consist of applying water or another approved dust palliative for the alleviation or prevention of dust nuisance. Deposition of rocks, earth materials or debris onto adjacent property, public roads or drainage channels shall not be allowed.

Section 17.28.170 Grading Inspection

A. General. All grading operations for which a permit is required shall be subject to inspection by the building official. Professional inspection of grading operations and testing shall be provided by the civil engineer, soils engineer, and the engineering geologist retained to provide such services in accordance with Subsection 17.28.170(E) for engineered grading and as required by the building official for regular grading.

B. Civil Engineer. The civil engineer shall provide professional inspection within such engineer's area of technical specialty, which shall consist of observation and review as to the establishment of line, grade and surface drainage of the development area. If revised plans are required during the course of the work they shall be prepared by the civil engineer.

C. Soils Engineer. The soils engineer shall provide professional inspection within such engineer's area of technical specialty, which shall include observation during grading and testing for required compaction. The soils engineer shall provide sufficient observation during the preparation of the natural ground and placement and compaction of the fill to verify that such work is being performed in accordance with the conditions of the approved plan and the appropriate requirements of this chapter. Revised recommendations relating to conditions differing from the approved soils engineering and engineering geology reports shall be submitted to the permittee, the building official and the civil engineer.

D. Engineering Geologist. The engineering geologist shall provide professional inspection within such engineer's area of technical specialty, which shall include professional inspection of the bedrock excavation to determine if conditions encountered are in conformance with the approved report. Revised recommendations relating to conditions differing from the approved engineering geology report shall be submitted to the soils engineer.

E. Permittee. The permittee shall be responsible for the work to be performed in accordance with the approved plans and specifications and in conformance with the provisions of this Code, and the permittee shall engage consultants, if required, to provide professional inspections on a timely basis. The permittee shall act as a coordinator between the consultants, the contractor and the building official. In the event of changed conditions, the permittee shall be responsible for informing the building official of such change and shall provide revised plans for approval.

F. Building Official. The building official may inspect the project at the various stages of the work requiring approval to determine that adequate control is being exercised by the professional consultants.

G. Notification of Noncompliance. If, in the course of fulfilling their responsibility under this chapter, the civil engineer, the soils engineer, or the engineering geologist finds that the work is not being done in conformance with this chapter or the approved grading plans, the discrepancies shall be reported immediately in writing to the permittee and to the

building official. Recommendations for corrective measures, if necessary, shall also be submitted.

H. Transfer of Responsibility. If the civil engineer, the soils engineer, or the engineering geologist of record is changed during the course of the work, the work shall be stopped until:

1. The civil engineer, soils engineer, or engineering geologist, has notified the building official in writing that they will no longer be responsible for the work and that a qualified replacement has been found who will assume responsibility.

2. The replacement civil engineer, soils engineer, or engineering geologist notifies the building official in writing that they have agreed to accept responsibility for the work.

Kern County Multi-Hazard Mitigation Plan

The 2005 Kern County Multi-Hazard Mitigation Plan (MHMP) describes natural hazards and impacts (including those resulting from earthquakes, landslides, and soil hazards) that threaten communities, and establishes mitigation goals and strategies. Information contained in the MHMP could also be used to help guide and coordinate mitigation activities and local policy decisions for future land use decisions. The MHMP divides the County into three regions, Valley, Mountain, and Desert. The Project site Area is located within the both the Valley region.

The governing federal law requires that the MHMP be reviewed and updated within five years in order to continue to be eligible for mitigation grant project funding. The County released a Comprehensive Update in September 2012 for its Kern Multi Jurisdiction Hazard Mitigation Plan.

4.7.4 Impacts and Mitigation Measures

Methodology

The potential impacts associated with the proposed Project are evaluated on a qualitative and quantitative basis through a comparison of the anticipated Project effects on geologic resources. The change in the land use is significant if the effects described below occur. The evaluation of project impacts as based on professional judgment, analysis of the County's safety policies, and the significance criteria established by Appendix G of the State CEQA Guidelines, which the County has determined to be appropriate criteria for this Recirculated Draft EIR.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the CEQA Guidelines, to determine if a project could potentially have a significant impact. Such an impact would occur if the proposed project would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving;
  - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault;
  - Strong seismic ground shaking;
  - Seismic-related ground failure, including liquefaction; or
  - Landslides;
- Result in substantial soil erosion or loss of topsoil;
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;
- Expose people or structures to a significant risk of loss, injury or death including flooding, as a result of the failure of a levee or a dam;
- Be located on expansive soil, as defined in Section 1803.5.3 of the California Building Code (2016), creating substantial risks to life or property; and/or
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

Based on the standards, the potential effects of Project implementation have been categorized as either "no impact," a "less than significant impact" or a "potentially significant impact." If a potentially significant impact cannot be reduced to a less than significant level through the application of goals, policies, standards or mitigation, it is categorized as a significant and unavoidable impact.

Project Impacts

Impact 4.7-1: The Project Would Expose People or Structures to Substantial Adverse Effects, Including the Risk of Loss, Injury, or Death Involving the Rupture of a Known Earthquake Fault.

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazards of surface faulting and fault rupture to built structures. Fault rupture is a break in the ground's surface and associated deformation resulting from the movement of a fault. Rupture has the potential to occur when a strong earthquake happens along specific active or potentially active faults. Areas around such faults are designated as Alquist-Priolo Earthquake Fault Zones and are shown in detail on the Alquist-Priolo Earthquake Fault Zone Maps. The proposed Project is not located in an Alquist-Priolo Earthquake Fault Zone. No active faults cross through or are located adjacent to the proposed Project. The nearest fault, the White Wolf Fault, is not identified as part of an Alquist-Priolo Earthquake Fault Zone. Some of the faults in the Bakersfield area are in the Alquist-Priolo Special Study Zone. Impacts involving fault rupture would be less than significant.

Given the highly seismic character of the southern San Joaquin Valley region, moderate to severe ground shaking associated with earthquakes on the nearby faults can be expected throughout the Metropolitan Bakersfield area. Maximum probable ground motion on the proposed Project site would likely be the result of movement along the White Wolf, San Andreas, or Pond Poso faults due to a maximum probable magnitude earthquake along each fault and distance to the proposed Project site. It is probable that faults within the region will move in the future. The proposed Project site is expected to experience ground shaking in the event of a major earthquake because of regional seismic activity; therefore, future residents may be exposed to seismic ground shaking. The proposed Project shall be designed and constructed to withstand the magnitude of an earthquake. The proposed Project will be constructed in conformance with the California Building Standards Code in order to minimize seismic impacts. Accordingly, the proposed Project will be required to construct all proposed structures in compliance with State law and local ordinances required by the most recent CBC (CCR Title 24) and to adhere to all modern earthquake construction standards. Modern earthquake construction standards include the American Society of Civil Engineers (ASCE) seismic design standard, specifically ASCE 7, which base seismic design on-site class (soil specific) and seismic design category (based on risk category). The required compliance with applicable CBC criteria, Alquist-Priolo Act, goals and policies of the Metropolitan Bakersfield General Plan, and the Kern County Zoning Ordinance (Kern County Building Code Chapter 17.08) would reduce impacts to less than significant levels.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.7-2: The Project Would Expose People or Structures to Adverse Effects, Including the Risk of Loss, Injury, or Death Involving Strong Seismic Ground Shaking Including That Would Result in Potential Substantial Adverse Effects.

Active or potentially active faults are located within the southern San Joaquin Valley region. The southern end of the San Joaquin Valley is bordered by five major fault systems, all of which are considered to be active: San Andreas, Garlock, Breckenridge-Kern Canyon, Sierra Nevada, and White Wolf faults. It is probable that faults near the proposed Project will move in the future; however, it is unlikely that ground rupture would occur on-site because it is not located within an Alquist-Priolo Earthquake Fault Zone or within 500 feet of a known active fault trace. Therefore, impacts are considered to be less than significant.

Given the highly seismic character of the southern San Joaquin Valley region, moderate to severe ground shaking associated with earthquakes on the nearby faults can be expected throughout the Metropolitan Bakersfield area. Maximum probable ground motion on the proposed Project would likely be the result of movement along the White Wolf, San Andreas, or Pond Poso faults due to a maximum probable magnitude earthquake along each fault and distance to the proposed Project. It is probable that faults within the region will move in the future. The proposed Project is expected to

experience ground shaking in the event of a major earthquake because of regional seismic activity; therefore, future Project employees may be exposed to seismic ground shaking. It is assumed that future Project employees would be people from the Metropolitan Bakersfield area as opposed to people relocating to the area, therefore, the proposed Project is not anticipated to introduce additional people to seismic ground shaking hazards.

The proposed Project shall be designed and constructed to withstand the magnitude of an earthquake. The proposed Project would be required to construct structures in compliance with State law and local ordinances in accordance with the most recent CBC and to adhere to all modern earthquake construction standards. The required compliance with applicable CBC criteria, Alquist-Priolo Act, goals and policies of the Metropolitan Bakersfield General Plan, the Kern County Ordinance Code (Kern County Building Code Chapter 17.08), and adherence to Mitigation Measures MM 4.7-1 through MM 4.7-7, would reduce impacts to less than significant levels.

Mitigation Measures

MM 4.7-1: **Phased Grading.** The project proponent shall limit grading to the minimum area necessary for construction. Prior to the initiation of construction, the project proponent shall retain a California registered professional engineer to approve the final grading earthwork and foundation plans prior to construction.

MM 4.7-2: **Geotechnical Study.** Prior to the issuance of building or grading permits for the project, the Project proponent shall conduct a full geotechnical study to evaluate soil conditions on the Project site and submit it to the Kern County Public Works Department for review and approval.

1. The geotechnical study must be signed by a California-registered professional engineer and must identify the following:

    a. Maximum considered earthquake and associated ground acceleration;

    b. Potential for seismically induced liquefaction, landslides, differential settlement, and mudflows;

    c. Stability of any existing or proposed cut-and-fill slopes;

    d. Collapsible or expansive soils;

    e. Foundation material type;

    f. Recommendations for placement and design of facilities, foundations, and remediation of unstable ground.

2. The project proponent shall determine the final siting of project facilities based on the results of the geotechnical study and implement recommended measures to minimize geologic hazards. The project proponent shall not locate project facilities on or immediately adjacent to a fault trace. All structures shall be

offset at least 100-feet from any mapped fault trace. Alternatively, a detailed fault trenching investigation may be performed to accurately locate the fault trace(s) to avoid sighting improvements on or close to these fault structures and to evaluate the risk of fault rupture. After locating the fault, accurate setback distances can be proposed.

3. The Kern County Public Works Department shall evaluate any final facility siting design developed prior to the issuance of any building or grading permits to verify that geological constraints have been avoided.

MM 4.7-3: **Seismic Design On-Site.** Prior to the issuance of grading permits, the project proponent shall retain a California registered engineer to design the project facilities to withstand probable seismically induced ground shaking at the site. All grading and construction on-site shall adhere to the specifications, procedures, and site conditions contained in the final design plans, which shall be fully compliant with the seismic recommendations of the California-registered professional engineer. The procedures and site conditions shall encompass site preparation, foundation specifications, and protection measures for buried metal. The final structural design shall be subject to approval and follow-up inspection by the Kern County Building Inspection Department. Final design requirements shall be provided to the on-site construction supervisor and the Kern County Building Inspector to ensure compliance.

MM 4.7-4: Building locations shall be stabilized against the occurrence of liquefaction by dynamic compaction, or other accepted soil stabilization method approved by the County Building official.

MM 4.7-5: **Geotechnical Evaluation.** Prior to the issuance of grading permits, a geotechnical evaluation, consisting of field exploration (drilling and soil sampling), laboratory testing of soil samples, and engineering analysis, shall be prepared to determine soil properties related, but not limited, to ground-motion acceleration parameters, the amplification properties of the subsurface units at the specific site, the potential for hydrocompaction to affect the proposed facilities, and the potential for collapsible, subsiding, or expansive soils to affect the proposed facilities.

These studies shall be used to determine the appropriate engineering for foundations and support structures as well as building requirements to minimize geotechnical hazard impacts. Copies of all analyses shall be submitted to the Kern County Public Works Department for review and approval. An approved copy of the evaluation shall be submitted to the Kern County Planning and Natural Resources Department.

MM 4.7-6: **Minimizing Erosion.** The project proponent shall continuously comply with the following:

1. The project proponent shall use existing roads to the greatest extent feasible to minimize erosion.

2. Prior to approval of the grading permit, final plans shall be reviewed and approved by the Kern County Public Works Department to confirm existing roads were used to the greatest extent feasible.

MM 4.7-7: **Minimizing Grading.** The project proponent shall continuously comply with the following:

1. The project proponent shall limit grading to the minimum area necessary for construction and operation of the project. Final grading plans shall include best management practices (BMPs) to limit on-site and off-site erosion, a water plan to treat disturbed areas during construction and reduce dust, and a plan for the disposal of drainage waters originating on-site and from adjacent right-of-ways (if required).

2. The plans shall be submitted to the Kern County Public Works Department for review and approval.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.7-3: The Project Would Result in Substantial Soil Erosion or Loss of Topsoil.

As discussed above, the proposed Project is located on relatively flat terrain and consists of soils that are not considered highly erosive, with the exception of wind erosion for the Cajon sandy loam soil. Due to the characteristics of the on-site soil types and the relatively flat terrain, implementation of the proposed Project has the potential to result in minimal erosion.

Project grading activities would remove or cover existing topsoil that is used for agricultural operations and may expose soils to wind and water erosion both during and after the construction phase of the proposed Project. To mitigate the potential effects of erosion on-site, temporary and permanent erosion control measures would be required, such as the use of sandbags, hydroseeding, landscaping and/or soil stabilizers. The Project proponent(s) would be required to submit a Stormwater Pollution Prevention Plan (SWPPP), which includes erosion control measures in order to comply with the National Pollutant Discharge Elimination System (NPDES) requirements of the Federal Clean Water Act (CWA) and the requirements of the California Water Quality Order No. 2009-0009-DWQ as amended by 2010-0014-DWQ and 2012-0006-0006-DWQ as implemented by the Kern County NPDES Permit Process. Any individual parcel Project proponent(s) would be responsible for the preparation of the SWPPPs for the individual site development. In addition, the proposed Project would be subject to County ordinances and standards relative to soils and geology. Standard compliance requirements include detailed site-specific soil analysis prior to issuance of building permits and adherence to applicable building codes in accordance with the most recent CBC. All earthwork is required to be performed in accordance with applicable County requirements as stipulated in the Kern County Ordinance Code. Implementation of Mitigation Measure MM 4.7-8 as well as mitigation measures in Section 4.10, *Hydrology and Water Quality* and compliance with applicable CBC criteria, goals and policies of the Metropolitan Bakersfield General Plan, and the Kern County Ordinance Code.

Mitigation Measures

Refer to Section 4.10, *Hydrology and Water Quality*, regarding water quality mitigation measures.

MM 4.7-8: **Soil Erosion and Sedimentation Control Plan.** The project proponent shall prepare a Soil Erosion and Sedimentation Control Plan to mitigate potential loss of soil and erosion. The plan shall be prepared by a California registered civil engineer or other professional approved to prepare said Plan and submitted for review and approval by the Kern County Public Works Department. The Soil Erosion and Sedimentation Control Plan shall include, but is not limited to, the following:

1. Best Management Practices to minimize soil erosion consistent with Kern County grading requirements and the California Regional Water Quality Control Board requirements pertaining to the preparation and approval of a Stormwater Pollution Prevention Plan (Best Management Practices recommended by the Kern County Public Works Department shall be reviewed for applicability);

2. Sediment collection facilities as may be required by the Kern County Public Works Department;

3. A timetable for full implementation, estimated costs, and a surety bond or other security as approved by the County; and

4. Other measures required by the County during permitting, including long-term monitoring (post-construction) of erosion control measures until site stabilization is achieved.

Provisions to comply with local and state codes relating to drainage and runoff, including use of pervious pavements, and/or other methods to the extent feasible, to increase stormwater infiltration and reduce runoff onto agricultural lands.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.7-4: The Project Would be Located on an Unstable Geologic Unit or Soil That Would Result in On-site or Off-site Landslide, Lateral Spreading, Subsidence, Liquefaction, or Collapse.

The Metropolitan Bakersfield General Plan indicates that liquefaction most often occurs in areas underlain by young alluvium where the groundwater table is higher than 50 feet bgs. According to the Metropolitan Bakersfield General Plan EIR, the proposed Project is not likely to be located within an area of high groundwater and loose soils. The Project site is underlain by Bakersfield fine sandy loam and Cajon sandy loam-overwash. However, the depth of groundwater on-site is approximately 165-175 feet bgs. Therefore, the potential for liquefaction on the proposed Project is considered low and impacts are anticipated to be less than significant.

The proposed Project is located on relatively flat topography and is not located adjacent to any steep slopes or other areas that would be subject to seismically induced landslides. Therefore, no impacts are anticipated in this regard.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.7-5: The Project Would Result in Adverse Impacts to People or Structures Resulting in a Risk of Loss, Injury or Death Including Flooding, as a Result of the Failure of a Levee or a Dam.

As indicated above, a break in Isabella Dam caused by an earthquake would flood 60 square miles of the Bakersfield area. It would take approximately eight to 12 hours from the time the dam breaks for water to reach the proposed Project. Therefore, allowing from a minimum of eight hours up to 12 hours for evacuation. This lag time would make injury or death from dam failure unlikely in the area of the proposed Project site. The chance of the Isabella Dam failing entirely, with the lake at capacity, is approximately one day out of 10,000 years. The Safety Element of the Metropolitan Bakersfield General Plan has identified policies including a response plan for dam failure as well as the maintenance of disaster response plans, development of discretionary approval procedures for critical facilities and the review of zoning designations, street widths and circulation patterns for compatibility with evacuation plans. The proposed Project would be designed and constructed in strict adherence to policies in the Metropolitan Bakersfield General Plan; therefore, less than significant impacts would occur.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.7-6: The Project Would Result in Impacts from Being Located on Expansive Soil, as Defined in Section 1803.5.3 of the CBC (2016) Creating Substantial Risks to Life or Property.

The proposed Project is located on Bakersfield fine sandy loam and Cajon sandy loam-overwash. None of these soil types exhibits expansive characteristics; shrink-swell potential is low. The proposed Project would be required to construct structures in compliance with State law and local ordinances in accordance with the most recent CBC (CCR Title 24) and to adhere to all modern construction standards. In addition, the proposed Project would be built to modern construction standards, which include the ASCE minimum design load standard, specifically Standard 7-10 and/or

7-15, which base seismic design on-site class (soil specific) and seismic design category (based on risk category). Furthermore, light and medium industrial structures constructed within the proposed Project would be required to comply with the most recent CBC (specifically Section 1803.5.3 regarding expansive soil), Kern County Ordinance Code, and the Metropolitan Bakersfield General Plan. Therefore, the potential for risks to life and property are low.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.7-7: The Project Would Be Constructed on Soils Incapable of Adequately Supporting the Use of Septic Tanks or Alternative Wastewater Disposal Systems Where Sewers Are Not Available for the Disposal of Wastewater.

The proposed Project site area has never been served by a sewer system. There are no existing septic systems located on the proposed Project site. Currently, neighboring residential and commercial properties are served by individual, privately-owned septic systems. A private package sewer treatment plant is proposed to provide services for the proposed Project site. The proposed Project would be designed and constructed in strict adherence to policies in the Metropolitan Bakersfield General Plan, Kern County Ordinance Code, and CBC criteria. In addition, Mitigation Measure MM 4.7-9 would be implemented. Therefore, impacts would be less than significant in this regard.

Mitigation Measures

MM 4.7-9: **Septic Design Plans.** Prior to the issuance of permits, the project proponent shall provide evidence to the Kern County Planning and Natural Resources Department that the siting, design and construction of proposed septic system(s) and leach field disposal system(s) comply with the 2016 Kern County Onsite Systems Manual as authorized by the California Water Board Local Agency Management Program (LAMP) and administered locally by the Kern County Environmental Health Services Department (KCEHS). Proving the proposed septic design plans comply with these requirements will ensure that all standards for septic tanks, seepage pits, and soils are capable of adequately supporting the use of septic tanks.

MM 4.7-10: **Final Leach Field Disposal System.** The final leach field disposal system shall be designed by a licensed engineer, taking into full consideration the requirements provided in the June 2016 Kern County Onsite Systems Manual.

Level of Significance after Mitigation

Impacts would be less than significant.

Cumulative Impacts

Soils and geologic conditions in the proposed Project vicinity may vary by location. Short-term cumulative impacts such as erosion and sedimentation would occur as a result of implementation of the proposed Project. The only cumulative long-term impact related to geology is the exposure of people to the potential for seismically induced ground shaking. Implementation of other cumulative projects would incrementally increase the number of people and structures potentially subject to a seismic event. However, such exposure would be minimized through strict engineering standards required at each respective site. The seismic and geologic significance would be considered on a project-by-project basis. Therefore, cumulative effects of increased seismic risk would be mitigated to a less than significant level on a project-by-project basis. The required compliance with applicable CBC criteria, goals and policies of the Metropolitan Bakersfield General Plan, and the Kern County Ordinance Code would reduce cumulatively considerable impacts to geologic and seismic hazard to less than significant levels.

Mitigation Measures

Implement Mitigation Measures MM 4.7-1 through MM 4.7-10, above.

Level of Significance after Mitigation

Impacts would be less than significant.

This Page Intentionally Left Blank

Section 4.8

Greenhouse Gases

Section 4.8
Greenhouse Gases

4.8.1 Introduction

This section of the Recirculated Draft Environmental Impact Report (RDEIR) evaluates the greenhouse gas (GHGs) conditions associated with buildout of the proposed Project. It also describes the impacts associated with GHGs that would result from implementation of the project, and, as necessary mitigation measures that would avoid or lessen these impacts. Insight Environmental Consultants completed an Air Quality Impact Analysis in June 2009 that evaluated the proposed Project's potential impacts on air quality. Due to the time between the technical study and this RDEIR, a second Air Quality Impact Analysis was prepared by Insight Environmental Consultants in July 2017. See Appendix C, *Air Quality Impact Analysis*, and Appendix N, *Original Technical Studies*. Information supporting this analysis is also based on the information and guidelines provided in the California Environmental Quality Act (CEQA), the San Joaquin Valley Air Pollution Control District (SJVAPCD) 2015 Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI), and Kern County's Guidelines for the Preparation of Air Quality Assessment for Environmental Impact Reports.

4.8.2 Environmental Setting

The California Air Resources Board (CARB) has divided California into regional air basins according to topographic drainage features. The proposed Project site is located in Kern County, which is within the jurisdiction of the San Joaquin Valley Air Basin (SJVAB) and locally controlled by the San Joaquin Valley Air Pollution Control District (SJVAPCD).

Greenhouse Gases (GHGs) and Global Climate Change

In the early 1960's scientists recognized that carbon dioxide (CO_2) levels in the atmosphere were rising every year. It was also noted that several other gases, including methane (CH_4) and nitrous oxides (N_2O) were also increasing. Levels of these gases have increased by about 40 percent since large-scale industrialization began around 150 years ago, according to the United States Environmental Protection Agency (EPA). After numerous computer-simulated model runs on the effects of these increases in the atmosphere, it was concluded that the rising concentrations almost always resulted in an increase of average global temperature. Rising temperatures may, in turn, produce changes in weather, sea levels and land use patterns, commonly referred to as "climate change". There is general scientific consensus that climate change is occurring, and that human activity contributes in some measure (perhaps substantially) to that change. It is difficult to determine the extent of change that humans may be causing due to the natural variability of the Earth's climate.

During the planet's history, the climate has changed many times, with events ranging from ice ages to long periods of warmth. Natural factors such as volcanic eruptions, changes in the Earth's orbit, and the amount of energy released from the sun historically have affected the Earth's climate. Human activities associated with the Industrial Revolution beginning in the late 18th century, have also

changed the composition of the atmosphere. The burning of fossil fuels, such as coal and oil, and deforestation has caused the concentrations of heat-trapping greenhouse gases (GHGs) to increase significantly in our atmosphere.

Many chemical compounds found in the Earth's atmosphere act as GHGs, which allow sunlight to enter the atmosphere freely. When sunlight strikes the Earth's surface, some of it is reflected back towards space as infrared radiation (heat). GHGs absorb this infrared radiation and trap the heat in the atmosphere. Over time, the amount of energy sent from the sun to the Earth's surface should be about the same as the amount of energy radiated back into space, leaving the temperature of the Earth's surface roughly constant. Many gases exhibit these "greenhouse" properties. Some of them occur in nature (water vapor, carbon dioxide, methane, and nitrous oxide), while others are exclusively human-made (like gases used for aerosols). The most relevant GHGs are water vapor (H_2O), carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. These gases prevent heat from escaping to space.

GHGs, in most cases, have both natural and anthropogenic sources. Natural mechanisms already exist as part of the 'carbon cycle' for removing GHGs from the atmosphere (often called land or ocean sinks). Levels of GHGs, due to the increase in anthropogenic sources, have exceeded the normal rates of natural absorption. This has resulted in increased atmospheric concentrations of GHGs and potentially human-induced global warming.

Our GHG emissions in the United States come mostly from energy use. These are driven largely by economic growth, fuel used for electricity generation, and weather patterns affecting heating and cooling needs. Energy-related carbon dioxide emissions, resulting from petroleum and natural gas account for approximately three-quarters of the human-generated GHG emissions in the United States, primarily in the form of carbon dioxide emissions from burning fossil fuels. More than half the energy-related emissions come from large stationary sources such as power plants; approximately a third comes from transportation; while industrial processes, agriculture, forestry, other land uses, and waste management make up a majority of the remainder of sources.

Methane, another GHG, comes from landfills, coal mines, oil and gas operations, and agriculture; representing nine percent of total GHG emissions in the United States. Nitrous oxide only represents five percent of the gas emissions, and is emitted from burning fossil fuels and through the use of certain fertilizers and industrial processes. Two percent of the total emissions are released as byproducts of industrial processes and through leakage.

The United States has the highest emissions of GHGs of any nation on Earth, though CO_2 emissions in California are less than the national average, both in per capita emissions and in emissions per gross state product. Transportation is the largest source of CO_2 emissions in California, accounting for approximately 41 percent of total emissions. Electricity generation accounts for approximately 22 percent of CO_2 emissions in California, and the industrial sector accounts for approximately 20.5 percent. California GHG emissions and the increase in project emissions of CO_2, methane (CH_4), and N_2O, are summarized in Table 4.8-1*, California Greenhouse Gas Emissions of CO_2, CH_4, AND N_2O.*

Table 4.8-1. California Greenhouse Gas Emissions of CO2, CH4, and N2O

Net - Million Tons – Carbon Dioxide Equivalent			
Greenhouse Gas	2013	2014	2015
Carbon Dioxide (CO_2)	376.1	371.8	369.9
Methane (CH_4)	39.8	40.1	39.6
Nitrous Oxide (N_2O)	12.3	12.2	11.7
High GWP Gases (HFC, PFC, SF_6)	16.8	17.8	19.1
Global Warming Potential	445.0	441.9	440.3

Source: CARB, 2017.

Global carbon dioxide emissions are expected to increase by 1.9 percent annually between 2001 and 2025. Much of the increase in these emissions is expected to occur in the developing world where emerging economies are fueled with fossil energy, such as China and India. Around 2,018 developing countries' emissions are expected to surpass the emissions of industrialized countries; increasing by 2.7 percent annually between 2001 and 2025, faster than the world average.

GHGs are a necessity to life as we know it. They keep the planet's surface warmer than it otherwise would be. However, as the concentrations of these gases increase in the atmosphere and continue to, the Earth's temperature is also increasing, exceeding past levels. The Earth's average surface temperature has increased by about 1.2 to 1.4 degrees Fahrenheit (ºF) since 1900 according to National Oceanic and Atmospheric Administration (NOAA) and National Aeronautical and Space Administration (NASA) data. On average the warmest global temperatures on record have all occurred within the past 15 years. Climate models predict that the average temperature at the Earth's surface could increase from 2.5 to 10.4ºF above 1990 levels by the end of this century if GHGs continue to increase. Other aspects of the climate are also changing such as rainfall patterns, snow and ice cover, and sea level.

Climate change affects people, plants, and animals. Scientists are certain that increasing the concentration of GHGs will change the planet's climate; however, they are not sure by how much it will change, at what rate it will change, or what the exact effects will be. They are working to better understand future climate change and how the effects will vary by region and over time.

Some climate changes are already occurring. These include; rise of sea level, shrinking glaciers, changes in the range and distribution of plants and animals, lengthening of growing seasons, trees blooming earlier, ice on rivers and lakes freezing later and breaking up earlier, and thawing of permafrost.

Scientists believe that most areas in the United States will to continue to warm, although some will likely warm more than others. Predicting which parts of the country will become wetter or drier is extremely difficult, but scientists generally expect increased precipitation and evaporation, and drier soil in the middle parts of the country. The northern regions such as Alaska are expected to experience the most warming. Alaska has already been experiencing significant climate change in recent years that may be attributable to human caused global climate change.

In addition to the changes already discussed, human health can also be affected both directly and indirectly by climate change in part through extreme periods of heat and cold, storms, climate-sensitive diseases such as malaria, and smog episodes.

In order to address climate change concerns the United States government has established a comprehensive policy to deal with global warming. This policy has three basic components:

- Slowing the growth of emissions;
- Strengthening science, technology and institutions; and
- Enhancing international cooperation.

Currently, the Federal government is using voluntary and incentive-based programs to reduce emissions and has established a variety of programs promoting climate technology and science. The United States prepared a comprehensive strategy in February 2002 to reduce the GHG intensity by 18 percent over the 10-year period from 2002 to 2012. Greenhouse gas intensity is a measurement of GHG emissions per unit of economic activity. By meeting this commitment, the United States will prevent the release of more than 500 million metric tons cumulatively between 2002 and 2012.

4.8.3 Regulatory Setting

Regulatory oversight for air quality in the SJVAB rests at EPA Region IX office at the Federal level, the CARB at the State level, and the regional level with the SJVAPCD.

Global Climate Change Regulatory Issues

In 1988, the United Nations established the Intergovernmental Panel on Climate Change to evaluate the impacts of global warming and to develop strategies that nations could implement to curtail global climate change. In 1992, the United Nations Framework Convention on Climate Change established an agreement with the goal of controlling GHG emissions, including methane. As a result, the Climate Change Action Plan was developed to address the reduction of GHGs in the United States. The Plan consists of more than 50 voluntary programs.

The Kyoto Protocol treaty was negotiated in December 1997. The agreement came into force on February 16, 2005 following ratification by Russia on November 18, 2004. As of December 2006, a total of 169 countries and other governmental entities have ratified the agreement. Notable exceptions include the United States and Australia. Other countries, like India and China, which have ratified the protocol, are not required to reduce carbon emissions under the present agreement despite their relatively large populations.

Additionally, the Montreal Protocol was originally signed in 1987 and substantially amended in 1990 and 1992. The Montreal Protocol stipulates that the production and consumption of compounds that deplete ozone in the stratosphere (chlorofluorocarbons [CFCs], halons, carbon tetrachloride, and methyl chloroform) were to be phased out by 2000 (methyl chloroform was to be phased out by 2005).

On September 27, 2006, Assembly Bill (AB) 32, the California Global Warming Solutions Act, of 2006 was enacted by the State of California. The legislature stated that "global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California." (AB 32). The Act caps California's GHG emissions at 1990 levels by 2020. The Act

defines GHG emissions as all of the following gases: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexaflouride. This agreement represents the first enforceable state-wide program in the U.S. to cap all GHG emissions from major industries that includes penalties for non-compliance. While acknowledging that national and international actions will be necessary to fully address the issue of global warming, AB 32 lays out a program to inventory and reduce GHG emissions in California and from power generation facilities located outside the state that serve California residents and businesses.

AB 32 charges CARB with responsibility to monitor and regulate sources of GHG emissions in order to reduce those emissions. By July 1, 2007, CARB adopted a list of discrete early action measures to be adopted and implemented before January 1, 2010, to reduce GHG emissions. CARB staff recommended an amount of 427 million metric tons of carbon dioxide equivalent ($MMTCO_2e$) as the total statewide greenhouse gas 1990 emissions level and 2020 emissions limit. The Board approved the 2020 limit on December 6, 2007. This limit is an aggregated statewide limit, rather than sector- or facility-specific. CARB is then to conduct rulemaking, culminating in rule adoption by January 1, 2011, for reducing GHG emissions to achieve the emissions cap by 2020. The rules must take effect no later than 2012. In designing emission reduction measures, CARB must aim to minimize costs, maximize benefits, improve and modernize California's energy infrastructure, maintain electric system reliability, maximize additional environmental and economic co-benefits for California, and complement the state's efforts to improve air quality.

At this time, the EPA does not regulate GHG emissions; however, in *Massachusetts et al. v, EPA (Environmental Protection Agency)*, the U.S Supreme Court determined that the EPA does have the authority to regulate GHGs under the Clean Air Act (CAA). The Court also instructed the EPA to review its policies toward regulation of vehicle emissions under the CAA. It is now anticipated that regulations will eventually be promulgated by the EPA to further control GHG emissions from vehicles as well as other sources.

Global warming and climate change have received substantial public attention for more than 15 years. For example, the United States Global Change Research Program was established by the Global Change Research Act of 1990 to enhance the understanding of natural and human-induced changes in the Earth's global environmental system, to monitor, understand and predict global change, and to provide a sound scientific basis for national and international decision making. Even so, the analytical tools have not been developed to determine the effect on worldwide global warming from a particular increase in GHG emissions, or the resulting effects on climate change in a particular locale. The scientific tools needed to evaluate the impacts that a specific project may have on the environment are even farther in the future.

Accordingly, there is no local or statewide significance threshold developed to evaluate the impacts of the proposed Project, or any project, on global climate change or on the environment in California.

Federal

U.S. Environmental Protection Agency (EPA)

On April 2, 2007, in *Massachusetts v. EPA*, 549 U.S. 497 (2007), the Supreme Court found that greenhouse gases are air pollutants covered by the CAA. The Court held that the EPA must determine whether or not emissions of GHGs from new motor vehicles cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In making these decisions, the EPA is required to follow the language of section 202(a) of the Clean Air Act. The Supreme Court decision resulted from a petition for rulemaking under section 202(a) filed by more than a dozen environmental, renewable energy, and other organizations.

On April 17, 2009, the Administrator signed Proposed Endangerment and Cause or Contribute Findings for GHGs under Section 202(a) of the CAA. EPA held a 60-day public comment period, which ended June 23, 2009, and received over 380,000 public comments. These included both written comments as well as testimony at two public hearings in Arlington, Virginia and Seattle, Washington. EPA carefully reviewed, considered, and incorporated public comments and has now issued these Final Findings.

The EPA found that six GHGs taken in combination endanger both the public health and the public welfare of current and future generations. The EPA also found that the combined emissions of these GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare under CAA section 202(a). These Findings were based on careful consideration of the full weight of scientific evidence and a thorough review of numerous public comments received on the Proposed Findings published April 24, 2009. These Findings were effective on January 14, 2010.

Specific GHG Regulations that the U.S. EPA has adopted to date are as follows:

40 CFR Part 98. Mandatory Reporting of Greenhouse Gases Rule

This rule requires mandatory reporting of GHG emissions for facilities that emit more than 25,000 $MTCO_2e$ emissions per year. CO_2e is a quantity that describes, for a given mixture and amount of GHG, the amount of CO_2 that would have the same GWP, when measured over a specified timescale (generally, 100 years). It is also a measure for comparing CO_2 with other GHGs (which generally have a higher GWP), based on the amount of those other gases multiplied by the appropriate GWP factor, commonly expressed as $MTCO_2e$. CO_2e is calculated by multiplying the metric tons of gas by the appropriate GWP. Additionally, reporting of emissions is required for owners of SF_6- and PFC-insulted equipment when the total nameplate capacity of these insulating gases is above 17,280 pounds. The proposed project would not be expected to trigger GHG reporting according to the rule; however, GHG emissions of the proposed project are quantified in this Recirculated Draft Environmental Impact Report (RDEIR).

40 CFR Part 52. Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule

The U.S. EPA mandated application of the Prevention of Significant Deterioration (PSD) requirements to facilities whose stationary source CO_2e emissions exceed 75,000 tons per year.

National Climate Action Plan

In June 2013, the President enacted a national Climate Action Plan (Plan) that consisted of a wide variety of executive actions and had three pillars discussed below (EOP 2013).

Cut Carbon in America – The Plan consists of actions to help cut carbon by deploying clean energy such as cutting carbon from power plants, promoting renewable energy, and unlocking long-term investment in clean energy innovation.

Prepare the United States for Impacts of Climate Change – The Plan consists of actions to help prepare for the impacts through building stronger and safer communities and infrastructure by supporting climate resilient investments, supporting communities and tribal areas as they prepare for impacts, and boosting resilience of building and infrastructure; protecting the economy and natural resources by identifying vulnerabilities, promoting insurance leadership, conserving land and water resources, managing drought, reducing wildfire risks, and preparing for future floods; and using sound science to manage climate impacts.

Lead International Efforts – The Plan consists of actions to help the United States lead international efforts through working with other countries to take action by enhancing multilateral engagements with major economies, expanding bilateral cooperation with major emerging economies, combating short-lived climate pollutants, reducing deforestation and degradation, expanding clean energy use and cutting energy waste, global free trade in environmental goods and services, and phasing out subsidies that encourage wasteful use of fossil fuels and by leading efforts to address climate change through international negotiations.

In June of 2014, the Center for Climate and Energy Solutions (C2ES) published a one-year review of progress in implementation of the Plan (C2ES, 2014). The C2ES found that the administration had made marked progress in its initial implementation. Notable areas of progress included steps to limit carbon pollution from power plants; improve energy efficiency; reduce CH_4 and HFC emissions; help communities and industry become more resilient to climate change impacts; and end U.S. lending for coal-fired power plants overseas.

Greenhouse Gas Endangerment Findings

As of January 14, 2010, the U.S. EPA's finding that six GHGs, taken in combination, endanger the public health and the public welfare of current and future generations became effective. The U.S. EPA also found that the combined emissions of these GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution that endangers public health and welfare under CAA Section 202(a). Subsequently, federal agencies have adopted specific GHG-related regulations and initiatives, including:

Transportation/Mobile Sources

U.S. EPA and National Highway Traffic Safety Administration Standards to Cut Greenhouse Gas Emissions and Fuel Use for New Motor Vehicles: coordinated steps to enable the production of a new generation of clean vehicles.

Renewable Fuel Standard Program: transportation fuel sold in the United States is required to contain a minimum volume of renewable fuel.

Stationary Sources

Carbon Pollution Standards for Power Plants: In September 2013, the U.S. EPA proposed a rule to reduce carbon emissions from new power plants. On June 2, 2014, the U.S. EPA issued a proposal to cut carbon pollution from existing power plants (the "Clean Power Plan"). U.S. EPA's May 2015 "Unified Agenda" indicates that both of these rules are expected to be issued in August 2015.

Final Greenhouse Gas Tailoring Rule: On May 13, 2010, the U.S. EPA set GHG emissions thresholds to define when permits under the New Source Review PSD and Title V Operating Permit programs are required for new and existing industrial facilities. This final rule "tailors" the requirements of these CAA permitting programs to limit covered facilities to the nation's largest GHG emitters: power plants, refineries, and cement production facilities.

Timing of Applicability of the PSD Permitting Program to GHGs: On March 29, 2010, the U.S. EPA completed its reconsideration of the December 18, 2008, memorandum entitled "EPA's Interpretation of Regulations that Determine Pollutants Covered by Federal Prevention of Significant Deterioration (PSD) Permit Program" (the so-called "Johnson memo"). The final action confirmed that GHGs become covered under the PSD program on January 2, 2011, when the cars rule took effect.

In June 2014, the U.S. Supreme Court ruled that the U.S. EPA cannot classify facilities as major PSD or Title V sources based solely on its GHG emissions meeting the major source threshold. However, the Supreme Court said that the U.S. EPA could continue to require that PSD permits, required due to criteria pollutant emissions, contain Best Available Control Techniques (BACT) limits for GHG emissions. This ruling struck down Step 2 of the Tailoring Rule but kept in effect Step 1 (U.S. EPA, 2014).

Emissions Reporting

GHG Reporting Program: This program collects reported GHG emissions from facilities that emit more than 25,000 $MTCO_2e$ emissions per year. Additionally, reporting of emissions is required for owners of SF_6- and PFC-insulated equipment when the total nameplate capacity of these insulating gases is above 17,280 pounds. The Petroleum and Natural Gas Systems source category consists of onshore production; offshore production; natural gas processing; natural gas transmission; underground natural gas storage; natural gas distribution; liquefied natural gas import and export terminals; and liquefied natural gas storage equipment.

Notification Requirements for Gas Well Completions (40 CFR Parts 60 and 63): Air pollution standards established by the U.S. EPA under the New Source Performance Standard, Final Rule August 16, 2012, for oil and gas production require companies to provide notifications of natural gas well completions. The U.S. EPA expects to use the notifications required by the 2012 standards and ongoing technical studies through 2014 to make a foundation for determining how best to require additional control of methane and other air pollutants from the oil and gas sector, including completions and associated gas from ongoing production and hydraulically fractured oil wells.

State

Assembly Bill (AB) 1493

On July 22, 2002, Governor Gray Davis signed Assembly Bill (AB) 1493, also known as the Pavley Regulations or the Clean Car Standards. AB 1493 required the State to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of GHG emissions emitted by passenger vehicles and light-duty trucks. Subsequent regulations were adopted by CARB in September 2004.

The regulations were threatened by automaker lawsuits and were stalled by the U.S. EPA's initial denial to allow California to implement GHG standards for passenger vehicles. The U.S. EPA later granted California the authority to implement GHG emission reduction standards for new passenger cars, pickup trucks and sport utility vehicles on June 30, 2009. On September 24, 2009, the CARB adopted amendments to the Pavley regulations that reduce GHG emissions in new passenger vehicles from 2009 through 2016.

Executive Order S-3-05

Executive Order S-3-05 was established by Governor Arnold Schwarzenegger in June 2006. Executive Order S-3-05 establishes statewide emission reduction targets through the year 2050:

- By 2010, reduce greenhouse gas emissions to 2000 levels,
- By 2020, reduce greenhouse gas emissions to 1990 levels, and
- By 2050, reduce greenhouse gas emission to 80 percent below 1990 levels.

This Executive Order does not include any specific requirements that pertain to the proposed Project. However, actions taken by the State to implement these goals may affect the proposed Project, depending on the specific implementation measures that are developed.

Executive Order S-1-07

Issued on January 18, 2007, Executive Order S-1-07 sets a declining Low Carbon Fuel Standard for GHG emissions measured in CO2e grams per unit of fuel energy sold in California. The target of the Low Carbon Fuel Standard is to reduce the carbon intensity of California passenger vehicle fuels by at least 10 percent by 2020. The carbon intensity measures the amount of GHG emissions in the

lifecycle of a fuel, including extraction/feedstock production, processing, transportation, and final consumption, per unit of energy delivered. CARB adopted the implementing regulation in April 2009. The regulation is expected to increase the production of biofuels, including those from alternative sources, such as algae, wood, and agricultural waste. In addition, the Low Carbon Fuel Standard would drive the availability of plug-in hybrid, battery electric, and fuel-cell power motor vehicles. The Low Carbon Fuel Standard is anticipated to lead to the replacement of 20 percent of the fuel used in motor vehicles with alternative fuels by 2020.

Executive Order Executive Order B-30-15 – 2030 Statewide Emission Reduction Target

EO B-30-15 was signed by Governor Jerry Brown Jr. on April 29, 2015. This EO establishes an interim statewide GHG reduction target of 40 percent below 1990 levels by 2030, which is necessary to guide regulatory policy and investments in California in the midterm, and put California on the most cost-effective path for long-term emission reductions. Under this EO, all State agencies with jurisdiction over sources of greenhouse gas emissions will need to continue to develop and implement emissions reduction programs to reach the State's 2050 target and attain a level of emissions necessary to avoid dangerous climate change. According to CARB's Scoping Plan Update, this EO is in line with the scientifically established levels needed in the United States to limit global warming below 2°C - the warming threshold at which scientists say there will likely be major climate disruptions such as super droughts and rising sea levels (CARB, 2014).

Assembly Bill (AB) 32

AB 32, also known as the California Global Warming Solutions Act of 2006, was established to mandate the quantification and reduction of GHGs to 1990 levels by the year 2020. The law establishes periodic targets for reductions, and requires certain facilities to report emissions of GHGs annually. The legislation authorizes CARB to reduce emissions from certain sectors that contribute the most to statewide emissions of GHGs.

The AB 32 Scoping Plan identifies the strategies for achieving the maximum technologically feasible and cost-effective GHG reductions by 2020, and to maintain and continue reductions beyond 2020. The scoping plan includes a range of GHG emission reduction actions, which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a Cap-and-Trade system, and an AB 32 cost of implementation fee regulation to fund the program. The initial scoping plan was approved at the CARB Board hearing on December 12, 2008. CARB approved the First Update to the Scoping Plan in May 2014.

Senate Bill (SB) 97

Senate Bill (SB) 97, enacted in August 2007, required the Office of Planning and Research (OPR) to develop guidelines for the mitigation of GHG emissions or effects related to releases of GHG emissions. On April 13, 2009, OPR submitted proposed amendments to the California Natural Resources Agency (CNRA), in accordance with SB 97, regarding analysis and mitigation of GHG emissions. Formal rulemaking was conducted in 2009 prior to adopting the amendments.

As part of the guidelines, OPR recommends that CARB set statewide thresholds of significance and emphasized the need to have a consistent threshold available to analyze projects. The draft guidelines also noted that the analyses should be based on the best available information. As directed by SB 97, the CNRA adopted amendments to the State CEQA Guidelines for GHG emissions on December 30, 2009. On February 16, 2010, the Office of Administrative Law approved the amendments and filed them with the Secretary of State for inclusion in the California Code of Regulations. The amendments became effective on March 18, 2010.

Other Mobile Source Reduction Requirements

Several other State provisions address the GHG emissions reduction targets set by CARB for mobile sources, including trucks, passenger vehicles, trains, and ships. These measures include:

- Low Carbon Fuel Standard (EO S-01-07)
- Advanced Clean Cars Program
- SmartWay Truck Efficiency Regulation
- AB 32 Cap-and-Trade Program as applicable to transportation fuel suppliers (beginning January 1, 2015)
- SB 375 (Land Use Planning) including the development of a Sustainable Communities Strategy as part of a Metropolitan Planning Organization's Regional Transportation Plan.

In particular, SB 375 requires the Air Resources Board to set regional targets for GHG emission reductions from passenger vehicles and light duty trucks, and requires each regional Metropolitan Planning Organization (MPOs) to adopt a Sustainable Communities Strategy (SCS) into its regional transportation plan that would allow the region to meet its GHG emission reduction target. The Kern County Council of Governments adopted the SCS for Kern County as part of its Regional Transportation Plan (RTP) in 2014. The RTP and SCS incorporate forecasted development patterns, modeling and measures designed to integrate land use and transportation planning to reduce local and regional GHG emissions. Oil and gas resources, as well as other land uses, are components of the SCS. While SB 375 does not require local governments to amend their General Plans to implement the SCS, it provides incentives for them to do so. Implementation of SB 375 is expected to substantially reduce GHG emissions in the County and throughout the State.

California Air Pollution Control Officers Association (CAPCOA)

The California Air Pollution Control Officers Association (CAPCOA) is the association of air pollution control officers representing all 35 air quality agencies throughout California. CAPCOA is not a regulatory body, but it has been an active organization in providing guidance in addressing the CEQA significance of GHG emissions and climate change as well as other air quality issues. The GHG analysis set forth in this report has been informed, in part, by the expertise and methodologies described in the following documents published by CAPCOA: (1) CEQA & Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act (CAPCOA, 2008); and (2) Quantifying Greenhouse Gas Mitigation

Measures: A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures (CAPCOA, 2010). The methodologies used in this GHG analysis are consistent with the CAPCOA guidelines

California Environmental Quality Act (CEQA)

There are a variety of statewide rules and regulations which have been implemented or are in development in California which mandate the quantification or reduction of GHGs. Under CEQA, an analysis and mitigation of emissions of GHGs and climate change in relation to a project is required where it has been determined that a project will result in a significant addition of GHGs. Certain Air Pollution Control Districts (APCDs) have proposed their own thresholds of significance and /or best performance standards.

California Code of Regulations Title 24

Title 24 of the California Code of Regulations was established in 1978, and serves to enhance and regulate California's building standards. While not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically establishes energy efficiency standards for residential and non-residential buildings constructed in the State of California in order to reduce energy demand and consumption. Part 6 is updated periodically to incorporate and consider new energy efficiency technologies and methodologies. The current version of the California Building Code became effective January 1, 2017. Local agencies must ensure that development in their jurisdictions complies with guidelines contained in the California Building Code. Cities and counties can, however, adopt building standards beyond those provided in the code.

San Joaquin Valley Air Pollution Control District (SJVAPCD)

On December 17, 2009, the SJVAPCD's Governing Board adopted the first comprehensive regional policy and guidance on addressing and mitigating GHG emission impacts caused by industrial, commercial, and residential development in the San Joaquin Valley. This set of guidance documents is designed to assist local permitting agencies and businesses by answering several questions related to CEQA and how to address GHG impacts under existing CEQA law.

To assist Lead Agencies, project proponents, permit applicants, and interested parties in assessing and reducing the impacts of project specific GHG emissions on global climate change, the SJVAPCD has adopted the guidance: *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA* and the policy: *District Policy – Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency*. The following criteria was outlined in the document to determine whether a project could have a significant impact:

- Projects determined to be exempt from the requirements of CEQA would be determined to have a less than significant individual and cumulative impact for GHG emissions and would not require further environmental review, including analysis of project specific GHG emissions. Projects exempt under CEQA would be evaluated consistent with established rules and regulations governing project approval and would not be required to implement BPS.

- Projects complying with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the project is located would be determined to have a less than significant individual and cumulative impact for GHG emissions. Such plans or programs must be specified in law or approved by the lead agency with jurisdiction over the affected resource and supported by a CEQA compliant environmental review document adopted by the lead agency. Projects complying with an approved GHG emission reduction plan or GHG mitigation program would not be required to implement BPS.

- Projects implementing Best Performance Standards would not require quantification of project specific GHG emissions. Consistent with CEQA Guideline, such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions.

- Projects not implementing Best Performance Standards would require quantification of project specific GHG emissions and demonstration that project specific GHG emissions would be reduced or mitigated by at least 29 percent, compared to Business-as-Usual (BAU*), including GHG emission reductions achieved since the 2002-2004 baseline period. Projects achieving at least a 29 percent GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG.

- Notwithstanding any of the above provisions, projects requiring preparation of an Environmental Impact Report for any other reason would require quantification of project specific GHG emissions. Projects implementing BPS or achieving at least a 29 percent GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG.

Local

Metropolitan Bakersfield General Plan

The Metropolitan Bakersfield General Plan cites policies to provide decision-makers with long-range guidance affecting the future character of the Metropolitan Bakersfield planning area. The elements within the Metropolitan Bakersfield General Plan provide goals, policies, and implementation measures in order to reduce impacts of projects on air quality. Applicable goals relative to the proposed Project site within these elements are listed in Table 4.8-2, *Metropolitan Bakersfield General Plan Goals and Policies for Air Quality*, below.

Table 4.8-2. Metropolitan Bakersfield General Plan Goals and Policies for Air Quality

Goals and Policies: Air Quality
Conservation/Air Quality Goal #1: "Promote air quality that is compatible with health, well being, and enjoyment of life by controlling point sources and minimizing vehicular trips to reduce air pollutants."
Conservation/Air Quality Goal #2: Continue working toward attainment of Federal, State and Local standards as enforced by the San Joaquin Valley Air Pollution Control District."
Conservation/Air Quality Goal #3: "Reduce the amount of vehicular emissions in the planning area."

Table 4.8-2. Metropolitan Bakersfield General Plan Goals and Policies for Air Quality
Goals and Policies: Air Quality
Conservation/Air Quality Policy #1: "Comply with and promote San Joaquin Valley Unified Air Pollution Control District (SJVAPCD) control measures regarding Reactive Organic Gases (ROG). Such measures are focused on: (a) steam driven well vents, (b) Pseudo-cyclic wells, (c) natural gas processing plant fugitives, (d) heavy oil test stations, (e) light oil production fugitives, (f) refinery pumps and compressors, and (g) vehicle inspection and maintenance."
Conservation/Air Quality Policy #2: "Encourage land uses and land use practices which do not contribute significantly to air quality degradation."
Conservation/Air Quality Policy #3: "Require dust abatement measures during significant grading and construction operations."
Conservation/Air Quality Policy #4: Consider air pollution impacts when evaluating discretionary permits for land use proposals. Considerations should include: a) Alternative access routes to reduce traffic congestion, b) Development phasing to match road capacities, c) Buffers including increase vegetation to increase emission dispersion and reduce impacts of gaseous or particulate matter on sensitive uses."
Conservation/Air Quality Policy #11: "Improve the capacity of the existing road system through improved signalization and traffic control systems."
Conservation/Air Quality Policy #12: "Encourage the use of mass transit, carpooling and other transportation options to reduce vehicle miles traveled."
Conservation/Air Quality Policy #13: "Consider establishing priority parking areas for carpoolers in projects with relatively large numbers of employees to reduce vehicle miles traveled and improve air quality."
Conservation/Air Quality Policy #14: "Establish park and ride facilities to encourage car pooling and the use of mass transit."
Conservation/Air Quality Policy #16: "Cooperate with Golden Empire Transit [GET] and Kern Regional Transit to provide a comprehensive mass transit system for Bakersfield; require large-scale new development to provide related improvements, such as bus stop shelters and turnouts."
Conservation/Air Quality Policy #18: "Encourage walking for short distance trips through the creation of pedestrian friendly sidewalks and street crossings."
Conservation/Air Quality Policy #19: "Promote a pattern of land uses which locates residential uses in close proximity to employment and commercial services to minimize vehicular travel."

4.8.4 Impacts and Mitigation Measures

This section describes the air quality significance thresholds, the air quality methodology used to evaluate whether the proposed Project would exceed the thresholds, and an evaluation of the proposed Project's impacts.

Methodology

The primary source of emissions (approximately 50 percent) from the proposed Project is from mobile sources. There are a number of factors available for estimating the GHG from mobile sources. Not all GHGs exhibit the same ability to induce climate change; as a result, GHG contributions are commonly quantified in carbon dioxide equivalencies (CO_2e). The CO_2e portion of GHG emissions from the proposed Project were estimated using the URBEMIS2007 v9.2.4 program and the California Climate Action Registry (CCAR) General Reporting Protocol.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the CEQA Guidelines, to determine if a project could potentially have a significant impact. Such an impact would occur if the proposed project would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment;
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Project Impacts

Impact 4.8-1: The Project Would Generate Greenhouse Gas Emissions, Either Directly or Indirectly, That May Have a Significant Impact on the Environment.

Neither the SJVAPCD nor any other federal, state, or local agency has adopted a threshold to measure a project's impact on global climate change. Global climate change is an international phenomenon, and the regulatory background and scientific data are changing rapidly. In 2006, the California State Legislature adopted AB 32, the California Global Warming Solutions Act of 2006. AB 32 describes how global climate change would impact the environment in California. The impacts described in AB 32 include changing sea levels, changes in snow pack and availability of potable water, changes in storm flows and flood inundation zones, and other impacts.

The list of impacts included in AB 32 may be considered substantial evidence of environmental impacts requiring analysis in CEQA documents. AB 32 requires CARB, the State agency charged with regulating statewide air quality, to adopt rules and regulations that would achieve greenhouse gas emissions equivalent to statewide levels in 1990 by 2020. By July 1, 2007, CARB adopted a list of discrete early action GHG emission reduction measures that could be implemented by January 1, 2010.

As required by AB 32, CARB determined what the statewide GHG emissions level was in 1990, and approved a statewide GHG emissions limit that is equivalent to that level, to be achieved by 2020. CARB approved the 2020 limit on December 6, 2007. CARB's GHG inventory has estimated 427 million $MTCO_2e$ in California in 1990. In 2004, the emissions were estimated at 480 $MMTCO_2e$.

Climate Change Impacts on the Project

AB 32 indicates that "the potential effects of global climate change include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snow pack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidence of infections, disease, asthma, and other health-related problems" (AB 32, section 38501[a]).

According to the California Climate Change Center (CCCC), climate change impacts would affect all of the sectors considered in this report: sea level rise, agriculture, snowpack and water supply, forestry, wildfire risk, public health, and electricity demand and supply. Additionally, climate change could produce compounding impact. For instance, in the San Francisco Bay Delta, heightened sea levels and high river inflows from warmer storms would place levee systems in greater jeopardy of flooding. The CCCC indicates that some of the most dramatic climate change impacts would be experienced as increased frequency and severity of extreme events, such as heat waves, wildfires, flooding, and conditions conducive to air pollution formation.

The proposed Project must comply with Title 24 energy efficiency standards. Vehicles purchased by residents would produce fewer GHG emissions than those produced today with implementation of AB 1493. Regulations stemming from AB 32 would result in reductions in emissions from major sources such as electrical power generation and cement production. Although it is unknown if AB 32 alone is enough to reduce California's fair-share contribution to global GHG inventory, it is currently the only well-defined and widely accepted benchmark for GHG emissions in California. The threshold that is to be used for this proposed Project is as follows:

Would the project be consistent with California's strategies to reduce greenhouse gas emissions to the levels in AB 32?

This threshold is qualitative in nature, and is addressed as such in this analysis. Note that the thresholds and the analysis may not be relevant to other projects. Therefore, this analysis does not establish thresholds in Kern County.

Project GHG Inventory

The primary source of GHG emissions (approximately 50 percent) from the proposed Project during operation would result from mobile sources. Proposed Project construction and operational activities would generate GHG emissions. Criteria and GHG emissions were estimated using the California Emissions Estimator Model (CalEEMod) version 2013.2.2 (Insight Environmental Consultants 2017).

There are a number of factors available for estimating the GHGs from mobile sources. Not all GHGs exhibit the same ability to induce climate change; therefore, GHG contributions are commonly quantified in CO_2e.

The 2005 BAU and mitigated proposed Project emissions are summarized shown in Table 4.8-3, *Estimated Annual Greenhouse Gas Emissions*.

Table 4.8-3. Estimated Annual Greenhouse Gas Emissions

Source	CO_2	CH_4	N_2O	CO_2e
Construction Emissions				
2016 Construction Emissions	195.03	0.04	0.00	195.86
2017 Construction Emissions	536.28	0.07	0.00	537.67
2018 Construction Emissions	718.28	0.10	0.00	720.46
2019 Construction Emissions	361.72	0.06	0.00	362.99
2020 Construction Emissions	337.31	0.04	0.00	338.18
2021 Construction Emissions	685.16	0.10	0.00	687.26

Table 4.8-3. Estimated Annual Greenhouse Gas Emissions

Source	CO_2	CH_4	N_2O	CO_2e
2022 Construction Emissions	348.46	0.06	0.00	349.70
2023 Construction Emissions	333.10	0.04	0.00	333.93
2024 Construction Emissions	681.33	0.10	0.00	683.40
Operational Emissions				
Area Emissions	0.05	0.0001	0.00	0.05
Energy Emissions	10,814	0.41	0.13	10,862
Mobile Emissions	43,523	0.94	0.00	43,543
Waste Emissions	689.03	40.72	0.00	1,544.2
Water Emissions	1,103.1	18.64	0.45	1,633.0
Total Proposed Project Operational Emissions	*56,129*	*60.7*	*0.58*	*57,582*
Annualized Construction Emissions[1]	*139.89*	*0.02*	*0.00*	*140.32*
Proposed Project Emissions	**62,301**	**54.44**	**0.55**	**63,614**

Notes: emissions are measures in tons/year; 0.00 could represent <0.00

[1] Per South Coast AQMD's Methodology: Construction emissions are annualized over a 30-year period.

Source: Insight Environmental Consultants, 2017.

Emission Estimation Assumptions

The proposed Project's construction and operational GHG emissions were estimated using the CalEEMOD program and can be found in Appendix C. BAU emissions were calculated based on the proposed Project activities using 2005 regulations and technologies built into CalEEMod, available as defaults. According to the SJVAPCD, in order for the proposed Project to conform with the goals of AB32 at least a 29 percent reduction from the 2002-2004 BAU period by 2020 must be demonstrated (Insight Environmental Consulting 2017). Because 2002 to 2004 emission factors were not available in CalEEMod, year 2005 was used for BAU. Using 2005 as BAU results in more conservative emission reduction estimations as the emission factors in 2005 are lower (more efficient), thereby producing a smaller reduction between mitigated and BAU. Mitigated proposed project emissions were calculated using updated emission factors from CalEEMod for the anticipated years of operation and corresponding land uses (Insight Environmental Consultants 2017).

Electricity usage for industrial land uses was estimated using CCAR Protocol. The CCAR emission factors for electricity use are 804.54 pounds of CO_2 per megawatt hour (MWh), 0.0067 pounds of NH_4 per MWh, and 0.0037 pounds of N_2O per MWh.

The proposed Project does not contribute substantially to water vapor because water vapor concentrations in the upper atmosphere are primarily due to climate feedbacks rather than emissions from project-related activities.

The proposed Project would not result in the emissions of hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), or sulphur hexafluoride (SF_6), the other gases identified as GHG in AB 32. The proposed Project would be subject to any regulations developed under AB32, the California Global Warming Solutions Act of 2006, as determined by CARB. As demonstrated in Table 4.8-4, *Comparison of BAU and Proposed Mitigated Emissions (Tons/Year*), below, the mandated required 29 percent reduction needed to conform with AB 32 goals would be reached with already in place state regulations for mobile sources such as low carbon fuel standards. This would result in a 33 percent reduction from the proposed Project's BAU GHG operation emissions of 85,842 $MTCO_2e$ per year to 57,582 $MTCO_2e$ per year as shown in Table 4.8-4, *Comparison of BAU and Proposed*

Mitigated Emissions (Tons/Year). Therefore, the proposed project would be considered less than significant.

Table 4.8-4. Comparison of BAU and Proposed Project Mitigation Emissions (Tons/Year)

	2011 BAU	Proposed Project Mitigated (2020)
Co2e Emissions	85,842	57,582
Percent Reduction		33%

Source: Insight Environmental Consultants 2017.

Attorney General Mitigation Analysis

The Office of the California Attorney General maintains a website with a list of CEQA Mitigations for Global Climate Change Impacts. The Attorney General has listed some examples of types of mitigations that local agencies may consider in order to offset or reduce global climate change impacts from a project. The Attorney General assures that the presented lists are examples and not intended to be exhaustive but instead provides measures and policies that could be undertaken. Moreover, the measures cited may not be appropriate for every project, so the Attorney General suggests that the lead agency should use its own informed judgment in deciding which measures it would analyze, and which measures it would require, for a given project.

The Attorney General suggests measures that could be undertaken or funded by a diverse range of projects, related to energy efficiency; renewable energy; water conservation and efficiency; solid waste measures; land use measures; transportation and motor vehicles; and carbon offsets. Implementation of the required mitigation measures will reduce the project specific generated GHGs to a less than significant level as the project proponent will be required to off-set impacts by 29 percent below business as usual, thus achieving the mandated emission reduction targets established by AB 32. Additionally, the proposed Project is located in an area of similar type industrial development, and along State Route 99, thus allowing existing infrastructure s to serve multiple users. In conclusion, the proposed Project by its design and mitigation measures would satisfy many of the suggested measures proposed by the Attorney General, which are shown in Table 4.8-5 *California Greenhouse Gas Emissions Reduction Strategies*, below.

Table 4.8-5. California Greenhouse Gas Emission Reduction Strategies

Strategy	Project Design/Mitigation to Comply with Strategy
Vehicle Climate Change Standards: AB 1493 (Pavley) required the state to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of climate change emissions emitted by passenger vehicles and light duty trucks. Regulations were adopted by CARB in September 2004.	These are CARB enforced standards; vehicles that access the proposed Project that are required to comply with the standards would comply with these strategies.
Other Light Duty Vehicle Technology: New standards would be adopted to phase in beginning in the 2017 model.	
Heavy-Duty Vehicle Emission Reduction Measures: Increased efficiency in the design of heavy-duty vehicles and an education program for the heavy-duty vehicle sector.	

Table 4.8-5. California Greenhouse Gas Emission Reduction Strategies

Strategy	Project Design/Mitigation to Comply with Strategy
Diesel Anti-Idling: In July 2004, CARB adopted a measure to limit diesel-fueled commercial motor vehicle idling.	Project would be subject to State law.
Hydrofluorocarbon Reduction: 1) Ban retail sale of HFC in small cans; 2) Require that only low GWP refrigerants be used in new vehicular systems; 3) Adopt specifications for new commercial refrigeration; 4) Add refrigerant leak-tightness to the pass criteria for vehicular Inspection and Maintenance programs; 5) Enforce federal ban on releasing HFCs.	This measure applies to consumer products. When CARB adopts regulations for these reduction measures, any products that the regulations apply to would comply with the measures.
Transportation Refrigeration Units (TRU), Off-Road Electrification, Port Electrification: Strategies to reduce emissions from TRUs, increase off-road electrification, and increase use of shore-side/port electrification.	Not applicable.
Manure Management: The proposed San Joaquin Valley Rule 4570 will reduce volatile organic compounds from confined animal facilities through implementation of control options.	Not applicable.
Alternative Fuels - Biodiesel Blends: CARB would develop regulations to require the use of 1 to 4 percent biodiesel displacement of California diesel fuel.	Not applicable.
Alternative Fuels - Ethanol: Increased use of ethanol fuel.	Not applicable.
Achieve 50 percent Statewide Recycling Goal: Achieving the State's 50 percent waste diversion mandate as established by the Integrated Waste Management Act of 1989, (AB 939, Sher, Chapter 1095, Statutes of 1989), will reduce climate change emissions associated with energy intensive material extraction and production as well as methane emission from landfills. A diversion rate of 48 percent has been achieved on a statewide basis. Therefore, a 2 percent additional reduction is needed.	Consistent with Mitigation in Section 4.17, UTILITIES, which requires construction recycling within the proposed Project.
Zero Waste - High Recycling: Additional recycling beyond the State's 50 percent recycling goal.	Consistent with Mitigation in Section 4.17, UTILITIES, which requires construction recycling within the proposed Project.
Landfill Methane Capture: Install direct gas use or electricity projects at landfills to capture and use emitted methane.	Not applicable.
Urban Forestry: A new statewide goal of planting 5 million trees in urban areas by 2020 would be achieved through the expansion of local urban forestry programs.	Consistent. Project would be subject to landscaping standards identified in the Kern County Zoning Ordinance.
Afforestation/Reforestation Projects: Reforestation projects focus on restoring native tree cover on lands that were previously forested and are now covered with other vegetative types.	Not applicable. The proposed Project area was not forested in recent times.
Water Use Efficiency: Approximately 19 percent of all electricity, 30 percent of all natural gas, and 88 million gallons of diesel are used to convey, treat, distribute and use water and wastewater. Increasing the efficiency of water transport and reducing water use would reduce greenhouse gas emissions.	Consistent with Mitigation.

Table 4.8-5. California Greenhouse Gas Emission Reduction Strategies

Strategy	Project Design/Mitigation to Comply with Strategy
Building Energy Efficiency Standards in Place and in Progress: Public Resources Code 25402 authorizes the CEC to adopt and periodically update its building energy efficiency standards (that apply to newly constructed buildings and additions to and alterations to existing buildings).	Consistent with Mitigation. Mitigation requires a 29 percent decrease of annual GHG emissions.
Appliance Energy Efficiency Standards in Place and in Progress: Public Resources Code 25402 authorizes the Energy Commission to adopt and periodically update its appliance energy efficiency standards (that apply to devices and equipment using energy that are sold or offered for sale in California).	Project would be consistent with State law.
Cement Manufacturing: Cost-effective reductions to reduce energy consumption and to lower carbon dioxide emissions in the cement industry.	Consistent with mitigation. The specific use is not proposed at this time. Mitigation requires GHG emission reductions regardless of the proposed project. Additionally, the preparation of a Precise Development (PD) Plan prior to the commencement of any ground disturbing activities will be required. The PD requirement will allow for additional review of any specific use and the incorporation of specific conditions to ensure compliance with State law, consistency with any locally adopted plans and compatibility with surrounding uses.
Smart Land Use and Intelligent Transportation Systems (ITS): Smart land use strategies encourage jobs/housing proximity, promote transit-oriented development, and encourage high-density residential/ commercial development along transit corridors. ITS is the application of advanced technology systems and management strategies to improve operational efficiency of transportation systems and movement of people, goods and services. Governor Schwarzenegger is finalizing a comprehensive 10-year strategic growth plan with the intent of developing ways to promote, through state investments, incentives and technical assistance, land use, and technology strategies that provide for a prosperous economy, social equity, and a quality environment.	The proposed Project is consistent with this strategy as the project is located along an existing State Highway. The site is located in an area with other similar type development, thus allowing all uses to capitalize on existing industrially related infrastructure.
Smart land use, demand management, ITS, and value pricing are critical elements for improving mobility and transportation efficiency. Specific strategies include: promoting jobs/housing proximity and transit-oriented development; encouraging high density residential/commercial development along transit/rail corridor; valuing and congestion pricing; implementing intelligent transportation systems, traveler information/ traffic control, incident management; accelerating the development of broadband infrastructure; and comprehensive, integrated, multimodal/ intermodal transportation planning.	Refer to response, above.
Enteric Fermentation: Cattle emit methane from digestion processes. Changes in diet could result in a reduction in emissions.	Not applicable.

Table 4.8-5. California Greenhouse Gas Emission Reduction Strategies

Strategy	Project Design/Mitigation to Comply with Strategy
Green Buildings Initiative: Green Building Executive Order, S-20-04 (CA 2005), sets a goal of reducing energy use in public and private buildings by 20 percent by the year 2015, as compared with 2003 levels. Consistent with Mitigation.	Mitigation requires compliance with State law and includes increased GHG emission reduction requirements.
California Solar Initiative: Installation of 1 million solar roofs or an equivalent 3,000 MW by 2017 on homes and businesses; increased use of solar thermal systems to offset the increasing demand for natural gas; use of advanced metering in solar applications; and creation of a funding source that can provide rebates over 10 years through a declining incentive schedule.	Not applicable.

Source: Insight Environmental Consulting, 2017.

Feasible and Reasonable Mitigation

CEQA, as well as the SJVAPCD Rule 9510, requires that all feasible and reasonable mitigation be applied to the proposed Project to reduce the impacts from construction and operations on air quality. The SJVAPCD's "Non-Residential On-Site Mitigation Checklist" was utilized in preparing the mitigation measures and evaluating the proposed Project's features. These measures include using controls that limit the exhaust from construction equipment and using alternatives to diesel when possible. Additional reductions will be achieved through the regulatory process of the air district and CARB as required changes to diesel engines are implemented which will affect the product delivery trucks and limits on idling.

While it is not possible to determine whether the proposed Project individually would have a significant impact on global warming or climate change, the proposed Project emissions will constitute a small fraction of the statewide GHG emissions. The strategies currently being implemented by CARB would help in reducing the proposed Project's GHG emissions and are summarized above in Table 4.8-5*, California Greenhouse Gas Emission Reduction Strategies*, above.

The impacts on global warming and climate change are indirect, not direct, and the emissions cannot be correlated with specific impacts based on currently available science. Climate change is a worldwide phenomenon, and local government lacks the expertise, or regulatory authority, to develop the scientific tools and policy needed to select a CEQA significance threshold for climate change or GHG emissions. The proposed Project will be subject to any regulations or requirements adopted under AB 32 or imposed by the state or federal government. In addition, as mentioned above, the proposed Project would result in a 33 percent reduction from the proposed Project's BAU GHG operation emissions of 85,842 $MTCO_2e$ per year to 57,582 $MTCO_2e$ per year as shown in Table 4.8-4, *Comparison of BAU and Proposed Project Mitigation Emissions (Tons/Year)*. Therefore, the proposed Project would be considered less than significant. The determination of project level significance, is therefore, considered less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.8-2: The Project Would Conflict with an Applicable Plan, Policy or Regulation Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases.

At of the time of this writing, the County of Kern does not have an adopted GHG Climate Action Plan. Implementation of the proposed project with the identified mitigation measure to reduce business as usual (BAU) GHG emissions by 29 percent is consistent with standards established by the CARB and the California Global Warming Solutions Act of 2006. As such, impacts are considered less than significant.

Mitigation Measures

Implement Mitigation Measure MM 4.3-1, as described in Section 4.3, *Air Quality*.

Level of Significance after Mitigation

Impacts would be less than significant.

Cumulative Impacts

While it is not possible to determine whether the proposed Project individually would have a significant impact on global warming or climate change, the proposed Project clearly would contribute to cumulative GHG emissions in California (see Table 4.8-3) as well as related potential health effects.

Kern County and the SJVAB currently do not have GHG inventories. On December 6, 2007, the CARB established a GHG emissions limit based on the 1990 level for the year 2020 and adopted regulations requiring mandatory reporting of GHGs for large facilities. After a year of investigation, CARB has established that the state's 1990 emissions are 427 million $MTCO_2e$. Preliminary estimates indicate that 2020 emission projections could be 600 million $MTCO_2e$ if no actions are taken to reduce GHGs ("business as usual" scenario). CARB determined that California must prevent 173 million tons of CO_ee from being emitted by 2020 in order to meet the 1990 level as required by AB 32.

The main contribution of GHG emissions from the proposed Project is from motor vehicles trips. Transportation sources account for approximately 42 percent of California's total GHG emissions. The proposed Project's emissions would, therefore, contribute to the increase in emissions. The effect on these emissions from other anticipated actions by CARB to address transportation issues, such as the development of fuels with less carbon, is not known at this time.

However, without the necessary science and analytical tools, it is not possible to assess, with certainty, whether the proposed Project's contribution would be cumulatively considerable within the meaning of State CEQA Guidelines Sections 15065(a)(3) and 15130. CEQA, however, does note that more severe environmental problems have lower thresholds for determining that a proposed Project's contribution to cumulative impacts is significant. Given the position of the legislature in AB 32, which

states that global warming poses serious detrimental effects, and the requirements of CEQA for the lead agency to determine that a project not have a cumulatively considerable contribution, the effect of 57,582 $MTCO_2e$ can be considered cumulatively considerable. This determination is based on the lack of clear scientific or other criteria for determining the significance of the proposed Project's contribution to the already-degraded air quality in the SJVAB

State CEQA Guidelines Section 15130 notes that sometimes the only feasible mitigation for cumulative impacts may involve the adoption of ordinances or regulations rather than the imposition of conditions on a project-by-project basis. Global climate change is this type of issue. Causes and effects are not just regional or statewide, they are worldwide. Given the uncertainties in identifying, let alone quantifying, the impact of any single project on global warming and climate change, and the efforts made to reduce emissions of GHGs from the project through design, in accordance with State CEQA Guidelines Section 15130, any further feasible mitigation will be accomplished through CARB regulations adopted pursuant to AB 32. The cumulative impacts of the proposed Project to global climate change as demonstrated in Table 4.8-4, above, would achieve greater than the required 29 percent reduction needed to conform with AB 32 goals.

Mitigation Measures

Implement Mitigation Measure MM 4.3-1, as described in Section 4.3, *Air Quality*.

Level of Significance after Mitigation

Cumulative impacts on global climate change and associated health effects are considered significant. and unavoidable.

This Page Intentionally Left Blank

Section 4.9

Hazards/Hazardous Materials

Section 4.9
Hazards/Hazardous Materials

4.9.1 Introduction

The purpose of this section is to identify, to the extent feasible, the potential for hazards associated with historic and current site uses, surrounding sites and recognized environmental conditions (RECs) in connection with the proposed Project site and to identify potential risks to human health, including future residents surrounding the site, users of the proposed Project site, workers and construction workers. A Hazardous Materials Evaluation was prepared by McIntosh & Associates in November 2008 and a subsequent Hazardous Materials Evaluation was prepared by McIntosh & Associates in July 2017. In addition, A Petroleum and Natural Gas Pipeline Assessment was prepared by McIntosh & Associates in July 2017. See Appendix F, *Hazardous Materials Evaluation*, Appendix G, *Petroleum and Natural Gas Pipeline Assessment*, and Appendix N, *Original Technical Studies*.

4.9.2 Environmental Setting

Local Character

The proposed Project site is undeveloped and is used mainly for agricultural purposes. A shop building is located in the easternmost portion of the Project site, near South Union Avenue. According to the California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR), the proposed Project is not located within an oil or gas field. There is one plugged and abandoned well with the proposed Project boundaries. A Pacific Gas and Electric (PG&E) natural gas transmission pipeline, number L-300B, traverses the site at a diagonal from northwest to southeast. Six pole-mounted electrical transformers (PMT) were observed within and adjacent to the proposed Project boundaries.

Surrounding Property Uses

Existing rural residential, agricultural, and commercial/light industrial land uses currently surround the proposed Project. The land uses for the adjacent properties is presented in the Table 4.9-1, *Surrounding Land Uses.*

Table 4.9-1. Surrounding Land Uses

Location	Adjacent Roads	Land Use
North	DiGiorgio Road Unpaved Western	Agricultural and roadway uses are present to the north. The land is designated R-IA (Resource-Intensive Agriculture), LMR (Low Medium Density Residential, 4 to 10 units per acre), HMR (High Medium Density Residential, 7.26 to 17.42 units per acre), SR (Suburban, 4 units per acre), GC (General Commercial)

Table 4.9-1. Surrounding Land Uses

Location	Adjacent Roads	Land Use
South	Houghton Road	Undeveloped agriculture land and State Route (SR) 99 off-ramp south of Houghton Road. The land is designated as R-IA (Resource-Intensive Agriculture), RR (Rural Residential, 2½ acres per unit), HC (Highway Commercial).
East	South Union Avenue is adjacent to 40 acres in the eastern most portion	Agricultural and rural residential with corralsand equestrian facilities, and mobile homes along South Union Avenue and on the northeast, east and southeast adjacent to the proposed project. There is an automobile wrecking yard (Higgins Auto Wrecking, 12825 South Union Avenue) located adjacent to the southeast portion of the proposed project. The land is designated as R-IA (Resource-Intensive Agriculture), RR (Rural Residential), SI (Service Industrial)
West	SR-99	SR-99 and undeveloped agricultural land. The land is designated as PT (Public Transportation) and R-IA (Resource-Intensive Agriculture)

Historical Use of Property

In 1934, an exploratory oil well was drilled; however, it failed to produce and was abandoned in 1935. The proposed Project has remained undeveloped and has been utilized for agricultural purposes from 1940's to the present. Currently there are approximately 63 acres of alfalfa being grown along the south portion of the Project site, and the balance of the Project site is fallow due to the recent drought conditions but has been prepared to resume farming operations.

A steel shop building is located on the east side of the Project site, near South Union Avenue along Lamb Avenue and was probably used for field equipment, vehicle maintenance, and storage. A retention basin, used for agricultural purposes, is located on the south edge of the Project site at the Houghton Road/Chevalier Road intersection.

A 34-inch diameter high pressure gas transmission pipeline (Line 300B), owned and operated by PG&E, traverses the Project site. The pipeline is marked at the east boundary of South Union Avenue and at the west boundary adjacent to State Route (SR) 99. There is a 6-inch natural gas distribution pipeline operated by Pacific Gas and Electric Company that is located on the west side of the South Union Avenue.

Aerial photographs were provided by Kern County Public Works Department and Western Photogrammetrics. Additionally, aerial photographs from Google Earth online website for the years 2008, 2009, 2011, 2012, 2013, 2014, 2015, and 2016 were reviewed to assess the history of the proposed Project site. (McIntosh & Associates 2017; refer to Appendix F and Appendix N). The following provides a summary of the aerial photographs:

1937: The project site is visible as fallow land. Some scarring from sheet-flooding is visible trending generally north to south. South Union Avenue is visible along the east boundary of the Project site. Small farms and rural residences are visible to the northeast, east, and south.

1952: A grove of trees is visible adjacent to South Union Avenue in the northeast corner of the easternmost portion of the Project site. Two parcels appear to be under cultivation.

Houghton Road is visible along the south boundary of the site. Two small farms/rural residences are visible in the parcel currently occupied by Higgins Auto Wrecking, near the south boundary of the site. The rural residence and corrals immediately north of the easternmost portion of the Project site is visible in this aerial photograph. Agricultural land is visible to the north, south, east, and west.

1956: The proposed Project site appears to be under cultivation with the exception of two fallow portions of the site. The on-site location of the west irrigation well and the concrete ditch are visible. Conditions on the adjacent properties appear relatively similar to those noted in the 1952 aerial photograph.

1963: SR 99 is visible along the west boundary of the Project site, having opened in 1961. The "cloverleaf" on- and off-ramps at Houghton Road, adjacent to the southwest corner of the Project site, appear to be under construction. On- and off-site conditions appear relatively similar to those noted in the 1956 and 1952 aerial photographs.

1975: Plowed/cultivated land has replaced trees in the easternmost portion of the Project site. A clearing with a small structure, possibly a small shed or shop, is visible in the east portion of the site. The south tailwater pit located near Houghton Road is visible. The SR-99/ Houghton Road interchange has been completed, and a dairy appears to be visible on the west side of SR-99, opposite the south half of the proposed Project. The original PG&E natural gas pipeline station is visible adjacent to South Union Avenue. Additional off-site conditions appear relatively similar to those viewed in the 1963 aerial photograph.

1981: A large oak tree is visible in the west part of the site, where the domestic well is located. The north portion of the site appears fallow. Rows of wrecked automobiles are visible at the location of Higgins Auto Wrecking, adjacent to the southern Project boundary. Additional on- and off-site conditions appear relatively similar to those noted in the 1975 aerial photograph.

1990: The steel shop building is visible in the small clearing in the west part of the easternmost portion of the Project site. On- and off-site conditions appear relatively similar to those noted in the 1981 aerial photograph.

1995: Conditions on- and off-site appear relatively similar to those noted in the 1990 aerial photograph. Mobile home lots are visible off-site, located north of the easternmost proposed Project boundary. North of the proposed Project, at a distance of 0.5-mile or greater, several residential subdivisions are visible.

2000: On- and off-site conditions appear relatively similar to those noted in the 1995 aerial photograph.

2002: Conditions on- and off-site appear relatively similar to those observed on the 1995 and 2000 aerial photographs.

2003: Conditions on- and off-site appear relatively similar to those observed on the 1995, 2000, and 2002 aerial photographs. More than 50 percent of the land comprising the proposed Project appears fallow or recently plowed.

2006: Conditions on- and off-site appear relatively similar to those observed on the 1995, 2000, 2002, and 2003 aerial photographs. Approximately 50 percent of the land comprising the proposed Project site appears to have been cultivated with alfalfa.

2008: The proposed Project is comprised of agricultural land. Portions of the Project site have crops growing, and the rest has been disked. A brushy retention basin in on the south edge of the Project site and has been used for agriculture purposes. A steel shop building is located on the east side of the Project site near South Union Avenue along Lamb Avenue. The proposed Project is adjacent to other related agricultural land, rural residential properties, and an automobile wrecking yard (Higgins Auto Wrecking).

2009: Conditions on the proposed Project and other adjacent properties appear relatively similar to those observed in the year 2008 and 2009 aerial photograph

2011: Conditions on the proposed Project and other adjacent properties appear relatively similar to those observed in the year 2008 and 2009 aerial photograph

2013: Conditions on the proposed Project and other adjacent properties appear relatively similar to those observed in the year 2008, 2009, and 2011 aerial photograph.

2014: Conditions on the proposed Project and other adjacent properties appear relatively similar to those observed in the year 2008, 2009, 2011, and 2012 aerial photograph.

2015: Conditions on the proposed Project and other adjacent properties appear relatively similar to those observed in the year 2008, 2009, 2011, 2012, 2013, and 2014 aerial photograph.

2016: The conditions on the proposed Project and other adjacent properties appear relatively similar to those observed in the years 2008,2009, 2011,2012, 2013, 2014 and 2015. The proposed Project is comprised of agricultural land. A portion of the proposed Project has crop growing, and the remained of the Project site has been disked in preparation for cultivation. A brushy retention basin is on the south edge of the Project site and has been used for agriculture purposes. A steel shop building is located on the east side of the Project site, near South Union Avenue along Lamb Avenue. The proposed Project is adjacent to other related agricultural land, rural residential properties, and an automobile wrecking yard (Higgins Auto Wrecking).

Records Review

A review of regulatory agency records was conducted for the site and surrounding one-mile radius. The following documents have been reviewed: U.S. Environmental Protection Agency (EPA) Toxic Release Inventory (TRI) records; California Air Resources Board (CARB) Community Health Air Pollution Information System (CHAPIS) records, EDR Report; DOGGR records; Kern County

Environmental Health Serves Department (KCEHSD) records; and Kern County Agricultural Commissioner records.

U.S. EPA Toxic Release Inventory (TRI)

Toxics Release Inventory (TRI), a US EPA database, contains information on toxic chemical releases. The 2006 TRI Explorer Chemical Releases Report for Bakersfield area facilities provides information on all regulated industries in Kern County. The report indicated that 1,591,813 pounds of various chemicals and hazardous wastes were disposed to Class I Underground Injection Wells, RCRA Subtitle C Landfills, and other unspecified landfills during the 2006 calendar year. The TRI Explorer report also indicated that 104,181 pounds of point-source air emissions and 61,211 pounds of fugitive air emissions were released into the atmosphere in 2006. This data was released by the EPA to the public on February 21, 2008.

The proposed Project was not identified in the 2006 TRI Explorer report, and no other sites were identified within a one-mile radius of the proposed Project. Additionally, the proposed Project was not identified in the 2017 US EPA TRI Facilities for Explorer Chemical Releases Report for Bakersfield, California area facilities, and no other properties were identified within a one-mile radius of the proposed project. This data was released by the US EPA data source and updated June 2, 2017 (McIntosh & Associates 2017; refer to Appendix F).

California Air Resources Board (CARB) CHAPIS Hazardous Air Pollutant Records

Toxic air pollutants are chemicals that have the potential to cause adverse health effects, such as cancer, birth defects, and organ damage. The online CHAPIS records were reviewed June 2017 and are listed from the year 2015 database for emissions by facilities and reflect the most current data available. The proposed Project was not identified with any emission inventory, and one-mile radius of the proposed project was not identified with any emission inventory and/or any facilities were identified (McIntosh & Associates 2017; refer to Appendix F).

The closest emission facility is Kern Oil & Refining Company located at 7724 East Panama Lane, in Bakersfield. It is approximately 5.75 miles northeast of the proposed Project with Particulate Matter Emissions of 5.671 tons for the year 2015 (McIntosh & Associates 2017; refer to Appendix F).

Environmental Data Resources, Inc. (EDR) Report

In July 2008, an Environmental Data Resources, Inc. (EDR) Radius Search was conducted for the proposed Project site and properties within a one-mile radius. The EDR report includes: 1) search of Federal, State and local agencies environmental records and 2) search for information about the physical setting of the sites and their surroundings. A copy of the EDR Report is included in Appendix N, *Original Technical Studies*.

The search of Federal, State, and local agencies environmental records found no records for the proposed Project site. Three facilities were identified on one or more of the databases searched for the EDR report. In addition, five “orphan sites” were identified in the EDR report. “Orphan sites” are sites that the EDR report cannot map due to insufficient information.

The EDR report indicated that two water wells are located on-site. The irrigation wells were listed by their U.S. Geological Survey well numbers. The west on-site irrigation well was correctly identified as well no. 31S28E-7P1, and the northwest on-site water well was correctly identified as well no. 31S28E-7D1. The total depths for both wells were not reported.

Lamb Chops

Lamb Chops, a Solid Waste/Landfill-listed facility, is located at 12336 South Union Avenue. Its agricultural composting operation was listed at the address of 300 Buena Vista Road. The permitted manure throughput for the composting facility was 1,000 cubic yards per day, and its permitted capacity was 2,500 cubic yards per day. The Lamb Chops composting facility was closed on March 31, 1999.

Young's Commercial Transfer (YCT)

Young's Commercial Transfer (YCT), is located at 300 Buena Vista Road, and is listed on the following databases: Hazardous Waste and Substances Sites (CORTESE); Leaking Underground Storage Tank (LUST); Historical Underground Storage Tank (HIST UST); State Facility Inventory Database (CA FID) UST; and Statewide Environmental Evaluation and Planning System (SWEEPS) Underground Storage Tank (UST).

The CORTESE database identifies public drinking water wells with detectable levels of contamination, hazardous substance sites selected for remedial action, sites with known toxic materials identified through the abandoned site assessment program, sites with USTs having a reportable release, and all solid waste sites from which there is known migration. No details were listed by CORTESE for YCT, and it is not considered a direct or indirect threat to the project site.

The LUST database contains reported leaking UST incidents that originate within the State Water Resources Control Board's Hazardous Substance Storage Container Database. YCT had operated two diesel USTs that leaked into soil only. The case was opened by KCEHSD, on March 4, 1992, and the last reporting date was October 3, 1994; the case was closed.

The HIST UST database contains listings from the State Water Resources Control Board (SWRCB). The diesel USTs were removed from the former YCT facility in 1992 had been installed in 1972 and 1973, respectively.

CA FID UST identified the former YCT facility as located within one-half to one mile of the proposed Project site. SWEEPS UST database identifies two diesel USTs with capacities of 10,000 gallons each on the YCT facility. No further details were provided.

Limi Brothers Farm

The CA FID UST database identified Limi Brothers Farm shop facility located at 11437 South Union Avenue. No further details were provided.

Orphan Sites

No orphan sites were identified less than one mile from the project site. The nearest sites are located at the junction of Taft Highway (SR-119) and SR-99, more than one mile to the north-northwest of the proposed Project. All of the orphan sites are off-site fueling stations/minimarts and none are situated upgradient of the proposed Project. These orphan sites are located at sufficient distances from the proposed Project such that they present no significant risks to the Project site.

Kern County Environmental Health Services (KCEHS) Department Records

The KCEHS was contacted in July 2008 regarding any records associated with aboveground storage tanks (ASTs), USTs, hazardous materials business plans (HMBPs), or hazardous materials incident reports (HMIRs) for the proposed Project site and surrounding locations. One soil remediation report was on file for the proposed Project site, in the location of the irrigation water wells. The remediation report for the proposed Project site was approved by KCEHS and a closure letter was issued on December 1, 2006. No other records were identified for the proposed Project.

One HMBP was identified for Higgins Auto Wrecking and two UST removal files were identified for Louis Limi Farm Shop and Young's Commercial Storage. The KCEHS issued a closure letter on for Louis Limi Farm Shop on October 8, 1991 and a closure letter for young's Commercial Storage on October 3, 1994. At the time the three facilities identified through KCEHS records review do not appear to represent current and/or material environmental risks to the Project site.

On June 26, 2017, KCEHS was contacted regarding the potential for records associated with Aboveground Storage Tanks (ASTs), Underground Storage Tanks (USTs), HMBPs, or Hazardous Materials Incident Reports (HMIRs) for the Project site and within a one-mile radius of the Project site. No HMBPs were on file with KCEHS for the Project site. However, KCEHS reported one Soil Remediation report and three UST removal files. KCEHS also reported several sites with a history of spills and Hazardous Material Business Inventories. Those sites specifically noted in the Hazardous Materials Evaluation (McIntosh & Associates 2017) are summarized below. Refer to Appendix F, *Hazardous Materials Evaluation*, and Appendix G, *Petroleum and Natural Gas Pipeline Assessment*, for further detail.

99 Houghton Industrial Park

In 2006, petroleum hydrocarbon impacted soil was observed in the vicinity of the location of two on-site irrigation wells along the west boundary, and in the northwest corner of, the Project site. Observations regarding soil were also made surrounding a waste oil AST, adjacent to a steel shop building located on the east side near South Union Avenue along Lamb Avenue (refer to Appendix F, *Hazardous Materials Evaluation*).

The Hazardous Materials Evaluation (McIntosh & Associates 2017) also notes information regarding characterizations and cleanups of petroleum hydrocarbon contaminated soil at the two irrigation wells and the waste oil AST in 2006. Impacted, non-hazardous soil, totaling 21.1 tons, was removed and transported to the McKittrick Waste Treatment Site in western Kern County for disposal and/or recycling. Confirmation samples were collected from each of the three on-site locations to ensure that the impacted soil had been removed to appropriate levels as required by the KCEHS. KCEHS issued

a December 1, 2006 closure letter indicating that no further action was required (refer to Appendix F, *Hazardous Materials Evaluation*).

Richard Limi Custom Harvesting

Richard Limi Custom Harvesting is located at 11437 South Union Avenue, approximately 0.45 miles northeast of the proposed Project. On September 19, 1991, one 10,000-gallon capacity, single wall, steel, diesel UST was removed for off-site destruction. Soil samples collected two feet beneath the dispenser exhibited diesel at 36 milligrams per kilogram (mg/kg), less than the KCEHS action level of 100 mg/kg. Groundwater was not affected. KCEHS subsequently issued a closure letter dated October 8, 1991, indicating that no further action was required (refer to Appendix F, *Hazardous Materials Evaluation).*

KCEHS did a routine Hazardous Material Business Plan Inventory (HMBPI) Inspection and Hazardous Waste Generator Inspection on May 26, 2015 at the site. No violations were observed. Limited materials are stored on-site and consist of gear oil, hydraulic oil, and motor oil (55 gallons each), used oil filters (350 pounds), waste oil (500 gallons, and oxygen (250 cubic feet) (refer to Appendix F, *Hazardous Materials Evaluation*).

Young's Commercial Transfer Company

Young's Commercial Transfer Company is located at 300 Buena Vista Road, approximately 0.21 miles east from the proposed Project. On February 18, 1992, two 10,000-gallon capacity, single-wall, steel, diesel USTs were removed and soil samples from under the tank were taken and analyzed. Approximately, 1,000 cubic yards of diesel impacted soil were removed from the former tank settings and bio-remediated on-site between November 1992 and July 1994. Monitoring wells indicated that petroleum hydrocarbons were not detected in groundwater during monitoring activities. A site closure report/letter dated August 11, 1994 indicating that no further action is needed at this site in relation to the former diesel underground tank (McIntosh & Associates 2017; refer to Appendix F, *Hazardous Materials Evaluation*).

Souza Properties

Souza Properties is located 9869 South Union Avenue approximately one-mile northeast of the proposed Project site. In March 1993, a fluid sample was taken from a small waste oil sump and it was determined that future testing was needed. On May 21, 1993 five USTs were removed and soil samples indicated that significant contamination existed beneath the tanks to a depth of 45 feet. On May 23, 1994, a Remedial Action Plan was implemented and excavation to 51 feet was undertaken. A total of 900 cubic yards of soil was removed and spread on-site to be treated via bioremediation and aerated. A closure letter was issues dated November 15, 1994 (McIntosh & Associates 2017; refer to Appendix F, *Hazardous Materials Evaluation*).

DOGGR Records

The primary mineral resource currently under development in portions of Kern County is oil. The proposed Project is located outside the administrative boundaries of any oil or gas field. DOGGR

Wildcat Map 4-2 and records searched as part of the records review for the Hazardous Materials Evaluation identified one plugged and abandoned exploratory oil well. The exploratory well, "Sea Cliff-Houghton" 1, was drilled by the Big McKittrick Oil Company of California between November 1934 and June 1935. The oil well was a dry hole that was subsequently abandoned by October 1935. Because the well was filled only with drilling mud prior to abandonment in 1935, the DOGGR requires that the well be reabandoned to current standards prior to construction.

DOGGR Wildcat Map W4-2 indicates that the nearest active producing oil fields are: the Mountain View Field approximately 4.75 miles northeast of the Project site; the Stockdale Field approximately 4.1 miles northwest of the Project site; and the Lakeside Field approximately 7.7 miles west of the Project site. The nearest producing gas field is the Paloma Field approximately 7.1miles southwest of the Project site (McIntosh & Associates 2017; refer to Appendix G, *Petroleum and Natural Gas Pipeline Assessment*).

Kern County Agricultural Department and Measurement Standards (Agricultural Commissioner)

The Kern County Agricultural Department and Measurement Standards (Agricultural Commissioner) has a monitoring program that maintains information about the farming companies, agricultural activities and pesticides use. A Restricted Materials Permit (RMP), obtained from the Agricultural Commissioner, is required for the application of chemicals to crops. The Project site has been utilized for agricultural purposes since the 1940s. Doug Kaiser Farms (DKF) is the current grower, and alfalfa is the current crop. DKF possesses RMP No. 1500666 for applications of pesticides and herbicides, which expired on December 31, 2008. Mitchell Property Management LP, Permit Number 1502896, was the grower for the years 2010 to 2017. A total of 45 pesticides, herbicides, fertilizers, and general soil amendments have been licensed for application to the proposed Project from the years until the year 2017.

Organochlorine pesticides are defined as persistent because they are stable in the environment and resist decay with time. Organochlorine pesticides include broad groups including: Hexachlorocyclohexane (Lindane), Dichiaro Diphenyl Trichloroethane (DDT) and related compounds, Dichlorodiphenyldichloroethylene (DDE) and Dichlorodiphenyldich loroethane (DOD), Cyclodienes (Aldrin, Heptachlor, and others), and Mirex and Chlordecone. The ability of these organochlorine pesticides to persist in the environment made them highly effective and therefore widely used in agricultural insect control efforts during the years 1940s to 1970s. Most organochlorine pesticides were banned for use in the United States by the mid-years 1980s; those that remain in legal use are the active, low concentration ingredients of some home and garden products and some agricultural and environments.

Table 4.9-2, *Chemicals Used On-Site Between 2008 and 2017* provides a summary of the agricultural crops and chemical products used within the proposed Project boundaries between 2008 and 2017.

Table 4.9-2. Chemicals Used On-site Between 2008 and 2017

Restricted Materials Permitted	
Product Name	**Years Permitted**
41-A	2008, 2016

Table 4.9-2. Chemicals Used On-site Between 2008 and 2017

Restricted Materials Permitted	
Product Name	**Years Permitted**
AD-WET	2008, 2011
BRANDT ONSITE	2016
BUCTRIL 4EC HERBICIDE	2008, 2010, 2011
BWC SPREADER 90	2010, 2011, 2012, 2014, 2015
CHLORPYRIFOS 4E AG	2009
CLARITY HERBICIDE	2008
COMITE	2014
DIMETHOATE 2.67 EC	2014
DRIFTSTOP	2010, 2011
FIRST CHOICE NO FOAM A	2009
GRAMOXONE INTEON	2011, 2012
HELENA PENETRATOR	2010
HERBIMAX	2009
HI=WETT SUPER-SPREADER	2016
HONCHO PLUS HERBICIDE	2011, 2016
INTENSITY ONE POST-EMERGENCE GRASS HERBICIDE	2016
LOCK-ON INSECTICIDE	2011, 2012
MAESTRO 4EC (CA)	2015
MIST-CONTROL (REVISE FORMULA)	2013, 2014, 2015
MSO CONCENTRATE WITH LECI-TECH	2011
NO FOAM B	2014
NUFARM RHOMENE MCPA BROADLEAF HERBIDIDE	2008, 2009
ON-SITE	2016
OUTLOOK I HERBICIDE	2016
POAST	2011
PROI(R) H20 HERBICIDE	2011, 2012, 2014, 2015, 2016
PURSUIT HERBICIDE	2009, 2010
QUEST	2010
RAMPART FUNGICIDE	2016
RAPTOR HERBICIDE	2008, 2009, 2010
RIDOMIL GOLD BRAVO SC	2016
RNA CROP OIL CONCENTRATE 1915	2008
ROUNDUP POWERMAX HER	2012, 2013, 2014, 2015, 2016
ROVRAL BRAND 4 FLOWABLE FUNGICIDE	2016
SHARK EW	2009
SILENCER	2013
SIMPLICITY CA	2016
SOURCE 1 NO FOAM B	2009
SURF-90	2016

Table 4.9-2. Chemicals Used On-site Between 2008 and 2017

Restricted Materials Permitted	
Product Name	**Years Permitted**
SURROUND WP CROP PROTECTANT	2016
WARRIOR II WITH ZEON TECHNOLOGY	2011, 2016
VULCAN	2014
YUKON	2014
ZEAL WDG MITICIDE	2016

Source: McIntosh & Associates, Hazardous Materials Evaluation, 2017.

Site Reconnaissance

Hazardous materials and the generation of hazardous waste raise environmental concerns when altering, changing or developing land uses. Hazardous materials can take the form of petroleum products (including oil and gasoline), vehicular fluids, paint, solvents, cleaning fluids and pesticides. By-products generated as a result of activities using hazardous materials (such as dry-cleaning solvents, oil and gasoline) are considered to be hazardous waste. Commercial uses, especially those with underground storage tanks, are most suspected for the contamination of soils and groundwater. With remediation techniques and strict guidelines currently in practice, soil contamination (unlike groundwater contamination) typically does not pose a serious health risk. The Hazardous Materials Evaluation conducted for the proposed Project noted areas of concern, which are discussed below; for further detail refer to Appendix F, *Hazardous Materials Evaluation*, Appendix G, *Petroleum and Natural Gas Pipeline Assessment*, and Appendix N, *Original Technical Studies*.

A site reconnaissance was conducted on July 1, 2008. The objective of the site reconnaissance was to visually inspect, observe and record the current physical conditions of the proposed Project and surroundings. A subsequent site reconnaissance visit was conducted on June 15, 2017 for the proposed Project and the surrounding area. The site was evaluated using a record search and site visit for the purpose of obtaining information to locate recognized environmental conditions (RECs) such as hazardous substances and petroleum products in connection with the proposed Project, including soils, surface waters, and groundwater. Emphasis was placed on the on-site area to determine if visible and recognizable hazardous materials or substances were present.

On-Site Observations

The following are observations from the July 1, 2008 and June 15, 2017 proposed Project site reconnaissance. Photographs of these observations are available in the Hazardous Materials Evaluation (refer to Appendix F and Appendix N).

- The proposed Project was observed to be agricultural land and cultivated and ready for growing crops. Some areas of the Project site were in production and some appeared to be being prepared or were fallow.
- PG&E has single pole mounted transformers at the southwest corner and approximately in the center along the west boundary edge of the proposed Project. Steel irrigation standpipes were along the west boundary edge of the proposed Project site.

- Four PG&E single Pole-Mounted Transformers (PMTs) were observed on-site. A blue label was observed affixed to one of the PMTs, indicating that it is free of electrolytic fluid containing polychlorinated biphenyls (PCBs).
- In 2017, the proposed Project was observed to be agricultural land and alfalfa was the current crop at the time of the 2017 site visit.
- The west irrigation well, powered by a late-model Cummins engine with an associated diesel AST mounted on a flatbed trailer, was observed near the west boundary, one-half mile north of the southwest corner. A 5-gallon bucket containing a small amount of waste oil was observed between the AST and the pump turbine. No oil- or diesel-stained soil was observed about the location. A decomposing, concrete-lined irrigation ditch was observed adjacent to the well location.
- In 2008, the northwest irrigation well, powered by a late-model Cummins engine with an associated diesel AST mounted on a flatbed trailer, was observed near the northwest corner of the Project site. A 2-gallon, capped plastic container of waste oil was observed on the south side of the pump turbine. By 2017, the engine, AST and 2-gallon plastic container had been removed. Well is now idle. No oil- or diesel-stained soil was observed within the vicinity of the idle irrigation well.
- Steel irrigation standpipes were observed along the west boundary.
- An unlined ditch was observed on the south side of the Di Giorgio Road unpaved alignment at the northeast corner of the proposed Project site. The ditch marks the boundary between the proposed Project and the adjacent off-site agricultural land to the north. In 2008, the ditch was identified to contain rip-rap.
- The proposed Project has an electrically operated domestic water well with associated pressure and a storage tank on the north side of the easternmost portion of the Project site. There is one pole mounted electrical transformer located off-site and to the north of the domestic water well (4) PMT.
- A PG&E Company marker indicating the presence of a natural gas pipeline no. L-300B was observed along the west boundary.
- An off-site PG&E, South Union Avenue natural gas meter and regulation Station 269.45-B, within the chain link fence and gravel surface located at the northwest corner of South Union Avenue and Mugsy Avenue, approximately 1,333 feet north of Houghton Road.
- In the easternmost portion of the Project site, an electrically-operated domestic well with associated pressure and storage tanks was observed at the north boundary. A steel shop building fixed to a concrete foundation with a floor area of 3,840 square feet was observed south of the domestic well. Two transformers, an inoperable electrical switch panel, and a cylinder-shaped, propane AST were observed near the northeast corner of the building in 2008. Propane service lines were observed on the east side of the building. An open canopied carport, out-of-service electrical panel/meter, and one pole mounted electrical transformer located on the north side at the easternmost portion of the proposed Project.

- At the Houghton Road / Chevalier Road intersection at the proposed Project, adjacent to the tail water booster pump, brushy retention basin, wooden beehives and one pole mounted electrical transformer. The wooden beehives were observed on the north side of a dry, brushy tailwater pit located in the south portion of the Project site. An irrigation riser was observed at the west end of the tailwater pit.
- A dry tailwater pit was observed in the southwest corner of the easternmost portion of the Project site.
- An out-of-service electrical turbine for a well booster pump was observed on the west slope of the dry, brushy tailwater pit.
- Two older transformers, with an associated out-of-service electrical panel and meter, were observed west of the tailwater pit.
- Higgins Auto Wrecking, Inc. is located at 12825 South Union Avenue, adjacent to the proposed Project at the southeast corner of the Project site at the intersection of South Union Avenue and Houghton Road.
- Old tire, debris and palm fronds, and row of palm trees are along the east edge of the Project site and South Union Avenue.
- The adjacent property along South Union Avenue and the east edge of the proposed Project site have rural residential units with corrals and equestrian facilities.

Off-Site Observations

The following are observations for the properties surrounding the proposed Project. Observations are from both the July 1, 2008 and June 15, 2017 site reconnaissance's. Photographs of these observations are available in the Hazardous Materials Evaluation (refer to Appendix F and Appendix N).

- Agricultural Land and rural residential with corrals and equestrian facilities, and mobile homes along South Union Avenue and on the northeast, east and southeast adjacent to the proposed project. There is an automobile wrecking yard (Higgins Auto Wrecking, 12825 South Union Avenue) located adjacent to the southeast portion of the proposed Project.
- Approximately ¼-mile southeast of the steel shop building, a fenced, off-site PG&E natural gas facility with a gravel surface was observed at South Union Avenue, adjacent to the southeast corner of the easternmost portion of the Project site.
- A fenced PG&E natural gas valve station no. 269B was observed within an unpaved road easement along the south boundary of the easternmost portion of the Project site.
- An off-site irrigation well was observed immediately east of the northeast corner of the Project site.

On-Site Hazards of Potential Concern

Pole Mounted Electrical Transformers

There are four pole mounted electrical transformer that are located on the proposed Project site, and two addition pole mounted electrical transformers are adjacent to the proposed project. The ground

surface below each pole mounted electrical transformer displayed no evidence of discoloration from fluid leakage.

PG&E is the owner of the PMTs. Mr. Mark Maytubby of PG&E reported that PMTs installed subsequent to 1990 likely did not contain polychlorinated biphenyl (PCB) insulating fluids. PMTs labeled with blue "non-PCB" stickers do not contain PCB fluids. Based on the visual absence of apparent unauthorized releases of insulating fluids from the on-site PMTs during the site reconnaissance activities, the on-site PMTs are not currently anticipated to pose adverse impacts. PG&E should be contacted regarding the disposition of these PMTs prior to development of the Project site. The electrical transformers located within the Project site are summarized in Table 4.9-3 *Electrical Transformers On-Site*.

Table 4.9-3. Electrical Transformers On-Site

Location	Number of *PMTs	*PG&E Power Rating	Year Installed
PMT– (1) - Southwest corner of the proposed project on the north side of the Houghton Road overpass.	1	15 *KvA [1]	1990
PMT– (2) - Along the west boundary adjacent to the overhead electric freeway message sign.	1	15 *KvA [1]	1994
PMT– (3) – Off–site - Adjacent to the Northeast corner of the proposed project. Blue label affixed to the transformer, indicating that it is free of electrolytic fluid containing *PCBs.	1	150 *KvA [3]	1999 [B]
PMT– (4) – Off-site – North of the electrically operated domestic water well and storage tank	1	15 *KvA [1]	2007 [B]
PMT– (5) - Located north of the Northeast corner of steel shop building on the proposed project	2	15 *KvA [1] 25 *KvA [1]	1991 1976
PMT– (6) - North of Houghton Road on the proposed project and adjacent to the tail water booster pump and brushy retention basin	1	10 *KvA [1] 10 *KvA [1]	1986 1986

Source: McIntosh & Associates, 2017.

[1] Single-Phase Transformer

[3] Three-Phase Transformer

[B] Blue sticker indicates transformer is confirmed PCB-free–*KvA - Kilovolt-Amperes

–PG&E - Pacific Gas and Electric Company

*PMTs – Pole Mounted Transformers

*PCBs – Polychlorinated Biphenyls

Pacific Gas and Electric Company Subsurface Pipelines

PG&E 34-inch diameter active natural gas transmission pipeline (Line 300-B) underlies the proposed project. The 34-inch diameter pipeline external coating includes primer, paint, two coats of asphalt, and two layers of felt. The depth of the pipeline is estimated at 36 inches to 60 inches below surface which allows the surface farmer to shallow plow and disc the soil above the pipeline a reasonable amount without endangering the pipeline. The natural gas transmission pipeline maximum operating pressure is approximately 700 pounds per square inch gauge (psig). The natural gas transmission pipeline traverses from SR-99 in the northwest to the south line bordering the easternmost portion of the proposed Project. The natural gas transmission pipeline then traverses due east for approximately 0.25 mile passing through the off-site PG&E (South Union Avenue natural gas meter and regulation Station 269.45-B), located at the northwest corner of South Union Avenue and Mugsy Avenue, which is located 1,333 feet north of Houghton Road.

PG&E operates a 6-inch diameter steel natural gas distribution pipeline operating at a maximum pressure of 60 psig parallels the west right-of-way of South Union Avenue, a 2-inch plastic distribution pipeline operating at a maximum pressure of 60 psig parallels the east right-of-way of South Union Avenue, and a 3-inch distribution pipeline operating at a maximum pressure of 60 psig parallels the north right-of-way of Houghton Road. Only the 6-inch pipeline has a segment adjacent to the proposed Project, which will require street improvements above the pipeline. The pipelines locate on-site are shown in Table 4.9-4, *Pipelines On-Site*.

Table 4.9-4. Pipelines On-Site

Pipeline Identifier	Diameter Pipeline	Year Installed	Operating Pressure Pounds Per Square Inch
(PG&E*) Natural Gas Transmission Pipeline (Line 300-B) underlies the proposed project	34 Inches	1950	700
(PG&E*) Natural Gas Distribution Pipeline traverses north to south along the west side of South Union Avenue right-a-way	6 Inches	Not available	60

Agricultural Activities

The Project site has been in agricultural production since the 1940s. The Agriculture Commissioner records revealed that herbicides, insecticides, pesticides and other chemicals were used on the proposed Project area. The years of agricultural activity conducted on the Project site has included the application of pesticides, herbicides and associated metals, which may be present in near surface soils at residual concentrations of concern. However, it is not known if environmentally-persistent pesticides and herbicides were applied to the proposed Project site.

Asbestos Containing Materials

It is possible that asbestos-containing materials could be present in subsurface concrete irrigation (transite) pipe on the site. Concrete pipe was documented in information obtained from the Kern County Assessor-Recorder's Office.

Oilfield Activities

DOGGR online website records and the Wildcat Map W4-1 identified that one exploration oil well was drilled near the north boundary of the proposed Project. The Big McKittrick Oil Company drilled one exploration well "Sea Cliff-Houghton", Well Number 1, and American Petroleum Institute (API) Number 02932362 on October 31, 1934, which was drilled to a depth of 6,756 feet. The well is east of present SR-99, along Di Giorgio Road and along the north portion of the proposed project. The well failed to produce oil or gas and was subsequently abandoned in October 9, 1935 (McIntosh & Associates 2017).

Water Wells

Two irrigation wells are located on-site. The first irrigation well is located in the western portion of the Project site and is identified as well no. 31S28E-7P1. The second irrigation well is located in the northwestern portion of the site and is identified as well no. 31S28E-7D1. These wells were confirmed during the site reconnaissance. Well no. 31S28E-7P1 is powered by late-model Cummins engine with

an associated diesel AST mounted on a flatbed trailer. Waste oil containers were observed between the AST and the pump turbine at this location in 2008, but removed since. The Cummins engine at well no. 31S28E-7D1 has been removed, and the well is now idle. Waste oil containers were observed on the south side of the pump turbine at this well location in 2008, but removed since.

As discussed previously, in the fall of 2006, petroleum-stained soil was removed from each well irrigation location and transported to the McKittrick Waste Site in western Kern County. No oil- or diesel-stained soil was observed at either well location. The wells would need to be properly abandoned per KCEHS standards prior to development. If the wells are not used in the planned development, they should be destroyed in accordance with California SWR and KCEHS requirements.

4.9.3 Regulatory Setting

Federal

U.S. Environmental Protection Agency (USEPA)

The USEPA was established in 1970 to consolidate in one agency a variety of Federal research, monitoring, standard-setting, and enforcement activities to ensure environmental protection. The USEPA's mission is to protect human health and to safeguard the natural environment - air, water, and land - upon which life depends. The USEPA works to develop and enforce regulations that implement environmental laws enacted by Congress, is responsible for researching and setting national standards for a variety of environmental programs, and delegates to states and tribes the responsibility for issuing permits and for monitoring and enforcing compliance. Where national standards are not met, the USEPA can issue sanctions and take other steps to assist the states and tribes in reaching the desired levels of environmental quality.

Federal Toxic Substances Control Act/Resource Conservation and Recovery Act (RCRA)/Hazardous and Solid Waste Act (HSWA)

The Federal Toxic Substances Control Act (1976) and the RCRA of 1976 established a program administered by the USEPA for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the HSWA, which affirmed and extended the “cradle to grave” system of regulating hazardous wastes.

Comprehensive Environmental Response, Compensation, and Liability Act/Superfund Amendments and Reauthorization Act (CERCLA)

CERCLA, commonly known as Superfund, was enacted by Congress on December 11, 1980. This law (U.S. Code Title 42, Chapter 103) provides broad Federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA establishes requirements concerning closed and abandoned hazardous waste sites; provides for liability of persons responsible for releases of hazardous waste at these sites; and, establishes a trust fund to provide for cleanup when no responsible party can be identified. CERCLA also enables

the revision of the National Contingency Plan (NCP). The NCP (Title 40, Code of Federal Regulation [CFR], Part 300) provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, and/or contaminants. The NCP also established the National Priorities List (NPL). CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) on October 17, 1986.

Clean Water Act (CWA)/Spill, Prevention, Control, and Countermeasure (SPCC) Rule

The CWA (33 U.S.C. Section 1251 et seq., formally the Federal Water Pollution Control Act of 1972), was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. As part of the CWA, the USEPA oversees and enforces the Oil Pollution Prevention regulation contained in Title 40 of the CFR, Part 112 (Title 40 CFR, Part 112), which is often referred to as the "SPCC rule" because the regulations describe the requirements for facilities to prepare, amend, and implement SPCC plans. A facility is subject to SPCC regulations if a single oil storage tank has a capacity greater than 660 gallons, or the total above ground oil storage capacity exceeds 1,320 gallons, or the underground oil storage capacity exceeds 42,000 gallons, and if, due to its location, the facility could reasonably be expected to discharge oil into or upon the "navigable waters" of the U.S.

Other Federal regulations overseen by the USEPA relevant to hazardous materials and environmental contamination include Title 40 CFR Chapter 1, Subchapter D – Water Programs and Subchapter I – Solid Wastes. Title 40 CFR Chapter 1, Subchapter D, Parts 116 and 117 designate hazardous substances under the CWA. Title 40 CFR Part 116 sets forth a determination of the reportable quantity for each substance that is designated as hazardous. Title 40 CFR Part 117 applies to quantities of designated substances equal to or greater than the reportable quantities that may be discharged into waters of the U.S.

Occupational Safety and Health Administration (OSHA)

OSHA's mission is to ensure the safety and health of America's workers by setting and enforcing standards; providing training, outreach, and education; establishing partnerships; and encouraging continual improvement in workplace safety and health. OSHA staff establishes and enforces protective standards and reaches out to employers and employees through technical assistance and consultation programs. OSHA standards are listed in Title 29 CFR Part 1910.

National Weather Service (NWS)

Under extreme fire weather conditions, the NWS issues Red Flag Warnings for all affected areas. A Red Flag Warning means that any ignition could result in a large-scale damaging wildfire. The NWS region encompassed by the project is the San Joaquin Valley/Hanford region. Red Flag Warning criteria for are as follows: the area contains dry fuels, the National Fire Danger Rating System is high to extreme, and the following forecast weather parameters are: 1) relative humidity is 25 percent or less; 2) a sustained wind average of 15 mph or greater; and 3) a temperature of more than 75 degrees Fahrenheit (°F) (NWS, 2014).

Transportation Emergency Preparedness Program

The U.S. Department of Energy (DOE) Office of Environmental Management implements the Transportation Emergency Preparedness Program (TEPP) through the Office of Transportation. TEPP integrates a basic approach to transportation emergency planning and preparedness activities under a single program with the goal to ensure DOE, its operating contractors, and state, tribal, and local emergency responders are prepared to respond promptly, efficiently, and effectively to accidents involving DOE shipments of radioactive material. The TEPP mission is to ensure that federal, state, tribal, and local responders have access to the plans, training, and technical assistance necessary to safely, efficiently, and effectively respond to transportation accidents involving DOE-owned radioactive materials. To accomplish this mission, a suite of tools has been developed to aid the response jurisdictions in their readiness activities.

State

Division of Oil, Gas and Geothermal Resources (DOGGR)

The DOGGR is the State agency responsible for supervising the drilling, operation, maintenance, plugging and abandonment of oil, gas and geothermal wells. DOGGR's regulatory program promotes the wise development of oil, natural gas and geothermal resources in California through sound engineering practices, prevention of pollution and ensurance of public safety. To implement this program, DOGGR recommends avoidance of building over or near plugged and abandoned wells, or the replugging of wells to current DOGGR standards.

Department of Toxic Substances Control (DTSC)

The Department of Toxic Substances Control (DTSC) is responsible for restoration, protection and enhancement of the environment; ensuring public health, environmental quality and economic vitality through regulating hazardous waste; conducting and overseeing cleanups; and developing and promoting pollution prevention. DTSC implements programs that oversee cleanups, prevent releases by ensuring waste is properly generated, handled, transported, stored and disposed of; enforcing laws; promoting pollution reduction; encouraging recycling and reuse; conducted toxicological evaluations; and involving the public in decisions. DTSC also oversees the siting and cleanup of schools.

DTSC maintains the CORTESE List for use by State and local agencies to provide information about hazardous release sites. This list includes the Site Mitigation and Brownfields Reuse Program Database (CalSites).

California Environmental Protection Agency (Cal/EPA)

The Cal/EPA was created in 1991, which unified California's environmental authority in a single cabinet-level agency and brought the California Air Resources Board (CARB), State Water Resources Control Board (SWRCB), Regional Water Quality Control Boards (RWQCBs), California Department of Resources Recycling and Recovery (CalRecycle) - formerly the Integrated Waste Management Board (IWMB), DTSC, Office of Environmental Health Hazard Assessment (OEHHA), and Department of Pesticide Regulation (DPR) under one agency. These agencies were

placed within the Cal/EPA "umbrella" for the protection of human health and the environment and to ensure the coordinated deployment of State resources. Their mission is to restore, protect, and enhance the environment, to ensure public health, environmental quality, and economic vitality.

DTSC is a department of Cal/EPA and is the primary agency in California that regulates hazardous waste, cleans up existing contamination, and looks for ways to reduce the hazardous waste produced in California. DTSC regulates hazardous waste in California primarily under the authority of RCRA and the California Health and Safety Code. Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

California Office of Emergency Services (OES)

In order to protect the public health and safety and the environment, the California Office of Emergency Services (OES) is responsible for establishing and managing statewide standards for business and area plans relating to the handling and release or threatened release of hazardous materials. Basic information on hazardous materials handled, used, stored, or disposed of (including location, type, quantity, and the health risks) needs to be available to firefighters, public safety officers, and regulatory agencies and needs to be included in business plans in order to prevent or mitigate the damage to the health and safety of persons and the environment from the release or threatened release of these materials into the workplace and environment. These regulations are covered under Chapter 6.95 of the California Health and Safety Code Article 1–Hazardous Materials Release Response and Inventory Program (Sections 25500 to 25520) and Article 2–Hazardous Materials Management (Sections 25531 to 25543.3).

CCR Title 19, Public Safety, Division 2, Office of Emergency Services, Chapter 4–Hazardous Material Release Reporting, Inventory, and Response Plans, Article 4 (Minimum Standards for Business Plans) establishes minimum statewide standards for Hazardous Materials Business Plans (HMBPs). These plans shall include the following: (1) a hazardous material inventory in accordance with Sections 2729.2 to 2729.7; (2) emergency response plans and procedures in accordance with Section 2731; and, (3) training program information in accordance with Section 2732. Business plans contain basic information on the location, type, quantity, and health risks of hazardous materials stored, used, or disposed of in the State. Each business shall prepare a HMBP if that business uses, handles, or stores a hazardous material or an extremely hazardous material in quantities greater than or equal to the following:

- 500 pounds of a solid substance;
- 55 gallons of a liquid;
- 200 cubic feet of compressed gas;
- A hazardous compressed gas in any amount; or,
- Hazardous waste in any quantity.

California Occupational Safety and Health Administration (Cal/OSHA)

Cal/OSHA is the primary agency responsible for worker safety in the handling and use of chemicals in the workplace. Cal/OSHA standards are generally more stringent than Federal regulations. The

employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (8 CCR Sections 337-340). The regulations specify requirements for employee training, availability of safety equipment, accident-prevention programs, and hazardous substance exposure warnings.

California Highway Patrol (CHP)

A valid Hazardous Materials Transportation License, issued by the CHP, is required by the laws and regulations of State of California Vehicle Code Section 3200.5 for transportation of either:

- Hazardous materials shipments for which the display of placards is required by State regulations; or,
- Hazardous materials shipments of more than 500 pounds, which would require placards if shipping greater amounts in the same manner.

Additional requirements on the transportation of explosives, inhalation hazards, and radioactive materials are enforced by the CHP under the authority of the State Vehicle Code. Transportation of explosives generally requires consistency with additional rules and regulations for routing, safe stopping distances, and inspection stops (Title 14, CCR, Chapter 6, Article 1, Sections 1150-1152.10). Inhalation hazards face similar, more restrictive rules and regulations (Title 13, CCR, Chapter 6, Article 2.5, Sections 1157-1157.8). Radioactive materials are restricted to specific safe routes for transportation of such materials.

Hazardous Material Business Plan

The State of California requires an owner or operator of a facility or business to complete and submit a Hazardous Material Business Plan (HMBP) to the Kern County Public Health Services Department if the facility or business handles a hazardous material or mixture containing a hazardous material that has a quantity at any one time during the reporting year equal to or greater than: 55 gallons; 500 pounds; 200 cubic feet at standard temperature and pressure for a compressed gas; any amount of hazardous waste; or amounts of radioactive materials requiring an emergency plan pursuant to Parts 30, 40, or 70 of Title 10, Code of Federal Regulations. Lower threshold quantities may be required for acutely hazardous substances. Pursuant to Health and Safety Code Section 25504 (a-c), an HMBP is required to contain detailed information on:

- Hazardous materials at the facility;
- Emergency response plans and procedures in the event of the reportable release or threatened release of a hazardous material; and
- Training for all new employees and annual training, including refresher courses, for all employees in safety procedures in the event of a release or threatened release of a hazardous material.

The intent of the HMBP is to provide basic information necessary for use by first responders in order to: prevent or mitigate damage to the public health and safety and to the environment from a release or threatened release of a hazardous material; and to satisfy federal and State Community Right-to-Know laws.

California Government Code

Government Code Section 65962.5 requires the DTSC, State Department of Health Services, the State Water Resources Control Board and the California Integrated Waste Management Board to assemble and annually update lists of hazardous waste sites and hazardous waste properties within California. The Secretary for Environmental Protection distributes these lists to each city and county where sites on the lists are located. Prior to approval of a development project by a lead agency the applicant shall consult these lists to determine that the project site is not listed.

California Public Resources Code

CEQA statute 21092.6 requires land agencies to consult with the compiled lists discussed above to determine whether a project or alternatives are located on a hazardous waste site.

California Education Code

The California Education Code Section 17213(a)(3) prohibits the approval of a school site if the site "contains one or more pipelines, situated underground or aboveground, which carries hazardous substances, acutely hazardous substances, or hazardous wastes, unless the pipeline is a natural gas line which is used only to supply natural gas to that school or neighborhood."

California Education Code Section 17213.1 requires DTSC to be involved in the environmental review process for the acquisition or construction of a school property utilizing state funding. The responsible school board is required to contract with an environmental assessor to supervise the preparation of a site evaluation to determine the potential for hazards or hazardous materials to exist on or near the site that could affect future staff and students, prior to acquiring a school site.

Petroleum and Natural Gas Pipelines

Pipelines that transport petroleum and natural gas are regulated by the following federal and state agencies:

- US Department of Transportation, Pipeline and Hazardous Materials Safety Administration, Office of Pipeline Safety (OPS).
- California Department of Forestry and Fire Protection, Office of the State Fire Marshal (OSFM).

A setback is a minimum distance required by zoning to be maintained between structures, or between structures and property lines. Kern County has not passed a zoning ordinance specifically addressing the setback distance for petroleum and natural gas pipelines. The Kern County Fire Department has not established setbacks from hazardous liquid pipelines to structures (McIntosh & Associates 2017).

The OSFM restricts encroachments into or on hazardous liquid pipeline easements per Informational Bulletin 03-001 (revised March 13, 2017) as follows:

Section 51014.6 of the California Government Code states the following:

a) Effective January 1, 1987, no person, other than the pipeline operator shall do any of the following with respect to any pipeline easement:

   i. Build, erect or create a structure or improvement within the pipeline easement or permit the building, erection or creation thereof.

   ii. Build, erect or create a structure, fence, wall or obstruction adjacent to any pipeline easement which would prevent complete and impaired surface access to the easement, or permit the building, erection or creation thereof.

b) No shrubbery or shielding shall be installed on the pipeline easement which would impair aerial observation of the pipeline easement. This subdivision does not prevent the revegetation of any landscape disturbed within a pipeline easement as a result of construction of the pipeline and does not prevent the holder of the underlying fee interest or the holder's tenant from planting and harvesting seasonal agricultural crops on a pipeline easement.

c) This section does not prohibit a pipeline operator from performing any necessary activities within a pipeline easement, including, but not limited to the construction, replacement, relocation, repair or operation of the pipeline.

It is the position of the State Fire Marshal that nothing shall encroach into or upon the pipeline easement, which would not impede the pipeline operator from complete and unobstructed surface access along the pipeline ROW, nor shall there by any obstructions which would shield the pipeline ROW from observation. In the interest of public safety and the protection of the environment, it is imperative that the pipeline operator visually assess conditions along the easement to ensure the integrity of the pipeline.

It is the responsibility of the pipeline operator to ensure unimpeded surface access and retain the ability to physically observe all portions of their pipeline rights-of-way. In cases where this is not possible, the pipeline operator shall inform the State Fire Marshall. The State Fire Marshall shall, in conjunction with the pipeline operator, resolve the issue.

The pipeline corridor is the pathway through the jurisdiction (city or county) in which the pipelines and facilities of a pipeline operator are located, including public rights-of-way and easements over and through public or private property. The setback distance shall be measured from the nearest edge of the pipeline corridor.

Pipeline Marker Signs

Transmission and distribution pipelines located both on-site and off-site are recognized by marker signs installed along their respective routes. The signs indicate the approximate location of the pipeline corridor and provide the name of the pipeline company of ownership and toll-free telephone number where the company can be reached in the event of a suspected or witnessed pipeline emergency. It is against the law for any person to willfully and knowingly deface, damage, remove, or destroy any pipeline marker sign or ROW marker. It should be noted that markers placed near

pipelines may not directly overlie them, and a pipeline may not follow a straight line between each marker.

Truck Routes

Currently, Federal regulations allow transportation of hazardous radioactive materials on all interstate highways. Trucks traveling from the highway to sites that use such materials (such as hospitals or nuclear power plants) are allowed to use the most direct route. The California Highway Patrol (CHP) has adopted Interstate 5 (I-5) as a truck route for transporting hazardous radioactive materials.

The Circulation Element of the Metropolitan Bakersfield General Plan designates specific roadways on which trucks may travel within and through the Metropolitan Bakersfield area. These routes direct trucks away from streets that are inappropriate or inadequate to serve substantial truck traffic. Trucks are allowed to access locations on local streets for site deliveries (e.g., goods delivery or moving cars); however, they must take the most direct route to and from the designated truck routes. None of the streets surrounding the proposed Project site are identified as a truck route within the Metropolitan Bakersfield General Plan Circulation Element.

Local

Metropolitan Bakersfield General Plan (MBGP)

The Metropolitan Bakersfield General Plan cites policies to provide decision-makers with long-range guidance affecting the future character of the Metropolitan Bakersfield planning area. The elements within the Metropolitan Bakersfield General Plan provide goals, policies and implementation measures in order to reduce impacts related to public safety. Applicable hazards/hazardous materials goals and policies relative to the proposed Project are listed in Table 4.9-5, *Metropolitan Bakersfield General Plan Goals and Policies for Hazards/Hazardous Materials*, below.

Table 4.9-5. Metropolitan Bakersfield General Plan Goals and Policies for Hazards/Hazardous Materials

Goals and Policies: Public Safety Element
Goal #1: Ensure that the Bakersfield metropolitan area maintains a high level of public safety for its citizenry.
Goal #2: Ensure that adequate police and fire services and facilities are available to meet the needs of current and future metropolitan residents through the coordination of planning and development of metropolitan police and fire facilities and services.
Goal #3: Provide for the coordinated planning and development of service areas for police and fire protection to ensure an equitable burden of responsibility between County and City in Metropolitan Bakersfield.
Policy #4: Monitor, enforce and update as appropriate all emergency plans as needs and conditions in the Planning area change, including the California Earthquake Response Plan, the Kern County Evacuation Plan, and the City of Bakersfield Disaster Plan.
Policy #6: Promote fire prevention methods to reduce service protection costs and costs to the taxpayer.
Policy #7: Enforce ordinances regulating the use/manufacture/sale/transport/disposal of hazardous substances and require compliance with state and federal laws regulating such substances.

Table 4.9-5. Metropolitan Bakersfield General Plan Goals and Policies for Hazards/Hazardous Materials
Goals and Policies: Public Safety Element
Policy #8: The Kern County and Incorporated Cities Hazardous Waste Management Plan and Final Environmental Impact Report serves as the policy document guiding all facets of hazardous waste.
Policy #9: Restrict, after appropriate public hearings, the use of fire-prone building materials in areas defined by the fire services as presenting high-conflagration risk.

Kern County and Incorporated Cities Hazardous Waste Management Plan (HWMP)

In response to the growing concern regarding hazardous waste management, State Assembly Bill (AB) 2948 enacted legislation authorizing local government to develop comprehensive hazardous waste management plans (HWMP). The intent of each plan is to assure that adequate treatment and disposal capacity is available to manage the hazardous wastes generated within this jurisdiction. The Kern County and Incorporated Cities HWMP was first adopted by Kern County and each incorporated city before September 1988 and was subsequently approved by the State Department of Health Services. The HWMP is incorporated by reference into both the Metropolitan Bakersfield General Plan, as permitted by Health and Safety Code Section 25135.7(b), and thus must be consistent with all other aspects of both general plans.

The HWMP provides policy direction and action programs to address current and future hazardous waste management issues that require local responsibility and involvement in Kern County. In addition, the HWMP discusses hazardous waste issues and analyzes current and future waste generation in the incorporated cities, County and State and Federal lands.

The purpose of the HWMP is to coordinate local implementation of a regional action to effect comprehensive hazardous waste management throughout Kern County. The action program focuses on development of programs to equitably site needed hazardous waste management facilities; to promote on-site source reduction, treatment and recycling; and to provide for the collection and treatment of small quantity hazardous water generators.

Prior to or during construction, the remediation of hazardous materials within the proposed Project site will require the removal of hazardous materials from the Project site. Although none of the surrounding roads are identified as truck routes, pursuant to the Metropolitan Bakersfield General Plan Circulation Element, trucks hauling the hazardous materials away from the site are allowed to use the surrounding roads as long as they utilize the most direct route to designated truck routes.

Kern County Emergency Health and Safety Division

The Kern County Emergency Health and Safety Division (KCEHSD) provides oversight for locations within county jurisdiction that pose a threat to human health and safety.

Kern County Wildland Fire Management Plan

The Kern County Wildland Fire Management Plan documents the assessment of wildland fire situations throughout the SRAs within the County. The Kern County Fire Department Wildland Fire Management Plan provides for systematically assessing the existing levels of wildland protection services and identifying high-risk and high-value areas that are potential locations for costly and

damaging wildfires. The goal of the plan is to reduce costs and losses from wildfire by protecting assets at risk through focused pre-fire management prescriptions and increasing initial attack success. Based on this assessment, preventive measures are implemented, including the creation of wildfire protection zones.

Kern County Building and Construction Ordinance (Title 17 of the Ordinance Code of Kern County)

Chapter 17.32 Fire Code

> Kern County has adopted, by reference, portions of the California Building Standards Code and the International Fire Code, with modifications and amendments. The purpose of this code is to prescribe the minimum requirements necessary to establish a reasonable level of fire safety to protect life and property from hazards created by fire, explosion, and dangerous conditions.
>
> The Kern County Fire Code defines a hazardous fire area as any land that is covered with grass, grain, brush, or forest and situated (e.g., in an inaccessible location) so that a fire originating upon such land would present an abnormally difficult job of suppression and would result in great and unusual damage through fire or the resulting erosion.

Chapter 17.34 Wildland-Urban Interface Code

> Kern County has adopted, by reference the Urban Wildland Interface Code, published by the International Fire Code Institute, with modifications and amendments. The purpose of this code is to safeguard life and property and maintain public welfare to a reasonable degree by addressing hazards related to wildland fire exposures and fire exposures from adjacent structures, and to prevent structure fires from spreading to wildland fuels.

Kern County Operational Area Hazardous Materials Area Plan

The Hazardous Materials Area Plan identifies local, State, and Federal responsibilities during incidents involving the release or threatened release of hazardous substances. According to the Kern County Operational Area Hazardous Materials Area Plan (Kern County Public Health Services Department, 2011):

> [H]azardous materials emergencies are the result of threatened releases, highway accidents, clandestine drug laboratories, train derailments, pipeline transportation accidents, pesticide drift incidents, or related fire and/or spills at fixed facilities.

4.9.4 Impacts and Mitigation Measures

Methodology

The potential impacts associated with the proposed Project are evaluated on a qualitative basis through a comparison of existing conditions within the proposed Project site and the anticipated Project effects. The potential for impacts to hazards/hazardous materials would occur if the effect described under the criteria below occurs. The evaluation of Project impacts is based on professional judgment, analysis of the County's hazards/hazardous materials policies, and the significance criteria established by Appendix G of the State CEQA Guidelines, which the County has determined to be appropriate criteria for this Recirculated Draft EIR.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the CEQA Guidelines, to determine if a project could potentially have a significant impact. Such an impact would occur if the proposed project would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accidental conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous, substances, or waste within one-quarter mile of an existing or proposed school;
- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment;
- For a project located within the adopted Kern County Airport Land Use Compatibility Plan results in a safety hazard for people residing or working in the project area;
- For a project within the vicinity of a private airstrip, results in a safety hazard for people residing or working in the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan;
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

The analysis of the existing environment and the impact analysis indicate that this proposed Project could result in a significant environmental impact if it would result in a release of hazardous materials that would, if not mitigated, adversely affect the public health and safety of future residents, surrounding residents and workers.

Project Impacts

Impact 4.9-1: The Project Would Create in a Significant Hazard to the Public or the Environment Through the Routine Transport, Use or Disposal of Hazardous Materials.

The Kern County and Incorporated Cities Hazardous Waste Management Plan (HWMP) lists goals and policies regarding the transport of hazardous wastes. The HWMP recognizes that the transportation of hazardous waste on roads poses a short-term threat to public health; of prime concern is the safety of the transportation system for hazardous waste, especially extremely hazardous waste, in and throughout Kern County. The HWMP seeks to establish State and federally maintained roads as candidate Commercial Hazardous Waste Shipping Routes in and through the County (except those to collect locally generated hazardous wastes). The current Metropolitan Bakersfield General Plan does not identify designated hazardous material shipping routes. The Kern County General Plan shows the nearest hazardous materials shipping routes to the Project site as the following: SR-99 (adjacent to the western proposed Project boundary); Interstate (I) 5 (approximately 7.5 miles west), and SR-58 (approximately 7.5 miles north).

The proposed Project would introduce approximately 4,613,004 square feet of light and service industrial, and general commercial and highway commercial land uses, which could include warehousing, distribution, and retail showroom uses. Industrial uses often involve the transport of hazardous materials. Because the proposed Project is located adjacent to SR-99, potential delivery trucks would transport materials and chemicals along a County designated hazardous materials shipping route. In addition, the proposed Project is located in an area that is currently surrounded by agricultural and some industrial (i.e., automobile wrecking yard) land uses. The number of deliveries in the area would increase; however, there is already the presence of hazardous material transport within the vicinity of the proposed Project. While the risk of exposure to hazardous materials cannot be fully eliminated, measures can be implemented to maintain risks at acceptable levels. As described above, several federal, state, and local regulatory agencies oversee hazardous materials transportation. Oversight by the appropriate agencies and compliance with applicable regulations are considered adequate to offset the negative effects related to the transport of hazardous materials within the proposed Project area.

The proposed Project would include a private package sewer treatment plant to provide sewer services for the Project site. Sewer System for the proposed Project area has never been provided, and currently the neighboring residential and commercial properties are served by individual and privately owned septic systems. The developer would be required to construct a new wastewater plant facility for the proposed Project that could cause significant environmental effects. Based on wastewater generation rate for general commercial and industrial development uses utilized by the County of Kern, the proposed project would result in the generation of a normal, unpeaked flow of approximately 1.46 million gallons per day, with a peak flow maximum generation rate of 2.91 million gallons per day of wastewater. The new wastewater package plant facility would be constructed according to State specifications and would be operated in such a way as to not contaminate the underlying unconfined aquifer, and not cause a nuisance to existing agricultural land, neighboring residential and commercial properties.

In accordance with the California Health and Safety Code and Kern County regulations, the Project applicant would be required to prepare and submit a HMBP for any uses that would require the use

and storage of hazardous materials (such as a wastewater treatment facility, water treatment facility, maintenance facilities, emergency response services).

Compliance with state and federal law, and the Metropolitan Bakersfield General Plan, as well as the implementation of mitigation measures would ensure impacts associated with routine transport, use, or disposal of hazardous waste during construction or operation of the proposed Project are reduced to less than significant levels.

Mitigation Measures

MM 4.9-1: **Hazardous Materials Business Plan.** During the life of the project, including decommissioning, the project operator shall prepare and maintain a Hazardous Materials Business Plan (HMBP), as applicable, pursuant to Article 1 and Article 2 of California Health and Safety Code 6.95 and in accordance with Kern County Ordinance Code 8.04.030, by submitting all the required information to the California Environmental Reporting System (CERS) at http://cers.calepa.ca.gov/ for review and approval. The HMBP shall:

- Delineate hazardous material and hazardous waste storage areas
- Describe proper handling, storage, transport, and disposal techniques
- Describe methods to be used to avoid spills and minimize impacts in the event of a spill
- Describe procedures for handling and disposing of unanticipated hazardous materials encountered during construction
- Establish public and agency notification procedures for spills and other emergencies including fires.
- Include procedures to avoid or minimize dust from existing residual pesticides and herbicides that may be present on the site

The project proponent shall ensure that all contractors working on the project are familiar with the facility's HMBP as well as ensure that one copy is available at the project site at all times. In addition, a copy of the approved HMBP from CERS shall be submitted to the Kern County Planning and Natural Resources Department for inclusion in the projects permanent record.

MM 4.9-2: **Spill Prevention Control and Countermeasures (SPCC) Response Plan.** Prior to the issuance of a certificate of occupancy for an individual parcel project which exceeds any of the thresholds established by Title 40, Code of Federal Regulations, Part 112, related to facilities requiring a Spill Prevention Control and Countermeasures (SPCC) Response Plan, the individual parcel proponent shall prepare and submit an SPCC Response Plan to the Kern County Public Health Services Department/Environmental Health Division and the California Department of Water Resources. The individual parcel proponent shall ensure the project is

implemented in compliance with the approved Spill Prevention Control and Countermeasures Response Plan.

~~**MM 4.9-3: Hazardous Waste Exclusion/Business Plan.** The individual parcel proponent shall continuously comply with the following:~~

~~1. All hazardous wastes shall be stored and properly managed in accordance with the approved Kern County Waste Management Department Hazardous Waste Exclusion Plan and Hazardous Materials Business Plan, until transported for proper disposal.~~

~~2. A copy of the Hazardous Waste Exclusion Plan shall be submitted to the Kern County Planning and Natural Resources Department.~~

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.9-2: The Project Would Create a Significant Hazard to the Public or the Environment Through Reasonably Foreseeable Upset and Accidental Conditions Involving the Release of Hazardous Materials into the Environment.

Project construction activities are not anticipated to result in a significant release of hazardous materials into the environment. However, during construction, there is a possibility of accidental release of hazardous substances, such as spilling petroleum-based fuels used for construction equipment. The level of risk associated with the accidental release of hazardous substances is not considered significant because of the small volume and low concentration of hazardous materials utilized during the construction phases. The Project contractor would be required to use standard construction controls and safety procedures that would avoid and minimize the potential for accidental release of such substances into the environment. Standard construction practices would be observed such that any materials released would be appropriately contained and remediated as required by local, State, and Federal law.

Light and medium industrial uses may result in increased risks from hazardous materials. These types of uses may allow the installations of ASTs and USTs utilized for fueling vehicles and backup generators (this short list is not all-inclusive). These uses could potentially result in environmental impacts from hazardous materials and/or substances; however, various government entities require permits for the hazardous materials concerns. These various permits require controls that would reduce the potential impacts to a less than significant level. The proposed Project would comply with all applicable rules and regulations dealing with hazardous materials and/or substances from the following agencies: SJVAPCD, California Regional Water Quality Control Board (CRWQCB), California Integrated Waste Management Board, DTSC, California Office of Environmental Health Hazard Assessment, KCDEHS, and the Kern County Fire Department.

As noted above, a physical inspection of the proposed Project site, as part of the Hazardous Materials Evaluation, revealed evidence of hazardous materials and waste present within the proposed Project site. The evidence consists of abandoned petroleum prospect well, use of pesticides and herbicides,

PMTs, the potential for asbestos containing materials, high-pressure pipelines within and adjacent to the proposed Project site, and water wells.

Local regulatory agency records were reviewed to help determine whether hazardous materials have been handled, stored or generated on the proposed Project site and/or the adjacent properties and businesses. In the fall of 2006, petroleum-stained soil was removed from each irrigation well location and transported to the McKittrick Waste Site in western Kern County. The remediation report for the proposed Project site was approved by KCEHSD and a closure letter was issued on December 1, 1006. No other hazardous materials records related to the Project site were found.

As discussed above, four PMTs were observed within the proposed Project boundaries. The PMTs were observed to be in good condition and no apparent corrosion was noted. The ground surface below each PMT displayed no evidence of discoloration from fluid leakage. PG&E is the owner of the PMTs. According to PG&E, PMTs installed after 1990 likely did not contain PCB insulating fluids. PMTs labeled with blue "non-PCB" stickers do not contain PCB fluids. Based on the visual absence of apparent unauthorized releases of insulating fluids, the on-site PMTs are not currently anticipated to pose adverse impacts.

PG&E maintains two natural gas pipelines, a 34-inch pipeline and 6-inch pipeline within areas that would be improved as part of the proposed Project. The 34-inch pipeline is one of many pipelines monitored for leaks daily by aircraft. The rupture of natural gas pipelines would result in the release of petroleum products to the Project site. A pipeline rupture could result in environmental contamination and human health effects in the rural-residential areas adjacent to the proposed Project site. For safety reasons, State regulations prohibit the construction of any structures directly over the pipeline and a right-of-way (ROW) is usually established. The width of the ROW is negotiated between the property owner and the pipeline operator and usually ranges between 20 and 100 feet. Types of shrubs may be restricted; specifically, structures and large trees cannot be located over pipelines. With the compliance with Federal, State and applicable local regulations, and implementation of mitigation measures, impacts from potential health risks or damaging incidents associated with the pipelines would be reduced to a level of less than significant.

The potential impacts resulting from the operation of the existing pipeline are reduced with the use of pipeline markers, signs and underground warning tape and further reduced by enhanced safety features, including intrusion detection and leak monitoring system (central control room via supervisory control and data acquisition to detect third party dig-in), automatic and remote-controlled shut-off valves. Given the design of the pipeline, recently imposed integrity management protocol for all utility pipeline operators, and pipeline monitoring and reporting requirements, the potential impacts associated with reasonably foreseeable upset and accident conditions during the operation of the existing pipelines within the proposed project would be less than significant with the implementation of mitigation measures.

According to the Hazardous Materials Evaluation, one previously abandoned oil prospect well is present within the proposed Project site. Public Resources Code Section 3208.1 authorizes the State Oil and Gas Supervisor to order the reabandonment of a previously abandoned well when construction of any structure over or in the proximity of the well could result in a hazard. The well was filled only with drilling mud prior to abandonment in 1935, therefore, the DOGGR will require

that the well be reabandoned to current standards prior to grading and development of the proposed Project. DOGGR will furnish the necessary closure specifications. Adherence to closure provisions would serve to reduce impacts to less than significant levels.

One active diesel powered and one idle irrigation well are located within the proposed Project boundary. In 2006, petroleum stained soil was removed from each well irrigation location and transported to the McKittrick Waste Site in western Kern County. No diesel or waste-oil staining was observed on the ground surface at the time of the site reconnaissance. One well may be expected to supply water for dust suppression during construction of the proposed Project. If the wells are not to be used for irrigation or industrial purposes, they should be destroyed in accordance with California Well Standards as governed by the California Department of Water Resources, and permit requirements of the KCEHSD. The wells would have a less than significant impact on the proposed Project.

A domestic well is located north of the modular shop building and should be destroyed in accordance with California Well Standards as governed by the California Department of Water Resources, and permit requirements of the KCEHSD. If it is determined that the well be utilized as a water source, then the well does not need to be destroyed. The well would have a less than significant impact on the proposed Project.

Applications of pesticides and herbicides have been conducted according to RMPs obtained annually from the Kern County Agricultural Commissioner's Office. Agricultural chemicals are typically applied in dilute concentrations, and when used properly, degrade relatively quickly. However, it is not known if environmentally persistent pesticides and herbicides have been applied to the proposed Project in the past. Generally, sampling and analysis of surface soils from properties with similar pesticide and herbicide application histories has typically yielded non-detectable results for analyses of elevated concentrations of environmentally persistent pesticides and/or herbicides. The potential for elevated concentrations of environmentally-persistent pesticides and herbicides to exist in the near-surface soils of the proposed Project, which would require regulatory action, is low. Therefore, less than significant impacts would occur.

It is possible that asbestos-containing materials could be present in subsurface concrete irrigation (transite) pipe on-site. Concrete pipe was documented in information obtained from the Kern County Assessor-Recorder's Office. If subsurface concrete irrigation pipe is located on-site, the SJVAPCB shall be contacted for proper disposal procedures and requirements. If any subsurface concrete irrigation pipe is removed from the proposed Project site, it would be removed according to SJVAPCD regulations and would be considered to be a less than significant impact.

If Valley Fever spores occur within the boundaries of the proposed Project, with the absence of mitigation, there is potential for the infection of construction workers and surrounding residents, as well as within the proposed Project area. Mitigation measures designed to reduce the amount of fugitive dust during grading activities would reduce the likelihood of Valley Fever to a less than significant level; (refer to Section 4.3, *Air Quality*). Covering of portions of the Project site with landscaping material and/or with impervious roadway surfaces and buildings would reduce the long-term potential release of Valley Fever spores to a less than significant level.

Due to the scope and nature of the proposed Project, the level of risk associated with hazardous materials on the proposed Project site is considered significant. However, a less than significant impact would occur in this regard after compliance with State and applicable local regulations and the following mitigation measures.

Mitigation Measures

MM 4.9-~~3~~4: **Discovered/Spilled Hazardous Waste Materials.** The Project proponent shall continuously comply with the following:

1. If suspect materials or wastes of unknown origin are discovered during construction on the project site, which is thought to include hazardous waste materials the following shall occur:

    a. All work shall immediately stop in the vicinity of the suspected contaminant;

    b. Project Construction Manager shall be notified;

    c. Area(s) shall be secured as directed by the Project Construction Manager;

    d. Notification shall be made to the Kern County Environmental Health Services Division/Hazardous Materials Section for consultation, assessment, and appropriate actions; and,

    e. Copies of all notifications and correspondence shall be submitted to the Kern County Planning and Natural Resources Department.

MM 4.9-~~4~~5: **Hazardous Materials Specialist.** Prior to issuance of the grading permit, a qualified hazardous materials specialist shall inspect each power pole on-site with a transformer. Those containing polychlorinated biphenyls shall be removed by the hazardous specialist and disposed of at an appropriate hazardous materials disposal site to the satisfaction of Department of Toxic Substances Control. The hazardous materials specialist shall provide a short report to the Kern County Planning and Natural Resources Department and the Kern County Environmental Health Services Division/Hazardous Materials Section for review and approval.

Prior to construction, Pacific Gas and Electric Company (PG&E) shall be contacted regarding the disposition of pole-mounted transformers. In the event of a future release or leak of insulating fluids from any of the pole-mounted transformers, PG&E shall be contacted for their removal or replacement.

MM 4.9-~~5~~6: **Known/Discovered Well Remediation.** Prior to start of construction, the abandoned petroleum prospect well shall be located, exposed, and re-abandoned, if required, to conform to the current abandonment requirements of the California

Department of Conservation, Division of Oil, Gas and Geothermal Resources and the Kern County Department of Environmental Health Services.

MM 4.9-6~~7~~: **Final Maps and Grading Plans, Notes.** The following note shall appear on all final maps and grading plans: "If during grading or construction, any plugged and abandoned or unrecorded wells are uncovered or damaged, the Department of Oil, Gas and Geothermal Resources will be contacted to inspect and approve any remediation required."

MM 4.9-7~~8~~: **Underground Service Alert One-call.** Prior to grading or excavating the Underground Service Alert One-call center shall be contacted at (800) 227-2600. The proposed excavation area shall be delineated with white marking paint or with other suitable markers such as flags or stakes at least two days prior to commencing any excavation work. A "Dig Alert" ticket number would be issued at the time Underground Service Alert is contacted. Excavating is not permitted without this ticket number and is valid for twenty-eight days. Underground Service Alert would notify its member utilities having underground facilities in the area. Underground Service Alert does not notify nonmember utilities or energy companies, or Caltrans.

MM 4.9-8~~9~~: **Ruptured Pipeline Safety.** If a rupturing of a pipeline should occur during excavation and construction activities the Kern County Fire Department and Pacific Gas and Electric Company should be contacted immediately. Natural gas transmission pipeline rupture most often indicates an emergency situation and 9-1-1 should be dialed. If an emergency is not indicated, the Kern County Fire Department-Greenfield Station 52, located at 312 Taft Highway, should be contacted at (661) 834-5144. Non-Emergency telephone numbers for the Kern County Fire Department number (661) 324-6551 and the project proponent shall follow all safety and cleanup regulations.

MM 4.9-9~~10~~: **On-site Water Wells.** If the on-site water wells are not to be used for irrigation or industrial purposes, they shall be destroyed in accordance with California Well Standards as governed by the California Department of Water Resources, and permit requirements of the Kern County Environmental Health Services Division.

MM 4.9-10~~11~~: **Herbicides.** Prior to the issuance of grading or building permits for the project, if herbicides are to be utilized, the contractor or personnel applying herbicides must have the appropriate State and local herbicide applicator licenses and comply with all State and local regulations regarding herbicide use.

1. Herbicides shall be mixed and applied in conformance with the product manufacturer's directions.

2. The herbicide applicator shall be equipped with splash protection clothing and gear, chemical resistant gloves, chemical spill/splash wash supplies, and material safety data sheets for all hazardous materials to be used.

3. To minimize harm to wildlife, vegetation, and waterbodies, herbicides shall not be applied directly to wildlife, products identified as non-toxic to birds and small mammals shall be used if nests or dens are observed.

4. Herbicides shall not be applied if it is raining at the site, rain is imminent, or the target area has puddles or standing water, and shall not be applied when wind velocity exceeds 10 miles per hour.

5. If spray is observed to be drifting to a non-target location, spraying shall be discontinued until conditions causing the drift have been abated.

MM 4.9-11~~12~~: **Asbestos Containing Materials.** If asbestos containing materials are identified during construction (particularly in the concrete irrigation (transite) pipe located on-site, then the San Joaquin Valley Air Pollution Control District shall be contacted for removal and disposal procedures. These procedures shall be followed in order to eliminate asbestos exposure to construction workers and surrounding workers and residents.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.9-3: The Project Would Emit Hazardous Emissions or Handle Hazardous or Acutely Hazardous, Substances, or Waste Within One-Quarter Mile of an Existing or Proposed School.

Due to the active agricultural uses of the proposed Project site, it is anticipated that pesticides have been used on-site, and that residues remain within the on-site soils. There are no existing schools located within one-quarter mile of the proposed Project. Currently, McKee Middle School and McKee Primary School are located approximately 1.5 miles north of the proposed Project and General Shafter Elementary School is located approximately 1.0 to the southwest. Additionally, the use, storage, and transportation of hazardous materials that would occur as part of construction and operation of the proposed Project would be more than 0.25 miles from these schools, thus potential impacts are considered less than significant in this regard.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.9-4: The Project Would Be Located on a Site That is Included on a List of Hazardous Materials Sites Compiled Pursuant to Government Code Section 65962.5 and, as a Result, Would Create a Significant Hazard to the Public or the Environment.

An EDR, Inc. radius search and written report for the proposed Project site and properties within one mile were completed in July 2008, in conjunction with the Hazardous Materials Evaluation (McIntosh and Associates 2008; refer to Appendix N). The search of Federal, State, and local agencies environmental records found no records for the proposed Project site. Three facilities were identified on one or more of the databases searched for the EDR report. These facilities are listed on the following databases: Solid Waste/Landfill-listed facility; CORTESE, LUST, HIST UST, CA FID UST; and SWEEPS UST. The facilities identified include Lamb Chops, YCT, and Limi Brothers Farm. In addition, five "orphan sites" were identified in the EDR report. "Orphan sites" are sites that the EDR report cannot map due to insufficient information. In addition, the Hazardous Materials Evaluation (McIntosh and Associates 2017; refer to Appendix F) included a more recent record search.

The proposed Project is not included on any hazardous materials sites lists. The proposed project would not create a hazard to the public or environment through the transport, disposal and/or use of hazardous materials, and it would not create a public hazard through emissions of hazardous materials, accidental or otherwise. Impacts are considered less than significant, and mitigation is not required.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.9-5: The Project Would Be Located Within an Within the Adopted Kern County Airport Land Use Compatibility Plan Resulting in a Safety Hazard for People Residing or Working in the Project Area.

The proposed Project site is not located within two miles of a public airport or public use airport as shown in the Kern County Airport Land Use Compatibility Plan (ALUCP).

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.9-6: The Project Would Result in a Safety Hazard for People Residing or Working in the Project Area from a Private Airstrip.

A private airstrip (Costerisan Farms Airport) was located two miles northwest of the proposed Project site; however, this private airstrip is no longer in use (pilotnav 2017). No other private airstrips are within two miles of the proposed Project site. Therefore, this airstrip is not expected to result in a safety hazard for the construction workers and future employees of the proposed Project site. Less than significant impacts are anticipated.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.9-7: The Project Would Impair Implementation of, or Physically Interfere with, an Adopted Emergency Response Plan or Emergency Evacuation Plan.

There is no information in the record to date that indicates the proposed Project would interfere with the operation of any roadway, facility, or area that would be used as part of an emergency response plan or emergency evacuation plan. Impacts would be less than significant, and mitigation is not required.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.9-8: The Project Would Expose People or Structures to a Significant Risk of Loss, Injury or Death Involving Wildland Fires, Including Where Wildlands are Adjacent to Urbanized Areas or Where Residences Are Intermixed with Wildlands.

As discussed in Impact 4.18-1, the proposed Project is not located adjacent to a wildland area. The proposed Project site is located in an area with a mixture of agricultural, industrial, and residential land uses, which are not considered susceptible to wildland fires. Therefore, wildland fires do not have the potential to affect the site and no impacts would occur.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Cumulative Impacts

Impacts related to hazardous materials and hazardous substances are considered site-specific and are generally mitigated to less than significant levels on a project-by-project basis. Compliance with Federal, State, and local regulations would ensure that contamination or exposure to hazardous substances is avoided or controlled to minimize the risk to the public on a project-by-project basis, as the cumulative projects are constructed. For the proposed Project, all potential hazards and potentially hazardous materials or situations that could result from release of hazardous substances would be mitigated to less than significant levels following compliance with Federal, State, and local regulations. Therefore, implementation of the proposed Project in conjunction with future projects would result in less than significant cumulative impacts for hazards or hazardous materials.

Mitigation Measures

Implement Mitigation Measures MM 4.9-1 through MM 4.9-12.

Level of Significance after Mitigation

Impacts would be less than significant.

This Page Intentionally Left Blank

Section 4.10

Hydrology and Water Quality

Section 4.10
Hydrology and Water Quality

4.10.1 Introduction

The purpose of this section is to describe the hydrologic and water quality setting of the proposed Project and surrounding area. This section also evaluates the potential impacts the proposed Project will have on water resources. A Water Supply Assessment was prepared by Yarne & Associates in January 2019. See Appendix H, Water Supply Assessment.

4.10.2 Environmental Setting

Climate

The proposed Project lies within the southern Central Valley of California, which has rainy winters and dry summers, characteristic of a Mediterranean climate. The Central Valley has greater temperature extremes than the coastal areas because it is less affected by the moderating influence of the Pacific Ocean.

Ninety percent of annual rainfall in the southern Central Valley occurs during the period between November and April. Infrequent summer thunderstorms and showers from tropical depressions account for the remaining rainfall. Average annual precipitation is about 5.7 inches, which is a relatively small amount. By comparison, Los Angeles County receives an annual average of 14.8 inches, Sacramento receives an average of 17.5 inches per year, and Bishop, which is on the dry eastern side of the Sierra Nevada mountain range (near Death Valley), receives an annual average of 5.4 inches.

Hydrology

Metropolitan Bakersfield, located in a semi-arid region, relies on groundwater, the Kern River and two water importation projects for its water supply for agricultural and municipal usage. The region receives a normal annual precipitation of approximately 5 to 13 inches, which categorizes the area as a desert or steppe; most of the precipitation falls between November and April.

Regional Surface Water Resources

Kern River

The Kern River is the only significant stream in Metropolitan Bakersfield. From an elevation of 775 feet above mean sea level at the mouth of the Kern River Canyon, westward to an elevation of 325 feet at Interstate 5, the Kern River is a unique resource in a desert environment. The river begins on the western flank of Mount Whitney in the southern Sierra Nevada and flows in a southwest direction.

Several minor streams flow into the Kern River, which exists as a contained basin except during high runoff years. The Kern River Basin includes approximately 2,100 square miles of watershed area above Isabella Dam, about 300 square miles of foothill area below the dam, and about 600 square miles of alluvial fan below the mouth of the Kern River Canyon. The basin is fully diverted and used; however, during very wet years, the Kern River reaches the flood channel located on the west of the valley floor and carries water into the Tulare Lake bed. The river flows have been regulated since the completion of Isabella Dam in 1953.

Tulare Lake Basin

The proposed Project is located within the Central Valley's Tulare Lake Basin; the Diablo and Temblor Mountain Ranges are to the west, the San Emigdio and Tehachapi Mountains are to the south, and the Sierra Nevada Mountains are to the east and southeast. The Tulare Lake Basin encompasses approximately 10.5 million acres. The basin is approximately 170 miles long and 140 miles wide; the Central Valley floor comprises less than one-half of the total Basin area. The Tulare Lake Basin drains to the San Joaquin River Basin only during years of heavy rainfall. The Tulare Lake Basin is under the jurisdiction of the Central Valley Regional Water Quality Control Board (RWQCB), which is responsible for designing and implementing the Tulare Basin Plan.

Regional Surface Water Supply

There are three major sources of surface water available in the Metropolitan Bakersfield General Plan area: the Kern River, the Central Valley Project (CVP), and the State Water Project (SWP). Historically, the Kern River has been the primary source of surface water to Kern County. It originates in the southern Sierra Nevada and flows in a south and southwesterly direction to the Central Valley northeast of Bakersfield. SWP water is supplied from the Sacramento/San Joaquin Delta area and is delivered through the California Aqueduct to Kern County and other areas. CVP water is delivered to the Kern County area through the Friant-Kent Canal. This canal begins at Friant Dam and Millerton Lake and flows southerly to its terminus at the Kern River upstream of the Project area.

Of the three principal sources of water, Kern River and Friant-Kern Canal water are higher quality water producers than SWP water. The quality of Kern River water near Bakersfield is excellent, as is the water quality of the Friant-Kern Canal.

Local Surface Water Setting

The proposed Project is relatively level, sloping southwesterly at an average rate of approximately 7.5 feet per mile. Precipitation is rarely enough to cause flowing water from the site, as most of the water percolates into the soil. The proposed Project overlies the Kern County sub-basin of the San Joaquin Valley Groundwater basin within the Tulare Lake Hydrologic Region.

Physical Characteristics of Surface Water Quality

Standard parameters used to assess the quality of stormwater provide a method of measuring impairment. The backgrounds of these typical characteristics assist in understanding water quality requirements. The quantity of a material in the environment and its characteristics determine the

degree of availability as a pollutant in surface runoff. In an urban environment, the quantity of certain pollutants in the environment is a function of the intensity of the land use. For instance, high density of automobile traffic makes a number of potential pollutants (such as lead and hydrocarbons) more available. The availability of a material, such as a fertilizer, is a function of the quantity and the manner in which it is applied. Applying fertilizer in quantities that exceed plant needs leaves the excess nutrients available for loss to surface or ground water.

The physical properties and chemical constituents of water have traditionally served as the means for monitoring and evaluating water quality. Evaluating the condition of water through a water quality standard refers to its physical, chemical or biological characteristics. Water quality parameters for stormwater make up a long list and are classified in many ways. In many cases, the concentration of an urban pollutant, rather than the annual load of that pollutant, is needed to assess a water quality problem.

Flooding

The Kern River has been subject to severe flooding from storms and snowmelt in the upper portion of its watershed. According to the Kern River Floodway Draft Environmental Impact Report dated June 1988, a worst-case maximum precipitation possible storm for the climate of the Kern River area would have produced an estimated peak discharge above Bakersfield of 204,000 cubic feet per second (cfs). In 1867, levees were first constructed in Bakersfield to protect from flood damage. The annual average runoff for the Kern River is estimated at 700,000 acre-feet per year, of which most is diverted to agricultural uses. The flood of November 1950 had a peak flow of 36,000 cfs and led to the construction of the Isabella Dam and Reservoir in 1953, which significantly reduced flood hazards in the southern San Joaquin Valley and the greater Metropolitan Bakersfield area.

Flooding of the Kern River has resulted from high-intensity winter rainstorms which generally occur from November through April. Flooding can also be caused by snowmelt, which occurs in the late spring and early summer months. However, snowmelt is less damaging because it has a longer period of runoff and a lower peak than rain floods.

Within the past 40 years, seven major floods have occurred including, the 1998 flood caused by the El Niño weather pattern. These floods have been investigated by the Kern County Water Agency (KCWA) and the U.S. Army Corp of Engineers (USACE). Since 1971, the United States Department of Housing and Urban Development (HUD) has designated the unincorporated portions of Kern County as a special flood hazard area. In compliance with the Federal Flood Insurance Program, HUD has provided Kern County with a series of eighty-three Flood Hazard Boundary Maps. These maps delineate major areas of flooding throughout the County.

The proposed Project site is located within the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map Zone X. According to FEMA, Zone X consists of: areas within and outside the 0.2 percent annual chance floodplain, areas of 1-percent annual chance sheet flow flooding where average depths are less than 1 foot, areas of 1-percent annual chance stream flooding where the contributing drainage area is less than 1 square mile, or areas protected from the 1-percent annual chance flood by levees. Flood insurance purchase is not required in these zones.

Dam Inundation

Isabella Dam is located approximately 40 miles northeast of the City of Bakersfield, near a major fault line. Isabella Dam is earth-filled and is approximately 185 feet high, 1,725 feet long, and can hold 570,000-acre feet of water.

Because Isabella Dam is near an active fault line, the potential for seismic activity to cause dam failure exists. If the dam fails, the entire lake storage would be released and approximately 60 square miles of the Metropolitan Bakersfield area would be flooded. Flood levels have the potential to reach 30 feet, with peak inundation at the Project site having the potential to be 5 to 10 feet depending on the water level in the lake. The proposed Project is expected to be inundated within ten to twelve hours after dam failure. This lag time would provide adequate time for warning and would substantially decrease the number of deaths and injury; however, property damage would occur. The chance of dam failure occurring is approximately one day in 10,000 years when the lake is at maximum capacity.

Groundwater

Groundwater is subsurface water that occurs beneath the ground surface in fully saturated zones within soils and other geologic formations. Groundwater in a saturated geologic unit with sufficient permeability and thickness to store sufficient water to sustain a well or spring is defined as an aquifer. A groundwater basin is defined as a hydrogeologic unit containing one large aquifer or several connected and interrelated aquifers.

Metropolitan Bakersfield rests above a series of water aquifers that form part of a larger groundwater basin called the San Joaquin Groundwater Basin. The primary aquifer below Metropolitan Bakersfield is made up of unconsolidated sediments bordered by faults or mountain ranges to the east, west and south. Groundwater within the Basin occurs under unconfined, confined and semi-confined conditions.

Groundwater recharge in the basin consists primarily of the percolation of excess irrigation applications, with lesser contributions supplied by river and canal seepage, artificial recharge programs of water agencies, and municipal and industrial wastewater. Direct recharge from precipitation is only a minor source of supply.

Historically, water quality degradation has been noticed in many wells in Kern County. Groundwater contamination in the area includes nitrates, ethylene dibromide (EDB), and dibromochloropropane (DBCP). As a result of the historical use of the area as cultivated agriculture, a number of groundwater contaminants have been introduced over a period of years. In many cases, recent efforts to limit such discharge have led to a reduction or complete cessation of new sources of contamination. Many uses, however, continue to contribute significant quantities of contaminants to the groundwater.

Three principal sources for ongoing groundwater contamination exist in the area: septic systems, cultivated agriculture, and the petroleum industry. By design, septic systems discharge nitrified effluent into soils surrounding the systems. Cultivated agriculture contributes pollutants through nitrogen fertilizer application resulting in a measurable increase in groundwater nitrates throughout

the area. A past source of groundwater contamination was the application of EDB and DBCP to control crop damage.

Petroleum production and refining contributes contamination through direct application of spilled or leaked crude oil and petroleum products to the ground surface and through the use of corrosion inhibitors in the well development process. Pollutants resulting from this activity typically include hydrocarbons and phenols that have entered the subsurface soils through injection or by percolation.

Groundwater recharge in the Basin is currently obtained through the following sources:

Natural Recharge. Natural recharge of groundwater is provided by precipitation runoff, which is defined as the amount of melted snow and rainwater measured after evaporation, evapotranspiration, and percolation.

River and Canal Seepage. Canal seepage is defined as the amount of water that percolates into the ground from earthen canals.

Spreading and Banking. Percolation of water spread in open basins has been used to replenish the groundwater system. Fifteen agencies operate groundwater banking programs in Kern County, which can store up to 5.7 million-acre-feet of water during wet years. The largest is the Kern Water Bank (KWB), a 7,000-acre groundwater recharge facility located in and along the Kern River channel, in response to concerns regarding groundwater supplies. The City of Bakersfield operates the "2800 Acres" groundwater recharge facility, a 2,800-acre groundwater recharge facility located in and along the Kern River channel, in response to concerns regarding groundwater supplies. The facility receives water from the Kern River, the Central Valley Project, and the State Water Project when they have water surpluses. The six-mile long site is made up of river channels, overflow lands and constructed spreading basins. The groundwater is recharged in this facility by spreading water onto spreading basins, then allowing it to percolate. The recharge facility improves groundwater quality by recharging low- salinity water from the Kern River into the aquifers, which dilutes the high-salinity irrigation water that reaches the groundwater from adjacent farming operations.

To eliminate potential overdraft conditions in which more groundwater is used than is replenished, surface water was made available to former groundwater users via the Friant-Kern Canal and the State Water Project. These supplemental surface water supplies, in conjunction with the recharge facilities, have generated inflow into the groundwater basin that exceeds the outflow, as is indicated by the steady rise in groundwater levels since 1992.

Water Quality

Surface water quality is subject to Federal, State, and local water quality requirements that are administered and enforced by the U.S. Environmental Protection Agency (EPA), the California State Water Resources Control Board (SWRCB), and the California Regional Water Quality Control Board (RWQCB), with cooperation from each county.

The principal law governing pollution of the nation's surface waters is the Federal Water Pollution Control Act (Clean Water Act [CWA]). Originally enacted in 1948, it was amended in 1972 and has remained substantially the same since. The CWA consists of two major parts: provisions that

authorize federal financial assistance for municipal sewage treatment plant construction and regulatory requirements that apply to industrial and municipal dischargers. The CWA authorizes the establishment of effluent standards on an industry basis. The CWA also requires states to adopt water quality standards that "consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses".

To achieve its objectives, the CWA is based on the concept that all discharges into the nation's waters are unlawful, unless specifically authorized by a permit. The National Pollutant Discharge Elimination System (NPDES) is the permitting program for discharge of pollutants into surface waters of the United States under Section 402 of the CWA. Thus, industrial and municipal dischargers (point source discharges) must obtain NPDES permits from the Central Valley RWQCB. The existing NPDES (Phase I) stormwater program requires municipalities serving more than 100,000 persons to obtain a NPDES stormwater permit for any construction project larger than five acres. Proposed NPDES stormwater regulations (Phase II) expand this existing national program to smaller municipalities with populations of 10,000 persons or more and construction sites that disturb greater than one acre. For other dischargers, such as those affecting groundwater or from non-point sources, a Report of Waste Discharge must be filed with the RWQCB. For specified situations, some permits may be waived and some discharge activities may be handled through being included in an existing general permit.

While the EPA has two permitting options to meet NPDES requirements (individual permits and general permits), the SWRCB has elected to adopt one statewide General Permit for California that applies to all construction-related stormwater discharges, except for those on tribal lands, in the Lake Tahoe Hydrologic Unit, and under the control of the California Department of Transportation (Caltrans).

Construction activity subject to this General Permit includes any clearing, grading, stockpiling, or excavation that results in soil disturbances of at least one acre of total land area. Construction activities disturbing less than one acre are still subject to this permit if the activity is part of a large common plan of development or if significant water quality impairment will result from the activity.

The General Permit requires all dischargers whose construction activity disturbs one acre or more to:

- Develop and implement a Stormwater Pollution Prevention Plan (SWPPP) that specifies Best Management Practices (BMPs) to prevent all construction pollutants from contacting stormwater and with the intent of keeping all products of erosion from moving off-site into receiving waters;
- Eliminate or reduce non-stormwater discharge to storm sewer systems and other waters of the United States; and
- Inspect all BMPs.

Construction activities disturbing less than one acre are required to prevent the pollution of stormwater runoff from the construction activities with the usage of erosion and sediment control BMP's as specified in the site development sections of the California Green Code.

4.10.3 Regulatory Setting

Federal Regulations

Clean Water Act (CWA)

The CWA is a federal law that protects the nation's water quality for surface waters, including lakes, rivers, coastal wetlands, and "waters of the United States". The CWA specifies that discharges to waters are illegal, unless authorized by an appropriate permit. The permits regulate the discharge of dredged and fill materials, construction-related stormwater discharges, and activities that may result in discharges of pollutants to waters of the United States. If waters of the U.S. are located on a project site, a proposed project is likely to discharge to them, and if impacts on them are anticipated, the project must obtain a CWA Section 401 Water Quality Certification from the appropriate RWQCB.

National Pollutant Discharge Elimination System (NPDES)

The NPDES program is administered by the EPA, which delegates oversight in California to the Regional Water Quality Control Boards.

The NPDES program provides general permits and individual permits. The general permits are for construction projects that disturb more than one acre of land. The general permit requires the applicant to file a public notice of intent to discharge stormwater and to prepare and implement a SWPPP. The SWPPP includes a site map, description of proposed activities, demonstration of compliance with applicable ordinances and regulations, and a description of BMPs that would be implemented to reduce erosion and discharge of construction-related pollutants.

Stormwater Pollution Prevention Plan (SWPPP)

The SWPPP has two major objectives: to help identify the sources of sediment and other pollutants that affect the quality of stormwater discharges, and to describe and ensure the implementation of BMPs to reduce or eliminate sediment and other pollutants in both stormwater and in non-stormwater discharges.

BMPs include activities, practices, maintenance procedures, and other management practices that reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges. BMPs include treatment requirements, operation procedures, and practices to control site runoff, spillage, leaks, waste disposal and drainage from raw materials storage. BMP implementation must take into account changing weather conditions and construction activities, and various combinations of BMPs may be used over the life of the project to maintain compliance with the CWA. The General NPDES Permit gives the owner the discretion to determine the most economical, effective and innovative BMPs to achieve the performance-based goals of the General NPDES Permit.

There are two types of BMPs: structural and nonstructural. Structural BMPs are the specific construction, modification, operation, maintenance, or monitoring of facilities that would minimize the introduction of pollutants into the drainage system or would remove pollutants from the drainage system. Nonstructural BMPs are activities, programs and other nonphysical measures that help reduce

pollutants from nonpoint sources to the drainage system. In general, nonstructural BMPs are source control measures.

The issue of pollution in stormwater and urban runoff has been recognized by both Federal and State agencies, and there has been a growing concern regarding activities that discharge water affecting California's surface water, coastal waters, and groundwater. Discharges of water are classified as either point source or non-point source discharges. A point source discharge usually refers to waste emanating from a single, identifiable point. Regulated point sources include municipal wastewater, oil field wastewater, winery discharges, solid waste sites and other industrial discharges. Point source discharge must be actively managed to protect the state's waters. A nonpoint source discharge usually is a waste emanating from diffused locations. As a result, specific sources of nonpoint source pollution may be difficult to identify, treat, or regulate. The goal is to reduce the adverse impact of nonpoint source discharges on water resources through better management of these activities. Nonpoint sources include drainage and percolation from a variety of activities such as agriculture, forestry, recreation, and storm runoff.

Impaired Waterbodies

The CWA Section 303(d) and the California's Porter-Cologne Water Quality Control Act (described below) require the State to establish the beneficial uses of its State waters and to adopt water quality standards to protect those beneficial uses. Section 303(d) establishes a Total Maximum Daily Load (TMDL), which is the maximum quantity of a particular contaminant that a water body can maintain without experiencing adverse effects, to guide the application of State water quality standards. Section 303(d) also requires the State to identify "impaired" streams (water bodies affected by the presence of pollutants or contaminants) and to establish the TMDL for each stream.

State Regulations

Department of Water Resources

The California Department of Water Resources' (DWR's) major responsibilities include preparing and updating the California Water Plan to guide development and management of the State's water resources; planning, designing, constructing, operating, and maintaining the State Water Resources Development System; regulating dams; providing flood protection; assisting in emergency management to safeguard life and property; educating the public; and serving local water needs by providing technical assistance. In addition, DWR cooperates with local agencies on water resources investigations; supports watershed and river restoration programs; encourages water conservation; explores conjunctive use of ground and surface water; facilitates voluntary water transfers; and, when needed, operates a State drought water bank.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act acts in cooperation with the CWA to establish the State Water Resources Control Board (SWRCB). The SWRCB is divided into nine regions, each overseen by a RWQCB. The SWRCB, and thus each RWQCB, is responsible for protecting California's surface waters and groundwater supplies.

The Porter-Cologne Water Quality Control Act develops Basin Plans that designate the beneficial uses of California's rivers and groundwater basins. The Basin Plans also establish narrative and numerical water quality objectives for those waters. Basin Plans are updated every three years and provide the basis of determining waste discharge requirements, taking enforcement actions, and evaluating clean water grant proposals. The Porter-Cologne Water Quality Control Act is also responsible for implementing CWA Sections 401-402 and 303(d) to SWRCB and RWQCBs.

Senate Bills 610 (Chapter 643, Statutes of 2001) and 221 (Chapter 642, Statutes of 2001)

SB 610 and SB 221 are companion measures that seek to promote more collaborative planning among local water suppliers and cities and counties. They require that water supply assessments occur early in the land use planning process for all large-scale development projects. If groundwater is the supply source, the required assessments must include detailed analyses of historic, current, and projected groundwater pumping and an evaluation of the sufficiency of the groundwater basin to sustain a new project's demands. They also require an identification of existing water entitlements, rights, and contracts and a quantification of the prior year's water deliveries. In addition, the supply and demand analysis must address water supplies during single and multiple dry years presented in 5-year increments for a 20-year projection. Under SB 221, approval by a county of a subdivision of more than 500 homes requires an affirmative written verification of a sufficient water supply.

Sustainable Groundwater Management Act

In 2014, California enacted the Sustainable Groundwater Management Act (SGMA; Water Code Section 10720 et seq.). SGMA, and related amendments to California law, require that all groundwater basins designated as high or medium priority in the DWR California Statewide Groundwater Elevation Monitoring (CASGEM) Program, and that are subject to critical overdraft conditions, must be managed under a new Groundwater Sustainability Plan (GSP) or a coordinated set of GSPs, by January 31, 2020. High or medium priority basins that are not subject to a critical overdraft must be regulated under one or more GSPs by 2022. Where GSPs are required, one or more local Groundwater Sustainability Agencies (GSAs) must be formed to implement applicable GSPs. A GSA has the authority to require registration of groundwater wells, measure and manage extractions, require reports and assess fees, and to request revisions of basin boundaries, including establishing new subbasins. GSAs must have been formed for high and medium priority basins by June 2017. All of the Kern County Subbasin has been included in exclusive GSA's as mandated by SGMA.

The 2.8 million acres of valley portion of Kern County has been designated a high priority and the 250,000 acres of the Indian Wells Valley sub-basin which includes the City of Ridgecrest and China Lake Naval Weapons Station has been classified a medium priority basin. Both are under mandatory requirements to form a GSA and create a GSP that achieves sustainability in 20 years.

Each GSP must include a physical description of the covered basin, such as groundwater levels, groundwater quality, subsidence, information on groundwater-surface water interaction, data on historical and projected water demands and supplies, monitoring and management provisions, and a description of how the plan will affect other plans, including city and county general plans. Under the

Act, the GSA is authorized to restrict pumping, levy assessments and fees and undertake water quality and quantity projects to rebalance the basin. The DWR must adopt regulations for the preparation of a GSP by January 2016. Emergency regulations for the preparation of the GSP's were approved by the California Water Commission on May 18, 2016. As defined by the Act, "sustainable groundwater management" means that groundwater use within basins managed by a GSP will not cause any of the following "undesirable results:" (a) chronic lowering of groundwater levels (not including overdraft during a drought, if a basin is otherwise managed); (b) significant and unreasonable reductions in groundwater storage; (c) significant and unreasonable seawater intrusion; (d) significant and unreasonable degradation of water quality; (e) significant and unreasonable land subsidence; and (f) surface water depletions that have significant and unreasonable adverse impacts on beneficial uses (Water Code Section 10721(w)).

Kern County is a member of the following GSA's: Cuyama Basin Groundwater Sustainability Agency, Indian Wells Valley Groundwater Authority and Kern Groundwater Authority which manages a portion of the valley sub-basin. The Valley portion of Kern County also is managed by the Kern River Groundwater Sustainability Agency which is comprised of the City of Bakersfield, Kern Delta Water District and Improvement District No. 4 of the Kern County Water Agency. An additional nine GSA's have also been formed to sustainably manage their respective portions of the Kern County subbasin.

Note: Effective December 11, 2018, the County of Kern withdrew from the Kern Groundwater Authority. The Kern County Water Agency (KCWA) was brought in as a cooperative member of Joint Powers Agreement to manage the white spaces. Five GSA's are preparing GSP's to manage the Kern subbasin per a Kern County Subbasin Coordination Agreement.

Municipal Recycled Water Landscape Irrigation Use Permit

The General Waste Discharge Requirements for Landscape Irrigation Uses of Municipal Recycled Water (Water Quality Order No. 2009-0006-DWQ) (Landscape Irrigation General Permit) regulates landscape irrigation with recycled water. Specified uses of recycled water considered to be "landscape irrigation" include any of the following: (i) parks, greenbelts, and playgrounds; (ii) school yards; (iii) athletic fields; (iv) golf courses; (v) cemeteries; (vi) residential landscaping and common areas (not including individually owned residential areas); (vii) commercial landscaping, except eating areas; (viii) industrial landscaping, except eating areas; and (ix) freeway, highway, and street landscaping. Producers or distributors of recycled water must submit a Notice of Intent for coverage under the Landscape Irrigation General Permit. This permit is not required for individual recycled water users and does not cover use of harvested stormwater for irrigation.

Producer and Distributor Responsibilities

Producers must deliver disinfected tertiary recycled water as defined by California Code of Regulations (CCR) Title 22, sections 60301.230 and 60301.320, which address disinfection requirements and "filtered wastewater" requirements, respectively. Producers are responsible for ensuring that recycled water meets the quality standards for disinfected tertiary recycled water as described in Title 22 and any associated waste discharge requirement order for the water reclamation plant. Distributors are responsible for drafting and submitting an operations and maintenance plan to

the SWRCB. The operations and maintenance plan contents are contained in a permit, and include operation and maintenance/management of transport facilities and associated infrastructure necessary to convey and distribute recycled water from the point of production to the point of use. Additionally, distributors must designate a Recycled Water Use Supervisor for each use area. A permit also addresses best management practices, including general operations and maintenance, which producers and distributors must apply to manage recycled water and prevent water quality impacts.

Usage

A permit establishes terms and conditions of discharge to ensure that the discharge does not unreasonably affect beneficial uses of groundwater and surface water. This includes minimum setback distances, signage, application control, and use restrictions, along with other preventative measures, such as backflow prevention and cross-contamination programs.

California Green Building Standards Code (CALGreen Code)

The State of California enacted The California Green Building Standards Code (CALGreen Code) as part 11 of The California Building Standards Code (Title 24). The 2016 CALGreen Code, effective on January 1, 2017, contains measures that are designed to improve public health, safety, and general welfare by utilizing design and construction methods that reduce the negative environmental impact of development and encourage sustainable construction practices.

The CALGreen Code provides mandatory direction to developers of all new construction and renovations of residential and non-residential structures with regard to all aspects of design and construction, including but not limited to site drainage design, stormwater management, and water use efficiency. Required measures are accompanied by a set of voluntary standards that are designed to encourage developers and cities to aim for a higher standard of development.

Under the CALGreen Code, all residential and non-residential sites are required to be planned and developed to keep surface water from entering buildings and to incorporate efficient outdoor water use measures. Construction plans are required to show appropriate grading and surface water management methods, such as swales, water collection and disposal systems, French drains, and rain gardens. Plans should also include outdoor water use plans that utilize weather or soil moisture-controlled irrigation systems. In addition to the above-mentioned requirements, non-residential developments are also required to develop:

- A Stormwater soil loss prevention plan[1];
- An irrigation budget for landscapes greater than 2,500 square feet, and
- A quantified plan to reduce waste water by 20 percent through use of water-efficient fixtures or non-potable water systems, such as use of harvested rainwater, grey water, and/or recycled water.

CALGreen also offers a tiered set of voluntary measures to encourage residential and non-residential development that goes beyond the mandatory standards to reduce soil erosion, rainwater capture and infiltration, and use of recycled and/or grey water systems. Non-residential developers are further encouraged to integrate treatment BMPs that result in zero net increase in runoff due to development

[1] Kern County, 2016 Cal Green Stormwater BMP (January 2017).

and can treat runoff from the 85th percentile storms. Furthermore, by meeting overall environmental performance goals for the specified categories (e.g., planning and design, energy efficiency, water efficiency and conservation, etc.), buildings can be designated as CALGreen Tier 1 or Tier 2, with the Tier 2 designation having more stringent goals than the Tier 1 designation.

Assembly Bill (AB) 1750 (Rainwater Capture Act of 2012)

Assembly Bill (AB) 1750 (AB 1750), also known as the Rainwater Capture Act of 2012, allows residential, commercial, and government land owners to install, operate, and maintain rainwater collection systems that would not otherwise directly enter a saltwater body through a constructed conveyance and treatment system. Under AB 1750, rainwater is defined as precipitation on any public or private parcel that has not entered an off-site storm drain system or channel, a flood control channel, or any other stream channel, and has not previously been put to beneficial use. AB 1750 permits the following uses for rooftop runoff: rain barrel system for outdoor non-potable use, rain collection system for outdoor non-potable use or infiltration into groundwater, and rain collection system for indoor non-potable use. Additional requirements are included for indoor non-potable use. Compliance with any local rainwater or stormwater capture programs continues to be required under AB 1750.

California Water Conservation Executive Orders

Beginning in January 2014, Governor Jerry Brown issued three Executive Orders (EOs), B-26-14, B-28-14, B-29-15, B-37-16, and B-40-17 regarding water supply, water demand, and water use within the State during severe drought conditions. EO B-29-15, issued April 1, 2015, sets limitations not only for existing land uses and water supply systems, but also for new construction. Some of these restrictions include:

- The Water Board shall prohibit irrigation with potable water of ornamental turf on public street medians. (EO B-29-15, Save Water, Action #6)
- The Water Board shall prohibit irrigation with potable water outside of newly constructed homes and buildings that is not delivered by drip or microspray systems. (EO B-29-15, Save Water, Action #7)
- The California Energy Commission shall adopt emergency regulations establishing standards that improve the efficiency of water appliances, including toilets, urinals, and faucets available for sale and installation in new and existing buildings. (EO B-29-15, Increase Enforcement Against Water Waste, Action #16)

In addition, EO B-29-15 requires that DWR update the State Model Water Efficient Landscape Ordinance through expedited regulation by the end of 2015. This ordinance will increase water efficiency standards for new and existing landscapes through more efficient irrigation systems, greywater usage, onsite stormwater capture, and by limiting the portion of landscapes that can be covered in turf (EO B-29-15, Increase Enforcement Against Water Waste, Action #11).

On November 13, 2015, Governor Brown issued EO B-36-15, which upheld the previous EOs, and directs the SWRCB to extend of urban water use restrictions through October 31, 2016 based on drought conditions known through January 2016. The SWRCB issued Emergency Regulations on

February 2, 2016, in compliance with EO B-36-15. These emergency regulations maintain the current tiers of required water reductions; however, additional adjustments in response to stakeholders; equity concerns were included in the Emergency Regulations.

In addition, DWR and the U.S. Bureau of Reclamation have finalized the 2016 Drought Contingency Plan that outlines State Water Project and Central Valley Project operations from February through November 2016. The 2016 Drought Contingency Plan was developed in coordination with staff from State and federal agencies. The 2016 Drought Contingency Plan communicates overarching goals for 2016 water management and the potential operations needed to achieve those goals.

In May 2016, Governor Brown issued EO B-37-16, which upheld the previous EOs, and directs local agencies to provide new permanent water use targets for each urban water supplier and concrete improvements to drought preparedness. The order bolstered the State's drought resilience and preparedness by establishing longer-term water conservation measures that include permanent monthly water use reporting, new urban water use targets, reducing system leaks and eliminating clearly wasteful practices, strengthening urban drought contingency plans and improving agricultural water management and drought plans. Local agencies are required to publicly disclose the projections and calculations used to determine their conservation standards, and to continue monthly water conservation reporting. EO B-37-16 calls for wise water use and less water waste to become permanent changes to prepare for more frequent and persistent periods of limited water supply. On April 7, 2017, EO B-40-17 lifted the drought emergency in all California counties except Fresno, Kings, Tulare, and Tuolumne counties. EO B-40-17 builds on EO B-37-16, which continues to remain in effect, to continue to make water conservation a way of life in California.

Biosolids Regulations

Biosolids generated during wastewater treatment are regulated by the State under SWRCB Water Quality Order No. 2004-0012-DWQ, Final General Waste Discharge Requirements for Land Application of Biosolids for Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities. This order, implemented under the federal biosolids rules (40 CFR Part 503), applies to all land application of Class A and Class B biosolids and "exceptional quality" biosolids-derived mixtures consisting of 50 percent or more biosolids. The order establishes permitting, monitoring, and reporting requirements. Local ordinances, described below, also regulate the disposal of biosolids in Kern County.

Local

Metropolitan Bakersfield General Plan

The goals and policies of the Metropolitan Bakersfield General Plan relating to water and water quality include water conservation, balancing competing demands for water, and protecting the quality of groundwater and surface water resources. The goals and policies that apply to the proposed Project are listed in Table 4.10-1, *Metropolitan Bakersfield General Plan Goals and Policies for Hydrology and Water Quality*, below.

Table 4.10-1. Metropolitan Bakersfield General Plan Goals and Policies for Hydrology and Water Quality
Goals and Policies: Hydrology and Water Quality
Goal #2: Assure that adequate groundwater resources remain available to the planning area.
Goal #3: Assure that adequate surface water supplies remain available to the planning area.
Goal #4: Continue cooperative planning for and implementation of programs and projects which will resolve water resource deficiencies and water quality problems.
Goal #5: Achieve a continuing balance between competing demands for water resource usage.
Goal #6: Maintain effective cooperative planning programs for water resource conservation and utilization in the planning area by involving all responsible water agencies in the planning process.

4.10.4 Impacts and Mitigation Measures

Methodology

The potential impacts associated with the proposed Project are evaluated on a qualitative basis through a comparison of the anticipated Project effects with the existing hydrologic environment. The change in the hydrologic environment is significant if the effect described under the criteria below occurs. The evaluation of Project impacts is based on professional judgment, analysis of the County's hydrology and water quality policies and the significance criteria established by Appendix G of the California Environmental Quality Act (CEQA) Guidelines, which the County has determined to be appropriate criteria for this Recirculated Draft EIR.

Thresholds of Significance

- The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the CEQA Guidelines, to determine if a project could potentially have a significant impact. Such an impact would occur if the proposed project would:
- Violate any water quality standards or waste discharge requirements;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;

- Substantially degrade water quality;
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- Place within a 100-year flood hazard area structures which would impede or redirect flood flows;
- Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; and/or
- Be subject to inundation by seiche, tsunami, or mudflow.

Project Impacts

Impact 4.10-1: The Project Would Violate Any Water Quality Standards or Waste Discharge Requirements.

With future urban development of the site, the proposed Project would increase urban pollutant discharge, especially during short-term construction phases. The discharge of materials other than stormwater from a particular site is prohibited. With urban development projects, the pollutants of concern include silt and sediment, oil and grease, floatable trash, nutrients (including fertilizers), heavy metals, pathogens (such as coliform bacteria) and other substances. Discharge of these substances, referred to as "controlled pollutants," into waters of the United States is prohibited.

Future proposed developments that involve grading and construction would contribute to an increase in pollution discharge. Individual development projects would be required to mitigate short-term construction impacts pursuant to the NPDES criteria and standards on a project-by-project basis. The purpose of the NPDES permit is to ensure that the proposed Project area would eliminate or reduce construction-related sediments and pollutants during stormwater runoff. Construction sediment erosion can be adequately controlled through the application of standard construction BMPs. The goal of BMPs is to capture and treat "first flush" stormwater run-off generated by surrounding and on-site watersheds. Water quality management BMPs for grading and construction scenarios may include the use of sand bags and straw bales for run-off diversion and velocity reduction, mulch topping, hydro-seeding and siltation fencing to prevent soil loss and measures to minimize vehicular leaking and spilling. Additionally, within Kern County, post-development compliance with NPDES is regulated by the Kern County Standard Urban Water Mitigation Plan (SUSMP). Projects within the City are required to comply with the SUSMP through the implementation of the City's Drainage Manual. Implementation of the following mitigation measures, in addition to compliance with the NPDES requirements, would reduce construction-related impacts on water quality to a less than significant level. Implementation and compliance with the SUSMP would reduce post development impacts to less than significant levels.

Mitigation Measures

Implement Mitigation Measure MM 4.7-8, as described in Section 4.7, *Geologic and Seismic Hazards.*

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.10-2: The Project Would Substantially Deplete Groundwater Supplies or Interfere Substantially With Groundwater Recharge Such That There Would be a Net Deficit in Aquifer Volume or a Lowering of the Local Groundwater Table Level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).

The agricultural uses on the Project site are irrigated using two existing on-site wells that supply groundwater to the existing agricultural uses. It is estimated that 50% of the irrigation supply is from the wells and the other 50% from Kern Delta Water District (KDWD) surface waters. The average annual irritation rate is 977.2-acre feet/year (AFY) and based on this volume, the existing agricultural uses would use approximately 488.6 AFY of groundwater.

Groundwater recharge from irrigated agricultural is a function of many variables which include weather, hydrologic conditions, irrigation practices, crops, soils, geologic conditions, etc. Recharge for the existing Project site was calculated using the total volume of irrigation and precipitation minus water losses associated with other factors. For the proposed Project a general estimate of agricultural recharge to groundwater was made by estimating that groundwater recharge at the existing site is on average 25% of the irrigated amount. Based on this percentage, the existing irrigated agricultural operations would result in approximately 122.15 AFY (25% of 488.6) of the pumped groundwater being returned to the water table with the balance, approximately 366.15 AFY of the pumped groundwater being lost through evapotranspiration.

The estimated water use for the proposed Project at build out in 2025 is approximately 544.5 AFY, which is approximately 432.7 AFY less than the existing agricultural operations and 187.5 AFY less than the water lost through evapotranspiration alone. The initial irrigation water requirement for landscaped areas of the proposed Project is estimated to be 39 AFY and 86.7 AFY at project build out. Water for on-site irrigation of Project landscaping will be provided by recycled water from the on-site wastewater treatment plant. The WSA conservatively estimated that total demand for landscape irrigation at 47.4 AFY. Considering this savings added to the overall reduction in demand as a result of the proposed Project, this results in a total reduction in water demand of approximately 480.12 AFY. This is illustrated in Table 4.10-2, *Different Between Existing and Proposed Water Usage*, below.

Table 4.10-2. Difference Between Existing and Proposed Water Usage

Type	Without Reclaimed Water (AFY)	With Reclaimed Water (AFY)
Avg. Existing Agricultural Use	977.2	977.22
Proposed Project Use	544.5	497.1
Difference	432.7	480.12

AFY = Acre-Feet Per Year
Source: Yarne & Associates, 2019.

Water for the proposed Project would be supplied by CalWater from the Bakersfield District. On average from 2011-2015 water to the District is 58% from groundwater, 16% from the Kern River purchased from the City of Bakersfield and treated by CalWater's North East Bakersfield Water Treatment Plant (NEBWTP); 5% from the Kern River purchased from the City treated at the North West Treatment Plant (NWWTP); and 21% from the Kern River or State Water Project (SWP) water from Improvement District No. 4 (ID-4) of the Kern County Water Agency (KCWA).

The groundwater sub-basin is not anticipated to be affected by the proposed Project, primarily due to the substantial reduction of water required between existing agricultural uses and proposed industrial and commercial uses. Additionally, the use of groundwater will be reduced because the on-site groundwater wells would no longer be used for water for the proposed Project. CalWater and other water suppliers including KDWD, KCWA and the City of Bakersfield also have ongoing and increasing programs to replenish the groundwater aquifers in normal and wet years with water banking programs to be used in future drought years and use of recharge basins. Additionally, groundwater sustainability plans and water conservation programs and best management practices continue to reduce overall water use including groundwater and increase efficiency and recharge. Lastly, according to the Water Supply Assessment, there would be an adequate supply of groundwater over the next 20 years, and there is a surplus groundwater production capacity. Therefore, impacts in this regard would be less than significant.

Because groundwater would no longer be pumped from under the Project site, adjacent water wells would not experience a drawdown effect of their existing supplies from the proposed Project. In addition, infiltration of surface water and lateral transfer of groundwater across the movement gradient would continue to replenish the aquifers beneath the proposed Project site. Please see Section 4.17, *Utilities*, Impact 4.17-4 for additional discussion regarding the proposed Project's impacts to groundwater supplies.

Mitigation Measures

Implementation of Mitigation Measure MM 4.17-1 through MM 4.17-5, as described in Section 4.17, *Utilities*.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.10-3: The Project Would Substantially Alter the Existing Drainage Pattern of the Site or Area, Including Through the Alteration of the Course of a Stream Or River, in a Manner Which Would Result in Substantial Erosion or Siltation On- or Off-Site.

The proposed Project site is relatively flat, with a low potential for runoff. Additionally, the topography of the Project site would remain similar to the existing conditions during site grading and construction. The development of industrial uses, landscaping, and roadways would alter the drainage pattern within the proposed Project through the introduction of impervious surfaces. Any water that is anticipated to drain off-site would be required by the County to drain into storm drain structures. The use of storm drain infrastructure reduces the amount of surface runoff and would potentially

reduce flooding impacts. Implementation of the following mitigation measures would reduce erosion or siltation impacts to less than significant levels.

Mitigation Measures

Implementation of Mitigation Measure MM 4.7-8, as described in Section 4.7, *Geology and Seismic Hazards*.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.10-4: The Project Would Substantially Alter the Existing Drainage Pattern of the Site or Area, Including Through the Alteration of the Course of a Stream or River, or Substantially Increase the Rate or Amount of Surface Runoff in a Manner Which Would Result in Flooding On- or Off-Site.

The development of industrial uses, landscaping, and roadways would alter the drainage pattern within the proposed Project through the introduction of impervious surfaces. Any water that is anticipated to drain off-site would be required by the County to drain into an approved storm drain structure or be retained on site. The use of storm drain infrastructure reduces the amount of surface runoff and would potentially reduce flooding impacts.

Mitigation Measures

Implementation of Mitigation Measure MM 4.7-8, as described in Section 4.7, *Geologic and Seismic Hazards.*

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.10-5: The Project Would Create or Contribute Runoff Water Which Would Exceed the Capacity of Existing or Planned Stormwater Drainage Systems or Provide Substantial Additional Sources of Polluted Runoff.

The proposed Project would add impervious surfaces to the Project site with the development of industrial uses and associated landscaping and roadways and potentially increase the amount of stormwater exiting the site. Surface runoff velocities, volumes and peak flow rates would increase as well and could flow off-site if not properly contained. Water that is anticipated to drain off-site would be required by the County to drain to storm drain structures, including detention or retention basins. Drainage collection facilities within the proposed Project would be constructed as development occurs and would be designed in accordance with local improvement standards and specifications. In addition, the Metropolitan Bakersfield General Plan has goals and policies to ensure that adequate storm drainage facilities are constructed to maintain a comprehensive storm drainage system to serve all urban development within Metropolitan Bakersfield. Pursuant to Kern County requirements, new

developments are required to provide their own on-site retention or illustrate that existing facilities have sufficient capacity to carry the additional runoff. If a stormwater drainage study is needed, the study would determine the size of retention basin(s) and optimal pipeline sizes that are needed to accommodate stormwater from the proposed project. These stormwater facility designs would be reviewed and approved by Kern County. Site improvement standards for drainage areas would be determined by the County of Kern as a function of the Precise Development Plan, Conditional Use Permit, or land division procedure. This would ensure that all drainage facilities are designed to accommodate runoff stormwater. With implementation and compliance with legal and regulatory requirements and the goals and policies of the Metropolitan Bakersfield General Plan and Kern County Ordinance Code, drainage impacts would be reduced to a less than significant level.

Mitigation Measures

Implementation of Mitigation Measure MM 4.7-8, as described in Section 4.7, *Geologic and Seismic Hazards*.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.10-6: The Project Would Otherwise Substantially Degrade Water Quality.

With the future urban development of the site, the proposed Project would result in an increase in urban pollutant discharge, especially during short-term construction phases. The discharge of materials other than stormwater from a particular site is prohibited. With urban development projects, the pollutants of concern include silt and sediment, oil and grease, floatable trash, nutrients (including fertilizers), heavy metals, pathogens (such as coliform bacteria), and other substances. Referred to as "controlled pollutants", discharge of these substances into waters of the United States is prohibited.

During construction of the proposed Project, pollutants from the site could potentially increase substantially as a result of soil disturbance and construction operations. Initial clearing and grading operations during construction would expose much of the surface soils and may release pollutants into runoff from the site that would result in an adverse water quality impact.

Erosion and sedimentation caused by construction activities are dependent upon climatic and site conditions, as well as the degree of disturbance and type of construction project. As indicated above sedimentation resulting from the excessive erosion of disturbed soils, is the primary pollutant of concern. Other pollutants of concern include phosphorous and nitrogen from fertilizers, pesticides, petroleum products, construction chemicals, soil additives and solid waste are often generated by construction projects. The following is a brief discussion of typical pollutants related to construction activities:

- Nutrients – Heavy use of commercial fertilizers can result in discharge of nutrients to water bodies where they may cause excessive algae growth. Nitrogen, phosphorous, and potassium are the major nutrients used for fertilizing new landscape and constriction sites.

- Trace Metals – Over half of the metal load carried in stormwater is associated with sediments as metals both absorb to solid particulate matter (total suspended solids) and are washed off in dissolved forms. Galvanized metals, paint, or preserved wood may contain metals which may, if uncontrolled, enter the stormwater and impact downstream receiving waters.
- Pesticides – The three most commonly used forms of pesticides at construction sites are herbicides, insecticides and rodenticides. Unnecessary or improper application of pesticides may directly or indirectly contaminate surface water bodies.
- Other Toxic Chemicals – If improperly stored and/or disposed of, synthetic organic compounds that may be used at construction sites (such as adhesives, cleaners, sealants, and solvents) may have an adverse impact on receiving waters.
- Miscellaneous Wastes – Miscellaneous wastes may include water from concrete mixers, paints and painting equipment cleaning activities, solid wastes from land clearing activities, wood and paper material from packaging of building material, and sanitary wastes. Improper disposal of construction wastes may directly or indirectly pollute runoff and receiving water bodies.

The proposed Project would be required to include a drainage system. Additionally, future proposed developments that involve grading and construction would contribute to an increase in pollution discharge. Individual development projects would be required to mitigate short-term construction impacts pursuant to the NPDES criteria and standards on a project-by-project basis. The purpose of the NPDES permit is to ensure the proposed Project area would eliminate or reduce construction related sediments and pollutants during stormwater runoff. Construction sediment erosion can be adequately controlled through the application of standard construction BMPs. The goal of BMPs is to capture and treat "first flush" stormwater run-off generated by surrounding and on-site watersheds. Water quality management BMPs for grading and construction scenarios may include the use of sand bags and straw bales for run-off diversion and velocity reduction, mulch topping, hydro-seeding and siltation fencing to prevent soil loss and measures to minimize vehicular leaking and spilling. Implementation and compliance with mitigation measures and the NPDES requirements would reduce construction-related impacts to water quality to a less than significant level.

Mitigation Measures

Implementation of Mitigation Measure MM 4.7-8, as described in Section 4.7, *Geology and Seismic Hazards.*

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.10-7: The Project Would Place Housing Within a 100-Year Flood Hazard Area as Mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or Other Flood Hazard Delineation Map.

No residences would be constructed in association with this proposed Project, and the Project is not located within a 100-year flood hazard area. The proposed Project is located within the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map Zone X. According to FEMA,

Zone X consists of: areas within and outside the 0.2 percent annual chance floodplain, areas of 1-percent annual chance sheet flow flooding where average depths are less than 1 foot, areas of 1-percent annual chance stream flooding where the contributing drainage area is less than 1 square mile, or areas protected from the 1-percent annual chance flood by levees. Flood insurance purchase is not required in these zones. Due to this small percentage, it is not anticipated that flooding hazards would occur within the Project site.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.10-8: The Project Would Place Within a 100-Year Flood Hazard Area Structures Which Would Impede or Redirect Flood Flows.

The proposed Project is not located within a 100-year flood hazard area. Refer to Impact 4.10-7, above.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.10-9: The Project Would Expose People or Structures to a Significant Risk of Loss, Injury or Death Involving Flooding, Including Flooding as a Result of the Failure of a Levee or Dam.

The closest dam to the proposed Project is the Isabella Dam. Isabella Dam is located approximately forty miles northeast of the proposed Project site and has a capacity to hold 570,000 acre-feet of water. If an earthquake were to occur in the vicinity, it could potentially result in a break in the dam. This could, under certain conditions, cause the entire lake storage to be released, which would result in flooding 60 square miles of the Metropolitan Bakersfield area (Kern County 2008). It would take approximately 10- 12 hours from the time the dam breaks for the water from Isabella Dam to reach the Project site, allowing adequate time for warning and to evacuate the area. The chance of the Isabella Dam failing entirely, with the lake at capacity, is approximately one day out of 10,000 years. The impacts to the proposed Project from dam failure are considered less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.10-10: The Project Would Be Subject to Inundation By Seiche, Tsunami, or Mudflow.

The proposed Project is located far enough from a large body of water that the site would not be impacted by seiche or tsunami. Additionally, as the Project site and surrounding area is relatively flat, the potential for a mudflow to occur is very low.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Cumulative Impacts

Cumulative effects related to hydrology resulting from implementation of the proposed Project and development in the vicinity and surrounding areas may expose more persons and property to potential water hazards. Cumulative development may also adversely affect downstream water quality, impacting surface and groundwater supplies. The potential cumulative impact is mitigated through required drainage studies to identify potential impacts, relationship to City and County drainage master plans, and implementation of appropriate on-site and off-site drainage improvements. Projects are also required to implement NPDES and BMP measures on a project basis to reduce potential water quality impacts. In addition, projects may require drainage improvements to be in compliance with the Metropolitan Bakersfield General Plan and Kern County Ordinance Code standards in addition to local and regional agency requirements, as part of the discretionary review process. There are no cumulative impacts associated with the proposed Project.

Mitigation Measures

Implementation of Mitigation Measure MM 4.7-8, as described in Section 4.7, *Geology and Seismic Hazards*, and Mitigation Measure MM 4.17-1 through MM 4.17-5, as described in Section 4.17, *Utilities*.

Level of Significance after Mitigation

Impacts would be less than significant.

Section 4.11

Land Use and Relevant Planning

Section 4.11
Land Use and Relevant Planning

4.11.1 Introduction

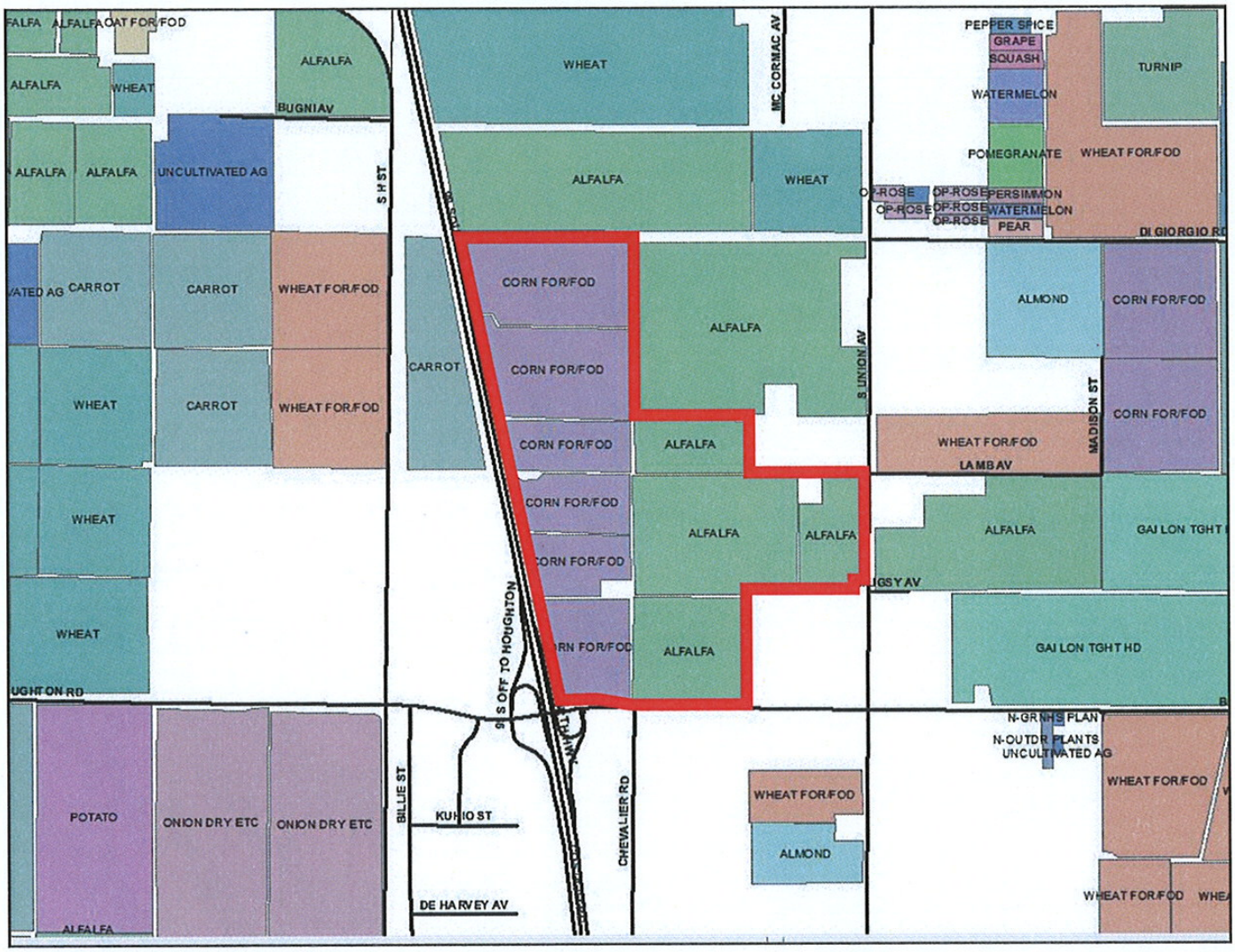
This section describes the environmental setting for land use and planning. Information in this section is based on information provided in the technical studies (refer to Appendices A through N). Ground and aerial photographs for the on-site and surrounding land use analysis as well as the following reference documents: Final Environmental Impact Report (EIR) for the Metropolitan Bakersfield General Plan, Metropolitan Bakersfield General Plan, Kern County General Plan, Title 16 of the Bakersfield Municipal Code, and the Kern County Ordinance Code. The purpose of this section is to identify the existing land use conditions, to analyze proposed Project compatibility with existing uses and consistency with relevant planning policies and to recommend mitigation measures to eliminate or reduce the significance of potential impacts.

4.11.2 Environmental Setting

The following section discusses the existing land uses in the Project area and land use conditions, such as type of use and densities adjacent to the Project site that would influence land use compatibility (refer to Figure 4.11-1, *On-Site and Surrounding Uses*). The environmental setting of the Project site consists of the physical conditions or existing land uses on the Project site and in the surrounding areas.

On-Site Land Use

The proposed Project site consists of disked land and has been utilized for agricultural purposes; primarily row-crop agriculture consisting of alfalfa, corn, wheat, and grain. A steel storage building associated with agricultural activities is located in the eastern portion of the site, near South Union Avenue (SR-204). There is one plugged and abandoned oil well located within the proposed Project boundaries (Big McKittrick Oil Company "Sea Cliff-Houghton" 1). In addition, two active, diesel-powered irrigation wells and one domestic well are located on-site.



Source: Kern County Geographic Information System Reported Crops

PROPOSED PROJECT

99 HOUGHTON INDUSTRIAL PARK PROJECT
CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07
AGRICULTURAL PRESERVE #13 EXCLUSION

On-Site and Surrounding Land Uses

Figure 4.11-1

Surrounding Land Use

Existing adjacent land uses include vacant land and agricultural uses to the north, agricultural uses and a small cluster of single-family residential homes to the east, SR-99 to the west, and agricultural uses and an automobile wrecking yard located south/southeast of proposed Project site. The following table, Table 4.11-1, *Surrounding Land Use*, provides a detailed description of the land uses for the properties adjacent to the site:

Table 4.11-1. Surrounding Land Use

Location	Land Use / Metropolitan Bakersfield General Plan Land Use Designations
North	Vacant / Agriculture: R-IA (Resource-Intensive Agriculture), LMR (Low Medium Density Residential, 4 to 10 units per acre), HMR (High Medium Density Residential, 7.26 to 17.42 units per acre), SR (Suburban, 4 units per acre), and GC (General Commercial)
East	Agriculture / Single-Family Residential / State Route 204: R-IA (Resource-Intensive Agriculture), RR (Rural Residential), and SI (Service Industrial)
South	Agriculture / Automobile Wrecking Yard: RI-A (Resource-Intensive Agriculture), RR (Rural Residential, 2½ acres per unit), and HC (Highway Commercial)
West	State Route 99 / Agriculture: PT (Public Transportation) and R-IA (Resource-Intensive Agriculture)

The area surrounding the proposed Project is undergoing various types of land use entitlements and development that will be consistent with the proposed Project.

4.11.3 Regulatory Setting

The proposed Project's relationships with the Metropolitan Bakersfield General Plan, the Kern County Zoning Ordinance, and other related policy planning documents are described below.

Local

Metropolitan Bakersfield General Plan

The Metropolitan Bakersfield General Plan is a policy document designed to give long-range guidance for decision-making affecting the future character of the Metropolitan Bakersfield planning area. The Metropolitan Bakersfield General Plan is a joint effort between the Kern County Planning Department and the City of Bakersfield Planning Division. It was last adopted on December 11, 2007, includes both City and unincorporated County lands, and is currently undergoing an update. It represents the official statement of the community's physical development as well as its economic, social and environmental goals. The Metropolitan Bakersfield General Plan contains goals and policies regarding the following Elements: Land Use, Circulation, Housing, Conservation, Open Space, Noise, Safety, Public Services and Facilities and Parks. An additional element includes the Kern River Plan, which helps to define goals and policies for issues unique to the Metropolitan Bakersfield area. The Metropolitan Bakersfield General Plan was utilized throughout this RDEIR as the fundamental planning document governing development on the Project site. Background information and policy information from the Metropolitan Bakersfield General Plan are cited in several sections of the RDEIR. Table 4.11-2, *Consistency Analysis with Metropolitan Bakersfield General Plan Goals and Policies*, below, provides a list of policies applicable to the proposed Project.

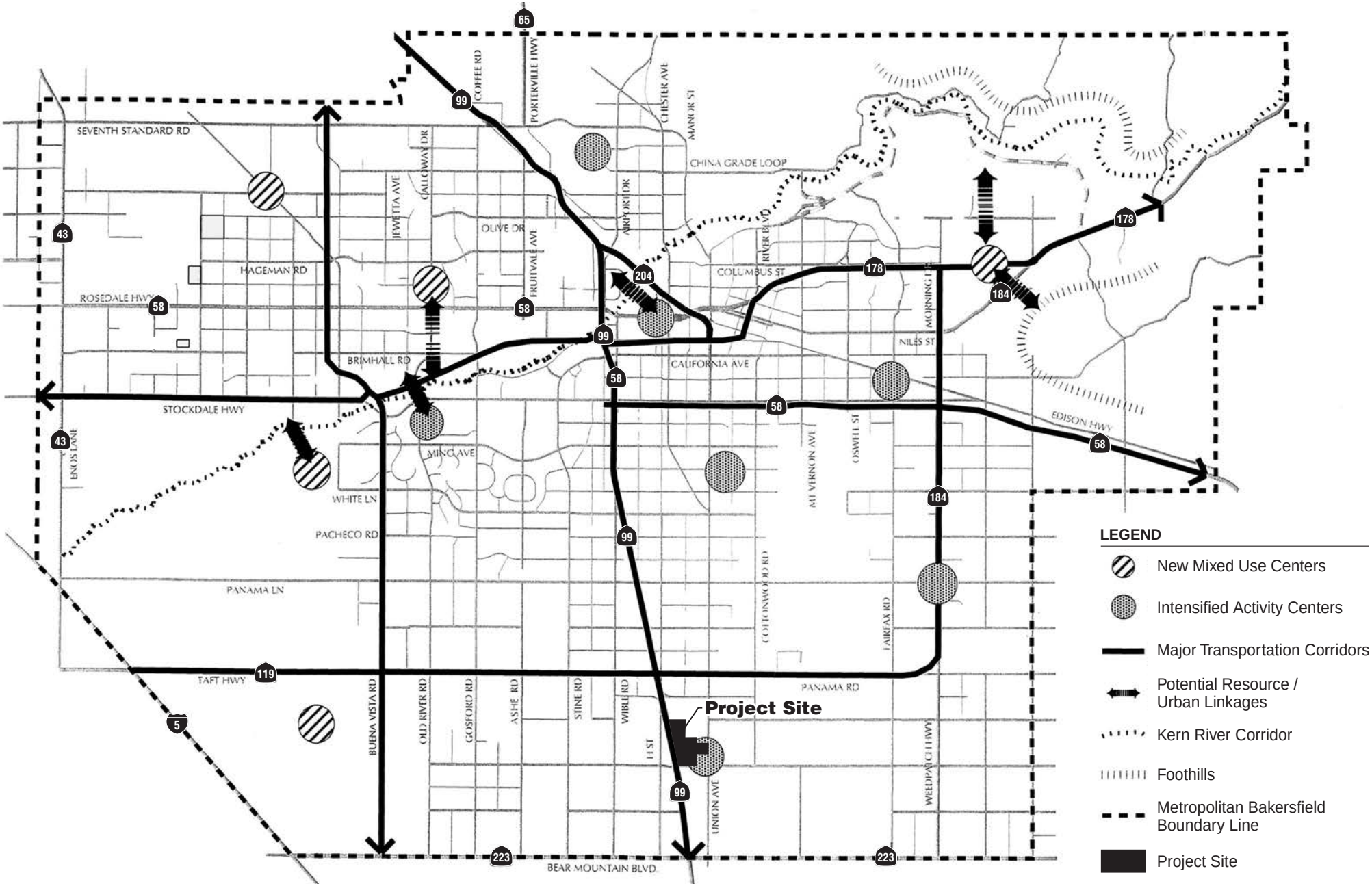
The proposed Project site and surrounding area are within the City of Bakersfield Sphere of Influence (SOI), defined as a plan for the probable physical boundary and service area of the City. This is the boundary in which all goals, policies and programs in the Metropolitan Bakersfield General Plan are applicable.

The Metropolitan Bakersfield General Plan has separated the City into four quadrants with State Route 99 (SR-99) serving as the north-south axis and Stockdale Highway (SR-58) serving as the east-west axis. These four quadrants are further subdivided into developed urban and rural-undeveloped areas. As a general rule, the City's SOI boundaries were utilized to help define the boundaries of planned urban growth. However, Pages II-2 through II-5 of the Metropolitan Bakersfield General Plan provide an overview of the basic principles for new urban areas and development in peripheral areas. The development concepts are referred to as "mixed-use activity centers." The following is an excerpt from Pages II-2 through II-5. Figure 4.11-2 *General Plan Land Use Policy Concept* Figure II-2 of the General Plan.

Overview of the General Plan Basic Principles for New Urban Areas

The Metropolitan Bakersfield General Plan Land Use Map is depicted in Figure II-1, located in the back of this document. The plan map provides a graphic depiction of the general plan's development policies and indicated that land use designations for which pertinent policies and standards have been established. Two basic principles govern the plan: the focusing of new development into distinctive centers which are separated by low land use densities and the siting of development to take advantage of the environmental setting. These principles are defined as the "centers" and "resource" concepts respectively. Figure II-2 conceptually illustrates these land use principles.

The "centers" concept provide for a land use pattern consisting of several concentrated mixed-use commercial and high density residential centers surrounded by medium density residential uses. Centers may be differentiated by functional activity, density/intensity, and physical character. Single-family residential uses are located between these mixed-use commercial/residential centers primarily.



Source: Metropolitan Bakersfield General Plan

0 15,000'
APPROXIMATE

99 HOUGHTON INDUSTRIAL PARK PROJECT

CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07 • AGRICULTURAL PRESERVE #13 EXCLUSION

General Plan Land Use Policy Concept

Figure 4.11-2

This concept encourages people to live and work in the same area, thus, serves to minimize sprawl, reduce traffic, travel time, infrastructure costs, and air pollution. In addition to promoting the formation of several large concentrated mixed-use centers, the plan attempts to consolidate smaller, neighborhood-serving commercial development by prescribing minimum distances between commercial parcels and by discouraging strip commercial development.

The "resources" concept emphasizes the siting of development to reflect the planning area's natural and visual resources; its river, canals, and foothills. The "resources" concept uses as a point of departure, the 1984 Kern River Plan Element (as amended), which takes advantage of the recreational potential of the river while respecting the river's sensitive natural habitats and aesthetic resources. It is proposed that linkages to unique resources be encouraged. Policies have been included in the plan to promote utilization and sensitivity of natural and visual resources.

Basic Principles for Development of Peripheral Areas

New development on the periphery of urban Bakersfield will be focused in ten new mixed-use activity centers located in the southwest, northwest and northeast. It is expected that the southwest center would include a mix of professional office and retail uses, moderate density residential, and would filter outwards to lower suburban-type densities. Although depicted in Figure II-2 in policy concept form, actual land use designations for the southwest center and the area around it will be determined through a more detailed land use and environmental analysis. In depth analysis of the southwest center is warranted due to its growth potential and its related impacts, impact on prime agricultural lands, and potential to impact the Kern River corridor resource. The northwest center will contain retail commercial, light industrial, moderate and high density residential, and will be surrounded by low and estate residential densities. The center in the northeast will include retail commercial, professional office, moderate and high density residential, and will filter outwards to lower densities.

The plan encourages that each center: (a) focus on a major open space amenity, such as a park or water body; (b) link land uses to the Kern River where possible; and (c) exhibit pedestrian sensitivity with appropriate design applied to encourage pedestrian activity. In addition to these three activity centers, peripheral development will be focused in smaller community centers, such as in the Greenfield and Lamont areas, with local-serving commercial services and residential uses.

As a general rule, the sphere of influence boundary was utilized to help define the boundaries of planned urban growth. However, there are two exceptions to this. The most obvious exception is the southwest center. Here, while the commercial center lies within the sphere of influence, the single-family residential densities extend beyond the western boundary of the present sphere of influence. Justification for extending beyond the sphere of influence boundary includes the following: (a) rapid growth has already taken place in this direction in recent years and show no signs of slowing; (b) the area presents an opportunity to capitalize on the Kern River as a visual and aesthetic resource; and (c) the ease with which services may be extended. The second exception occurs in Oildale. In particular, a major new airport terminal with supporting commercial and industrial uses are master planned just north of the existing terminal at Meadows Field."

Table 4.11-2. Consistency Analysis with Metropolitan Bakersfield General Plan Goals and Policies

GOALS AND POLICIES	PROJECT CONSISTENCY
Circulation Element - Streets	
Streets Policy #36: Prevent streets and intersections from degrading below Level of Service "C" where possible due to physical constraints (as defined in a Level of Service Ordinance) or when the existing Level of Service is below "C" prevent where possible further degradation due to new development with a three-part mitigation program: adjacent right-of-way dedication, access improvements and/or on area-wide impact fee. The area-wide impact fee would be used where the physical changes for mitigation are not possible due to existing development and/or the mitigation measures is part of a larger Project, such as freeways, which will be built at a later date.	Appropriate fees would be applied to the future development of the proposed Project in order to accommodate the expansion of required utilities, facilities, and infrastructure.
Streets Policy #37: Require new development and expansion of existing development to pay for necessary access improvements, such as street extensions, widenings, turn lanes, signals, etc., as identified in the transportation impact report as may be required for a Project.	Refer to analysis for Circulation/Streets Goal #3 and Policy #36.
Streets Policy #39: Require new development and expansion of existing development to pay or participate in its pro rata share of the costs of expansions in area-wide transportation facilities and services which it necessitates.	Refer to analysis for Circulation/Streets Goal #3 and Policy #36.
Streets Policy #40: Provide new local street systems that are logical and comprehensible and systems of street names and addresses that are simple, consistent, and understandable.	Future roadway extensions and improvements shall be implemented in accordance with Kern County Ordinance Code requirements.
Streets Policy #41: Plan alignments for local streets to permit economical and practical patterns, shapes, and sizes of development parcels.	Future roadway extensions and improvements shall be implemented in accordance with Kern County Ordinance Code requirements.
Circulation Element - Transit	
Transit Goal #2: Provide a street system and land development policies that support public transportation"	Refer to this section for a detailed description of available public transportation.
Transit Goal #3: Provide cost effective public transportation services.	Refer to analysis in Circulation/Transit Goal #2.
Transit Goal #4: Reduce traffic congestion and parking requirements and improve air quality through improved transportation services.	Refer to analysis in Circulation/Transit Goal #2.
Transit Policy #1: Consider transit service issues in the design of the arterial and collector street system.	Future roadway extensions and improvements shall be implemented in accordance with Kern County Ordinance Code requirements.

Table 4.11-2. Consistency Analysis with Metropolitan Bakersfield General Plan Goals and Policies

GOALS AND POLICIES	PROJECT CONSISTENCY
Transit Policy #4: Coordinate with GET [Golden Empire Transit] to locate bus stops as close as possible to the facilities they serve.	The Project Applicant shall work with the GET to locate bus stops as close as possible to the proposed Project site in an effort to provide residents with sufficient access to public transit service.
Circulation Element - Bikeways	
Bikeways Goal #1: Provide a circulation system which recognizes and responds to the needs of bicycle travel.	Future roadway extensions and improvements shall be implemented in accordance with Kern County Ordinance Code requirements.
Bikeways Goal #2: Provide a circulation system that minimizes cyclist/motorist conflicts.	Refer to analysis in Bikeways Goal #1.
Bikeways Policy #5: Consider bicycle safety when implementing improvements for automobile traffic operations.	Refer to analysis in Bikeways Goal #1.
Bikeways Policy #7: Provide bicycle parking facilities at activity centers such as shopping centers, employment sites, and public buildings.	Refer to analysis in Bikeways Goal #1.
Circulation/Bikeways Policy #9: Require new subdivisions to provide bike lanes on collector and arterial streets in accordance with the Bikeway Master Plan.	Refer to analysis in Bikeways Goal #1.
Circulation Element - Parking	
Circulation/Parking Goal #1: Provide an efficient parking system to respond to the needs of motorists.	Future parking improvements shall be implemented in accordance with Kern County Ordinance Code requirements.
Circulation/Parking Goal #2: Satisfy parking requirements in all new developments (residential, commercial, industrial, etc.) through off-street facilities.	Refer to analysis in Circulation/Parking Goal #1.
Circulation/Pedestrian Ways Element Goals	
Circulation/Pedestrian Ways Goal #2: Provide adequate sidewalks throughout the planning area.	Development on-site shall be subject to County design review, Kern County Ordinance Code, and Metropolitan Bakersfield General Plan requirements.
Circulation/Pedestrian Ways Element Policies	
Safety Element Goal #2: Ensure that adequate police and fire services and facilities are available to meet the needs of current and future metropolitan residents through the coordination of planning and development of metropolitan police and fire facilities and services.	The proposed Project site is within fire and sheriff/police service areas and is not anticipated to create and additional need for police and fire services. Any potential increase in the cost to maintain and staff additional fire or sheriff/police protection services would be paid for by property tax revenues generated by the proposed Project.
PSF School Policy #1: New development will be required to pay its proportional share of the cost of school impact fees within the Plan area.	The Project Applicant/Developer is required to pay developer fees to mitigate impacts to elementary and middle schools.
PSF Park Policy #3: "Require developers to dedicate land, provide improvements and/or in lieu fees to serve the needs of the population in newly developing areas."	Appropriate fees would be applied to the future development of the proposed Project.
Conservation Element – Biological Resources	

Table 4.11-2. Consistency Analysis with Metropolitan Bakersfield General Plan Goals and Policies

GOALS AND POLICIES	PROJECT CONSISTENCY
Biological Resources Goal #1: "Conserve and enhance Bakersfield's biological resources in a manner which facilitates orderly development and reflects the sensitivities and constraints of these resources."	A Biota Report was performed for the proposed Project. Due to the site's location within the Metropolitan Bakersfield Habitat Conservation Plan (MBHCP) boundary, the proposed Project would be required to pay biological impact mitigation fees. Additional mitigation measures are also required.
Biological Resources Goal #2: "To conserve and enhance habitat areas for designated 'sensitive' animal and plant species."	Refer to analysis for Biological Resources Goal #1.
Biological Resources Policy #1: "Direct development away from 'sensitive biological resource' areas, unless effective mitigation measures can be implemented."	Refer to analysis for Conservation/Biological Resources Goal #1.
Biological Resources Policy #2: "Preserve areas of riparian vegetation and wildlife habitat within floodways along rivers and streams, in accordance with the Kern River Plan Element and channel maintenance programs designed to maintain flood flow discharge capacity."	No riparian habitat is located within the proposed Project site.
Biological Resources Policy #3: "Discourage, where appropriate, the use of off-road vehicles to protect designated sensitive biological and natural resources."	Upon construction of the proposed Project, the Project site would not be vacant nor available for off-road vehicle use.
Biological Resources Policy #4: "Determine the feasibility of enhancing sensitive biological habitat and establishing additional wildlife habitat in the study area with State and/or Federal assistance."	Refer to the analysis for Conservation/Biological Resources Goal #1.
Biological Resources Policy #5: "Determine the locations and extent of suitable habitat areas required for the effective conservation management of designated "sensitive" plant and animal species."	No sensitive plant species occur on-site. Refer to the analysis for Conservation/Biological Resources Goal #1.
Biological Resources Policy #6: "Investigate the feasibility of including natural areas selected for the habitat conservation plan as a component of the regional park system."	Refer to the analysis for Conservation/Biological Resources Goal #1.
Conservation Element - Mineral Resources	
Mineral Goal #1: Protect areas of significant resources potential for future use.	The proposed Project site is not located within an oil or gas administrative boundary. The prospect well on the northwest portion of the site had no oil shows and one natural gas show and was abandoned in 1935. One natural gas pipeline traverses the proposed Project area. The proposed Project would be required to comply with appropriate setbacks for the on-site abandoned wells and natural gas pipelines in accordance with the Kern County Ordinance Code, Chapter 19.98, Oil and Gas Production, and Kern County Fire Department Pipeline Development Policies.
Mineral Goal #2: Document areas of current mineral and energy resource extraction, as a basis for land use and conservation policies and programs.	No mineral and energy resource extraction areas occur on-site.
Mineral Goal #3: Avoid conflicts between the productive use of mineral and energy resource lands and urban growth.	The proposed Project would be required to comply with the Kern County Ordinance Code, Chapter 19.98, Oil and Gas Production. No productive mineral and energy resource lands are within, or adjacent to, the proposed Project site. Therefore, development of

Table 4.11-2. Consistency Analysis with Metropolitan Bakersfield General Plan Goals and Policies

GOALS AND POLICIES	PROJECT CONSISTENCY
	the proposed Project would avoid conflicts between the productive use of mineral and energy resource lands and urban growth.
Mineral Goal #4: Protect land, water, air and visual resources from environmental damage resulting from mineral and energy resource development.	Mineral and energy resource development would not occur as part of the proposed Project. Because the site is outside any oil or gas administrative boundary, future development of mineral and energy resources would be unlikely; however, should future development occur, it shall be evaluated for environmental impacts at the time the development is proposed.
Mineral Policy #1: Maintain maps and descriptions of potential mineral and energy resources as a basis for policy and program implementation.	This RDEIR provides information, including maps, on mineral and energy resources for the proposed Project and adjacent properties. Refer to the analysis for Mineral Goal #1, above.
Mineral Policy #2: Document the location, status and long-term viability of sand and gravel quarries and petroleum drilling sites for purposes of avoiding near and long-term land use conflicts and provide a basis of compliance monitoring.	The proposed Project does not contain sand and gravel extraction areas or petroleum drilling sites.
Mineral Policy #3: Encourage and support the exchange of information on mineral and energy resources between private industry, City of Bakersfield and Kern County.	This RDEIR provides information on mineral and energy resources for the proposed Project site and adjacent properties.
Mineral Policy #4: Land use decisions shall recognize the importance of identified mineral resources and need for conservation of resources identified by the State Mining and Geology Board.	The proposed Project will undergo discretionary review by Kern County. This RDEIR evaluates the presence and absence of mineral resources on the Project site and any potential impacts the proposed Project may have on the proposed mineral resources. This RDEIR will be utilized by decision makers to help them make an educated decision on the proposed Project.
Mineral Policy #5: Protect significant mineral and petroleum resource areas, including potential sand and gravel extraction areas.	Refer to the analysis for Mineral Goals #2 and #3 and Mineral Policy #2, above.
Mineral Policy #6: Continue implementation of the Kern River Channel Maintenance Program for extraction of river sand and gravel.	The proposed Project is not located within the Kern River Channel Maintenance Program.
Mineral Policy #7: Promote development of compatible uses adjacent to mineral extraction areas.	Refer to the analysis for Mineral Goal #3, above.
Mineral Policy #8: Allow development of resource extraction sites subject to the conditional use permit procedure in zones where such uses are not prohibited by right and where it can be shown that the proposed extraction uses are compatible with surrounding areas.	Resource extraction sites are not proposed as part of this Project. Any future development of mineral and energy resources shall be evaluated for environmental impacts at the time the development is proposed.
Mineral Policy #9: Encourage preservation of any known deposits of gemstones and fossils.	The proposed Project has not been identified as a potential quarry. Additionally, according to the Phase I Cultural Resources Survey prepared for the proposed Project, fossils are not anticipated to be encountered within the Project site.
Mineral Policy #10: Implement, as appropriate, the California Environmental Quality Act to minimize land use conflicts and reduce extraction operations.	Refer to the analysis for Mineral Goal #3 and Mineral Policies #1 and #3, above.

Table 4.11-2. Consistency Analysis with Metropolitan Bakersfield General Plan Goals and Policies

GOALS AND POLICIES	PROJECT CONSISTENCY
Mineral Policy #11: Prohibit incompatible development in areas, which have a significant potential to harm public health, safety and welfare due to mineral and petroleum extraction and processing.	Refer to the analysis for Mineral Goal #3, Mineral Policies #1 and #3, above, and Section 4.9, *Hazards/Hazardous Materials*.
Mineral Policy #12: Design resource extraction operations subject to discretionary permits to maintain the integrity of areas of "high environmental quality" and unique scenic value.	Resource extraction operations are not proposed as part of the proposed Project; therefore, discretionary permits would not be required. Any future development of mineral and energy resources shall be evaluated for environmental impacts at the time the development is proposed.
Mineral Policy #13: Require surface mineral resource extraction sites to have plans and procedures for land reclamation, conforming with the requirements of the State Mining and Geology Board, to be implemented upon completion of extraction operations at each site or portion thereof.	Refer to the analysis for Mineral Resource Goals #2 and 3, above and Mineral Policy #12, above.
Mineral Policy #14: Review all discretionary mineral or petroleum development including renewal of existing authorizations, under the policies and procedures of the California Environmental Quality Act.	Mineral or petroleum development is not proposed as part of this proposed Project. Refer to the analysis for Mineral Goal #3 and Mineral Policies #1 and #3, above.
Mineral Policy #15: Require petroleum production sites in urban areas, which are subject to discretionary permits to install peripheral landscaping to help reduce the noise, dust and visual impacts to adjacent sensitive receptors and public ways.	Resource extraction operations are not proposed as part of this Project. The proposed Project would be subject to the appropriate setbacks and landscaping for the abandoned well and the natural gas pipelines as required by the Kern County Ordinance Code, Chapter 19.98, Oil and Gas Production, and Kern County Fire Department Pipeline Development Policies.
Mineral Policy #16: Require all mineral development to be predicated on appropriate reclamation plans that meet the standards of the State Surface Mining and Reclamation Act and the implementing guidelines of the State Mines and Geology Board, and/or the standards of the State Division of Oil and Gas. Reclamation/ restoration of the sites shall be done at each phase of development or as extraction is completed.	Refer to the analysis for Mineral Goal #4, above. It is unlikely that mineral development would occur on-site. Any mineral development shall be required to comply with the standards of the State Surface Mining and Reclamation Act and the implementing guidelines of the State Mines and Geology Board, and/or the standards of the DOGGR.
Conservation Element – Soils and Agriculture	
Soils and Agriculture Goal #1: "Provide for the planned management, conservation, and wise utilization of agricultural land in the planning area."	The proposed Project is not consistent with this goal and will result in an unavoidable adverse impact.
Soils and Agriculture Goal #2: "Promote soil conservation and minimize development of prime agricultural land as defined by the following criteria: Capability Class I and/or II irrigated soils, 80-100 Storie Index rating, Gross crop return of $200 or more per acre per year, and Annual carrying capacity of one animal per acre per year."	As defined by the California Land Conservation Act (G.C. Section 51202) and the Metropolitan Bakersfield General Plan, prime agricultural soils comprise Class I and Class II soils, Storie index 80-100 soils, vineyards and orchards and soil that yields a minimum of $200 an acre per year. According to these standards, the proposed Project consists of prime soils.

Table 4.11-2. Consistency Analysis with Metropolitan Bakersfield General Plan Goals and Policies

GOALS AND POLICIES	PROJECT CONSISTENCY
Soils and Agriculture Goal #3: "Establish urban development patterns and practices that promote soil conservation and that protect areas of agricultural production of food and fiber crops, and nursery products."	Refer to analysis for Soils and Agriculture Element Goal #1.
Soils and Agriculture Policy #1: "Determine the extent and location of all prime agricultural land within the study area."	Approximately 314.30 acres of the proposed Project are located within an area designated prime agricultural land. Additionally, approximately 257.57 acres of the proposed Project are included in Agricultural Preserve No. 13. Therefore, implementation of the proposed Project would result in a significant and unavoidable impact. A Farmland Conversion Study has been prepared for the RDEIR and is included as Appendix B.
Soils and Agriculture Policy #2: "Review projects that propose subdividing or urbanizing prime agricultural land to ascertain how continued commercial agricultural production in the project vicinity would be affected."	Phased development of the proposed Project would allow for the continued use of prime agricultural land until buildout of the Project site occurs.
Soils and Agriculture Policy #3: "Protect areas designated for agricultural use, which includes Class I and II agricultural soils having surface delivery water systems, from the encroachment of residential and commercial subdivision development activities."	The proposed Project has Class II and III agricultural soils. Based on the California Land Conservation Act and the Metropolitan Bakersfield General Plan criteria for prime farmland, the proposed Project consists of 314.30 acres of prime agricultural lands. However, the proposed Project was identified for urbanization within the Metropolitan Bakersfield General Plan. Therefore, the proposed Project would not be considered an encroachment of commercial uses.
Soils and Agriculture Policy #4: "Monitor the amount of prime agricultural land taken out of production for urban uses or added within the plan area."	A Farmland Conversion Study has been prepared for the RDEIR and is included as Appendix B.
Soils and Agriculture Policy #6: "Continue implementing land grading ordinances that reduce soil erosion/siltation commonly associated with land development."	Project grading shall be conducted in accordance with applicable local grading ordinances, standards, and practices to minimize soil erosion and siltation.
Soils and Agriculture Policy #7: "Land use patterns, grading, and landscaping practices shall be designed to prevent soil erosion while retaining natural watercourses when possible."	Natural watercourses are not present within the proposed Project site. However, with implementation of mitigation measures in Section 4.7, *Geologic and Seismic Hazards*, and Section 4.10, *Hydrology and Water Quality*, impacts would be reduced to less than significant levels.
Soils and Agriculture Policy #9: "Protect prime agricultural lands against unplanned urban development by adopting agricultural zoning, general plan agriculture designation, and by encouraging use of the Williamson Act and supporting programs and policies that provide tax and economic incentives to ensure the long-term retention of agricultural lands."	The proposed Project is not situated on land under an existing Williamson Act Contract; however, it is identified as prime farmland. In addition, approximately 257.57 acres of the proposed Project are located in Agricultural Preserve No. 13. Approval and implementation of the proposed Project would result in a significant impact from the conversion of approximately 314.30 acres of soil that meet the requirements for prime farmland if water for irrigation were available.
Soils and Agriculture Policy #10: "Encourage landowners to retain their lands in agricultural production."	The proposed Project will remain under agricultural production as the various phases of the Project are constructed.
Soils and Agriculture Policy #12: "Prohibit premature removal of ground cover in advance of development and require measures to prevent soil erosion during and immediately after construction."	Refer to analysis for Soils and Agriculture Policy #6.

Table 4.11-2. Consistency Analysis with Metropolitan Bakersfield General Plan Goals and Policies

GOALS AND POLICIES	PROJECT CONSISTENCY
Soils and Agriculture Policy #13: "Minimize the alteration of natural drainage and require development plans to include necessary construction to stabilize runoff and silt deposition through enforcement of grading and flood protection ordinances."	Refer to analysis for Soils and Agricultural Policy #7.
Soils and Agriculture Policy #14: "When considering proposal to convert designated agricultural lands to non-agricultural use, the decision-making body of the city and County shall evaluate the following factors to determine the appropriateness of the proposal: Soil quality; Availability of irrigation water; Proximity to non-agricultural uses; Proximity to intensive parcelization; Effect on properties subject to "Williamson Act" land use contracts; Ability to be provided with urban services (sewer, water, roads, etc.); Ability to effect the application of agricultural chemicals on nearby agricultural properties; Ability to create a precedent-setting situation that leads to the premature conversion of prime agricultural lands; Demonstrated project need; and Necessity of buffers such as lower densities, setbacks, etc.	Refer to analysis for Soils and Agricultural Policy #3 and #9.
Conservation Element – Water Resources	
Water Quality Goal #2: Assure that adequate groundwater resources remain available to the planning area.	Based on the Water Supply Assessment, the proposed Project will withdraw 287.11 acre-feet of groundwater annually regardless of single or sequential dry years. The groundwater sub-basin will not be affected by the proposed Project primarily due to a large reduction of water required between existing agricultural uses and proposed industrial uses.
Water Quality Goal #3: Assure that adequate surface water supplies remain available to the planning area.	No surface water sources will be utilized for the proposed Project except as groundwater recharge.
Conservation Element - Air Quality	
Air Quality Goal #1: "Promote air quality that is compatible with health, well-being, and enjoyment of life by controlling point sources and minimizing vehicular trips to reduce air pollutants."	Stationary point sources (i.e., mechanical equipment) would be subject to applicable regulatory requirements. With regard to mobile emissions, the proposed Project would strive to reduce the number of vehicular trips to the site by the provisions of sidewalks, bicycle lanes and bicycle racks.
Air Quality Goal #2: Continue working toward attainment of Federal, State and Local standards as enforced by the San Joaquin Valley Air Pollution Control District."	Refer to analysis for Conservation/Air Quality Goal #1.
Air Quality Goal #3: "Reduce the amount of vehicular emissions in the planning area."	Refer to analysis for Conservation/Air Quality Goal #1.

Table 4.11-2. Consistency Analysis with Metropolitan Bakersfield General Plan Goals and Policies

GOALS AND POLICIES	PROJECT CONSISTENCY
Air Quality Policy #1: "Comply with and promote San Joaquin Valley Unified Air Pollution Control District (SJVAPCD) control measures regarding Reactive Organic Gases (ROG). Such measures are focused on: (a) steam driven well vents, (b) Pseudo-cyclic wells, (c) natural gas processing plant fugitives, (d) heavy oil test stations, (e) light oil production fugitives, (f) refinery pumps and compressors, and (g) vehicle inspection and maintenance."	Air Quality impacts have been analyzed and concluded to be significant and unavoidable since operational and cumulative ROG emissions would exceed San Joaquin Valle Air Pollution Control District (SJVAPCD) thresholds.
Air Quality Policy #2: "Encourage land uses and land use practices which do not contribute significantly to air quality degradation."	The proposed Project would provide development consistent with existing and approved development on nearby parcels, and would be located in an area of relatively lesser environmental sensitivity accommodating growth while balancing environmental considerations.
Air Quality Policy #3: "Require dust abatement measures during significant grading and construction operations."	As discussed in Section 4.3, *Air Quality*, the proposed Project would implement dust control techniques during construction activities in conformance with SJVAPCD Regulation VIII, the Kern County Ordinance Code, and required Mitigation Measures.
Air Quality Policy #4: Consider air pollution impacts when evaluating discretionary permits for land use proposals. Considerations should include: a) Alternative access routes to reduce traffic congestion, b) Development phasing to match road capacities, c) Buffers including increase vegetation to increase emission dispersion and reduce impacts of gaseous or particulate matter on sensitive uses."	The rate of development would proceed based largely on economic considerations, infrastructure improvements, market demands and other planning considerations. All plans are subject to review and approval by the Planning Department as part of the final Development Plan review process.
Air Quality Policy #11: "Improve the capacity of the existing road system through improved signalization and traffic control systems."	Refer to analysis for Circulation/Streets Policy #1 and #3.
Air Quality Policy #12: "Encourage the use of mass transit, carpooling and other transportation options to reduce vehicle miles traveled."	Refer to analysis for Circulation/Streets Policy #4.
Air Quality Policy #13: "Consider establishing priority parking areas for carpoolers in projects with relatively large numbers of employees to reduce vehicle miles traveled and improve air quality."	Refer to analysis for Circulation/Parking Element Goal #1 and #4.
Air Quality Policy #14: "Establish park and ride facilities to encourage carpooling and the use of mass transit."	Refer to analysis for Circulation/Streets Policy #4.
Air Quality Policy #16: "Cooperate with Golden Empire Transit [GET] and Kern Regional Transit to provide a comprehensive mass transit system for Bakersfield; require large-scale new development to provide related improvements, such as bus stop shelters and turnouts."	Refer to analysis for Circulation/Streets Policy #4.

Table 4.11-2. Consistency Analysis with Metropolitan Bakersfield General Plan Goals and Policies

GOALS AND POLICIES	PROJECT CONSISTENCY
Air Quality Policy #18: "Encourage walking for short distance trips through the creation of pedestrian friendly sidewalks and street crossings."	Refer to analysis for Circulation/Pedestrian Ways Goal #1 and #2.
Air Quality Policy #19: "Promote a pattern of land uses which locates residential uses in close proximity to employment and commercial services to minimize vehicular travel."	Refer to analysis for Circulation/Pedestrian Ways Goal #1.
Land Use Element - Aesthetics	
Land Use Goal #3: Accommodate new development which is compatible with and complements existing land uses.	The proposed Project has been evaluated with respect to potential impacts pertaining to the degradation of existing visual character/quality. The Project site is located in close proximity to agricultural farms, orchards, light industrial activities, and single-family residences. However, the Project area is slated for development, which would be subject to County design review standards and regulations that would ensure functional and visual compatibility of both the Project and surrounding projects.
Land Use Goal #7: Establish a built environment which achieves a compatible functional and visual relationship among individual buildings and sites.	Development on-site shall be subject to County design review, Kern County Ordinance Code, and Metropolitan Bakersfield General Plan requirements.
Land Use Policy #26: Encourage adjacent commercial uses to be of compatible height, setback, color and materials.	The Project would be designed with unified materials and colors and would be compatible with the surrounding land uses. Future uses are subject to the development standards of the Kern County Ordinance Code, which regulates all aspects of development including building heights, building massing, setbacks, parking, landscaping, lighting, and signage.
Land Use Policy #28: Require that commercial development provide design features such as screen walls, landscaping and height, setback and lighting restrictions between the boundaries of adjacent residential land use designations so as to reduce impacts on residences due to noise, traffic, parking, and differences in scale.	Refer to the analysis for Land Use Policy #26. The proposed Project's lighting plans would also be reviewed by Kern County on a project-by-project basis to ensure uniformity and adequate public lighting without adding to the light and glare in the proposed Project area.
Land Use Policy #30: Street frontages along all new commercial development shall be landscaped.	Refer to the analysis for Land Use Policy #26.
Land Use Policy #34: Provide for the clustering of new industrial development adjacent to existing industrial uses and along major transportation corridors.	The proposed Project would provide approximately 314.30 acres of industrial development within the southern Metropolitan Bakersfield area, at the Houghton Road and SR-99 interchange.
Land Use Policy #36: Require that industrial uses provide design features, such as screen walls, landscaping and height, setback and lighting restrictions between the boundaries of adjacent residential land use designations so as to reduce impacts on residences due to light, noise, sound and vibration.	Development on-site shall be subject to County design review, Kern County Ordinance Code, and Metropolitan Bakersfield General Plan requirements.
Land Use Policy #37: Street frontages along all new industrial development shall be landscaped.	Refer to the analysis for Land Use Policy #26.

Table 4.11-2. Consistency Analysis with Metropolitan Bakersfield General Plan Goals and Policies

GOALS AND POLICIES	PROJECT CONSISTENCY
Land Use Policy #63: Encourage the use of creative and distinctive signage which establishes a distinctive image for the planning area and identifies principal entries to the metropolitan area, unique districts, neighborhoods and locations.	Signage plans have not been submitted for the proposed Project. Should signage be proposed in the future, signage plans shall be reviewed and approved by the County's Planning Department as part of the final Development Plan review process.
Land Use Policy #72: Promote the establishment of attractive entrances into communities, major districts, and transportation terminals, centers, and corridors within the planning area.	Refer to analysis for Land Use Policy #26.
Land Use Policy #74: Encourage the establishment of design programs which may include signage, street furniture, landscape, lighting, pavement treatments, public art, and architectural design.	Refer to analysis for Land Use Policy #26.
Land Use Element – Cultural Resources	
Land Use Element Goal #6: Accommodate new development that is sensitive to the natural environment, and accounts for environmental hazards.	According to the Phase I Cultural Resource Survey, the proposed Project is not located within an area of significant cultural resources.
Land Use Element Policy #105: Development on land containing known archaeological resources (i.e., high sensitivity areas) shall utilize methodology set forth as described necessary by a qualified archaeologist to locate proposed structures, paving, landscaping and fill dirt in such a way as to preserve these resources undamaged for future generations when it is the recommendation of a qualified archaeologist that said resources be preserved in situ.	Refer to Goal #6.
Land Use Element Policy #107: The preservation of historical resources shall be promoted, and other public agencies or private organizations shall be encouraged to assist in the purchase and/or relocation of sites, buildings, and structures deemed to be of historical significance.	Refer to Goal #6.
Land Use Element - Land Use and Planning	
Land Use Goal #1: Accommodate new development which captures the economic demands generated by the marketplace and establishes Bakersfield's role as the capital of the southern San Joaquin Valley.	The proposed Project would provide industrial and commercial uses that would meet the substantial and unmet service demands of the residents within the southern portion of the City.
Land Use Goal #2: Accommodate new development which provides a full mix of uses to support its population.	Refer to the analysis for Land Use Goal #1.
Land Use Goal #3: Accommodate new development which is compatible with and complements existing land uses.	The proposed Project is located in close proximity to agricultural farms, orchards, light industrial activities, and single-family residences. Development of the proposed Project would be subject to Metropolitan Bakersfield and County requirements, to ensure functional and visual compatibility both internally within the proposed Project and with surrounding uses.

Table 4.11-2. Consistency Analysis with Metropolitan Bakersfield General Plan Goals and Policies

GOALS AND POLICIES	PROJECT CONSISTENCY
Land Use Goal #4: Accommodate new development which channels land uses in phased, orderly manner and is coordinated with the provision of infrastructure and public improvements.	The Project site is adjacent to other proposed projects, and the proposed Project is located within the logical pathway of continued urbanization, south of the City of Bakersfield. The rate of on-site development would correspond with the availability of appropriate infrastructure.
Land Use Goal #6: Accommodate new development that is sensitive to the natural environment, and accounts for environmental hazards.	The Project site is located within the adopted MBHCP and will be subject to the payment of HCP fees. Upon payment of this fee, a development permit application would become a sub-permittee and would be allowed the "incidental take" of species in accordance with state and federal endangered species laws. Pesticide contamination was deemed not to be a major concern at the site.
Land Use Goal #7: Establish a built environment which achieves a compatible functional and visual relationship among individual buildings and sites.	Development on-site shall be subject to County design review and Kern County Ordinance Code and Metropolitan Bakersfield General Plan requirements.
Land Use Policy #15: Allow for the development of a variety of commercial centers/corridors which are differentiated by their function, intended users and level of intensity, including convenience centers service local residential neighborhoods, subregional centers which serve groupings of neighborhoods, and major regional centers which serve the planning area and surrounding areas.	The proposed Project is located in an urbanizing area and is near existing residential and industrial development. The proposed Project would provide industrial uses that would capture the economic demands generated by the marketplace.
Land Use Policy #16: Allow for development of a variety of commercial uses, including those which serve residents (groceries, clothing, etc.), highway users, and tourists-visitors.	Refer to the analysis for Land Use Policy #15.
Land Use Policy #26: Encourage adjacent commercial uses to be of compatible height, setback, color and materials.	The Project would be designed with unified materials and colors and would be compatible with the surrounding land uses. Future uses are subject to the development standards of the Kern County Ordinance Code, which regulates all aspects of development including building heights, building massing, setbacks, parking, landscaping, lighting, and signage.
Land Use Policy #28: Require that commercial development provide design features such as screen walls, landscaping and height, setback, and lighting restrictions between the boundaries of adjacent residential land use designations so as to reduce impacts on residences due to noise, traffic, parking, and differences in scale.	Refer to the analysis for Land Use Policy #26.
Land Use Policy #30: Street frontages along all new commercial development shall be landscaped (I-1).	Refer to the analysis for Land Use Policy #26.
Land Use Policy #30B: Require perimeter street(s) around new commercial office, retail, mixed-use, and industrial business park land uses where they will enhance pedestrian and vehicular access from adjacent residential neighborhoods or promote convenient access to public transit services, and where anticipated traffic will	Perimeter street(s) will be considered during the development review process upon receipt of definitive site plans.

Table 4.11-2. Consistency Analysis with Metropolitan Bakersfield General Plan Goals and Policies

GOALS AND POLICIES	PROJECT CONSISTENCY
not detrimentally impact local streets. Exceptions may be allowed if natural or artificial barriers such as, but not limited to, railroads, utility corridors, canals, or other watercourses, or topographic features exist that create a logical separation between the uses, or to encourage infill development.	
Land Use Policy #31: Allow for a variety of industrial uses, including land-extensive mineral extraction and processing, heavy manufacturing, light manufacturing, warehousing and distribution, transportation-related, and research and development uses (I-1).	Approximately 107.72 acres of LI (Light Industrial), 159 acres of SI (Service Industrial), 22 acres of GC (General Commercial), and 9.01 acres if HC (Highway Commercial) uses are proposed.
Land Use Policy #34: Provide for the clustering of new industrial development adjacent to existing industrial uses and along major transportation corridors.	SR-99 is adjacent to the west and SR-204 is adjacent to the east of the proposed Project.
Land Use Policy #36: Require that industrial uses provide design features, such as screen walls, landscaping and height, setback, and lighting restrictions between the boundaries of adjacent residential land use designations so as to reduce impacts on residences due to light, noise, sound and vibration.	Refer to the analysis for Land Use Policy #26.
Land Use Policy #37: Street frontages along all new industrial development shall be landscaped.	Refer to the analysis for Land Use Policy #26.
Land Use Policy #38: Minimize impacts of industrial traffic on adjacent residential parcels through the use of site plan review and improvement standards.	Refer to the analysis for Land Use Policy #26.
Land Use Policy #52: Locate new development where infrastructure is available or can be expanded to serve the proposed development.	As discussed in Section 4.17, *Utilities*, utility infrastructure is either currently, or will be available for the Project site at build-out, or improvements to the existing infrastructure are planned in order to provide the Project site and other future developments with adequate utilities.
Land Use Policy #53: Ensure that land use and infrastructure development are coordinated.	The development of the Project site will be coordinated with infrastructure improvements.
Land Use Policy #54: The developer shall be responsible for all on-site costs incurred as a result of the proposed project, in addition to a proportional share of off-site costs incurred in service extension or improvements. The availability of public or private services or resources shall be evaluated during discretionary project consideration. Availability may affect project approval or result in a reduction in size, density, or intensity otherwise indicated in the general plan's map provisions.	Refer to analysis for Land Use Policy #52.
Land Use Policy #55: Provide for the mitigation of significant noise impacts on adjacent sensitive uses from transportation corridor improvements.	An Acoustical Analysis was conducted for the proposed Project. Refer to Section 4.13, *Noise*, for impacts and mitigation measures associated with noise impacts of the Project.

Table 4.11-2. Consistency Analysis with Metropolitan Bakersfield General Plan Goals and Policies

GOALS AND POLICIES	PROJECT CONSISTENCY
Land Use Policy #61: Coordinate a consistent design vocabulary between city and county for all public signage, including fixture type, lettering, colors, symbols, and logos.	Signage plans have not been submitted for the proposed Project. Should signage be proposed in the future, signage plans shall be reviewed and approved by the County's Planning Department as part of the final Development Plan review process.
Land Use Policy #62: Provide signage which is adequately spaced and clearly visible during the day and night to control vehicular traffic, bicycles, and pedestrians.	Refer to the analysis for Land Use Policy #61.
Land Use Policy #63: "Encourage the use of creative and distinctive signage which establishes a distinctive image for the Planning area and identifies principal entries to the metropolitan area, unique districts, neighborhoods and locations."	Refer to the analysis for Land Use Policy #61.
Land Use Policy #65: Encourage that signs be designed and placed on buildings to be visible to pedestrians in areas designated for pedestrian activity.	Refer to the analysis for Land Use Policy #61.
Land Use Policy #72: Promote the establishment of attractive entrances into communities, major districts, and transportation terminals, centers, and corridors within the Planning area.	Refer to analysis for Land Use Policy #26.
Land Use Policy #74: Encourage the establishment of design programs which may include signage, street furniture, landscape, lighting, pavement treatments, public art, and architectural design.	Refer to analysis for Land Use Policy #26.
Land Use Policy #75: Provide adequate land area for the expansion of existing uses and development of new uses consistent with the policies of the general plan.	The proposed Project will be constructed consistent with the policies of the Metropolitan Bakersfield General Plan.
Land Use Policy #76: Provide for a mix of land uses which meets the diverse needs of residents; offers a variety of employment opportunities; capitalizes, enhances, and expands upon existing physical and economic assets; and allows for the capture of regional growth.	The proposed Project will provide light and medium industrial uses at the Houghton Road and SR-99 interchange in the southern metropolitan area adjacent to the City of Bakersfield. The proposed Project will provide a broad range of goods and services to serve the regional market area.
Land Use Policy #77: Allow for the continuance of agricultural uses in areas designated for future urban growth.	Currently, the Project site consists of active agricultural land and fallow land. The proposed Project involves a GPA and zone change to allow for the phased development of the entire property with industrial and commercial uses. Portions of the Project site not under development will remain agricultural land until such time development is approved.
Land Use Policy #79: "Provide for an orderly outward expansion of new "urban" development (any commercial, industrial, and residential development having a density greater than one unit per acre) so that it maintains continuity of existing development, allows for the incremental expansion of infrastructure and public services, minimizes impacts on natural environmental	Refer to analysis for Land Use Goals #1, #3, #4, #6, and #7.

Table 4.11-2. Consistency Analysis with Metropolitan Bakersfield General Plan Goals and Policies

GOALS AND POLICIES	PROJECT CONSISTENCY
resources, and provides a high quality environment for living and business."	
Land Use Policy #80: Assure that General Plan Amendment proposals for the conversion of designated agricultural lands to urban development occur in an orderly and logical manner giving full consideration to the effect on existing agricultural uses.	A Farmland Conversion Study was prepared for the proposed Project to evaluate the conversion for the existing on-site farmland to industrial uses. Refer to Section 4.2, *Agriculture*, for a detailed analysis of compatibility of the proposed Project and surrounding land uses.
Land Use Policy #82: "Preserve existing significant sound residential neighborhoods, commercial districts, and industrial areas."	Refer to the analysis for Land Use Goals #1, #3, #4, #6, and #7.
Land Use Policy #99: Develop a plan to ensure that all parking lots are 40 percent shaded at maturity to help alleviate "heat island effect."	Future development phases would be subject to the Kern County Ordinance Code and design review requirements. Final development plans will be reviewed by the County Planning Department on a project-by-project basis.
Land Use Policy #100: "Encourage the use of reflective roofing material and other measures that reduce the "heat island effect."	Refer to the analysis for Land Use Policy #99.
Noise Element	
Noise Goal #1: "Ensure that residents of the Bakersfield Metropolitan Area are protected from excessive noise and existing moderate levels of noise are maintained."	As stated in Section 4.13, *Noise*, the proposed Project would be subject to compliance with the Metropolitan Bakersfield General Plan and County's noise standards during construction and Project operation.
Noise Goal #2: "Protect the citizens of the Planning area from the harmful effects of exposure to excessive noise and protect the economic base of the area by preventing the encroachment of incompatible land uses near known noise-producing roadways, industries, railroads, airports and other sources."	As stated in Section 4.13, *Noise*, the proposed Project would be subject to compliance with the Metropolitan Bakersfield General Plan and County's noise standards during short-term construction and Project operation. Construction activities would adhere to the Kern County Noise Ordinance with respect to hours of operation and all equipment would be fitted with factory equipped mufflers and be in good working order; refer to Mitigation Measures 4.13-1 through 4.13-5.
Noise Policy #1: "Identify noise-impact areas exposed to existing or projected noise levels exceeding 65 dB CNEL (exterior) or the performance standards described in Table VII-4. The noise exposure contour maps on file at the City of Bakersfield and County of Kern indicate areas where existing and projected noise exposures exceed 65 dB CNEL (exterior) for the major noise sources identified."	The proposed Project would not exceed the Kern County's 65-dBA-CNEL (exterior) criterion for long-term vehicular-related noise.
Noise Policy #2: "Prohibit new noise-sensitive land uses in noise-impacted areas unless effective mitigation measures are incorporated into project design to acceptable levels."	As indicated within the Noise Impact Assessment, on-site noise levels would be below the 65 dBA exterior noise standards. Therefore, implementation of the proposed Project would comply with the Goals and Policies of the Metropolitan Bakersfield General Plan.
Noise Policy #3: Review discretionary industrial, commercial or other noise generating land use projects for compatibility with nearby noise-sensitive land uses. Additionally, the development of new noise generating	Not applicable. The proposed Project would not be located adjacent to incompatible land uses such as industries, railroads, and airports, that generate high levels of noise.

Table 4.11-2. Consistency Analysis with Metropolitan Bakersfield General Plan Goals and Policies

GOALS AND POLICIES	PROJECT CONSISTENCY
land uses which are not preempted from local noise regulation will be reviewed if resulting noise levels will exceed the performance standards contained within Table VII-4 in areas containing residential or other noise-sensitive land uses.	
Noise Policy #4: Require noise level criteria applied to land uses other than residential or other noise-sensitive uses to be consistent with the recommendations of the California Office of Noise Control (see Figure VII-3)	Refer to Noise Policy #2.
Noise Policy #5: Encourage vegetation and landscaping along roadways and adjacent to other noise sources in order to increase absorption of noise.	Future development would comply with County Ordinances requiring setbacks from roadways and landscaping along arterial and collector roads.
Noise Policy #6: Encourage interjurisdictional coordination and cooperation with regard to noise impact issues.	Refer to Noise Goals #1 and #2, and Noise Policy #1, #2, and #5. As stated in Section 4.13, *Noise*, the proposed Project was evaluated against thresholds based on standards set forth by federal, State, and local agencies. In addition, the Project applicant will work with Kern County to implement Mitigation Measures 4.13-1 through 4.13-5.
Noise Policy #7: Establish threshold standards for the determination of the existence of cumulative noise impacts that are significant and will therefore require mitigation to achieve acceptable noise standards that do not exceed the standards contained in this element.	Refer to the consistency analysis for Noise Policy #6.
Safety Element – Public - Hazards/Hazardous Materials	
Safety Goal #1: Ensure that the Bakersfield metropolitan area maintains a high level of public safety for its citizenry.	The proposed Project would be required to adhere to the Metropolitan Bakersfield General Plan Safety Element, compliance with the County of Kern Department Codes, the Kern County Ordinance Code, DOGGR regulations, and compliance with the CBC and UBC to ensure safety for citizens.
Safety Goal #3: Provide for the coordinated planning and development of service areas for police and fire protection to ensure an equitable burden of responsibility between County and City in Metropolitan Bakersfield.	The proposed Project would be serviced by the Kern County Fire and Sheriff's Departments. Refer to Section 4.15, *Public Services* and Section 4.17, *Utilities*, for additional information.
Safety Policy #4: Monitor, enforce and update as appropriate all emergency plans as needs and conditions in the Planning area change, including the California Earthquake Response Plan, the Kern County Evacuation Plan, and the City of Bakersfield Disaster Plan.	Section 4.15, *Public Services* and Section 4.17, *Utilities*, addresses the potential impacts of the proposed Project on fire and emergency response. Additionally, all emergency plans applicable to the proposed Project would be updated as needed.
Safety Policy #6: Promote fire prevention methods to reduce service protection costs and costs to the taxpayer.	The proposed Project would be reviewed by the Kern County Fire Department. The proposed Project would be designed to comply and/or incorporate the Kern County Fire Department fire prevention requirements.
Safety Policy #7: Enforce ordinances regulating the use/manufacture/sale/transport/disposal of hazardous substances and require compliance with state and federal laws regulating such substances.	The proposed Project is subject to discretionary approval and would be required to comply with and/or adhere to all applicable State, Federal and local laws and regulations related to the use, manufacture, sale, transport and/or disposal of hazardous substances. A Hazardous Materials Evaluation was prepared for

Table 4.11-2. Consistency Analysis with Metropolitan Bakersfield General Plan Goals and Policies

GOALS AND POLICIES	PROJECT CONSISTENCY
	the Project to identify potential hazardous materials present within the proposed Project site and provide mitigation measures to reduce impacts. If hazardous materials are used during site construction, the materials shall be properly handled and disposed.
Safety Policy #8: The Kern County and Incorporated Cities Hazardous Waste Management Plan and Final Environmental Impact Report serves as the policy document guiding all facets of hazardous waste.	The proposed Project would be required to adhere to all applicable standards and requirements of the Kern County and Incorporated Cities Hazardous Waste Management Plan (HWMP). Any hazardous waste created during construction of the proposed Project will be disposed in accordance with the HWMP.
Safety Policy #9: Restrict, after appropriate public hearings, the use of fire-prone building materials in areas defined by the fire services as presenting high-conflagration risk.	As stated in Section 4.15, *Public Services* and Section 4.17, *Utilities* of this DREIR, future development of the proposed Project will be serviced by the Kern County Fire Department. The proposed Project would be reviewed by the Kern County Fire Department and would be required to comply with Kern County Fire Department requirements that prohibit the use of fire-prone building materials, where appropriate.
Safety Element - Seismic	
Seismic Goal #1: Substantially reduce the level of death, injury, property damage, economic and social dislocation and disruption of vital services that would result from earthquake damage.	The proposed Project design would be required to undergo review by the County of Kern. Adherence to and incorporation of the goals and policies of the Metropolitan Bakersfield General Plan Safety Element, compliance with the Kern County Ordinance Code, and compliance with the CBC and UBC would reduce impacts of earthquakes.
Seismic Goal #2: Ensure the availability and effective response of emergency services following an earthquake.	Refer to the analysis for Seismic Goal #1.
Seismic Goal #3: Prepare the Planning area for effective response to, and rapid, services following an earthquake.	Refer to the analysis for Seismic Goal #1.
Seismic Goal #7: Protect land uses from the risk of dam failure inundation including the assurances that: the functional capabilities of essential facilities are available in the event of a flood; hazardous materials are not released; effective measures for mitigation of dam failure inundation are incorporated into the design of critical facilities; and the rapid and orderly evacuation of populations in the inundation area will occur.	Isabella Dam is located approximately 40 miles northeast of Bakersfield, approximately 45 miles from the proposed Project site. The Safety Element of the Metropolitan Bakersfield General Plan has identified policies including a response plan for dam failure as well as the maintenance of disaster response plans and development of discretionary approval procedures for critical facilities for compatibility with evacuation plans. The proposed Project design would be required to undergo review by the County of Kern. The Project would be designed and constructed in strict adherence and incorporation with the goals and policies of the Metropolitan Bakersfield General Plan Safety Element, compliance with the Kern County Ordinance Code, and compliance with the CBC and UBC would reduce impacts related to dam failure.
Seismic Policy #7: Continue to address seismically hazardous buildings pursuant to Chapter 12.2 (8875 et. Seq.), Division 1 of Title 2 of the Government Code.	The proposed Project would be required to comply with the most current seismic standards of the UBC.
Seismic Policy #8: Require seismic review of other potentially hazardous buildings upon any change in their use or occupancy status.	The proposed Project design would be required to undergo review by the County of Kern.

Table 4.11-2. Consistency Analysis with Metropolitan Bakersfield General Plan Goals and Policies

GOALS AND POLICIES	PROJECT CONSISTENCY
Seismic Policy #9: Adopt and maintain high standards for seismic performance of buildings, through prompt adoption and careful enforcement of the most current seismic standards of the Uniform Building Code.	Refer to the analysis for Seismic Safety Policy #7.
Seismic Policy #10: Prohibit development designed for human occupancy within 50 feet of a known active fault and prohibit any building from being placed astride an active fault.	The proposed Project is not located within 50 feet of a known active fault. Additionally, implementation of the proposed Project would result in light to medium industrial land uses. Buildings associated with the proposed Project would not be intended for human occupancy. Adherence to and incorporation with the goals and policies of the Metropolitan Bakersfield General Plan Safety Element, compliance with the Kern County Ordinance Code, and compliance with the CBC and UBC would reduce impacts of fault rupture.
Seismic Policy #11: Require site-specific studies to locate and characterize specific fault traces within an Alquist-Priolo Earthquake Fault Zone for all construction designed for human occupancy.	The proposed Project is not located within an Alquist-Priolo Earthquake Fault Zone. Therefore, no site-specific study is required.
Seismic Policy #12: Design significant lifeline installations such as highway, utilities and petrochemical pipelines which cross an active fault, to accommodate potential fault movement without prolonged disruption of an essential service or creating threat to health and safety.	No active faults traverse the proposed Project and it is not located within an Alquist-Priolo Earthquake Fault Zone.
Seismic Policy #13: Determine the liquefaction potential at sites in areas of high groundwater prior to development and determine specific mitigation to be incorporated into the foundation design, as necessary to prevent or reduce damage from liquefaction in an earthquake.	The proposed Project is not located within an area of high groundwater. Therefore, the Project site is not susceptible to liquefaction. However, conformance with standard construction and design parameters set forth in the CBC would reduce potential impacts.
Seismic Policy #14: Route major lifeline installations around potential liquefaction areas or otherwise protect them against significant damage from liquefaction in an earthquake.	Refer to the analysis for Seismic Policy #13.
Seismic Policy #15: Compile information on areas of potential hazards and field information developed as part of CEQA investigations and geologic reports and keep geologic reviews and policy development current and accessible for use in report preparation.	The County of Kern will review the proposed Project and will be able to obtain information regarding seismic and geologic hazards on-site from this RDEIR.
Seismic Policy #18: Design discretionary critical facilities located within the potential inundation area for dam failure in order to: mitigate the effects of inundation on the facility; promote orderly shut-down and evacuation (as appropriate); and, prevent on-site hazards from affecting building occupants and the surrounding communities in the event of dam failure.	Isabella Dam is located approximately 40 miles northeast of Bakersfield, approximately 45 miles from the proposed Project. The Safety Element of the Metropolitan Bakersfield General Plan has identified policies including a response plan for dam failure as well as the maintenance of disaster response plans and development of discretionary approval procedures for critical facilities for compatibility with evacuation plans. The proposed Project design would be required to undergo review by the County of Kern. The Project would be designed and constructed in strict adherence and incorporation with the goals and policies of the Metropolitan Bakersfield General Plan Safety Element, compliance with the Kern County Ordinance Code, and compliance with the

Table 4.11-2. Consistency Analysis with Metropolitan Bakersfield General Plan Goals and Policies

GOALS AND POLICIES	PROJECT CONSISTENCY
	CBC and UBC would reduce impacts related to dam failure.
Seismic Policy #19: Design discretionary facilities in the potential dam inundation area used for the manufacture, storage or use of hazardous materials to prevent on-site hazards from affecting surrounding communities in the event of inundation.	Refer to the analysis for Seismic Policy #18.
Seismic Policy #20: Require emergency response plans for the Planning area to include specific procedures for the sequential and orderly evacuation of the potential dam inundation area.	Refer to the analysis for Seismic Policy #18.
Seismic Policy #21: Encourage critical and high-occupancy facilities as well as facilities for elderly, handicapped and other special care occupants located in the potential inundation area below the dam to develop and maintain plans for the orderly evacuation of their occupants.	Refer to the analysis for Seismic Policy #18.
Safety Element - Flooding	
Flooding Goal #1: Minimize hazards to planning area residents resulting from flooding.	The proposed Project would result in light and medium industrial facilities, and commercial uses. No residential land uses would be provided by the proposed Project. Future employees of the Project site are not likely to be impacted as a result of flooding within the proposed Project. The 8 to 12-hour lag time between failure of the Isabella Dam and inundation of the Project site reduces the risks to residents. Additionally, the proposed Project is located within Flood Zone X, which indicates that no flooding would be expected.
Flooding Goal #2: Reduce the risk of flooding to land uses.	Refer to the analysis for Flooding Safety Goal #1.
Flooding Policy #1: Ensure that the Bakersfield metropolitan area maintains a high level of public safety for its citizenry.	The proposed Project would be required to adhere to and incorporate the goals and policies of the Metropolitan Bakersfield General Plan Safety Element, comply with the Kern County Ordinance Code, and comply with the CBC and UBC to ensure safety for citizens. Refer to Sections 4.9, *Hazards and Hazardous Materials*, of this RDEIR.
Flooding Policy #2: Ensure that adequate police and fire services and facilities are available to meet the needs of current and future metropolitan residents through the coordination of planning and development or metropolitan police and fire facilities and services.	The proposed Project would be required to comply with the provisions of the Uniform Fire Code and local amendment; Title 19, 22, and 27 of the California Safety Code Regulation; the Kern County Ordinance Code; and the National Fire Prevention Association Standards. Implementation of the recommended mitigation measures identified in Section 4.15, *Public Services*, of this RDEIR, would serve to ensure adequate levels of police and fire services are provided to meet existing and future demands associated with implementation of the proposed Project.
Public Services and Facilities Element - Aesthetics	
Street Lighting Goal #2: Develop uniform Planning area street light location and design standards.	The proposed Project includes the installation of streetlights and entry lighting that would conform to the intent of the Kern County Ordinance Code and Development Standards.

Table 4.11-2. Consistency Analysis with Metropolitan Bakersfield General Plan Goals and Policies

GOALS AND POLICIES	PROJECT CONSISTENCY
Street Lighting Policy #4: Require developers to install street lighting in all new developments in accord with adopted city standards and county policies.	The proposed Project includes the installation of streetlights in conformance with adopted County standards and regulations.
Public Services and Facilities Element – General Utilities	
General Utilities Policy #5: Require all new development to pay its pro rata share of the cost of necessary expansion in municipal utilities, facilities and infrastructure for which it generates demand and upon which it is dependent.	Appropriate fees would be applied to the future development of the Project site in order to accommodate the expansion of required utilities, facilities, and infrastructure.
Public Services and Facilities Element - Water Distribution	
Water Distribution Goal #1: Ensure the provision of adequate water service to all developed and developing portions of the planning area.	The existing water purveyor, who provides irrigation water solely for agricultural purposes, will not service the proposed Project with domestic water. Instead, the domestic water will be provided by an on-site private well with water treatment and distribution facilities.
Water Distribution Policy #3: Require that all new development proposals have an adequate water supply available.	Refer to Public Services and Facilities - Water Distribution Goal #1, above.
Public Services and Facilities Element – Sewers	
Sewer Services Goal #3: Provide trunk sewer availability to and treatment/disposal capacity for all metropolitan urban areas, to enable cessation or prevention of the use of septic tanks where such usage crates potential public health hazards or may impair groundwater quality, and to assist in the consolidation of sewerage systems. Provide sewer service for urban development regardless of jurisdiction.	The proposed Project site has never been served by a sewer system. A new private package sewer treatment plant is proposed to provide services for the Project site.
Public Services and Facilities Element - Storm Drainage	
Storm Drainage Goal #1: "Ensure the provision of adequate storm drainage facilities to protect Planning area residents from flooding resulting from stormwater excess."	Stormwater facilities would be incorporated into the design of the infrastructure of the Project site. Additionally, future development phases would be subject to the Kern County Ordinance Code and design review requirements. Final development plans would be reviewed by the Kern County Planning Commission on a project-by-project basis.
Public Services and Facilities Element - Street Lighting	
Street Lighting Goal #1: "Provide uniform and adequate public lighting for all developed and developing portions of the Planning area."	Future development phases would be subject to the Kern County Ordinance Code and design review requirements. Final development plans would be reviewed by the Kern County Planning Commission on a project-by-project basis.
Street Lighting Policy #4: "Require developers to install street lighting in all new development in accord with adopted city standards and county policies."	Refer to analysis for PSF Street Lighting Goal #1.
Public Services and Facilities Element - Solid Waste	
Solid Waste Goal #1: "Ensure the provision of adequate solid waste disposal services to meet the demand for these services in the Planning area."	The County has adequate capacity in the Bena Landfill and the Shafter-Wasco Landfill to support the proposed Project.

Zoning Designations

Title 19 of the Kern County Ordinance Code provides a description of permitted uses, building height, yard and distance between buildings for the various zoning designations within the County. The Ordinance consists of two primary parts: a map that delineates the boundaries of zoning districts; and text that explains the purpose of the district, specifies permitted and conditional uses and establishes development and performance standards.

On- and Off-Site Zoning Designations

The proposed Project site is zoned A (Exclusive Agriculture). Zoning designations for properties surrounding the proposed Project include: A (Exclusive Agriculture), A-1 (Limited Agriculture), CH (Highway Commercial), C-2 PD (General Commercial, Precise Development Combining), E(1) RS MH (Estate 1 Acre, Residential Suburban Combining, Mobile Home Combining), E(2 ½) RS (Estate 2.5 Acres, Residential Suburban Combining), E(1/2) RS (Estate 0.5 Acres, Residential Suburban Combining), E(10) RS (Estate 10 Acres, Residential Suburban Combining), R-2 (Medium Density Residential, 16 units per acre), and M-2 PD (Medium Industrial, Precise Development Combining).

Metropolitan Bakersfield Habitat Conservation Plan

The Metropolitan Bakersfield Habitat Conservation Plan (MBHCP), adopted in March 1990, and its implementing agreements and ordinances provide a method of collecting funds for the acquisition and perpetual management of habitat land for the purpose of creating preserves. The MBHCP provides descriptions of species of concern and habitat areas within the Metropolitan Bakersfield General Plan Area. Development projects within Metropolitan Bakersfield pay mitigation fees, which are used to buy habitat lands. These lands are managed by wildlife agencies or entities they approve. Take avoidance measures are also listed in the MBHCP. Implementation of habitat preservation must always occur before project development. The boundaries of the MBHCP study area match the boundaries of the Metropolitan Bakersfield General Plan, which consists of 408 square miles. Refer to Section 4.4, *Biological Resources*, for a detailed discussion and Project consistency with the MBHCP.

Air Quality Attainment Plan

The Air Quality Attainment Plan (AQAP) prepared for the San Joaquin Valley Air Basin (Basin) calls for overall reduction in air quality emissions in the Valley to comply with California Ambient Air Quality Standards (CAAQS) for ozone and carbon monoxide (CO). Stationary and mobile source emission control recommendations and regulations have been developed by the San Joaquin Valley Air Pollution Control District (SJVAPCD) to implement the AQAP.

Metropolitan Bakersfield General Plan Bikeway Master Plan

This Plan includes the location and extent of bikeways within the greater Bakersfield Metropolitan area. The Metropolitan Bakersfield General Plan Bikeway Master Plan, included in the Circulation Element of the General Plan, was prepared by the City of Bakersfield and Kern County.

Emergency Response Plan

This Plan, prepared by the City of Bakersfield, indicates emergency evacuation routes that would be used in emergency situations, as well as other specific measures related to emergency preparedness.

Regional Transportation Plan

The Regional Transportation Plan (RTP) for Kern County identifies future transportation improvements needed to serve the projected transportation needs of the County. The RTP details the existing transportation systems, sets goals, policies, and projects, and identifies funding mechanisms for these projects. Transportation projects identified in the RTP include highway, street, and roadway projects; mass transportation; railroad; and other programs and projects related to the transportation needs of the County.

Solid Waste Management Plan

This plan is a comprehensive guide for all solid waste management activities in the County. The plan identifies the existing solid waste generation and disposal facilities in Kern County, estimates future solid waste disposal demand and identifies programs to meet this future need.

Hazardous Waste Management Plan (HWMP)

This Plan focuses on the siting of hazardous waste disposal facilities, the transport of hazardous waste in the County, protection of water resources from hazardous waste contamination and public education concerning the use and disposal of hazardous waste.

4.11.4 Impacts and Mitigation Measures

Methodology

The potential impacts associated with the proposed Project are evaluated on a qualitative basis through a comparison of the existing land use and the proposed land uses. The change in the land use on the Project site is significant if the effect described under the Thresholds of Significance below occurs as a result of the proposed actions. The evaluation of Project impacts is based on professional judgment, analysis of the County's visual resources policies and the significance criteria established in Appendix G of the State CEQA Guidelines, which the County has determined appropriate for this RDEIR.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the CEQA Guidelines, to determine if a project could potentially have a significant impact. Such an impact would occur if the proposed project would:

- Physically divide an existing community or contribute to the decline of an existing community (a physical change that interrupts the cohesiveness of the neighborhood);
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; and/or
- Conflict with any applicable habitat conservation plan or natural community conservation plan.

The analysis of the existing environmental and impact analysis indicate that this proposed Project could not result in a significant environmental impact to land use.

Project Impacts

Impact 4.11-1: The Project Would Physically Divide an Existing Community or Contribute to the Decline of an Existing Community.

The proposed Project currently consists of land under agricultural production or fallow agricultural land. A steel storage building associated with agricultural activities is located in the eastern portion of the site, near South Union Avenue. The majority of the Project site is currently designated R-IA (Resource-Intensive Agriculture) and HC (Highway Commercial), with the HC (Highway Commercial) designation located in the southwestern area of the Project site. The proposed Project has a zoning classification of A (Exclusive Agriculture).

Existing land uses surrounding the proposed Project site include agricultural, residential, and industrial uses. The residential uses consist of a small cluster of single-family homes located to the east of the proposed Project. However, areas south and east of the proposed Project are designated for service industrial and highway commercial uses. Given that the proposed Project would develop industrial and commercial facilities in an area with an existing land use mix of industrial and residential, the proposed Project would not physically divide an already established community or neighborhood. Implementation of the proposed Project would not drastically alter the community characteristics in such a manner that would physically divide or contribute to the decline of an established community or neighborhood.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.11-2: The Project Would Conflict with Applicable Land Use Plan, Policy or Regulation of an Agency with Jurisdiction Over the Project.

The proposed Project would require an amendment to the Metropolitan Bakersfield General Plan and a concurrent change to the County of Kern zoning classification. This would result in a conversion of approximately 314.30 acres of agricultural uses and vacant land to industrial uses. The proposed Project has been reviewed for consistency with goals and policies as set forth in the Metropolitan Bakersfield General Plan.

As described in Section 3.0, *Project Description*, the proposed Project includes an amendment to the Land Use Element of the Metropolitan Bakersfield General Plan, amending the existing land use designation from R-IA (Resource – Intensive Agriculture) to LI (Light Industrial), SI (Service Industrial), GC (General Commercial), and HC (Highway Commercial). The subsequent zone change would consist of the removal of the existing A (Exclusive Agriculture) zoning classification and rezone the Project site M-1 PD (Light Industrial, Precise Development Combining), M-2 PD (Medium Industrial, Precise Development Combining), CH PD (Highway Commercial, Precise Development Combining), and C-2 PD (General Commercial, Precise Development Combining). The General Plan Amendment (GPA) and zone change (ZCC) would permit development of a light to medium industrial park containing approximately 4,613,004 square feet (net building area) of warehousing, distribution, and retail showroom uses. In addition, two conditional use permits (CUPs) would permit the development of a sewer treatment plant and a water treatment plant.

Table 4.11-2, *Consistency Analysis with Metropolitan Bakersfield General Plan Goals and Policies for Land Use* (above), assesses the proposed Project's relationship to pertinent goals and policies of the Metropolitan Bakersfield General Plan. Note that goals and policies not included in the assessment are omitted because they have either a negligible relationship or no relationship to the proposed Project or surrounding area. The analysis contained in Table 4.11-2 concludes that there would be no significant consistency impacts of the proposed Project associated with the Metropolitan Bakersfield General Plan goals and policies.

The proposed Project was reviewed and determined to be consistent with the following regional plans: Air Quality Attainment Plan, Metropolitan Bakersfield General Plan Bikeway Master Plan, Regional Transportation Plan, Solid Waste Management Plan, Metropolitan Bakersfield Habitat Conservation Plan and Hazardous Waste Management Plan.

Air Quality Attainment Plan

As the Project proposes to amend the Metropolitan Bakersfield General Plan land use designation to allow industrial uses as opposed to agricultural uses (the current land use and zoning designations), the AQAP anticipated growth of the population and economy within the Basin. The AQAP predicted the workforce in Kern County to increase along with a 2.2 percent population increase between 2002 and 2030. Thus, the proposed Project is viewed as continued growth anticipated by the AQAP (refer to Section 4.3, *Air Quality*, for further discussion). The proposed Project's consistency with the San Joaquin Valley Air Pollution Control District (SJVAPCD) AQAP is also addressed in this Recirculated Draft EIR in Section 4.3, *Air Quality*.

Metropolitan Bakersfield General Plan Bikeway Master Plan

The proposed Project would not affect the City's Metropolitan Bakersfield General Plan Bikeway Master Plan. Bike lanes would be implemented as appropriate along roadways when full improvements are completed.

Regional Transportation Plan

The proposed Project would implement roadway improvements, such as installation of traffic signals and the widening of roadway segments and/or improve intersections on a fair-share basis. These improvements would be consistent with the policies or planned projects of the RTP (refer to Section 4.16, *Transportation and Traffic*, for further information).

Solid Waste Management Plan

Solid waste disposal would be in accordance with the County's Solid Waste Management Plan. Refer to Section 4.15, *Public Services*, and Section 4.17, *Utilities*.

Hazardous Waste Management Plan

Due to the previous oil drilling and gas production activities on-site, the proposed Project would be required to properly dispose of any contaminated soil within the Project site prior to construction. The proposed Project is located on a site that has been historically used for agricultural uses. Therefore, there is potential for contaminated soil to be encountered during construction. In addition, although the Project site has not been identified as being located in an area that has been designated as a candidate site or facility for hazardous materials disposal, removal of hazardous materials on the Project site is required prior to construction. In addition, the proposed Project may result in increased risks from hazardous materials and appropriate rules and regulations would adhere to the completed Project. Therefore, the proposed Project is subject to the Kern County and Incorporated Cities Hazardous Waste Management Plan as discussed in detail in Section 4.9, *Hazards and Hazardous Materials*.

Mitigation Measures

MM 4.11-1: **Master Precise Development Plan.** Prior to the issuance of any grading or building permit issued on the proposed project site, the project proponent shall process through the Kern County Planning and Natural Resources Department a Master Precise Development Plan in accordance with the requirements identified in Chapter 19.56 of the Kern County Zoning Ordinance.

1. All future changes to the physical environment of the site and or the specific characteristics of the existing uses of the site, either by a Master Developer or subsequent future land owners shall require revision and/or modification of the Master Precise Development Plan in accordance with Chapter 19.56 of the Kern County Zoning Ordinance.

2. The following thresholds have been established for the project site.

a. The proposed uses on the site shall not exceed a maximum of 4,613,004~~5,134,253~~ square feet of industrial and/or commercial use as determined by the Kern County Planning Director.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.11-3: The Project Would Conflict with Applicable Habitat Conservation Plan or Natural Community Conservation Plans.

The Project site is located within the permitted area of the MBHCP. The MBHCP addresses mitigation and compensation for the loss of endangered species habitat and impacts on endangered species within the Metropolitan Bakersfield area. The development of the site would require the payment of mitigation fees for the preservation of natural habitat areas in the area (refer to Section 4.4, *Biological Resources*).

Mitigation Measures

No mitigation measures beyond compliance with the Metropolitan Bakersfield Habitat Conservation Plan is required. No additional mitigation measures are proposed.

Level of Significance after Mitigation

Impacts would be less than significant.

Cumulative Impacts

The area influenced by cumulative land use effects related to adjacent parcels and the surrounding planned development areas is described in Table 3-5, *Cumulative Projects List* (refer to Chapter 3, *Project Description*). Related land use projects in the surrounding areas have been: (1) submitted for plan processing; (2) approved by the County of Kern and City of Bakersfield; and/or (3) engaged in active construction programs. While the surrounding area is not at buildout, and as yet is relatively rural in nature, the proposed Project would contribute to a cumulative influence on proposed land uses in and around the Project area.

The anticipated proposed Project impacts in conjunction with cumulative development in the site vicinity would increase industrial uses and result in the loss of open space and mineral petroleum uses in the local vicinity. Potential land use impacts are site-specific and require evaluation on a case-by-case basis. This is true with regard to land use compatibility impacts, which are generally a function of the relationship between the interactive effects of a specific development site and those of its immediate environment. Development of the proposed Project site and surrounding planning area is anticipated to occur in accordance with the Metropolitan Bakersfield General Plan, and in accordance with zoning classifications. Potential cumulative effects upon land use and planning are not anticipated to be significant.

Mitigation Measures

No mitigation beyond compliance with the goals, policies, and implementation measures of the Metropolitan Bakersfield General Plan and the Metropolitan Bakersfield Habitat Conservation Plan is required. No additional mitigation measures are proposed.

Level of Significance after Mitigation

Impacts would be less than significant.

Section 4.12

Mineral Resources

Section 4.12
Mineral Resources

4.12.1 Introduction

The purpose of this section is to evaluate existing mineral resources and the potential impacts on mineral resources, oil and gas, sand and gravel, and any other mineral resources of the proposed Project. This section also describes the environmental and regulatory settings. Mitigation measures are recommended to avoid or lessen impacts, as necessary. Information within this section is based on California Geological Survey (CGS, formerly the Department of Conservation Division of Mines and Geology [DMG]), California Division of Oil, Gas & Geothermal Resources (DOGGR) and Kern County publications and maps, in addition to the Hazardous Materials Evaluation prepared for the proposed Project. A Hazardous Materials Evaluation (2008 HME) was prepared by McIntosh & Associates in November 2008 (refer to Appendix N). A second HME (2017 HME) was prepared by McIntosh & Associates in July 2017. See Appendix F, *Hazardous Materials Evaluation*, and Appendix N, *Original Technical Studies*.

4.12.2 Environmental Setting

Local Character

Metropolitan Bakersfield General Plan

There are approximately 25 oil fields either partially or completely within the Metropolitan Bakersfield General Plan area. The closest oil fields to the proposed Project include Stockdale and Mountain View oil fields. In addition, there are three sand and gravel extraction areas within the Metropolitan Bakersfield General Plan area, primarily along the floodplain and alluvial fan of the Kern River.

Project Site

According to the State Division of Oil, Gas, and Geothermal Resources (DOGGR), the proposed Project is not located within an oil or gas field. One abandoned well, “Sea Cliff-Houghton” 1, is located in the northwest portion of the proposed Project. This well was drilled by Big McKittrick Oil Company of California between November 1934 and June 1935. No oils shows were reported during the drilling period; one gas show was reported at a depth interval from 2,077 feet to 2,079 feet. The well was abandoned in October 1935.

Regional Character

Kern County

Kern County is one of the largest producers of mineral products in California with a production value of almost one-quarter of the State's total. The principal County mineral product is petroleum (an organic derivative material) and related products, which contribute about 75 percent of the total valuation of all County mineral products. The remainder is comprised of sand and gravel, borax, cement products and other construction and gem-like minerals including gold. The majority of the proposed Project is currently designated as Map Code R-IA (Resource - Intensive Agriculture) and a small portion of the southwest corner of the site as Map Code HC (Highway Commercial) by the Metropolitan Bakersfield General Plan.

Kern County produces more oil than any other county in California and is one of the nation's leading petroleum-producing counties. Mineral and petroleum resources are basic to Kern County's economy. As new recovery technologies come into use, petroleum extraction should continue in economic importance. And as long as new urbanization is restricted in areas having important mineral and petroleum resources, the future production of these resources remains promising.

The history of the oil industry in Kern County dates back to the 19th century. The Lakeview Gusher near Taft (of the Midway-Sunset Oil Field) was literally a lake of oil held back by check dams, resulting in the accumulation of nine million barrels of oil in the ground. The Kern River Oil Field was established in 1899 when a 43-foot well dug by hand, by Tom Means, resulted in another sudden stream flow of oil. By 1903, 796 wells produced almost 17 million barrels of oil from the Kern River field. Over the next decade, the Kern River and West Side oil fields set production records and pioneered improvements in oil extraction. In the mid-1930s, several valley oil fields were found in large anticlines in Miocene oil sands beneath the valley floor. These discoveries were made following the advent of the reflection seismograph. Discoveries included the Ten Section, Greeley, Rio Bravo North, Coles Levee, South Coles Levee and Strand oil fields. Today, 71 active fields still continue to produce from the originally established 98 oilfields.

Oil Resources

In order to locate oil, companies drill through the earth to the deposits deep below the surface. The oil is then pumped from below the ground by oilrigs. Typically, oil then travels through pipelines and is stored in large tanks until it is sent to various places to be used for the production of thousands of products. Oil must be changed or refined into other products before it can be used. At oil refineries, crude oil is split into various types of products by heating the thick black oil (crude). Some of the products include gasoline, diesel fuel, aviation fuel, home heating oil, oil for ships and oil to burn in power plants to make electricity. In California, approximately 74 percent of our oil is used for transportation (i.e., cars, planes, trucks, etc.). Oil is found in 18 of the 58 counties in California.

Kern County crude oil is known as "heavy" oil. It is very thick and is difficult to pump from the ground. One of the innovations of the industry is to inject steam into the well, heating up the crude and making it easier to pump. This extends the life of the oil field but is also expensive. Drilling

activity in Kern County hit its peak in the 1950's, and the number of new wells being drilled has since stabilized.

The vast majority of the state's oil activity occurs in the County of Kern where four of the nation's seven most productive oil fields are located. Several of the County's "giant" oil fields are located entirely or partially within the City of Bakersfield. According to the 2016 Annual Report of the State Oil and Gas Supervisor, Kern County produced approximately 134,114,693 oil barrels (bbl) from 42,045 active producing wells (DOGGR 2017). Mineral resources in Kern County include numerous mining operations that extract a variety of materials, including sand and gravel, stone, gold, dimensional stone, limestone, clay, shale, gypsum, pumice, decorative rock, silica, and specialty sand. The State Geologist has classified 2,971 square miles of land in Kern County as Mineral Resource Zones (MRZs) of varying significance.

Natural Gas

Natural gas is lighter than air and is produced in two basic forms, associated gas and non-associated gas. Associated gas is produced along with crude oil while non-associated gas is produced from gas fields that do not produce any crude oil. Natural gas is found underground and then pumped from below ground and transported in large pipelines. Because natural gas usually has no odor and can't be seen, it is mixed with a chemical that gives it an easy to detect smell in the event of an accidental leak. From the storage tanks, natural gas is sent through underground pipelines to its destination (consumer) to be used for cooking, heating, manufacturing and to power plants to make electricity. California's net natural gas production in the year 2016 totaled 156,005,114 million cubic feet (including Outer Continental Shelf). Kern County accounted for 113,014,940 million cubic feet of this natural gas, representing approximately 72 percent of the total natural gas produced statewide.

Project Site

Pacific Gas and Electric Company (PG&E) natural-gas transmission pipeline *No. L-300B*, is located within the proposed Project boundaries. This pipeline was installed in 1954, is 34 inches in diameter, and operates at 700 pounds per square inch (psi). It traverses southeasterly across the property from SR-99 in the northwest to the south line bordering the easternmost portion of the site. The pipeline then traverses due east for one-quarter-mile, passing through PG&E valve station 269B and the original PG&E station situated at South Union Avenue. Refer to Figure 4.12-1, *Natural Gas Pipeline Map*, for an illustration of the location of the on-site pipeline. A 4-inch-diameter, steel, subsurface natural gas distribution line operating at 60 psi was also identified that traverses the west side of South Union Avenue.

Sand and Gravel

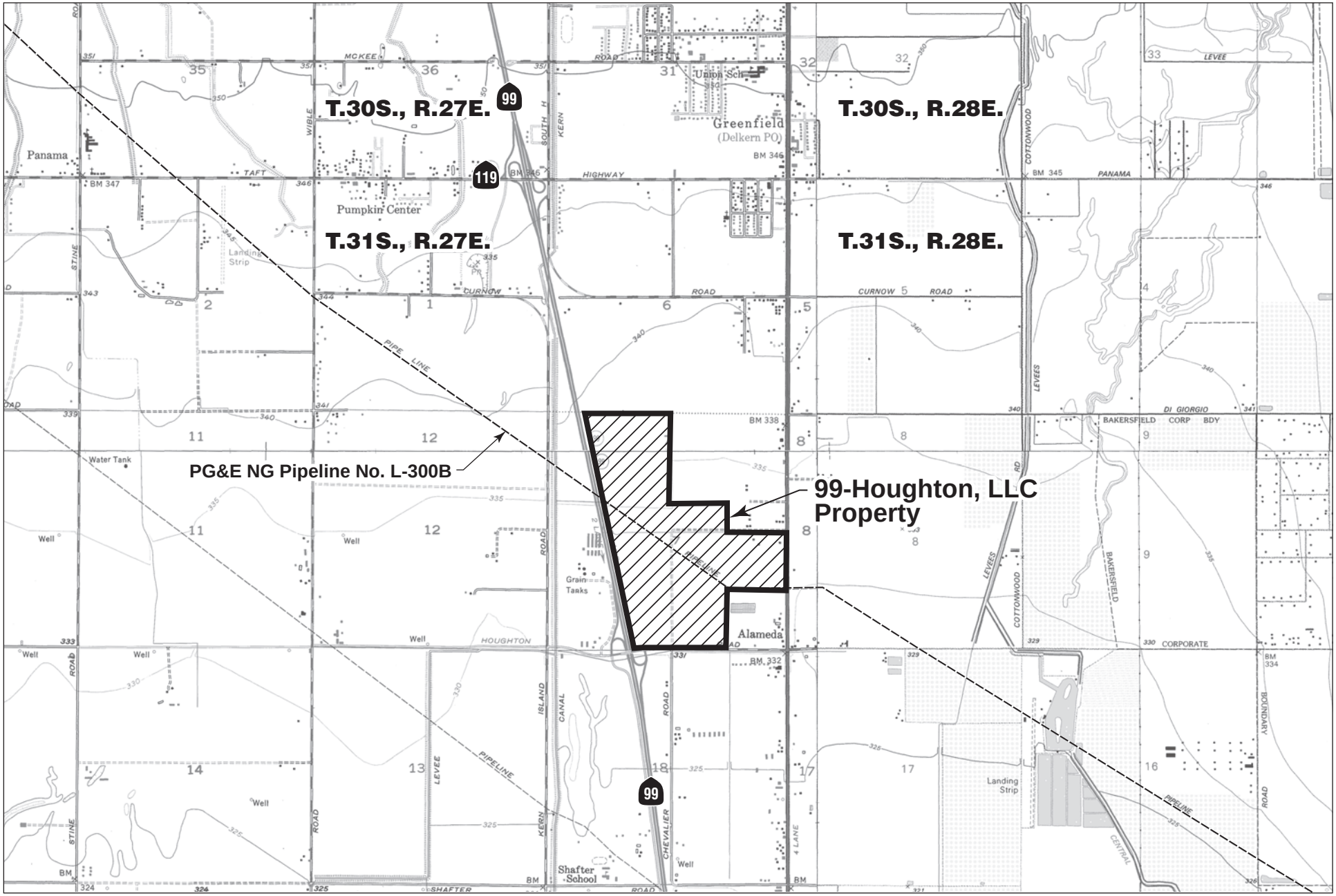
Sand and gravel have been determined to be important resources for construction, development and physical maintenance, from highways and bridges to swimming pools and playgrounds. The availability of sand and gravel affects construction costs, tax rates and affordability of housing and commodities. The State of California has statutorily required the protection of sand and gravel operations. Because transportation costs are a significant portion of the cost of sand and gravel, the

long-term availability of local sources of this resource is an important factor in maintaining the economic attractiveness of a community to residents, business, and industry.

Project Site

The proposed Project does not contain sand and gravel resources. There is no evidence of past or current sand and gravel extraction operations occurring within the site or immediate Project vicinity.

The major resources of sand and gravel in Kern County are in stream deposits along the eastern side of the San Joaquin Valley and in the Sierra Nevada foothills, and in alluvial fan deposits along the north flank of the San Emigdio and Tehachapi Mountains at the southern end of the County. Most of the recent alluvium in the San Joaquin Valley floor is composed of sand used as a source of road base material. According to the Metropolitan Bakersfield General Plan, there are three sand and gravel extraction areas within the Metropolitan Bakersfield General Plan area, primarily along the floodplain and alluvial fan of the Kern River. None of these sand and gravel extraction areas are within or in close proximity to the proposed Project site.



SOURCE: USGS California Quadrangles; Conner, Photorevised 1973, Gosford, Photorevised 1973, Lamont, 1992, Weed Patch, 1992,

0 3000'
APPROXIMATE

99 HOUGHTON INDUSTRIAL PARK PROJECT
CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07
AGRICULTURAL PRESERVE #13 EXCLUSION

Natural Gas Pipeline Map

Figure 4.12-1

Other Mineral Resources

The following section describes additional mineral resources relevant to local and regional character.

Gold has been the most important metallic mineral mined in Kern County in terms of total dollar value. It has been recovered by both placer and lode mining mainly in the Sierra Nevada and desert regions. While fluctuation in gold prices has caused a reactivation of interest in the commodity over the last two decades, continuous mining activity has been somewhat limited. Placer gold was mined before 1900, with the greatest number of deposits being mined during the late 1920s and 1930s. Principal placer deposits are in the Rand District, El Paso Mountains and along the Kern River. Approximately 1,500 gold claims have been registered in Kern County with approximately 280 of those claims activated as either lode or placer mines. Total amount of gold extracted from Kern County sites is not available since records were not kept during the more active lode mining activities prior to 1900. Placer yields are in excess of 32,000 fine ounces, a 1957 figure, but not likely to be much more since that date.

The Metropolitan Bakersfield General Plan EIR (Section 4.14, *Mineral and Energy Resources*) identifies the foothills of the Sierra Nevada's as having some potential as fossil and gemstone sites. These mineral resources, although possessing scientific and cultural value, are not considered a major economic resource.

Project Site

There is no evidence of other mineral resources being located within the proposed Project site and/or of mining operations occurring within the site or immediate Project vicinity.

4.12.3 Regulatory Setting

Oil, gas, and minerals, like land, are considered forms of property. The mineral resources that are beneath a tract of land (i.e., the mineral estate or subsurface estate) can be owned, and the ownership provides the holder with the mineral rights or subsurface rights, whereas, surface rights refer to ownership of the land (i.e., the surface estate) and the right to use the surface. When different parties own the surface and subsurface estates, it is referred to as split estate or severed estate lands.

The separation of surface and subsurface rights can occur through a mineral reservation. Severance by mineral reservation may occur if a party owning both surface and subsurface rights sells the land, but retains (or reserves) all or a portion of the mineral, oil and/or gas rights. To preserve title to the subsurface estate, the mineral owner has to record their mineral reservation with the county clerk and recorder's office or other government land title office. Mineral reservations often occur when lands are originally patented (e.g., the federal government sells the land but holds onto the mineral rights).

The following regulatory discussion provides applicable Federal, State, local goals, policies, regulations, codes and acts pertinent to development and operation of the proposed Project.

Federal

Bureau of Land Management

The Bureau of Land Management (BLM), an agency within the United States Department of the Interior, administers 261 million surface acres of America's public lands, located primarily in two Western States. The BLM sustains the health, diversity and productivity of the public lands for the use and enjoyment of present and future generations. The public lands provide a myriad of opportunities for commercial activities. Commercially valuable natural resources include energy and mineral commodities, forest products, grazing forage, and special uses such as rights-of-way for pipelines and transmission lines.

BLM is responsible for managing commercial energy and mineral production from the public lands in an environmentally sound and responsible manner. BLM is responsible for the leasing of Federal oil, gas, and geothermal minerals. BLM is also responsible for supervising the exploration, development, and production operations of these resources on both Federal and Indian lands. The proposed Project is privately owned and is not, in part or in total, under ownership of the BLM.

State

Surface Mining and Reclamation Act of 1975

The mineral resources addressed in this report pertain to those resources that are classified under the State Mining and Reclamation Act of 1975 (SMARA). The SMARA mandated the initiation by the State Geologist of mineral land classification in order to help identify and protect mineral resources in areas within the State subject to urban expansion and other irreversible land uses which would preclude mineral extraction. SMARA also allowed the designation of lands containing mineral deposits of regional or statewide significance. SMARA was amended (1980) to provide for the classification of non-urban area subject to land-use threats incompatible with mining. The classification of land within California takes place according to a priority list that was established by the State Mining and Geology Board (SMGB) in 1982, or when the SMGB is petitioned to classify a specific area. Currently, the State Geologist's SMARA classification activities are carried out under a single program for urban and non-urban areas of the state. Mineral lands are mapped using the California Mineral Land Classification System according to jurisdictional boundaries, mapping all mineral commodities at one time in the area, including aggregate, common clay and dimensions stone. Priority is given to areas where future mineral resource extraction could be precluded by incompatible land use or to mineral resources likely to be mined during the 50-year period following their classification. Detailed mineral land classification and designation reports provided by the State Mining and Geology Board are on file at the City of Bakersfield and County of Kern.

The SMGB established Mineral Resources Zones to designate lands that contain mineral deposits. Accordingly, the Mineral Resource Zone (MRZ) classification system is used to evaluate an area's mineral resources pursuant to SMARA. A "resource" is a concentration of naturally occurring solid, liquid, or gaseous material in such form and amount that economic extraction of a commodity from the concentrations is currently potentially feasible. A "reserve" is that part of the resource base which

could be economically extracted or produced within the foreseeable future. For any given mineral resource, an area may be classified as MRZ-1, MRZ-2, MRZ-3, or MRZ-4, as follows:

- MRZ-1: Areas where the available geologic information indicates that no significant mineral deposits are present, or where it is judged that no significant likelihood exists for their presence.
- MRZ-2a: Areas where the available geologic information indicates that significant mineral deposits are present.
- MRZ-2b: Areas where the available geologic information indicates that there is likelihood for the presence of significant mineral deposits.
- MRZ-3a: Areas where the available geologic information indicates that mineral deposits exist, the significance of which cannot be determined from available data.
- MRZ-3b: Areas where the available geologic information indicates that mineral deposits are likely to exist, the significance of which cannot be determined from available data.
- MRZ-4: Areas where available geologic information is inadequate for assignment into any other MRZ, or where there is not enough information available to determine the presence or absence of mineral deposits.

The MRZ classifications are applied based on available geologic information and upon geologic appraisal of the mineral resource potential of the land, including geologic mapping and other information on surface exposures, drilling records, and mine data; and on socioeconomic factors such as market conditions and urban development patterns.

Division of Oil, Gas, and Geothermal Resources (DOGGR)

DOGGR is responsible for supervising the drilling, operation, maintenance, plugging, and abandonment of oil, gas, and geothermal wells. DOGGR's regulatory program promotes the sensitive development of oil, natural gas, and geothermal resources in California through sound engineering practices, prevention of pollution, and implementation of public safety programs. To implement this regulatory program, DOGGR requires avoidance of building over or near plugged or abandoned oil and gas wells or requires the remediation of wells to current DOGGR standards.

All oil and gas wells drilled and constructed in California must adhere to strict requirements. These requirements include general laws and regulations regarding the protection of underground and surface water, and specific regulations regarding the integrity of the well casing, the cement used to secure the well casing inside the bore hole, and the cement and equipment used to seal off the well from underground zones bearing fresh water and other hydrocarbon resources. (See California Public Resources Code sections 3106, 3203, 3211, 3220, 3222, 3224, 3255; Title 14 of the California Code of Regulations, sections 1722.2, 1722.3, 1722.4, etc.). In addition, the DOGGR requires avoidance of building over or near plugged or abandoned oil and gas wells or requires the remediation of wells to current DOGGR standards.

DOGGR also has the authority under the CCR to adopt field rules for oil and gas pools or zones in a field when sufficient geologic and engineering data is available from previous drilling operations. The administrative boundaries of each pool or zone for which field rules have been adopted and geologic and engineering information is available to accurately describe subsurface conditions are designated through a ministerial process by DOGGR. Applicable field rules identify down hole conditions and well construction information that oil and gas operators should consider when drilling and completing onshore oil and gas wells. In addition to DOGGR facilities regulations, operators that have facilities in designated areas must have Spill Prevention, Control and Countermeasure Plans per U.S. Environmental Protection Agency (EPA) requirements.

In California, wells that inject fluids associated with oil and natural gas production operations (Class II injection wells) are regulated by the DOGGR under the Underground Injection Control (UIC) Program. Injection operations regulated under the UIC Program include water flood, steam flood, cyclic steam, water disposal, gas storage, and other enhanced oil recovery projects. DOGGR's UIC program is monitored and audited by the EPA because in 1982 DOGGR entered into a primacy agreement with the EPA for regulation of Class II injection wells under the federal Safe Drinking Water Act (SDWA). The requirements of DOGGR's UIC Program are found in the Public Resources Code (PRC), the Safe Drinking Water Act, and in the state and federal regulations. The main features of the UIC Program include permitting, inspection, enforcement, mechanical integrity testing, plugging and abandonment oversight, data management, and public outreach.

On November 15, 2013, the DOGGR began the formal rulemaking process for Well Stimulation Treatment Regulations, which, at that time were to go into effect no later than January 1, 2015. Interim regulations went into effect on January 1, 2014, which require oil and gas well operators to submit notification of well stimulation treatments and various types of data associated with well stimulation operations, including chemical disclosure of well stimulation fluids, to the DOGGR. In addition, the DOGGR is required to compile submitted information regarding these activities and make it available to the public in a format that is easily searchable.

On June 20, 2014, Governor Brown signed into law Senate Bill (SB) 861 (Committee on Budget and Fiscal Review, Chapter 35, Statutes of 2014), which took effect immediately. SB 861 amended DOGGR's authority to use emergency rulemaking to establish interim regulations for implementation of SB 4. As allowed under the new law, the readopted SB 4 interim well stimulation treatment regulations will remain in effect until the most current version and status if the final well stimulation regulations went into effect July 1, 2015 (DOGGR 2017).

California Geological Survey (Formerly California Division of Mines and Geology)

The California Geological Survey (formerly the California Division of Mines and Geology within the State Department of Conservation) has responsibility to identify and assist in the utilization of mineral deposits, and to identify geological hazards, including fault locations.

Local

Metropolitan Bakersfield General Plan

The Metropolitan Bakersfield General Plan lists the issues, goals, policies, and implementation measures related to oil, natural gas, sand and gravel, as other minerals and energy resources in the County, as contained in the Energy Element. Project implementation would be guided in part by the goals, policies, and implementation programs, which are presented in Table 4.12-1, *Metropolitan Bakersfield General Plan Goals and Policies for Mineral Resources*.

Table 4.12-1. Metropolitan Bakersfield General Plan Goals and Policies for Mineral Resources

Goals and Policies: Mineral Resources Element
Goal #1: Protect areas of significant resources potential for future use.
Goal #2: Document areas of current mineral and energy resource extraction, as a basis for land use and conservation policies and programs.
Goal #3: Avoid conflicts between the productive use of mineral and energy resource lands and urban growth.
Goal #4: Protect land, water, air and visual resources from environmental damage resulting from mineral and energy resource development.
Policy #1: Maintain maps and descriptions of potential mineral and energy resources as a basis for policy and program implementation.
Policy #2: Document the location, status and long-term viability of sand and gravel quarries and petroleum drilling sites for purposes of avoiding near and long-term land use conflicts and provide a basis of compliance monitoring.
Policy #3: Encourage and support the exchange of information on mineral and energy resources between private industry, City of Bakersfield and Kern County.
Policy #4: Land use decisions shall recognize the importance of identified mineral resources and need for conservation of resources identified by the State Mining and Geology Board.
Policy #5: Protect significant mineral and petroleum resource areas, including potential sand and gravel extraction areas.
Policy #6: Continue implementation of the Kern River Channel Maintenance Program for extraction of river sand and gravel.
Policy #7: Promote development of compatible uses adjacent to mineral extraction areas.
Policy #8: Allow development of resource extraction sites subject to the conditional use permit procedure in zones where such uses are not prohibited by right and where it can be shown that the proposed extraction uses are compatible with surrounding areas.
Policy #9: Encourage preservation of any known deposits of gemstones and fossils.
Policy #10: Implement, as appropriate, the California Environmental Quality Act to minimize land use conflicts and reduce extraction operations.
Policy #11: Prohibit incompatible development in areas, which have a significant potential to harm public health, safety and welfare due to mineral and petroleum extraction and processing.
Policy #12: Design resource extraction operations subject to discretionary permits to maintain the integrity of areas of "high environmental quality" and unique scenic value.
Policy #13: Require surface mineral resource extraction sites to have plans and procedures for land reclamation, conforming with the requirements of the State Mining and Geology Board, to be implemented upon completion of extraction operations at each site or portion thereof.

Table 4.12-1. Metropolitan Bakersfield General Plan Goals and Policies for Mineral Resources
Goals and Policies: Mineral Resources Element
Policy #14: Review all discretionary mineral or petroleum development including renewal of existing authorizations, under the policies and procedures of the California Environmental Quality Act.
Policy #15: Require petroleum production sites in urban areas, which are subject to discretionary permits to install peripheral landscaping to help reduce the noise, dust and visual impacts to adjacent sensitive receptors and public ways.
Policy #16: Require all mineral development to be predicated on appropriate reclamation plans that meet the standards of the State Surface Mining and Reclamation Act and the implementing guidelines of the State Mines and Geology Board, and/or the standards of the State Division of Oil and Gas. Reclamation/restoration of the sites shall be done at each phase of development or as extraction is completed.

Kern County Zoning Ordinance (Title 19 of the Ordinance Code of Kern County)

Chapter 19.98 Oil and Gas Production

This chapter of the Kern County Zoning Ordinance contains the procedures and standards that apply to all exploration drilling and production activities related to oil, gas, and other hydrocarbon substances carried out in unincorporated Kern County. The purpose of this chapter is to promote the economic recovery of oil, gas, and other hydrocarbon substances in a manner compatible with surrounding land uses and protection of the public health and safety.

This chapter, along with related parts of the zoning ordinance, was amended by the Kern County Board of Supervisors on November 9, 2015 to require a ministerial permit for all oil and gas operations along with updated implementation standards and mitigation measures. A comprehensive project level oil and gas activities EIR was certified and includes mitigation measures to address environmental impacts of pre-drilling exploration, well drilling, and the operation of wells and other oil and gas production–related equipment and facilities, including exploration, production, completion, stimulation, reworking, injection, monitoring and plugging and abandonment. This required permit is in conjunction with and coordinated with the permit issued by DOGGR.

Kern County Fire Department

A set back is a minimum distance required by zoning to be maintained between structures or between structures and property lines. Kern County does not currently have any adopted zoning ordinance specifically addressing set back distances for petroleum and natural gas pipelines. However, the Kern County Fire Department has set back distance requirements for buildings constructed adjacent to transmission pipelines that transport petroleum and natural gas. The Pipeline Development Policies of the Kern County Fire Department are as follows:

- No habitable portion of a structure shall be construction within 50 feet of a gas main, or transmission line, or refined liquid product line with 36 inches of cover;

- No structure may be within 40 feet of a hazardous liquids pipeline bearing refined product, with 48 inches or more of cover;
- No habitable portion of a structure shall be built within 30 feet of a crude oil pipeline operating at 20 percent of its design strength;
- Prior to or concurrent with filing of a final map, a covenant shall be recorded on all lots of this tract, or portion thereof, which are within 250 feet of any gas transmission line. Covenant shall acknowledge proximity of pipeline easement to said property and describe the name, type and dimension of the pipelines. Prior to recordation, the subdivider shall submit and obtain approval covenant wording with the City Attorney, Office of Environmental services and City Engineer.

4.12.4 Impacts and Mitigation Measures

Methodology

In accordance with the California Environmental Quality Act (CEQA), the effects of a project are evaluated to determine if they will result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts that are identified. The criteria, or standards, used to determine the significance of impacts may vary depending on the nature of the proposed Project. Mineral Resource impacts resulting from the implementation of the proposed Project could be considered significant if they cause any of the following results.

Thresholds of Significance

- The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the CEQA Guidelines, to determine if a project could potentially have a significant impact. Such an impact would occur if the proposed project would result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; and/or
- Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

The analysis of the existing environment and the impact analysis indicate that this proposed Project could result in a significant environmental impact if it would result in a loss of mineral resources, if not mitigated.

Project Impacts

Impact 4.12-1: The Project Would Not Result in the Loss of Availability of a Known Mineral Resource That Would be of Value to the Region and the Residents of the State

The proposed Project is not located within the administrative boundary of an oil or gas field. One previously abandoned exploration well, “Sea Cliff-Houghton” 1, is located in the northwest corner of

the Project site. The well was installed in November 1934 and drilled to approximately 6,756 feet, where it had no oil shows and one gas show at a depth interval of 2,077 to 2,079 feet. The well was abandoned as a dry hole with mud in the casing in October 1934 (refer to Appendix F, *Hazardous Materials Evaluation*). No other mineral resources or mineral resource facilities are known to occur on the Project site.

The lack of oil shows in prospect well "Sea Cliff-Houghton" 1 indicates that commercial quantities of oil and/or natural gas are not likely to underlie the proposed Project. As discussed in Section 4.9, *Hazards/Hazardous Materials*, the well must be reabandoned to current DOGGR and Kern County standards. Impacts would be less than significant because no known or potential mineral resources are present within, or in close proximity to, the proposed Project.

The Project does not propose mineral and/or energy resource development. However, PG&E currently operates a natural gas pipeline, number L-300B, that traverses the Project site (refer to Figure 4.12-1, *Natural Gas Pipeline Map*). Transport of natural gas through this pipeline would not be impeded by the proposed Project implementation. Mitigation would be required in order to maintain PG&E access to the pipeline. In addition, development on-site, would, also be required to comply with applicable State and local regulations in order to reduce potential impacts on health and safety related to this pipeline to less than significant levels (refer to Section 4.9, *Hazards/Hazardous Materials*). Impacts would be less than significant.

Mitigation Measures

Implementation of MM 4.9-6, 4.9-7, 5.9-9, and 4.9-10.

MM 4.12-1: **Natural Gas Pipeline Easements.** The Pacific Gas and Electric (PG&E) natural gas pipeline easement shall be included on all maps and grading plans to allow for continuous PG&E access for all maintenance activities.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.12-2: The Project Would Result in the Loss of Availability of a Locally Important Mineral Resource Recovery Site Delineated on a Local General Plan, Specific Plan or Other Land Use Plan.

Extraction and use of mineral resources is a significant economic and social value in Kern County. Challenges occur when oil production and mineral extraction activities are located in close proximity to incompatible land uses, such as residential. As discussed in Impact 4.12-1, above, the Project site is not located within the administrative boundaries of an oil or gas field. No oil shows were observed, and one natural gas show was observed at a depth interval or 2,077 to 2,079 feet in 1934-35. The DOGGR requires reabandonment of the prospect well "Sea Cliff-Houghton" 1.

There is no property within the proposed Project that is contained within an MRZ. Therefore, the proposed Project is not anticipated to result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

Extraction and use of mineral resources is a significant economic and social value in Kern County. Challenges occur when oil production and mineral extraction activities are located in close proximity to incompatible land uses, such as residential. As discussed in Impact 4.12-1, above, the proposed Project is not located within the administrative boundary of an oil or gas field. No commercial shows of oil or natural gas have been withdrawn from prospect well "Sea Cliff-Houghton" 1. This prospect well is currently abandoned.

The proposed Project in not within an MRZ. Therefore, the proposed Project is not anticipated to result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Cumulative Impacts

Cumulative impacts to mineral resources would occur if the cumulative projects would result in the loss of oil or aggregate mineral resources. This proposed Project is not within an administrative boundary for oil or gas fields and is not within an area of aggregate mineral resources. Other projects in the Metropolitan Bakersfield area may occur within or near existing oil fields, as well as sand and gravel mining operations. However, where these resources have substantial remnant supplies, none of the cumulative projects would preclude continued extraction or production of these resources. In addition, because the proposed Project has a less than significant impact on mineral resources, it would not add to a cumulative loss of resources within Kern County. Therefore, cumulative impacts would not result.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Section 4.13

Noise

Section 4.13
Noise

4.13.1 Introduction

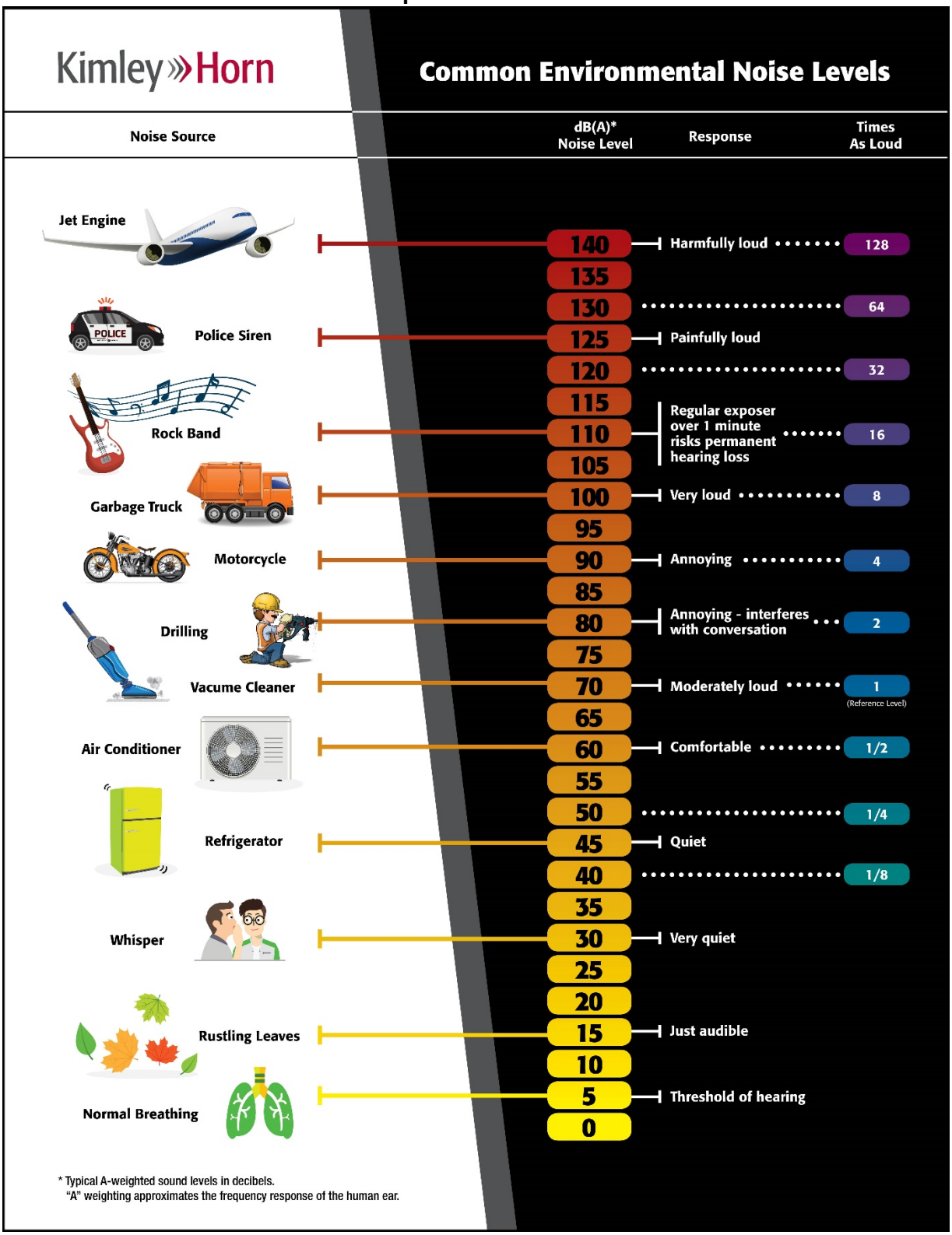
This section of the Recirculated Draft EIR addresses the potential noise impacts associated with construction and operation of the proposed Project. The noise section describes the existing conditions on the proposed Project site, the regulatory setting, the impacts of the proposed Project, and feasible mitigation measures to reduce impacts. An Environmental Noise Assessment was prepared by Bollard Acoustical Consultants, Inc. in April 2009. A second Environmental Noise Assessment was prepared by Bollard Acoustical Consultants, Inc. in May 2016 and an updated Environmental Noise Assessment was prepared in July 2017. See Appendix I, *Environmental Noise Assessment*, and Appendix N, *Original Technical Studies*.

Acoustical Terminology

Sound is technically described in terms of the loudness (amplitude) of the sound and frequency (pitch) of the sound. Noise is typically described as any unwanted or objectionable sound. The standard unit of measurement of the loudness of sound is the decibel (dB). Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against sound frequencies in a manner approximating the sensitivity of the human ear. The A-weighted sound level of traffic and other long-term noise-producing activities within and around a community varies considerably with time. Measurements of this varying noise level are accomplished by recording values of the A-weighted level during representative periods during the day.

Decibels are based on the logarithmic scale. The logarithmic scale compresses the wide range in sound pressure levels to a more usable range similar to how the Richter scale measures earthquake magnitudes. In terms of human response to noise, a sound 10 dBA higher than another is perceived to be twice as loud; 20 dBA higher, four times as loud; and so forth. Everyday sounds normally range from 30 dBA (very quiet) to 100 dBA (very loud). Examples of various sound levels in different environments are shown in Figure 4.13-1, *Sound Levels and Human Response*.

Figure 4.13-1 Sound Levels and Human Response



In most situations, a three-dBA change in sound pressure level is considered a "just-detectable" difference. A five-dBA change (either louder or quieter) is readily noticeable and a 10-dBA change is a doubling (if louder) or a halving (if quieter) of the subjective loudness. Sound from a small localized source (approximating a "point" source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates or drops-off at a rate of six dBA for each doubling of the distance (six dBA/DD). This decrease, due to the geometric spreading of the energy over an ever- increasing area, is referred to as the inverse square law. However, highway traffic noise is not a single, stationary point source of sound. The movement of the vehicles makes the source of the sound appear to emanate from a line (line source) rather than a point when viewed over some time interval. Since the change in surface area of a cylinder only increases by two times for each doubling of the radius instead of the four times associated with spheres, the change in sound level is three dBA per doubling of distance. Numerous methods have been developed to measure sound over a period of time. These methods include (1) the community noise equivalent level (CNEL); (2) the equivalent sound level (L_{eq}); and (3) the day/night average sound level (L_{dn}). These methods and additional noise related terminology is described below.

Community Noise Equivalent Level (CNEL)

Cumulative noise metrics were developed to assess community response to noise. They are useful because they attempt to take into account the loudness and duration of the noise, the total number of noise events and the time of day these events occur in one single-number rating scale. They are designed to account for the known health effects of noise on people. CNEL is a 24-hour, time-weighted energy-average noise level based on dBA that measures the overall noise during an entire day. Noise that occurs during certain sensitive time periods is penalized for occurring at these times by adding decibels to its L_{eq} measurement. On the CNEL scale, noise between 7:00 AM and 10:00 PM is penalized by approximately five dB, to account for the greater potential for noise to interfere during these hours, as well as typically lower ambient (background) noise levels during these hours. Noise during the night (from 10:00 PM to 7:00 AM) is penalized by ten dB to attempt to account for our higher sensitivity to noise in the nighttime and the expected further decrease in ambient noise levels that typically occur in the night.

Equivalent Sound Level (Leq)

The equivalent sound level, abbreviated L_{eq}, is a measure of the exposure resulting from the accumulation of A-weighted sound levels over a particular time period (e.g., one-hour, eight-hour school day, nighttime or a full 24-hour day). However, because the length of the period can be different depending on the time frame of interest, the applicable period should always be identified or clearly understood when discussing the metric. Such durations are often identified through a subscript, for example $L_{eq(24)}$.

Conceptually, L_{eq} may be thought of as a constant sound level over the period of interest that contains as much sound energy as the actual time-varying sound level with its normal peaks and valleys. It is important to recognize, however, that the two signals (the constant one and the time-varying one) would sound very different from each other if compared in real life. Variations in the "average" sound level suggested by L_{eq} are not an arithmetic value, but a logarithmic ("energy-averaged") sound level. Thus, loud events clearly dominate any noise environment described by the metric.

Day/Night Average Sound Level (L_{dn})

The day/night average sound level (L_{dn}) is a measure of the 24-hour average noise level at a given location. It was adopted by the U.S. Environmental Protection Agency (EPA) for developing criteria for the evaluation of community noise exposure. L_{dn} is based on a measure of the average noise level over a given time period. The L_{dn} is calculated by averaging the L_{eq} for each hour of the day at a given location after penalizing the sleeping hours (from 10:00 PM to 7:00 AM) by 10 dBA to take into account the increased sensitivity of people to noises that occur at night. The sound level exceeded over a specified timeframe can be expressed as L_n (i.e., L_{90}, L_{50}, L_{10}, etc.). L_{50} equals the level exceeded 50 percent of the time; $L_{10,}$ ten percent of the time; etc.

Maximum Sound Level (Lmax)

The maximum sound level recorded during a noise event.

Noise (Exposure) Contours

Noise (exposure) contours illustrate (typical a line drawn on a diagram/map) a noise source indicating constant levels of noise exposure. CNEL contours are frequently utilized to describe a community's exposure to noise.

Sound Propagation and Attenuation

For purposes of sound propagation, noise sources may be classified as point sources or line sources. Point sources usually are localized, such as a piece of machinery, and at a distance, sound from such sources will propagate in a spherical pattern. Sound levels from point sources will attenuate or drop-off at the rate of six dB for each doubling of distance. Sound from line sources, such as a highway, propagates in a cylindrical pattern. Sound from line sources will attenuate at a rate of three dB per doubling of distance.

Additionally, sound levels also may be attenuated by air and ground absorption, and from shielding by natural or man-made obstacles in the sound path. Noise barriers (walls or earth berms) are features that are commonly constructed to interrupt noise propagation and reduce noise levels. Wind and atmospheric temperature inversions also influence sound propagation.

Vibration Characteristics

Vibration is a unique form of noise. It is unique because its energy is carried through structures and the earth, whereas, noise is simply carried through the air. Thus, vibration is generally felt rather than heard. Some vibration effects can be caused by noise; e.g., the rattling of windows from truck pass-bys. This phenomenon is related to the coupling of the acoustic energy at frequencies that are close to the resonant frequency of the material being vibrated. Typically, ground-borne vibration generated by man-made activities attenuates rapidly as distance from the source of the vibration increases. Vibration, which spreads through the ground rapidly, diminishes in amplitude with distance from the source. The ground motion caused by vibration is measured as particle velocity in inches per second and, in the U.S. is referenced as vibration decibels (VdB).

The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people. Sources within buildings such as operation of mechanical equipment, movement of people or the slamming of doors causes most perceptible indoor vibration. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel wheeled trains and traffic on rough roads. Ground type, distance between source and receptor, duration, and the number of perceived vibration events can all influence human and structural responses to vibration. The range of interest is from approximately 50 VdB, which is the typically background vibration velocity, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings.

4.13.2 Environmental Setting

Noise-Sensitive Land Uses

Certain land uses are particularly sensitive to noise, including schools, hospitals, rest homes, long-term medical and mental care facilities, and parks and recreation areas. Residential areas are also considered noise sensitive, especially during the nighttime hours.

The proposed Project is mostly vacant and used for agricultural purposes. Noise sensitive land uses in the immediate vicinity of the proposed Project include existing single-family residences to the east of the proposed Project. These uses may be affected by increased Project-related traffic noise on local area roadways and on-site noise sources.

Existing Noise Environment

The proposed Project consists of approximately 314.30 acres of fallow agricultural land. The topography of the site is relatively flat, sloping slightly from the northwest to the southeast. Elevations range from approximately 331 feet above mean sea level (msl) to 340 feet above msl. Existing noise sources located in the immediate vicinity of the proposed Project include traffic on local roadways and agricultural equipment.

Ambient Noise Measurements

The existing ambient noise environment in the immediate project vicinity is defined primarily by SR-99 traffic, local traffic, and commercial/light industrial operations. In order to quantify existing ambient noise levels in the proposed Project area, a 24-hour ambient noise level measurement survey was completed at the closest residential property to the proposed Project site on December 18-19, 2008 and additional short-term ambient noise measurements were collected in July 10, 2017 (Bollard Acoustical Consultants 2017) at three locations. Figure 4.13-2, *Location of Existing Noise Level Measurements*, shows the location where noise measurements were taken in 2017.

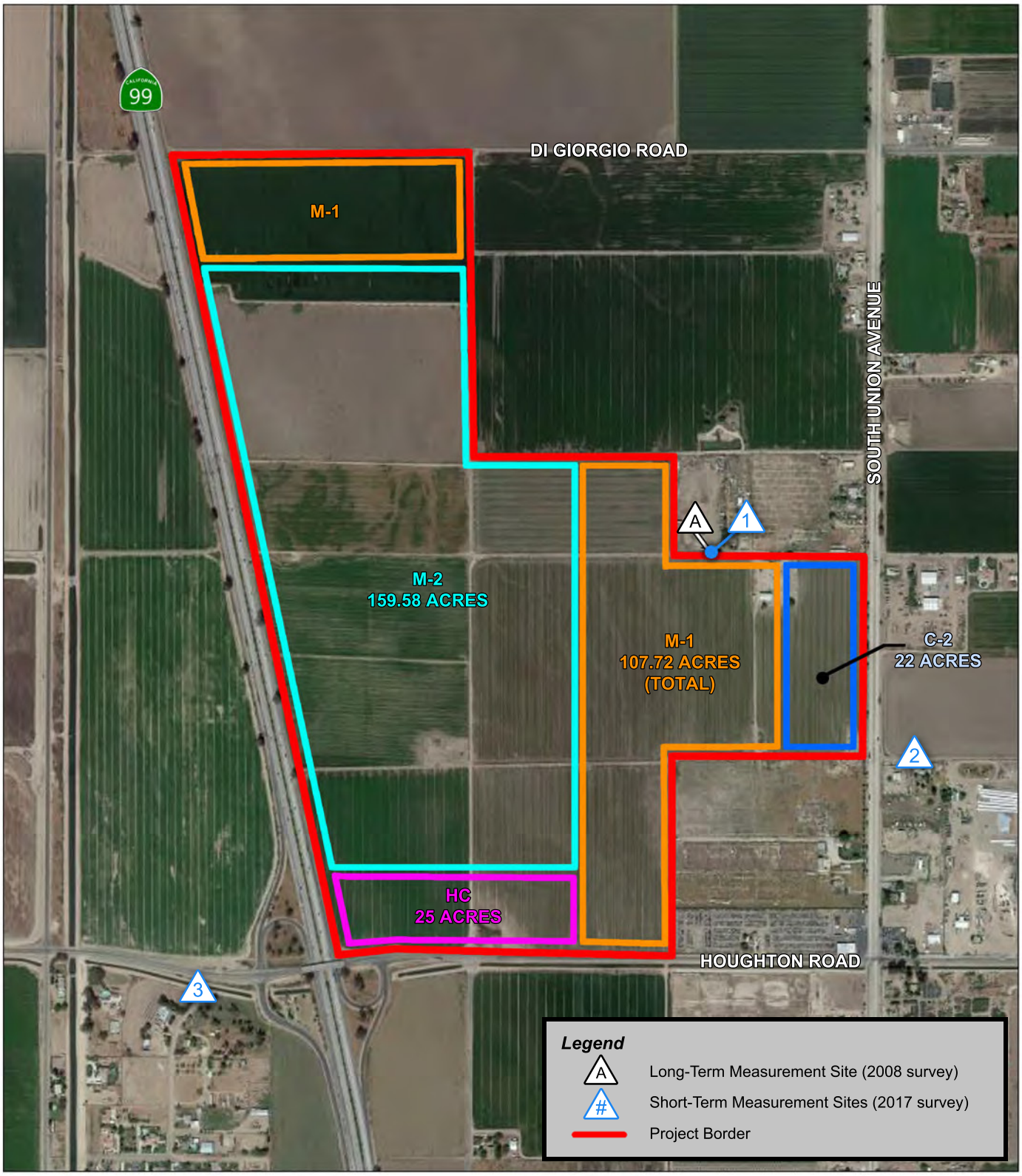
Noise monitoring equipment used for the study consisted of a Larson-Davis Laboratories (LDL) Model 820 precision integrating sound level meter equipped with an LDL Model 2560 1/2" microphone. The instrumentation complies with applicable requirements of the American National

Standards Institute (ANSI) for Type 1 (precision) sound level meters, and was calibrated prior to use with an LDL Model CAL200 acoustical calibrator to ensure the accuracy of the measurements (Bollard Acoustical Consultants 2017).

Existing Traffic Noise Levels

Vehicular noise along major roadways in the vicinity of the proposed Project was modeled to estimate existing noise levels from mobile sources. The existing and future roadway noise levels were projected using the Federal Highway Administration (FHWA) Traffic Noise Prediction Model, together with several roadway and site parameters. The FHWA Traffic Noise Prediction Model's Lookup Table provides a reference of pre-calculated TNPM results for simple highway geometries, which is adequate for the purposes of this analysis.

Traffic volumes used in the FHWA TNPM were obtained from the Traffic Study prepared by McIntosh & Associates, January 2016. Existing modeled traffic noise levels are shown in Table 4.13-1, *Existing Traffic Noise Levels*. Table 4.13-1 shows existing traffic noise levels at a reference distance of 100 feet from the centerlines of existing Project-area roadways. As illustrated in Table 4.13-1, existing traffic noise levels range from 30 to 70 dBA CNEL. Several roadway segments currently exceed the Metropolitan Bakersfield General Plan noise standard of 65 dBA CNEL standard at 100 feet from the centerline.



SOURCE: Bollard Acoustical Consultants, Inc.,
99 Houghton General Plan Amendment EIR

Noise Measurement Location

0 1000'
APPROXIMATE

99 HOUGHTON INDUSTRIAL PARK PROJECT

CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07 • AGRICULTURAL PRESERVE #13 EXCLUSION

Location of Existing Noise Level Measurements

Figure 4.13-2

Table 4.13-1. Existing Traffic Noise Levels

Roadway	Segment	L_{dn} (dB) @ 100 feet
Panama Lane	West of 99 SB Ramp	70
	99 SB Ramp to 99 NB Ramp	67
	99 NB Ramp to South H St.	69
	South H St. to South Union Ave.	65
	South Union Ave. to Cottonwood Rd.	64
	East of Cottonwood Rd.	64
Hosking Ave.	West of Hughes Ln.	55
	Hughes Ln. to 99 SB Ramp	54
	99 SB Ramp to 99 NB Ramp	54
	99 NB Ramp to South H St.	54
	South H St. to South Union Ave.	56
	South Union Ave. to Cottonwood Rd.	30
Taft Hwy.	West of Wible Rd.	63
	Wible Rd. to Compangnoni St.	62
	Compangnoni St. to 99 NB Ramp	65
	99 NB Ramp to South H St. (2015)	69
	South H St. to South Union Ave.	69
	South Union Ave. to Cottonwood Rd.	68
	East of Cottonwood Rd.	68
Di Giorgio Rd.	West of Chevalier Rd. (Entrance #1)	n/a
	Chevalier Rd. (Entrance #1) to South Union Ave.	n/a
	South Union Ave. to Cottonwood Rd.	33
	East of Cottonwood Rd.	46
Curnow Rd.	West of South Union Ave.	44
	South Union Ave. to Cottonwood Rd.	38
Houghton Rd.	West of Stine Rd.	60
	Stine Rd. to Wible Rd.	58
	Wible Rd. to South H St.	53
	South H St. to 99 SB Ramp	58
	99 SB Ramp to 99 NB Ramp	62
	99 NB Ramp to Entrance #7	64
	Entrance #7 to Chevalier Rd. (Entrance #6)	64
	Chevalier Rd. (Entrance #6) to Entrance #5	64
	Entrance #5 to South Union Ave.	64
	South Union Ave. to Cottonwood Rd.	65
	Cottonwood Rd. to Adobe Rd.	65
	East of Adobe Rd.	64
Shafter Rd.	Chevalier Rd. to South Union Ave.	39
	East of South Union Ave.	43
Bear Mountain Blvd.	West of Costajo Rd.	60
	Costajo Rd. to 99 NB Ramp	67
	99 NB Ramp o South Union Ave.	69
	East of South Union Ave.	69
Stine Road	North of Houghton Rd.	50
	South of Houghton Rd.	48

Table 4.13-1. Existing Traffic Noise Levels

Roadway	Segment	L_{dn} (dB) @ 100 feet
Wible Road	North of Taft Hwy.	55
	Taft Hwy to Houghton Rd.	54
	South of Houghton Rd.	49
Hughes Lane	South of Hosking Ave.	54
Compangnoni St.	South of Taft Hwy.	50
South H St.	North of Panama Ln.	59
	Panama Ln. to Hosking Ave.	62
	Hosking Ave. to Taft Hwy.	57
	South of Taft Hwy.	46
	North of Houghton Rd. (2015)	48
	South of Houghton Rd. (2015)	49
Chevalier Rd.	Di Giorgio Rd. to Houghton Rd.	n/a
	Houghton Rd. to Shafter Rd. (2015)	40
South Union Ave.	North of Panama Ln.	70
	Panama Ln. to Hosking Ave.	67
	Hosking Ave. to Taft Hwy.	64
	Taft Hwy. to Curnow Rd.	60
	Curnow Rd. to Di Giorgio Rd.	59
	Di Giorgio Rd. to Lamb Ave. (Entrance #2)	59
	Lamb. Ave. (Entrance #2) to Entrance #3	59
	Entrance #3 to Mugsy Ave. (Entrance #4)	59
	Mugsy Ave. (Entrance #4) to Houghton Rd.	59
	Houghton Rd. to Shafter Rd.	58
	Shafter Rd. to Bear Mountain Blvd.	57
	South of Bear Mountain Blvd.	55
Cottonwood Rd.	North of Panama Ln.	53
	Panama Ln. to Hosking Ave.	42
	Hosking Ave. to Taft Hwy.	42
	Taft Hwy. to Curnow Rd.	47
	Curnow Rd. to Di Giorgio Rd.	47
	Di Giorgio Rd. to Houghton Rd.	36
Adobe Rd.	North of Buena Vista Blvd.	36
	South of Buena Vista Blvd. (2015)	51

Notes: SR = State Route
Where "N/A" appears in the table, the particular roadway segment does not have traffic data because the road is not yet constructed.
Source: Bollard Acoustical Consultants, Inc., 2016, Bollard Acoustical Consultants, Inc., 2017.

Stationary Sources

The proposed Project is located in a primarily agricultural area. Transient noise generation from agricultural operations and equipment occurs within the Project vicinity on a seasonal basis. There are no other sources of stationary noise in the vicinity of the proposed Project.

4.13.3 Regulatory Setting

Federal

There are a number of laws and guidelines at the Federal level that direct the consideration of a broad range of noise and vibration issues. Because the project does not require action by Federal agencies, at this time, the project is not directly subject to Federal noise regulations other than those of the Federal Occupational Safety and Health Administration (OSHA). For perspective, several of the more significant noise-related Federal regulations and guidelines are described below.

Noise Control Act of 1972 (42 USC 4910)

This act establishes a national policy to promote an environment for all Americans free from noise that jeopardizes their health and welfare. To accomplish this, the act establishes a means for the coordination of Federal research and activities in noise control, authorizes the establishment of Federal noise emissions standards for products distributed in commerce, and provides information to the public with respect to the noise-emission and noise-reduction characteristics of such products.

USEPA Recommendations in "Information on Levels of Environmental Noise Requisite to Protect Health and Welfare with an Adequate Margin of Safety" (NTIS 550\9-74-004, USEPA, Washington, D.C., March 1974)

In response to a Federal mandate, U.S. Environmental Protection Agency (EPA) provided guidance in Information on Levels of Environmental Noise Requisite to Protect Health and Welfare with an Adequate Margin of Safety (National Technical Information Service [NTIS], 550\9-74-004, EPA, Washington, D.C., March 1974). Commonly referenced as the "Levels Document," it establishes an Ldn of 55 dBA as the requisite level, with an adequate margin of safety, for areas with outdoor uses, including residential and recreational areas. This document does not constitute EPA regulations or standards but identifies safe levels of environmental noise exposure without consideration of costs for achieving these levels or other potentially relevant considerations. It is intended to "provide State and local governments, as well as the Federal government and the private sector, with an informational point of departure for the purpose of decision-making." The agency is careful to stress that the recommendations contain a factor of safety and do not consider technical or economic feasibility issues and, therefore, should not be construed as standards or regulations.

Federal Highway Administration

The purpose of the Federal Highway Administration (FHWA) Noise Abatement Procedures (23 CFR 772) is to provide procedures for noise studies and noise abatement measures to help protect the public health and welfare, supply noise abatement criteria, and establish requirements for information to be given to local officials for use in the planning and design of highways. The purpose of this regulation is to provide procedures for noise studies and noise abatement measures to help protect the public health and welfare, to supply noise abatement criteria (NAC), and to establish requirements for information to be given to local officials for use in the planning and design of highways. It establishes five categories of noise-sensitive receptors and prescribes the use of the hourly L_{eq} as the criterion metric for evaluating traffic noise impacts.

All highway projects that are developed in conformance with this regulation shall be deemed to be in conformance with the Department of Transportation-FHWA Noise Standards. Title 23 establishes an NAC of 67 dBA $L_{eq(h)}$ applicable to federal highway projects for evaluating impacts to land uses including residences, recreational uses, hotels, hospitals, and libraries (23 CFR Chapter 1, Part 772, Section 772.19). Additionally, FHWA requires that individual states establish an allowable noise level increase (at or above which the increase is deemed to be "substantial" (between 5 and 15 dB) and abatement should be considered) for Type 1 highway projects. Type I projects include projects that would: construct a highway in a new location; physically alter and existing highway where there is a substantial horizontal or vertical alteration; add through-traffic lane(s); add auxiliary lane(s); add or relocate interchange lands or ramps; restripe pavement for the purposes of adding lane(s); and add a new, or substantially altering and existing, weigh station, rest stop, ride-share lot, or toll plaza.

Occupational Safety and Health Administration

The OSHA Occupational Noise Exposure: Hearing Conservation Amendment (Federal Register 48 [46], 9738–9785, 1983) stipulates that protection against the effects of noise exposure shall be provided for employees when sound levels exceed 90 dBA over an 8-hour exposure period. Protection shall consist of feasible administrative or engineering controls. If such controls fail to reduce sound levels to acceptable levels, personal protective equipment shall be provided and used to reduce exposure of the employee. Additionally, a hearing conservation program must be instituted by the employers whenever employee noise exposure equals or exceeds the action level of an 8-hour, time-weighted average sound level of 85 dBA. The hearing conservation program requirements consider periodic area and personal noise monitoring, the performance and evaluation of audiograms, the provision of hearing protection, annual employee training, and record keeping.

State

California Environmental Quality Act (CEQA) Guidelines

The California Environmental Quality Act (CEQA) was enacted in 1970 and requires that all known environmental effects of a project be analyzed, including environmental noise impacts. Under CEQA, a project has a potentially significant impact if the project exposes people to noise levels in excess of standards established in the local general plan or noise ordinance. Additionally, under CEQA, a project has a potentially significant impact if the project creates a substantial increase in the ambient noise levels in the project vicinity above levels existing without the proposed Project. If a project has a potentially significant impact, mitigation measures must be considered. If mitigation measures to reduce the impact to less than significant are not feasible due to economic, social, environmental, legal, or other conditions, the most feasible mitigation measures must be considered.

California Government Code

The California Department of Health Services has studied the correlation of noise levels and their effects on various land uses and established guidelines for evaluating the compatibility of various land uses as a function of community noise exposure. The State requires all municipalities to prepare and adopt a comprehensive long-range general plan. General plans must contain a noise element (California Government Code Section 65302[f] and Section 46050.1 of the Health and Safety Code). The requirements for the noise element of the general plan include describing the noise environment

quantitatively using a cumulative noise metric, such as CNEL or DNL, establishing noise/land use compatibility criteria, and establishing programs for achieving and/or maintaining land use compatibility. Noise elements should address all major noise sources in the community, including mobile and stationary noise sources.

The State Office of Planning and Research (OPR) Noise Element Guidelines include recommended exterior and interior noise level standards for local jurisdictions to identify and prevent the creation of incompatible land uses due to noise. The Noise Element Guidelines contain a land use compatibility table that describes the compatibility of various land uses with a range of environmental noise levels in terms of the CNEL. Table 4.13-2, *California Land Use Compatibility Noise Guidelines*, presents guidelines for determining acceptable and unacceptable community noise exposure limits for various land use categories. The guidelines also present adjustment factors that may be used to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution.

Table 4.13-2. California Land Use Compatibility Noise Guidelines

LAND USE CATEGORY	COMMUNITY NOISE EXPOSURE (dBA CNEL)			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential – Low Density, Single-Family, Duplex, Mobile Homes	50 - 60	55 - 70	70 – 75	75 – 85
Residential – Multiple Family	50 - 65	60 - 70	70 – 75	70 – 85
Transient Lodging – Motels, Hotels	50 - 65	60 - 70	70 – 80	80 – 85
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 - 70	60 - 70	70 – 80	80 – 85
Auditoriums, Concert Halls, Amphitheaters	NA	50 - 70	NA	65 – 85
Sports Arenas, Outdoor Spectator Sports	NA	50 – 75	NA	70 – 85
Playgrounds, Neighborhood Parks	50 - 70	NA	67.5 – 75	72.5 – 85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 - 70	NA	70 – 80	80 – 85
Office Buildings, Business Commercial and Professional	50 - 70	67.5 – 77.5	75 – 85	NA
Industrial, Manufacturing, Utilities, Agriculture	50 - 75	70 - 80	75 – 85	NA

Table 4.13-2. California Land Use Compatibility Noise Guidelines

LAND USE CATEGORY	COMMUNITY NOISE EXPOSURE (dBA CNEL)			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable

Source: General Plan Guidelines, Office of Planning and Research, California, October 2003, page 250.

CNEL = community noise equivalent level; NA = not applicable.

Notes:

Normally Acceptable – Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

Conditionally Acceptable – New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

Normally Unacceptable – New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Clearly Unacceptable – New construction or development should generally not be undertaken.

California Division of OSHA

Occupational exposure to noise is regulated by the California Division of OSHA in Title 8, Group 15, Article 105, Sections 5095–5100. As mentioned above, the agency's standards stipulate that protection against the effects of noise exposure shall be provided when sound levels exceed 90 dBA over an 8-hour exposure period. Protection shall consist of feasible administrative and/or engineering controls. If such controls fail to reduce sound levels to acceptable levels, personal protective equipment shall be provided and used to reduce exposure of the employee. In addition, a hearing conservation program must be instituted by employers whenever employee noise exposure equals or exceeds the action level of an 8-hour time-weighted average sound level of 85 dBA. The hearing conservation program requirements consider periodic area and personal noise monitoring, the performance and evaluation of audiograms, the provisions of hearing protection, annual employee training, and record keeping. The California Environmental Quality Act (CEQA) (PRC Section 21000 et seq.) requires the identification of "significant" environmental impacts and their feasible mitigation.

Section XI of Appendix G to the CEQA Guidelines (CCR Title 14, Appendix G) lists some indicators of potentially significant impacts, which are included below under "Thresholds of Significance."

CEQA does not define a threshold for "significant increase" with respect to noise exposure; however, based on human response and commonly applied industry standards, the following thresholds of significance would be applied to the project, as set forth by the CEQA Guidelines:

- The project causes the ambient noise level measured at the property line of affected uses to increase by 3 dBA in CNEL, to a level at or within the "normally unacceptable" or "clearly unacceptable" noise/land use compatibility category; or
- The project causes any 5-dBA or greater noise increase.

California Noise Control Act of 1973

Sections 46000 through 46080 of the California Health and Safety Code, known as the California Noise Control Act of 1973, declares that excessive noise is a serious hazard to the public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also identifies a continuous and increasing bombardment of noise in the urban, suburban, and rural areas. The California Noise Control Act declares that the State of California has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the state to provide an environment for all Californians free from noise that jeopardizes their health or welfare.

California Noise Insulation Standards

In 1974, the California Commission on Housing and Community Development adopted noise insulation standards for hotels, motels, dormitories, and multifamily residential buildings (Title 24, Part 2, California Code of Regulations [CCR]). Title 24 establishes standards for interior room noise (attributable to outside noise sources). The regulations also specify that acoustical studies must be prepared whenever a multifamily residential building or structure is proposed to be located near an existing or adopted freeway route, expressway, parkway, major street, thoroughfare, rail line, rapid transit line, or industrial noise source, and where such noise source(s) create an exterior CNEL (or L_{dn}) of 60 dBA or greater. Such acoustical analysis must demonstrate that the residence has been designed to limit intruding noise to an interior CNEL (or L_{dn}) of at least 45 dBA (California's Title 24 Noise Standards, Chap. 2-35).

California Department of Transportation

The California Department of Transportations (Caltrans) has oversees the traffic noise analysis protocol for new highway construction and reconstruction projects. This protocol specifies the policies, procedures, and practices that are to be used by agencies that sponsor federal or federal-aid highway projects involving new construction or reconstruction. The NAC specified in the protocol are the same as those specified in 23 CFR 772. The protocol defines a noise increase as substantial when the predicted noise levels with project implementation exceed existing noise levels by 12 dBA. The protocol also states that a sound level is considered to approach an NAC level when the sound level is within 1 dB of the NAC identified in 23 CFR 772 (e.g., 66 dBA is considered to approach the NAC of 67 dBA, but 65 dBA is not).

Local

Most jurisdictions have unique standards and guidelines regarding noise and nuisance. These are set out in county and municipal codes and general plans. Each noise ordinance or noise element within a municipal/county code will address noise levels that create a nuisance in surrounding communities. Noise ordinances and noise elements occasionally classify different areas within these communities according to zoning standards. Such zones can include residential areas, which are analyzed further according to the density of the population; industrial areas; commercial areas; agricultural areas; and rural areas. The possible adverse effects of construction noise are included within the noise standards. The ambient noise level, type of noise source, distance to the noise source, time of day, duration of the noise, and zoning of the areas are variables that are considered when assessing the adverse effects

of noise on noise-sensitive receptors. Virtually all municipal/county codes categorize noise by dBA. Many standards will use a continuous L_{eq}, CNEL, or L_{dn} to express the sound levels over a given timeframe. The applicable standards for noise levels that apply to this proposed Project are those within the Kern County General Plan and the Metropolitan Bakersfield General Plan.

Metropolitan Bakersfield General Plan

The Metropolitan Bakersfield General Plan has established land use compatibility criteria for various community land uses. For noise generated by transportation noise sources such as traffic, the Noise Element of the Metropolitan Bakersfield General Plan specifies that residential land uses are compatible with exterior noise levels of up to 60 dB L_{dn} without the need for noise mitigation. The 60 dB L_{dn} noise level is considered an acceptable noise environment for residential outdoor activities. The Metropolitan Bakersfield General Plan may allow an exterior noise level of up to 65 dB L_{dn} provided that available exterior noise level reduction measures have been implemented and interior noise levels satisfy the Metropolitan Bakersfield General Plan's standard.

An interior noise level criterion of 45 dB L_{dn} is specified in the Noise Element for residential land uses exposed to transportation noise sources. The intent of this interior noise standard is to provide a suitable environment for indoor communication and sleep. In addition to the L_{dn} criteria discussed above, the Metropolitan Bakersfield General Plan establishes noise level performance criteria applied to non-transportation noise exposure at noise sensitive uses. Table 4.13-3, *Hourly Noise Level Performance Standards Metropolitan Bakersfield General Plan*, summarizes the hourly standards. The standards are applied to any hour the noise source is operating, and are five dBA more restrictive during the hours of 10:00 PM to 7:00 AM.

Table 4.13-3. Hourly Noise Level Performance Standards Metropolitan Bakersfield General Plan

Maximum Acceptable Noise Level, dBA		
Min./Hr. (Ln)	Day (7:00 AM – 10:00 PM)	Night (10:00 PM – 7:00 AM)
30 (L_{50})	55	50
15 (L_{25})	60	55
5 ($L_{8.3}$)	65	60
1 ($L_{1.7}$)	70	65
0 (L_{max})	75	70

Note: Ln means the percentage of time the noise level is exceeded during an hour. L50 means the level exceeded 50% of the hour, L25 is the level exceeded 25% of the hour, etc.

Source: City of Bakersfield, Metropolitan Bakersfield General Plan, December 11, 2002.

Significance Criteria for Project-Related Noise Level Increases

The potential increase in traffic noise exposure due to the project is a factor in determining significance. Research into the human perception of changes in sound level indicates the following.

- A 3 dB change is barely perceptible,
- A 5 dB change is clearly perceptible, and
- A 10 dB change is perceived as being twice or half as loud.

A limitation of using a single noise level increase value to evaluate noise impacts is that it fails to account for pre-project noise conditions. Table 4.13-4, *Significance of Changes in Cumulative Noise Exposure*, is based on recommendations made in August 1992 by the Federal Interagency Committee on Noise (FICON) to provide guidance in the assessment of changes in ambient noise levels resulting from aircraft operations. The recommendations are based on studies that relate aircraft noise levels to the percentage of persons highly annoyed by the noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, it has been asserted that they are applicable to all sources of noise described in terms of cumulative noise exposure metrics such as the L_{dn}. Specifically, they provide good correlation to transportation-related noise sources.

Table 4.13-4. Significance of Changes in Cumulative Noise Exposure

Significance of Changes in Cumulative Noise Exposure	
Noise Level Without Project (L_{dn})	Increase Required for Significant Impact
<60	+5.0 dB or more
60-65 dB	+3.0 dB or more
>65	+1.5 dB or more

Sources: FICON, City of Bakersfield, Metropolitan Bakersfield General Plan, December 11, 2007.

An increase in the traffic noise levels becomes more significant as the ambient noise levels increase. For instance, a significant increase in traffic noise levels is expected to be 1.5 dB when the no-project traffic noise levels exceed 65 dB L_{dn}. However, a significant increase in traffic noise levels is expected to be 5 dB when the no-project traffic noise levels are less than 60 dB L_{dn}. In other words, as ambient noise levels increase, a smaller increase in noise resulting from the project is sufficient to cause significant annoyance.

Generally, a project may have a significant impact on the environment if it will substantially increase the ambient noise levels at adjoining areas or expose people to severe noise exposure. In practice, more specific professional standards have been developed, as discussed above. These standards state that a noise impact may be considered significant if it would generate noise that would conflict with local planning criteria. Additionally, noise impacts associated with the proposed project would be considered significant if they would expose existing noise-sensitive land uses to traffic noise level increases consistent with Table 4.13-4, above.

The Metropolitan Bakersfield General Plan also provides goals, policies and implementation measures in order to reduce noise impacts. Applicable goals relative to the Project site within these elements are listed below in Table 4.13-5, *Metropolitan Bakersfield General Plans Goals and*

Policies for Noise, followed by a brief explanation of how the proposed Project complies with the goals and policies.

Table 4.13-5. Metropolitan Bakersfield General Plan Goals and Policies for Noise
Goals and Policies: Noise Element
Goal #1: "Ensure that residents of the Bakersfield Metropolitan Area are protected from excessive noise and existing moderate levels of noise are maintained."
Goal #2: "Protect the citizens of the Planning area from the harmful effects of exposure to excessive noise, and protect the economic base of the area by preventing the encroachment of incompatible land uses near known noise-producing roadways, industries, railroads, airports and other sources."
Policy #1: "Identify noise-impact areas exposed to existing or projected noise levels exceeding 65 dB CNEL (exterior) or the performance standards described in Table VII-4. The noise exposure contour maps on file at the City of Bakersfield and County of Kern indicate areas where existing and projected noise exposures exceed 65 dB CNEL (exterior) for the major noise sources identified."
Policy #2: "Prohibit new noise-sensitive land uses in noise-impacted areas unless effective mitigation measures are incorporated into project design to acceptable levels. "
Policy #3: Review discretionary industrial, commercial or other noise generating land use projects for compatibility with nearby noise-sensitive land uses. Additionally, the development of new noise generating land uses which are not preempted from local noise regulation will be reviewed if resulting noise levels will exceed the performance standards contained within Table VII-4 in areas containing residential or other noise-sensitive land uses.
Policy #4: Require noise level criteria applied to land uses other than residential or other noise-sensitive uses to be consistent with the recommendations of the California Office of Noise Control (see Figure VII-1(I-4))
Policy #5: "Encourage vegetation and landscaping along roadways and adjacent to other noise sources in order to increase absorption of noise."
Policy #6: "Encourage interjurisdictional coordination and cooperation with regard to noise impact issues. "
Policy #7: "Establish threshold standards for the determination of the existence of cumulative noise impacts that are significant, and will therefore require mitigation to achieve acceptable noise standards that do not exceed the standards contained in this element."

Vibration Standards

The County does not have regulations that define acceptable levels of vibration. One of the most recent reference suggesting vibration standards is the Federal Transit Administration's (FTA) publication concerning noise and vibration impacts assessment from transit activities (U.S. Department of Transportation, Federal Transit Administration, Transit Noise and Vibration Impact Assessment, April 1995). The term VdB is used by the FTA. To prevent vibration annoyance in residences, a level of 80 VdB or less is suggested to prevent damage to fragile buildings.

Kern County Ordinance

Title 19 Kern County Zoning Ordinance

Section 19.04.252 of the Kern County Zoning Ordinance defines *exterior noise level* as "the noise level near the exterior of a structure usually within fifty (50) feet of the structure."

Section 19.80.030.S (1) restricts noise generated by commercial or industrial uses within 500 feet of a residential use or residential zone district. The commercial or industrial use shall not generate noise that exceeds an average 65 dB L_{dn} between the hours of 7 AM and 10 PM. and shall not generate noise that exceeds 65 dB, or which would result in an increase of 5 dB or more from ambient sound levels, whichever is greater, between the hours of 10 PM and 7 AM. Commercial or industrial facilities that are located in the M-3 zone district are exempt from these noise-generation restrictions.

Title 8 Kern County Health and Safety Ordinance

Chapter 8.36 Noise Control

The Noise Control Ordinance in the Kern County Municipal Ordinance (Section 8.36.020 et seq.) prohibits a variety of nuisance noises. Construction-related noise is regulated by means of a limitation on the hours of construction activity for projects located within 1,000 feet of an occupied residential dwelling. In such cases, construction is prohibited between the hours of 9 PM and 6 AM on weekdays and 9 PM and 8 AM on weekends, except as provided below:

- The development services agency director or his designated representative may for good cause exempt some construction work for a limited time.
- Emergency work is exempt from this section.

4.13.4 Impacts and Mitigation Measures

Methodology

CEQA requires determination of the significance of noise impacts associated with the proposed Project. The process of assessing the significance of noise impacts associated with the proposed Project first involved establishing thresholds at which significant impacts on noise-sensitive uses were considered to occur. Next, noise levels associated with activities related to the proposed Project were predicted and compared to the significance thresholds. Where a noise level is predicted to exceed a threshold, the impact is considered significant. Details about assumptions and methods used to predict noise levels are discussed under each impact type.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the CEQA Guidelines, to determine if a project could potentially have a significant impact. Such an impact would occur if the proposed project would:

- Exposes persons to, or generates, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;

- Exposes persons to, or generates, excessive ground borne vibration or ground borne noise levels;
- Results in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project;
- Results in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project;
- Exposes persons residing or working in the Project area to excessive noise levels as identified in the Kern County Airport Land Use Compatibility Plan; and/or
- Exposes people residing or working in the Project area to excessive noise levels due to a private airstrip within the vicinity of the project.

Project Impacts

Impact 4.13-1: The Project Would Result in Exposure of Persons to, or Generation of, Noise Levels in Excess of Standards Established in the Local General Plan or Noise Ordinance or Applicable Standards of Other Agencies.

There are a variety of noise sources associated with the future development of the proposed Project site which have the potential to create noise levels in excess of the 65 dB County noise standards. These noise sources could result in annoyance at existing noise-sensitive receivers surrounding the proposed Project area such as the residential uses to the east. Proposed Project implementation would result in both short-term construction-related and long-term operational-related impacts.

The identified, primary noise-producing elements associated with the proposed Project are increased traffic on the local roadway network, Project-related traffic on new roadways, and industrial operations associated with the proposed Project.

At this time, specific industrial uses on the proposed Project site are not available. As a result, it is not feasible to identify specific noise impacts associated with each of the proposed uses; however, a general discussion and assessment of impacts can be conducted based upon the possible types of uses associated with these land use designations. The following is a discussion of the potentially significant noise sources associated with the possible industrial uses proposed at the Project site.

Industrial Land Uses

The conceptual layout of the proposed Project site includes lots zoned for light and service industrial uses, and highway and general commercial uses. Various uses could be permitted under these uses. The purpose of the proposed M-1 PD (Light Industrial Precise Development Combining) District is to designate areas for wholesale commercial, storage, trucking, assembly-type manufacturing, and other similar industrial uses. The purpose of the proposed M-2 PD (Medium Industrial Precise Development Combining) District is to designate areas for general manufacturing, processing and assembly activities. The purpose of the proposed CH PD (Highway Commercial Precise Development Combining) and C-2 PD (General Commercial Precise Development Combining) is to designate areas for retail uses. Uses may not produce fumes, odor, dust, smoke, gas, or vibrations extending beyond zoning district boundaries.

The production of noise is a result of many industrial processes, even when the best available noise control technology is applied. Noise exposures within industrial facilities are controlled by the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) and the California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA), but exterior noise levels may exceed locally acceptable standards. Commercial, recreational, and public service facility activities can also produce noise which affects adjacent sensitive land uses.

These noise sources can be continuous and may contain tonal components which have a potential to annoy individuals who live nearby. In addition, noise generation from fixed noise sources may vary based upon climatic conditions. Noise production due to future project industrial uses may significantly impact nearby existing residential uses on Lamb Avenue west of South Union Avenue (SR-204). The Project-related industrial uses are unknown at this time and would be considered a potentially significant impact.

Increased Traffic Along Roadways and Site Entrance

Future development within the area would result in additional traffic on adjacent roadways, thereby increasing vehicular noise in the vicinity of existing and proposed land uses. To assess noise impacts due to project-related traffic increases on the local roadway network, traffic noise levels were predicted at a representative distance (100 feet from the roadway centerlines) for the 2025, 2025+Project, 2035, and 2035+Project scenarios. Results of the Project-related traffic noise analyses are summarized in Table 4.13-6 *Predicated Traffic Noise Exposure Levels 100 Feet from Roadway Centerlines*.

Table 4.13-6 Predicated Traffic Noise Exposure Levels 100 Feet from Roadway Centerlines

Roadway	Segment	Ldn, dB (Change, dB)	
		2025+ Project	2035+Project
Panama Lane	West of 99 SB Ramp	72 (+2)*	72 (+2) *
	99 SB Ramp to 99 NB Ramp	69 (+2) *	70 (+3) *
	99 NB Ramp to South H St.	70 (+1)	71 (+2) *
	South H St. to South Union Ave.	68 (+3) *	69 (+4) *
	South Union Ave. to Cottonwood Rd.	67 (+3) *	68 (+4) *
	East of Cottonwood Rd.	66 (+2)	66 (+2)
Hosking Ave.	West of Hughes Ln.	60 (+5) *	63 (+8) *
	Hughes Ln. to 99 SB Ramp	61 (+7) *	65 (+11) *
	99 SB Ramp to 99 NB Ramp	61 (+7) *	64 (+10) *
	99 NB Ramp to South H St.	61 (+7) *	65 (+11) *
	South H St. to South Union Ave.	59 (+3)	61 (+5) *
	South Union Ave. to Cottonwood Rd.	49 (+19) *	57 (+27) *

Table 4.13-6 Predicated Traffic Noise Exposure Levels 100 Feet from Roadway Centerlines

Roadway	Segment	Ldn, dB (Change, dB)	
		2025+ Project	2035+Project
Taft Hwy.	West of Wible Rd.	67 (+4) *	69 (+6) *
	Wible Rd. to Compangnoni St.	67 (+5) *	69 (+7) *
	Compagnoni St. to 99 NB Ramp	68 (+3) *	70 (+5) *
	99 NB Ramp to South H St. (2015)	70 (+1)	70 (+1)
	South H St. to South Union Ave.	71 (+2) *	72 (+3) *
	South Union Ave. to Cottonwood Rd.	70 (+2) *	70 (+2) *
	East of Cottonwood Rd.	70 (+2) *	70 (+2) *
Di Giorgio Rd.	West of Chevalier Rd. (Entrance #1)	n/a	46 (n/a)
	Chevalier Rd. (Entrance #1) to South Union Ave.	n/a	58 (n/a)
	South Union Ave. to Cottonwood Rd.	50 (+17) *	53 (+20) *
	East of Cottonwood Rd.	52 (+6) *	49 (+3)
Curnow Rd.	West of South Union Ave.	52 (+8) *	55 (+11) *
	South Union Ave. to Cottonwood Rd.	47 (+9) *	47 (+9)
Houghton Rd.	West of Stine Rd.	59 (-1)	59 (-1)
Buena Vista Blvd.	Stine Rd. to Wible Rd.	58 (0)	58 (0)
	Wible Rd. to South H St.	58 (+5) *	58 (+5) *
	South H St. to 99 SB Ramp	62 (+4)	62 (+4)
	99 SB Ramp to 99 NB Ramp	70 (+8) *	70 (+8) *
	99 NB Ramp to Entrance #7	73 (+9) *	74 (+10) *
	Entrance #7 to Chevalier Rd. (Entrance #6)	73 (+9) *	73 (+9) *
	Chevalier Rd. (Entrance #6) to Entrance #5	71 (+7) *	71 (+7) *
	Entrance #5 to South Union Ave.	70 (+6) *	70 (+6) *
	South Union Ave. to Cottonwood Rd.	67 (+2) *	67 (+2) *
	Cottonwood Rd. to Adobe Rd.	66 (+1)	67 (+2) *
	East of Adobe Rd.	66 (+2)	66 (+2)
Shafter Rd.	Chevalier Rd. to South Union Ave.	46 (+7) *	47 (+8) *
	East of South Union Ave.	47 (+4)	47 (+4)
Bear Mountain Blvd.	West of Costajo Rd.	62 (+2)	63 (+3) *
	Costajo Rd. to 99 NB Ramp	68 (+1)	68 (+1)
	99 NB Ramp o South Union Ave.	70 (+1)	71 (+2) *
	East of South Union Ave.	71 (+2) *	71 (+2) *
Stine Road	North of Houghton Rd.	49 (-1)	48 (-2)
	South of Houghton Rd.	49 (+1)	49 (+1)
Wible Road	North of Taft Hwy.	57 (+2)	58 (+3)
	Taft Hwy to Houghton Rd.	54 (0)	53 (-1)
	South of Houghton Rd.	52 (+3)	53 (+4)
Hughes Lane	South of Hosking Ave.	57 (+3)	59 (+5) *
Compangnoni St.	South of Taft Hwy.	51 (+1)	52 (+2)
South H St.	North of Panama Ln.	62 (+3)	64 (+5) *

Table 4.13-6 Predicated Traffic Noise Exposure Levels 100 Feet from Roadway Centerlines

Roadway	Segment	Ldn, dB (Change, dB)	
		2025+ Project	2035+Project
	Panama Ln. to Hosking Ave.	64 (+2)	65 (+3) *
	Hosking Ave. to Taft Hwy.	61 (+4) *	63 (+6) *
	South of Taft Hwy.	53 (+7) *	56 (+10) *
	North of Houghton Rd. (2015)	50 (+2)	50 (+2)
	South of Houghton Rd. (2015)	51 (+2)	51 (+2)
Chevalier Rd.	Di Giorgio Rd. to Houghton Rd.	n/a	62 (n/a)
	Houghton Rd. to Shafter Rd. (2015)	49 (+9) *	49 (+9) *
South Union Ave.	North of Panama Ln.	72 (+2) *	73 (+3) *
	Panama Ln. to Hosking Ave.	70 (+3) *	72 (+5) *
	Hosking Ave. to Taft Hwy.	68 (+4) *	70 (+6) *
	Taft Hwy. to Curnow Rd.	67 (+7) *	69 (+9) *
	Curnow Rd. to Di Giorgio Rd.	68 (+9) *	69 (+10) *
	Di Giorgio Rd. to Lamb Ave. (Entrance #2)	67 (+8) *	68 (+9) *
	Lamb. Ave. (Entrance #2) to Entrance #3	68 (+9) *	69 (+10) *
	Entrance #3 to Mugsy Ave. (Entrance #4)	68 (+9) *	69 (+10) *
	Mugsy Ave. (Entrance #4) to Houghton Rd.	69 (+10) *	70 (+11) *
	Houghton Rd. to Shafter Rd.	64 (+6) *	66 (+8) *
	Shafter Rd. to Bear Mountain Blvd.	63 (+6) *	65 (+8) *
	South of Bear Mountain Blvd.	61 (+6) *	63 (+8) *
Cottonwood Rd.	North of Panama Ln.	59 (+6) *	61 (+8) *
	Panama Ln. to Hosking Ave.	53 (+11) *	57 (+15) *
	Hosking Ave. to Taft Hwy.	52 (+10) *	55 (+13) *
	Taft Hwy. to Curnow Rd.	52 (+5) *	52 (+5) *
	Curnow Rd. to Di Giorgio Rd.	51 (+4)	51 (+4)
	Di Giorgio Rd. to Houghton Rd.	47 (+11) *	49 (+13) *
Adobe Rd.	North of Buena Vista Blvd.	46 (+10) *	46 (+10) *
	South of Buena Vista Blvd. (2015)	52 (+1)	52 (+1)

Sources: McIntosh & Associates 2016, Bollard Acoustical Consultants, Inc. 2017.

* Represent significant noise level impacts. Cumulative noise impact was assessed based on application of the Table 5 criteria to the future plus project increase relative to the existing condition. Project-related traffic noise impact was assessed based on the project's contribution to the cumulative impact or application of the Table 5 criteria to the project-related increase relative to the no project condition. Please see a more detailed presentation of the significance methodology presented in the Regulatory Setting section. Where a cumulative noise impact or project-related noise impact was identified, the roadway segment in question was inspected in order to identify any existing noise-sensitive land uses.

Based on the information presented in Table 4.13-6, significant Project-related traffic noise exposure would be expected along parts of Panama Lane, Hosking Avenue, Taft Highway, Di Giorgio Road, Curnow Road, Houghton Road/Buena Vista Boulevard, Shafter Road, Bear Mountain Boulevard, Hughes Lane, South H Street, Chevalier Road, South Union Avenue (SR-204), Cottonwood Road, and Adobe Road in the proposed Project vicinity.

Chevalier Road between Houghton Road and Di Giorgio Road, Di Giorgio Road west of South Union Avenue, and Lamb Avenue west of South Union Avenue (SR-204) would be constructed as part of the proposed Project. With the exception of a single existing residence along Lamb Avenue, west of South Union Avenue, there are no current noise-sensitive uses in the immediate project vicinity or near the future Chevalier Road, Di Giorgio Road, and Mugsy Avenue on the proposed Project site. Future (2025 and 2035) traffic noise exposure at the home on Lamb Avenue west of South Union Avenue (SR-204) would be approximately 68 and 69 dB L_{dn}, respectively. This level is above the existing measured ambient noise level of 61 dB L_{dn} and would be expected to add significantly to the overall noise environment at this location based on the established significance criteria. There are no current noise-sensitive uses near the future Chevalier Road and Di Giorgio Road on the proposed Project site.

On portions of Di Giorgio Road, Chevalier Road, Cottonwood Road, Shafter Road, Kaiser Lane, and Adobe Road, Project-related traffic noise exposure increases from their respective roadways would generally be considered significant if not for the existing ambient noise exposure dominated by SR-99. In these cases, existing ambient noise exposure in the proposed Project area are assumed to be no less than 53 dB L_{dn} (conservatively 10 dB less than the measured ambient noise exposure near the east side of the proposed Project site), and future (2025 and 2035) project-related traffic noise exposures would not be expected to add significantly to the noise environments.

As shown in Table 4.13-6, future (2025 and 2035) Project-related traffic noise exposure increases would be expected to exceed the applicable significance criterion (+1.5 dB) along sections of Panama Lane, Hosking Avenue, Taft Highway, Houghton Road/Buena Vista Boulevard, Bear Mountain Boulevard, and South Union Avenue (SR-204) in the proposed Project vicinity. There are no noise sensitive land uses adjacent to Houghton Road between SR-99 and Project Entrance #3, and South Union Avenue between Lamb Avenue and Mugsy Avenue. Therefore, there are no Project-related noise impacts along these roadway segments.

As shown in Table 4.13-6, traffic noise impacts would be expected along roadway segments where both significant traffic noise increases were identified and where existing noise-sensitive land uses along those roadway segments were identified. Depending on the proximity of a particular roadway segment to SR-99, a noise impact may not necessarily materialize. The roadway segments closer to SR-99 would have a higher background ambient noise level environment which may mask the significant increases in traffic noise levels identified along some individual roadways. The farther away a roadway segment is from SR-99, the more likely it would be that the background ambient noise level would be low enough that such masking would not be significant, and the noise impact would occur.

Significant project-related traffic noise level increases are assumed along South Union Avenue (SR-204) between Panama Lane and Lamb Avenue where residential uses currently exist. In addition, the proposed Project would generate increased traffic on local area roadways that exceed thresholds. Project-related traffic noise levels impacts would also be expected along roadway segments where both significant increases were identified and where existing noise-sensitive land uses along those roadway segments were identified. These impacts would be significant.

Mitigation Measures

MM 4.13-1: **Acoustical Analysis.** Prior to the submittal of any Precise Development Plan or modification to an approved Master Precise Development Plan:

1. The project proponent shall be required to prepare an acoustical analysis to ensure that all appropriate noise control measures are incorporated in to the proposed project design so as to mitigate any noise impacts to off-site sensitive uses. Such noise control measures may include, but are not limited to: noise barrier use, site redesign, silencers, partial or complete enclosures of critical equipment, etc.

2. Noise impacts shall be evaluated by the Planning and Natural Resources Department during the Precise Development Plan review process.

MM 4.13-2: **Noise Levels.** The following measures are recommended to reduce short-term noise levels associated with project construction:

1. Construction activities at the project site shall comply with the hourly restrictions for noise-generating construction activities, as specified in the Kern County Noise Ordinance (Municipal Ordinance Code 8.36.020). Accordingly, construction activities shall be prohibited between the hours of 9:00 PM to 6:00 AM on weekdays, and between 9:00 PM to 8:00 AM on weekends. These hourly limitations shall not apply to activities where hourly limitations would result in increased safety risk to workers or the public.

2. Equipment staging and laydown areas shall be located at the furthest practical distance from nearby residential land uses. To the extent possible, staging and laydown areas should be located at least 500 feet of existing residential dwellings.

3. Where feasible construction equipment shall be fitted with approved noise-reduction features such as mufflers, baffles, and engine shrouds that are no less effective than those originally installed by the manufacturer.

4. Haul trucks shall not be allowed to idle for periods greater than five minutes, except as needed to perform a specified function (e.g., concrete mixing).

5. On-site vehicle speeds shall be limited to 15 miles per hour, or less (except in cases of emergency).

6. Back-up beepers for all construction equipment and vehicles shall be broadband sound alarms or adjusted to the lowest noise levels possible, provided that the Occupational Safety and Health Administration and California Division of Occupational Safety and Health's safety requirements are not violated. On vehicles where back-up beepers are not available, alternative safety measures such as escorts and spotters shall be employed.

MM 4.13-3: **Noise Disturbance Coordinator.** Prior to the issuance of grading permits, a "Noise Disturbance Coordinator" shall be established. The project operator shall submit evidence of methods of implementation and shall continuously comply with the following during construction:

1. The disturbance coordinator shall be responsible for responding to any local complaints about construction noise.

2. The disturbance coordinator shall determine the cause of the noise complaint (e.g., starting to early, bad muffler, etc.) and shall be required to implement reasonable measures such that the complaint is resolved.

Level of Significance after Mitigation

Impacts would be significant and unavoidable.

Impact 4.13-2: The Project Would Expose Persons to or Generation of Excessive Ground Borne Vibration or Ground Borne Noise Levels.

The types of construction vibration impacts include human annoyance and building structural damage. Human annoyance occurs when construction vibration rises significantly above the threshold of perception. Building damage can take the form of cosmetic or structural.

Construction activities such as blasting, pile driving, pavement breaking, demolition, diesel locomotives, and rail-car coupling can produce vibration that may be felt by adjacent uses. It is not anticipated that construction or operation of the proposed Project would require the use of equipment that is known to generate substantial construction vibration levels, however, given the uncertainty as to the specific use, impacts are considered potentially significant.

Mitigation Measures

Implement Mitigation Measure MM 4.13-2, above.

Level of Significance after Mitigation

Impacts would be significant and unavoidable.

Impact 4.13-3: The Project Would Create a Substantial Permanent Increase in Ambient Noise Levels in the Project Vicinity Above Levels Existing Without the Project.

At this time, specific industrial uses on the Project site are not available. As a result, it is not feasible to identify specific noise impacts associated with each of the proposed uses; however, as identified in Impact 4.13-1, general discussion and assessment of impacts can be conducted based upon the possible types of uses associated with these land use designations.

Although a specific industrial use is not proposed at this time, previous discussion has indicated that the Project site will be subject to the existing Metropolitan Bakersfield General Plan thresholds of significance for noise evaluation and attenuation. The proposed Project is located in an area of similar

type industrial uses as those proposed. With implementation, impacts are not expected to expose people to a substantial permanent increase in the ambient noise level in the project vicinity.

Mitigation Measures

Implement Mitigation Measures MM 4.13-2, above.

MM 4.13-4: **Noise Reduction Methods.** The following notes shall be placed on all grading and building permits issued for the project site:

1. Construction noise reduction methods such as shutting off idling equipment, installing temporary acoustic barriers around stationary construction noise sources, maximizing the distance between construction equipment staging areas and occupied residential areas, and use of electric air compressors and similar power tools, rather than diesel equipment, shall be used where feasible.

2. During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers.

3. All equipment shall be fitted with factory equipped mufflers, and be in good working condition. Construction contracts shall specify that all construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and other state required noise attenuation devices.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.13-4: The Project Would Create a Substantial Temporary or Periodic Increase in Ambient Noise Levels in the Project Vicinity Above Levels Existing Without the Project.

Short-term noise impacts would be associated with the excavation and grading activities during the construction phase. Construction activities would result in short-term noise levels higher than existing ambient noise levels within the proposed Project area. Noise would also be generated during the construction phase(s) of the proposed Project by increased truck traffic on local area roadways. A significant Project-generated noise source would be truck traffic associated with the transport of heavy materials and equipment to and from the construction site.

During the construction phase(s) of the proposed Project, noise from building equipment would be expected to add to the noise environment in the immediate vicinity of the proposed Project. Activities involved in construction would likely generate maximum noise levels, of 77 to 85 dB at a distance of 50 feet. Construction activities would be temporary in nature and are anticipated to occur during normal daytime working hours (7 AM to 6 PM). Although, the noise generated by equipment and experienced at surrounding uses during construction would vary hourly, daily and weekly, due to the number and types of equipment used, existing residences near the proposed Project site would likely be affected by this noise.

Groundborne noise and other types of construction-related noise impacts would typically occur during the initial site preparation, which can create the highest levels of noise; but is also generally the shortest of all construction phases. High groundborne noise levels and other miscellaneous noise levels can be created by the operation of heavy-duty trucks, backhoes, bulldozers, excavators, front-end loaders, compactors, scrapers and other heavy-duty construction equipment. Operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts).

Typically, the site preparation phase, which includes excavation and grading of the site and infrastructure construction, tends to generate the highest noise levels, because the noisiest construction equipment is earthmoving equipment. Earthmoving includes excavation machinery such as back fillers, bulldozers, excavators/front-end loaders and earthmoving equipment (i.e., compactors, scrapers and graders).

Table 4.13-7, *Typical Construction Noise Levels*, indicates the characteristics of specific types of construction equipment. As indicated in Table 4.13-7, noise levels generated by heavy construction equipment could range from 77 dB to 85 dB at 50 feet. The noise generated by equipment and experienced at surrounding uses during construction would vary hourly, daily, and weekly, due to the number and types of equipment used; however, construction activities would be temporary and would likely occur during daytime working hours.

Table 4.13-7. Typical Construction Noise Levels

Type of Equipment	Maximum Equipment Noise Level dBA, CNEL at 50 feet
Backhoe	78
Concrete Mixer Truck	79
Dump Truck	77
Front End Loader	79
Pneumatic Tools	85
Air Compressor	78

Source: Bollard Acoustical Consultants, Inc. 2017.

During construction and grading activities, all equipment would tend to be operated in a localized area. Thus, at any given moment, there would be a combined sound level from multiple pieces of equipment. However, the tendency is for the use to be sequential. For example, the haul trucks dump the dirt, followed by the loaders, bulldozers and graders, which push it around. These activities are then followed by the compactors and water trucks that pass over the area periodically. The period of time for each operation would vary with graders and compactors in an area for the longest period of time.

During the construction of the proposed Project, construction activities have the potential to impacts noise sensitive land uses in the immediate vicinity. Construction noise is usually not considered to be

significant if construction noise limits to the daytime hours (7:00 AM to 10:00 PM), if extraordinary noise-producing activities (e.g., pile driving) are not anticipated, and if construction equipment is adequately maintained and muffled and would not result in an exceedance of noise standards identified in the Metropolitan Bakersfield General Plan. Implementation of mitigation measures would ensure compliance with the Metropolitan Bakersfield General Plan and County's noise standards. As a result, the proposed Project would result in less than significant construction-related noise impacts.

Mitigation Measures

Implementation of Mitigation Measure MM 4.13-2, above.

MM 4.13-5: **Written Notice to the Public.** Prior to commencement of any on-site construction activities (i.e., fence construction, mobilization of construction equipment, initial grading, etc.) the project proponent shall provide written notice to the public through mailing a notice.

1. The mailing notice shall be to all residences within 1,000 feet of the project site, 15 days or less prior to construction activities. The notices shall include: The construction schedule, telephone number and email address where complaints and questions can be registered with the noise disturbance coordinator.

2. A minimum of one sign, legible at a distance of 50 feet, shall be posted at the construction site or adjacent to the nearest public access to the main construction entrance throughout construction activities that shall provide the construction schedule (updated as needed) and a telephone number where noise complaints can be registered with the noise disturbance coordinator.

3. Documentation the public notice has been sent and the sign has been posted shall be provided to the Kern County Planning and Natural Resources Department.

Level of Significance after Mitigation

Impacts would be significant and unavoidable.

Impact 4.13-5: The Project is Not Located Within an Airport Land Use Plan or, Where Such a Plan Has Not Been Adopted, Within Two Miles of a Public Airport or Public Use Airport, Would the Project Expose People Residing or Working in the Project Area to Excessive Noise Levels.

The proposed Project is not located within any area subject to the land use restrictions of the adopted Kern County Airport Land Use Compatibility Plan. The closest public airport is Bakersfield Municipal Airport, located approximately five (5) miles northeast of the proposed Project site. However, no sensitive receptors would be constructed as part of the proposed Project, and the

Bakersfield Municipal Airport would not expose the Project to excessive noise levels. Airport noise would be considered less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.13-6: The Project is Within the Vicinity of a Private Airstrip, Would the Project Expose People Residing or Working in the Project Area to Excessive Noise Levels.

Refer to Impact 4.13-5, above. As previously mentioned, the proposed Project is not located in within any area subject to the land use restrictions of the adopted Kern County Airport Land Use Compatibility Plan. Costerisan Farms Airport, a private airstrip, is located approximately two (2) miles northwest of proposed Project site; however, this airport does not generate significant daily flights. Activities at the airport would not significantly impact the proposed Project. Impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Cumulative Impacts

Noise by definition is a localized phenomenon, and drastically reduces as distance from the source increases. Consequently, only projects and growth due to occur in the general vicinity of the proposed Project site would contribute to cumulative noise impacts. Cumulative noise impact was assessed based on application of the Table 4.13-3 criteria to the future plus project increase relative to the existing condition. Project-related traffic noise impact was assessed based on the project's contribution to the cumulative impact or application of the Table 4.13-3 criteria to the project-related increase relative to the no project condition.

Cumulative Construction Noise

With regard to the exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies (Impact 4.13-1) and with regard to the project resulting in a substantial temporary or periodic increase (e.g. during construction) in ambient noise levels in the project vicinity above levels existing without the project (4.13-4), construction noise impacts are localized in nature because they are limited to the construction site where construction equipment is operating. As discussed under Impact 4.13-1, noise levels from typical construction equipment range from 78 dBA to 85 dBA L_{eq} at 50 feet from the

source. Although other projects may be constructed in the vicinity at the same time as the proposed Project, construction noise would temporary and all projects would be required to conform to all applicable noise reduction standards. However, the proposed Project could combine with past, present, and reasonably foreseeable future projects. Impacts are potentially significant and mitigation measures are required.

Groundborne Vibration

With regard to exposing persons to, or generation of, excessive ground borne vibration or ground borne noise levels (Impact 4.13-2), the proposed Project would not result in substantial levels of ground-borne vibration at sensitive receptors. As described above, major construction activity within 200 feet of a noise-sensitive land use may be potentially disruptive to sensitive operations. In order to result in a cumulative vibration impact, major construction activities would have to be located within 200 feet of another project. Due to the localized nature of vibration impacts and the fact that all construction would not occur at the same time or at the same location, cumulative development in the surrounding Kern County would not result in the exposure of people to or the generation of excessive groundborne vibration and/or noise levels. Therefore, when considered cumulatively with the construction of the other projects in the surrounding area, it is not anticipated that the project would contribute to substantial groundborne vibration levels at sensitive receptors. Therefore, impacts of the proposed Project would not be cumulatively considerable.

Cumulative Operation Impacts

Roadway Noise Exposure

With regard to the exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies (Impact 4.13-1) and with regard to increasing ambient noise levels with respect to increased traffic noise in the proposed Project vicinity above levels existing without the Project (4.13-4), along with future regional growth, and other projects to be developed within the proposed project vicinity would result in increases in traffic that would cumulatively increase traffic noise at 15 roadway segments. These roadways include: Panama Lane, Hosking Avenue, Taft Highway, Di Giorgio Road, Curnow Road, Houghton Road/Buena Vista Boulevard, Shafter Road, Bear Mountain Boulevard, Hughes Lane, South H Street, Chevalier Road, South Union Avenue (SR-204), Cottonwood Road, and Adobe Road.

With regard to the residential land uses, the residence located along Lamb Avenue, west of South Union Avenue (SR-204), would be subject to cumulative impacts associated with roadway noise from traffic associated with past, present, and reasonably foreseeable projects. Therefore, the proposed Project would have a significant cumulative impact in this regard.

Noise Generation

With regard to the generation of noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies (Impact 4.13-3) and with regard to increasing ambient noise levels with respect to development operations in the Project vicinity above levels existing without the proposed Project, the proposed Project's operational impacts would be less

than significant with the implementation of Mitigation Measures. The implementation of reasonably foreseeable development projects would have the potential to increase ambient noise from new operational noise sources (such as HVAC equipment, parking lots, and truck deliveries) and by increasing human activity throughout the project sites and surrounding areas. Mechanical HVAC equipment located on the ground or on rooftops of new buildings have the potential to generate noise levels that exceed 65 dBA within an approximately 100-foot radius of the equipment. Additionally, commercial development would have the potential to result in noise levels above 65 dBA CNEL within approximately 70 feet of the source. Noise sources from parking lots typically range from about 30 to 66 dBA at a distance of 100 feet. Therefore, the project, in combination with other reasonably foreseeable development project, would have the potential to result in ambient noise levels that exceed 65 dBA CNEL.

In general, the noise levels generated by commercial, industrial and recreational facility operations would not exceed 65 dBA at a distance of 100 feet from each individual source. Thus, impacts from operational noise would be site-specific in nature and reasonably foreseeable development projects would be required to conform to policies in the MBGP and Kern County Zoning Ordinance to minimize exposure to excessive noise levels. In addition, each individual project is required to undergo site-specific analysis to determine individual noise impacts and provide mitigation measures as appropriate. The proposed Project would have the potential to combine with reasonably foreseeable projects in the vicinity to increase ambient noise levels; however, the proposed Project operational noise impacts would be mitigated to a less than significance level with the incorporation of the above measures. It is expected that through conformance with adopted policies and requirements to reduce noise, and project specific mitigation; impacts of the proposed Project, in combination with reasonably foreseeable nearby projects, cumulative impacts would be reduced to less than significant levels.

Private or Public Airstrip Noise

With regard to the project exposing people residing or working in the project area to excessive noise levels from a private or public airstrip (Impact 4.13-5), project impacts would be less than significant; however, the project would result in a greater number of people working in the project site and potentially being exposed to airstrip noise from Costerisan Farms Airport, a private airstrip, located approximately two (2) miles northwest of proposed. As stated above, this airport does not generate significant daily flights and activities at the airport would not significantly impact the proposed Project. As such, these impacts would not combine with impacts from past, present, or reasonably foreseeable projects to make a considerable contribution to a significant cumulative impact. Impacts would be less than significant, and no mitigation measures would be required.

Mitigation Measures

Implement Mitigation Measures MM 4.13-1 through MM 4.13-5 above.

Level of Significance after Mitigation

Cumulative impacts would be significant and unavoidable.

This Page Intentionally Left Blank

Section 4.14

Population and Housing

Section 4.14
Population and Housing

4.14.1 Introduction

This section examines the impacts of the proposed Project on population, housing, and employment in the area. This section also outlines the existing population and housing in the area, as well as projected population growth, future housing demands, and employment growth in Kern County. Information in this section is based on data from the Kern Council of Governments (Kern COG), including its Regional Housing Needs Allocation Plan (2014); the Kern County Housing Element 2015-2023 (December 2016); the U.S. Census Bureau; and California Department of Finance (DOF) demographic information.

4.14.2 Environmental Setting

Population

According to the DOF, the population in Kern County, including incorporated areas, was estimated to be 916,464 persons as of January 1, 2019 (California Department of Finance [DOF] 2019). In 2018 the population was approximately 906,563, which equates to a one-year increase of approximately 9,901 residents, or a 1.09 percent increase (DOF 2018a). As of January 1, 2019, approximately 318,006 persons (or approximately 34.7 percent) resided within the unincorporated area of Kern County (DOF 2019). The 2019 population within the unincorporated area of Kern County represents an increase of 2,531 residents, over the 2018 population of 315,475 (DOF 2018a). According to the DOF's projections, the County's population is anticipated to increase to 996,506 persons by the year 2025 and 1,214,656 persons in 2040 (DOF 2018).

Existing and Projected Housing

Kern County's housing supply totaled 290,706 dwelling units in 2014 and 299,674 dwelling units in 2019. This represents an increase in housing supply of approximately 3.0 percent (8,968 units). The residential vacancy rate, a translation of the number of unoccupied housing units on the market, is a good indicator of the balance between housing supply and demand in the community. Kern County's vacancy rate is approximately 10.7 percent as of January 1, 2019. The average number of persons per household in the County is 3.95 (DOF 2019).

The DOF estimates that 114,973 dwelling units were located within the unincorporated area of Kern County as of January 1, 2019. These units represent approximately 38.3 percent of the total number of dwelling units within Kern County. The average number of persons per household in the unincorporated area of Kern County was 2.74. Approximately 14.5 percent of the dwelling units within the area were vacant.

Employment

As of March 2019, Kern County had a labor force of 388,700 persons (Employment Development Department [EDD] 2019a). An estimated 39,300 people (approximately 10.1 percent) of the labor force was unemployed. In 2012, Kern County had a labor force of 391,900 persons and approximately 51,500 persons (approximately 13.1 percent) of the labor force were unemployed (EDD 2019a). The unemployment rate as of March 2019 is lower than the estimate seven years ago. Kern County's current unemployment rate is higher than California's rate (4.6 percent) and higher than the national rate (3.8 percent) for April 2019 (USDL 2019). The predominant industries for Kern County for employment growth were not available, but information for the Bakersfield MSA is. Within this area software developers, database administrators, web developers, personal care aides, and helpers, brick masons and tile setters have the highest degree of job growth. In 2017 the government industry accounted for approximately 21.1 percent of Kern County's employment as of April 2019 (EDD 2019c).

4.14.3 Regulatory Setting

State

State law requires each city and county to adopt a general plan for future growth. This plan must include a housing element that identifies housing needs for all economic segments and provides opportunities for housing development to meet that need. At the state level, HCD estimates the relative share of California's projected population growth that would occur in each county in the state based on DOF population projections and historic growth trends. Where there is a regional council of governments, as in Kern County, HCD provides the regional housing need to the council. The council then assigns a share of the regional housing need to each of its cities and counties. The process of assigning shares provides cities and counties the opportunity to comment on the proposed allocations. HCD oversees the process to ensure that the council of governments distributes its share of the state's projected housing need.

Each city and county must update its general plan housing element on a regular basis (generally, every 5 years). Among other things, the housing element must incorporate policies and identify potential sites that would accommodate the city's share of the regional housing need. Before adopting an update to its housing element, the city or county must submit the draft to HCD for review. HCD will advise the local jurisdiction whether its housing element complies with the provisions of California Housing Element Law.

The councils of governments are required to assign regional housing shares to the cities and counties within their region on a similar 5-year schedule. At the beginning of each cycle, HCD provides population projections to the councils of governments, who then allocate shares to their cities and counties. The shares of the regional need are allocated before the end of the cycle so that the cities and counties can amend their housing elements by the deadline.

Local

Kern County Housing Element 2015-2023

The Kern County Housing Element (Kern County Planning Department 2016) covers only the unincorporated portions of the Metropolitan Bakersfield General Plan and the Kern County General Plan. The City of Bakersfield has a separate housing element. The housing element is one of the seven mandated elements of the local general plan. Housing element law, enacted in 1969, mandates that local governments adequately plan to meet the existing and projected housing needs of all economic segments of the community. The law acknowledges that, in order for the private market to adequately address housing needs and demand, local governments must adopt land use plans and regulatory systems that provide opportunities for, and do not unduly constrain, housing development. As a result, housing policy in the state rests largely upon the effective implementation of local general plans and, in particular, local housing elements. Housing element law also requires the Department of Housing and Community Development (HCD) to review local housing elements for compliance with State law and to report its written findings to the local government. State law requires the Kern County Housing Element be updated regularly; the current 2015-2023 Housing Element Update was adopted by the Kern County Board of Supervisors on April 16, 2016 and approved by the State.

Kern Council of Governments (Kern COG)

Kern COG is an association of city and county governments created to address regional transportation issues while protecting the integrity and autonomy of each jurisdiction. Its member agencies include the County and the 11 incorporated cities within Kern County.

Under California Housing Element Law, Kern COG is the regional council of governments responsible for allocating the regional housing need to the County. Kern COG adopted a Regional Housing Needs Allocation Plan (RHAP) in June 2014 that establishes housing production goals for each jurisdiction within the region for the period between 2013 and 2023.

Future housing needs refer to the projected amount of housing a community is required to plan for during a specified planning period. California's Housing and Community Development Department provides each regional council of governments its share of the statewide housing need. In turn, all councils of governments are required by State law to determine the portion allocated to each jurisdiction within the region. This allocation process is known as the RHAP in the Kern COG region.

The RHAP determines housing needs with a special emphasis on ensuring adequate housing for persons in the very low, low, and moderate income ranges. This assessment allows communities to anticipate growth so that they can grow in a way that enhances quality of life; improves access to jobs, transportation, and housing; and does not adversely affect the environment. Kern COG has determined the total number of units needed in the County by 2023 (the 11-year projection period) is 67,675. For Bakersfield, the number of units is 36,290, or 53.6 percent of the County total, and for Unincorporated County, the number of units is 21,583, or 31.8 percent of the County total, by 2023.

Metropolitan Bakersfield General Plan

The Metropolitan Bakersfield General Plan lists the issues, goals, policies, and implementation measures related to population and housing in the County, as contained in the Land Use Element.

Project implementation would be guided in part by the goals, policies, and implementation programs, which are presented in Table 4.14-1, *Metropolitan Bakersfield General Plan Goals and Policies for Population and Housing.*

Table 4.14-1. Metropolitan Bakersfield General Plan Goals and Policies for Population and Housing
Goals and Policies: Land Use Element
Goal #3: Accommodate new development which provides a full mix of uses to support its population.
Goal #3: Accommodate new development which is compatible with and complements existing land uses.
Goal #4: Accommodate new development which channels land uses in phased, orderly manner and is coordinated with the provision of infrastructure and public improvements.
Policy #3: Ensure that residential uses are located in proximity to commercial services, employment centers, public services, transportation routes, and recreational and cultural resources.
Policy #15: Allow for the development of a variety of commercial centers/corridors which are differentiated by their function, intended users and level of intensity, including convenience centers serving local residential neighborhoods, sub-regional centers which serve groupings of neighborhoods, and major regional centers which serve the planning area and surrounding areas.
Policy #16: Allow for the development of a variety of commercial uses, including those which serve residents (groceries, clothing, etc.), highway users, and tourists-visitors.
Policy #34: Provide for the clustering of new industrial development adjacent to existing industrial uses and along major transportation corridors.
Policy #76: Provide for a mix of land uses which meets the diverse needs of residents; offers a variety of employment opportunities; capitalizes, enhances, and expands upon existing physical and economic assets; and allows for the capture of regional growth.
Policy #79: Provide for an orderly outward expansion of new "urban" development (any commercial, industrial, and residential development having a density greater than one unit per acre) so that it maintains continuity of existing development, allows for the incremental expansion of infrastructure and public services, minimizes impacts on natural environmental resources, and provides a high-quality environment for living and business.

4.14.4 Impacts and Mitigation Measures

Methodology

The potential impacts to population and housing are based on qualitative and quantitative analyses of the proposed Project's related increases in population and housing compared to planned growth estimates and population projections for the Kern County and the Southern San Joaquin Valley area.

Thresholds of Significance

Significance Criteria

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria as established in Appendix G of the CEQA Guidelines, to determine if a project could potentially have a significant impact. Such an impact would occur if the proposed project would:

- Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure);
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; and/or
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

The lead agency determined in the NOP/IS (see Appendix A) that the following environmental issues areas resulted in no impact and were scoped out of requiring further review in this Recirculated Draft EIR. Please refer to Appendix A of this Recirculated Draft EIR for a copy of the NOP/IS and additional information regarding the following impacts:

- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.

The proposed Project includes approximately 314.30 acres of agricultural land. A steel storage building associated with agricultural activities is located in the eastern portion of the Project site, near South Union Avenue (SR-204). Implementation of the proposed Project would not require the removal or displacement residential structures; therefore, no housing would be displaced, and the project would not require construction of replacement housing elsewhere. No impact would occur.

- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

The proposed Project includes approximately 314.30 acres of agricultural land. A steel storage building associated with agricultural activities is located in the eastern portion of the Project site, near South Union Avenue (SR-204). Implementation of the proposed Project would not require the removal or displacement residential structures or their inhabitants; therefore, no people would be displaced, and the project would not require construction of replacement housing elsewhere. No impact would occur.

Project Impacts

Impact 4.14-1: The Project Would Directly Induce Substantial Population Growth.

The Project proposes the future development of industrial and commercial uses on-site, which would not result in an increase in local population and housing units when compared to current conditions. The proposed Project includes a General Plan Amendment (GPA) to modify the existing Metropolitan Bakersfield General Plan land use designations and a Zone Change (ZCC) for the Project site. The GPA and ZCC would alter the existing land use and zone designations for the Project site's estimated 314.30 acres to allow for light and service industrial uses. The industrial areas would contain approximately 4,613,004 square feet (net building area) of warehousing, distribution, and retail showroom uses. No residential uses would be constructed under the proposed Project.

A project could induce population growth in an area either directly or indirectly. More specifically, the development of new homes or businesses could induce population growth directly, whereas the extension of roads or other infrastructure could induce population growth indirectly. The introduction

of approximately 4,613,004 square feet of light to medium industrial development within the Project site would increase the number of employees needed within the County. Given the current unemployment rate within the County, it is anticipated that any new jobs generated from this proposed Project would not result in a need for new housing or a population increase. This is because the existing labor force can be used to provide employees to the new industrial facilities.

As the Project proposes to amend the Metropolitan Bakersfield General Plan to allow for the industrial uses, the proposed Project would be removing an obstacle to growth in the Project area by changing the existing land use designation from R-IA (Resource-Intensive Agriculture) to LI (Light Industrial), SI (Service Industrial), GC (General Commercial), and HC (Highway Commercial). This allows for additional employment opportunities, which can lead to the relocation of people to jobs and ultimately and increase in population. However, the size of the labor force within Kern County and the current unemployment rates as discussed above, are considered to be sufficient for the current County population to accommodate jobs generated by the proposed Project.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Cumulative Impacts

As discussed above, the proposed Project would not increase population, as no new residences would be constructed and the current labor force would be used to provide the number of employees necessary for the industrial facilities proposed by the Project. This proposed Project would not directly increase population or the housing stock.

Because the proposed Project would not directly increase population and there is a high unemployment rate, the proposed Project is not anticipated to result in a direct or indirect impact on population and housing, nor is it anticipated to be growth inducing. Therefore, the proposed Project, in conjunction with the current and reasonably foreseeable projects discussed in Chapter 3, *Project Description*, would not lead to population growth. The employment opportunities provided by the proposed Project and other reasonably foreseeable projects would help to provide a balance with the current and projected labor force associated with future conditions. Therefore, this cumulative impact would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Section 4.15

Public Services

Section 4.15
Public Services

4.15.1 Introduction

This section focuses on public services, comprised of fire protection, sheriff / police protection, schools, parks and recreation, and libraries. The potential impacts on public services were evaluated, based in part, on coordination with the appropriate local service agencies that serve the proposed Project area. This section provides baseline information, and evaluates potential impacts, on public services practices and policies related to the proposed Project. A Public Services Report was prepared by McIntosh & Associates in October 2008 (refer to Appendix N). A second Public Services Report was prepared by McIntosh & Associates in June 2017. See Appendix J, *Public Support Services*, and Appendix N, *Original Technical Studies*.

4.15.2 Environmental Setting

The public services addressed in this section include police and fire protection, parks, schools, libraries, and other countywide public protection facilities.

Fire Protection

The Kern County Fire Department (KCFD) is responsible for fire protection services, fire prevention, emergency medical and rescue services, arson investigation and hazardous materials coordination with citizens within the Metropolitan Bakersfield General Plan area. The KCFD has established a ratio of staff to resident population and operates at a ratio of 1.092 fire personnel per 1,000 residents which slightly exceeds the national standards. The KCFD provides primary fire protection to unincorporated areas of the county and on regional transportation corridors such as Interstate (I) 5. The KCFD also acts as a secondary responder. The Emergency Communications Center was established as a joint dispatch center for the Bakersfield Fire Department and the KCFD in 1988, which provides for the closest station response concept. The center's dispatch covers more than 8,000 square miles, includes more than 65 fire stations, including 15 Kern County Fire Stations, and receives calls from nine separate public safety agencies. A Joint Powers Agreement has been established between the County and City of Bakersfield fire departments that provides for the closest station response concept. The two fire departments have adopted nonoverlapping, but contiguous station response boundaries without regard to City or County limits.

The National Fire Code set forth by the National Fire Protection Association (NFPA), California Fire Code, the California Building Code (CBC) and the Ordinance Code of Kern County are applied and utilized to regulate fire safety in the County.

Facilities and Services

The KCFD would serve the proposed Project. All KCFD first alarm response companies are staffed with a three-person engine company and a three-person truck company that provides basic Emergency Medical Technician medical aid services. Currently, Kern County Fire Station 52, located at 312 Taft Highway, is the first responding station for the Project area. Station 52 also houses a heavy

rescue vehicle that is "shared staffing" with either engine. There is a potentially low, first-unit emergency response time of three minutes to the edge of the site (at South Union Avenue [SR-204]), given the proximity of the project site to Station 52. Due to traffic and distance, the response time could range from four to eight minutes. An overall average response time for engine and truck companies is 5.2 minutes for any property within a 2.6-mile area around a specific station. Station No. 52 is located approximately 1.1 miles from the northeast corner of the project site, while the furthest point (southwest corner) is approximately 2.7 miles away.

Because the proposed Project is located outside of the boundaries of the Joint Powers Agreement, response companies located at City of Bakersfield Fire Station 13 (the closest City Fire Station at Poppyseed Street and Stine Road, south of Panama Lane) are not currently available.

The KCFD has established a ratio of staff to resident population, but the national industry standard is 1.0 fire personnel per 1,000 residents. Currently, the KCFD operates at a ratio of 1.092 fire personnel per 1,000 residents, slightly exceeding the national standard.

Whether the existing facilities, manpower, and equipment are adequate to maintain a sufficient level of service in the Greenfield area would depend on the density of new occupancy. In the last five to ten years, the KCFD has witnessed a marked increase in the population of Kern County. An increase in service requests, such as for residential fires, vehicle accidents, medical aid, mandated business inspections and safe programs, have been associated with this increase in population. As with most businesses, fire service is also impacted with growth, rather small or large impacts.

Sheriff/Police Protection

The Kern County Sheriff's Department is responsible for providing law enforcement services through the enforcement of local, State and Federal laws. The completion of this goal involves crime prevention, field patrol (ground and air), crime investigation, apprehension of offenders, regulation of noncriminal activity and the performance of a number of related and support services. Traffic and parking control functions are also provided, with some investigation of property damage, traffic accidents and complete investigations of all injury, fatal, intoxication and hit-and-run accidents.

The Kern County Sheriff's Department administers police services throughout the County, enforcing local, State and federal laws. The Kern County Sheriff's Department is responsible for crime prevention, field patrol (ground and air), crime investigation, the apprehension of offenders, regulation of noncriminal activity, and a number of related and support services. Traffic and parking control functions are also provided, along with some investigation of property damage reports and traffic accidents.

Response time is the time required to handle a call for service, which is measured from the time a call is received until the time a patrol car arrives at the scene. Response times are variable, particularly because the nearest responding patrol car may be located anywhere in the station's patrol area and may not respond from the nearest substation. The average response used by the Kern County Sheriff's Department is five minutes or less for an emergency or immediate response incident (e.g., a crime that is underway and/or a life-or-death situation) and eight to ten minutes for routine calls (e.g., a crime that has already occurred and/or an incident that is not life threatening). Response to an

emergency at or near the proposed Project site can vary depending on the demands of the substation at the time of the call. If demands are high, response time will be longer than estimated. The response time for a non-emergency call could range from 15 to 30 minutes or more, depending on staffing and other calls for service.

Facilities and Services

The proposed Project is located within the Lamont Substation's jurisdiction of the Kern County Sheriff's Department, located at 12022 Main Street, in the township of Lamont, and is approximately 6 miles east from the proposed project. The Lamont Substation is responsible for providing law enforcement services to the residents and businesses located throughout an almost 500-square-mile area. The Kern County Sheriff's Department Lamont Substation has 20 deputies assigned for patrol within the geographic service area, which includes the proposed Project. The Lamont Substation has 1 sergeant, 3 senior deputies, 16 deputies, and 1 section lieutenant during the day. At night, an additional sergeant and lieutenant are responsible for monitoring calls within the Lamont service area (McIntosh & Associates 2017). If a situation warranted immediate aid, deputies from Frazier Park and Taft would be requested first. The next level of assistance would be requested department side from 10 other Substations, Metro Patrol and Special Units (McIntosh & Associates 2017).

The County of Kern and the City of Bakersfield have a formal mutual aid agreement for law enforcement and emergency services. Beyond departmental capabilities, a formal request for mutual aid will occur by established protocols. Agencies within the County of Kern will be requested first and then request outside the county will begin by region. Additionally, both the Kern County Sheriff's Department and the Bakersfield Police Department aided dispatch systems identify calls for service by City and County aid jurisdiction. The Lamont Substation response time to an emergency in the proposed Project area could range from 15 to 30 minutes depending on call priority (McIntosh & Associates 2017). The Kern County Sheriff's patrol units traveling through the City shall respond to observed public safety problems and then call the City Police Department for follow-up.

California Highway Patrol (CHP)

As a major Statewide law enforcement agency, the California Highway Patrol (CHP) is responsible for the management and regulation of traffic to achieve safe, lawful and efficient use of the California highways as well as provide disaster and lifesaving assistance.

The purpose of the CHP is to ensure safety and provide service to the public on the highway transportation system and to assist local government during emergencies when requested. The primary responsibility of the CHP is to patrol state highways and all county roadways, enforce traffic regulations, respond to traffic accidents, and provide service and assistance to disabled vehicles. The CHP maintains a mutual aid agreement with the Kern County Sheriff's Department.

The CHP is divided into eight different divisions. The proposed Project is located in the CHP Central Division, which includes which includes 15 area offices, two commercial vehicle enforcement facilities (CVEF), and three communications and dispatch centers (CHP 2017). The closest CHP area office to the proposed Project area is the Bakersfield office, located approximately one mile north of the proposed Project site, at 9855 Compagnoni Street (CHP 2017).

Schools

Primary and secondary school facilities are provided throughout Metropolitan Bakersfield by several school districts and collegiate institutions. The educational institutions are responsible for the operation, staffing and scheduling of more than 70 individual school facilities. Two of the key factors that affect existing and future school facilities are funding and student generation rates. The proposed Project is located within the Greenfield Union School and Kern High School Districts.

Greenfield Union School District

The proposed Project is located within the Greenfield Union School District (GFUSD) jurisdiction. The closest elementary school is Granite Point Elementary School, located at 2900 Berkshire Road, approximately 5.5 miles north of the proposed Project. Granite Point Elementary School has a design capacity of 750 students and has a current enrollment of approximately 958 students. The closest middle school is McKee Middle School, located at 205 McKee Road, approximately two miles north of the proposed Project. McKee Middle School has a design capacity of 1,100 students and has a current enrollment of approximately 946 students (McIntosh & Associates 2017).

Kern County High School District

The proposed Project is also located within Kern High School District boundaries. The proposed Project site and the area west of South Union Avenue (SR-204) are located within the Ridgeview High School (8501 Stine Road) attendance area. Ridgeview High School is located at 8501 Stine Road, and is approximately 5.5 miles northwest of proposed Project. The school serves grades 9th through 12th, has a capacity of 2,176 students, and has a current enrollment of approximately 2,274 students. The District has no plans to increase enrollment capacity (McIntosh & Associates 2017).

Collegiate Institutions

Higher education within Metropolitan Bakersfield is provided by Bakersfield College and California State University at Bakersfield (CSU Bakersfield). Bakersfield College is a two-year community college, whereas CSU Bakersfield has four-year and graduate degree programs.

Parks and Recreation

The Kern County Parks and Recreation Department manages eight (8) regional parks, 25 public buildings, and 40 neighborhood parks. There are no recreational facilities currently serving the Project, nor are there existing parks located within ¾-mile of the proposed Project. The nearest developed park to the proposed Project is Kern Delta Park (approximately 1.5 miles north-northwest of the proposed Project).

Libraries

The Kern County Library system consists of 24 branches and two (2) bookmobiles throughout Kern County, with the main branch library (the Beale Memorial Library) located in Bakersfield. Materials for use at county branches include books, government documents, computers, CDs, and other informational media. The Kern County library system maintains a collection of 1.15 million books,

audiovisual items, periodicals, and other informational sources (Kern County Library 2017). The closest libraries to the proposed Project are the Lamont Branch Library, located approximately 5.25 miles northeast of the proposed Project, at 8304 Segrue Road, Lamont, and Wilson Branch Library, located approximately 5.5 miles north of the proposed Project site, at 1901 Wilson Road in Bakersfield.

4.15.3 Regulatory Setting

State

Senate Bill (SB) 50

The Leroy F. Greene School Facilities Act of 1998, or Senate Bill 50 (SB 50), authorizes school districts to levy developer fees to finance the construction or reconstruction of school facilities. In January 2015, the State Allocation Board (SAB) approved maximum Level 1 developer fees at $0.54 per square foot of enclosed and covered space in any commercial or industrial development, and $3.36 per square foot for residential development. These fees are intended to address the increased educational demands on the school district resulting from new development. Public school districts can, however, impose higher fees than those established by the SAB, provided they meet the conditions outlined in the act. Private schools are not eligible for fees collected pursuant to SB 50.

The payment of school mitigation impact fees authorized by SB 50 is deemed to provide full and complete mitigation of project impacts on school facilities. SB 50 provides that a State or local agency may not deny or refuse to approve the planning, use, or development of real property on the basis of a developer's refusal to provide mitigation in amounts in excess of that established by SB 50.

Local

Metropolitan Bakersfield General Plan

The Metropolitan Bakersfield General Plan cites policies to provide decision-makers with long-range guidance affecting the future character of the Metropolitan Bakersfield planning area. The elements within the Metropolitan Bakersfield General Plan provide goals and policies in order to ensure that public services have adequate capacity to service proposed developments. Applicable public services goals and policies relative to the proposed Project site are identified in Table 4.15-1, *Metropolitan Bakersfield General Plan Goals and Policies for Public Services*, below.

Table 4.15-1. Metropolitan Bakersfield General Plan Goals and Policies for Public Services
Metropolitan Bakersfield General Plan: Safety Element
Safety Element Goal #2: Ensure that adequate police and fire services and facilities are available to meet the needs of current and future metropolitan residents through the coordination of planning and development of metropolitan police and fire facilities and services.
Public Services and Facilities (PSF) School Policies
PSF School Policy #1: New development will be required to pay its proportional share of the cost of school impact fees within the Plan area.
Public Services and Facilities (PSF) Parks Element Policies
PSF Park Policy #3: "Require developers to dedicate land, provide improvements and/or in lieu fees to serve the needs of the population in newly developing areas."

Capital Improvement Plan

A countywide Capital Improvement Plan (CIP) was presented to the board of supervisors on October 9, 2007, and adopted in 2008. This report presents the best current understanding regarding new public facilities that would be needed to serve projected development in the County through 2030. The scope of services includes parks; libraries; Kern County Sheriff's Department (public protection and investigation), fire department, animal control, public health, and landfill/transfer facilities; and, general government services. Road and sewer costs, as well as related impacts, are not part of this program. The program includes three phased components:

Phase One: Develop a conceptual CIP for the included facility categories, assessing what additional capacity and conceptual projects are required to provide needed infrastructure for new development through 2030;

Phase Two: Evaluate existing and potential funding sources, and outline options available as financing mechanisms, including a development fee proposal; and

Phase Three: Perform a fiscal (operational) analysis for use in evaluating the ongoing operating and maintenance impact of a new development on the County's general fund.

The adopted CIP includes a summary of proposed service levels for the included facilities and a conceptual list of the planned projects upon which the CIP was based.

Public Facilities Mitigation Program

The changing fiscal landscape in California during the past 30 years has steadily undercut the financial capacity of local governments to fund infrastructure. Three dominant trends stand out:

- The passage of a string of tax limitation measures, starting with Proposition 13 in 1978 and continuing through the passage of Proposition 218 in 1996;
- Declining popular support for bond measures to finance infrastructure for the next generation of residents and businesses; and

- Steep reductions in federal and state assistance.

Faced with these trends, the County has adopted a policy of "growth pays its own way" through use of a public facilities mitigation program. The primary policy objective of this program is to ensure that new development pays the capital costs associated with growth. In 2008, the County adopted a Capital Improvement Plan (CIP) that document identifies the best current understanding of the public facilities that will be needed to accommodate new development anticipated through 2030. The CIP further identified appropriate facility demand standards to be used as a basis for estimating future facility needs and level of service. The basic purpose of the CIP is to identify the facilities and infrastructure needed to serve the population in 2030.

Continued growth within the County and the associated impacts resulting from that growth have increased the demands to Countywide public services and have made it difficult to not only implement and fund many of those facilities identified within the Capital Improvement Plan, but maintain existing public service demand standards as growth occurs. In short, despite the increase in property taxes generated as a result of the proposed project and other similar projects within the County, public facility impacts are still underfunded and unable to maintain existing and adopted facility standards.

The purpose of the Public Facilities Mitigation Program is to identify those impacts on public services and determine the California Environmental Quality Act (CEQA)-required mitigation (in dollars) that would be needed to address the growth impacts adequately. The following categories have been identified to help determine which specific public needs are impacted by the proposed project.

- Countywide Public Protection Facilities;
- Sheriff Patrol and Investigation Facilities;
- Library Facilities;
- Animal Control Facilities:
- Park Facilities;
- Fire Facilities;
- Waste Management Facilities;
- Public Health Facilities; and
- General government Facilities.

4.15.4 Impacts and Mitigation Measures

Methodology

The potential impacts associated with the proposed Project are evaluated on a quantitative basis through a comparison of the anticipated project effects on public services. The evaluation of project impacts as based on professional judgment, consistency analysis with the goals and polices of Metropolitan Bakersfield General Plan and the significance criteria established by Appendix G of the

State CEQA Guidelines, which the County has determined to be appropriate criteria for this Recirculated Draft EIR. In accordance with CEQA, the effects of a project are evaluated to determine if they will result in a significant adverse impact on the environment. An EIR is required to focus on these effects and offer feasible mitigation measures to reduce or avoid any significant impacts that are identified.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria as established in Appendix G of the CEQA Guidelines, to determine if a project could potentially have a significant impact. Such an impact would occur if the proposed project would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities; and/or result in the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services, which include:

    i. Fire Protection

    ii. Police Protection

    iii. Schools

    iv. Parks

    v. Other Public Facilities

Project Impacts

Impact 4.15-1: The Project Would Result in Adverse Physical Impacts Associated with New or Physically Altered Governmental Facilities or Result in the Need for New or Physically Altered Governmental Facilities and Have Significant Fiscal Impacts on Public Services.

In May 2009, the County prepared, in consultation with Willdan Financial Services a Public Services Study, the purpose of which was to calculate and present development factors that will enable the County to expand its inventory of public facilities, and therefore maintain its existing facilities standards, as new development leads to service population increases. The applicability of these factors assumes full property taxes and are based on the services provided by the County to a given area to determine the underfunded public service needs. Table 4.15-2, *Applicability of Proposed Mitigation Factors to Residential and Non-Residential Uses*, identified below, summarizes the applicability of each of the proposed mitigation factors to residential and non-residential uses.

Table 4.15-2. Applicability of Proposed Mitigation Factors to Residential and Non-Residential Uses

Fee Category	Geographic Applicability	Service Population	
		Residential	Non-Residential
Public Protection	Countywide	X	X
Sheriff Patrol & Investigation	Unincorporated	X	X
Library	Countywide	X	
Animal Control	Unincorporated areas, Maricopa, McFarland, Tehachapi, Arvin, Bakersfield	X	
Community Parks	Countywide	X	
Regional Parks	Countywide	X	
Fire	Kern County Fire Service Area	X	X
Waste Management	Countywide	X	X
Public Health	Countywide	X	X
General Government	Countywide, different rates for cities	X	X

Future development of industrial uses would create public services typical of any new industrial development. As a non-residential facility, implementation of the proposed Project has the potential to result in a demand for new and/or additions to existing public protection facilities, sheriff facilities, fire facilities, waste management facilities, public health facilities and various general governmental facilities.

At this time, specific industrial uses on the proposed Project site are not available. The proposed M-1 PD (Light Industrial, Precise Development Combining), M-2 PD (Medium Industrial, Precise Development Combining), C-2 PD (General Commercial, Precise Development Combining), and CH PD (Highway Commercial, Precise Development Combining) Zone Districts would allow for, gas stations, restaurants, motels, wholesale commercial, storage, trucking, assembly-type manufacturing, general manufacturing, processing, office, or industrial uses to be constructed on-site. As a result, it is not feasible to specifically identify monetary mitigation for public facilities at this time, given the various commercial, office or industrial uses allowed within the M-2 PD Zone District. Given the proposed Project is non-residential, impacts to library, animal control, community and regional parks are considered less than significant.

The following is a discussion on the various public service impacts that would result with implementation of the proposed Project.

Fire Protection

Construction of the proposed Project has the potential to create an increased demand for fire services on the KCFD due to the increase in urban/industrial development. According to Captain Jim Eckroth, the proposed Project could increase the demand for fire protection and emergency services that could require manpower and equipment that are adequate to maintain a sufficient level of service in the

Greenfield area depending on the density of the new proposed commercial and industrial development (McIntosh &Associates 2017).

At this time mitigation development fees and taxes are undetermined by the KCFD; however, the proposed Project would be required to pay all fees and taxes established for the fire department prior to issuance of building permits. During the plan review phase, the Project Applicant may be required to agree to Conditions of Approval for development of the proposed Project in order to mitigate the demand for additional fire personnel and additional emergency equipment necessary to maintain adequate fire protection service. As such, implementation of the required mitigation measures below would reduce impacts to a less than significant level for fire protection services related to increase fire personnel.

The proposed Project has the potential of having short-term construction-related impacts. If during construction there is a need to redirect traffic or block access routes or residential streets, potential delays in emergency response could result. This temporary impact would be reduced to less than significant with implementation of mitigation measures pertaining to coordination during construction (refer to Section 4.16, *Transportation and Traffic*). Additionally, compliance with fire safety standards and requirements such as interior sprinkler systems, fire alarms, emergency access and adequate fire flow at public and on-site hydrants would be required during the plan review process and would reduce impacts to less than significant levels.

Furthermore, construction of the proposed Project would be subject to the provisions of the Uniform Fire Code and local amendments; Titles 19, 22 and 27 of the California Safety Code Regulations; the Kern County Ordinance Code; and the National Fire Prevention Association Standards. Thus, ensuring adequate fire protection services are maintained within the Project site.

Therefore, the proposed Project and the increase demand would not create an adverse impact because planned growth is something that is simply responded to by the KCFD. The KCFD and the Kern County Planning and Natural Resources Department reviews each new development to ensure that all requirements for emergency access, fire hydrant location and spacing, fire flows, and fire lanes are incorporated into the proposed project designs. Kern County code of Ordinances, regulations, guidelines, and fees are periodically updated. Development projects, including the proposed Project, are required to incorporate the most current code requirement that are in effect at the time of map recordation or building permit issuance. Impacts would be less than significant.

Sheriff/Police Protection

Construction of the proposed Project has the potential to create an increased demand for police services on the Kern County Sheriff's Department due to the increase in urban/industrial development. However, according to Commander Drake Massey, the existing facility, manpower and equipment are adequate to maintain sufficient service for this response area (McIntosh & Associates 2017). Additionally, the addition of officers, clerical staff, and law enforcement equipment pursuant to conditions of approval as set forth by the County, would decrease the demand on the existing police services and reduce the significance of impacts to less than significant levels.

Similar to the fire protection services, the proposed Project has the potential of having short-term construction related impacts. Construction areas may require additional police monitoring throughout

the duration of Project construction both during day and nighttime periods. Additionally, the need to redirect traffic or block access routes or residential streets may arise which would result in potential delays in police response. These temporary impacts would not be considered significant with implementation of mitigation measures pertaining to coordination during construction (refer to Section 4.16, *Transportation and Traffic*).

Other Public Facilities

Public protection facilities include criminal detention facilities, courthouses, coroner, 911 communications, and the Kern County Sheriff's Department administrative buildings. In contrast with sheriff patrol and investigation facilities, which are used primarily to provide services in unincorporated areas of the County, public protection facilities serve residential and nonresidential development countywide. Similar to sheriff facilities, demand for public protection services per employee are less than compared per resident, however implementation of the proposed Project would increase the service need. With implementation of the mitigation measures, impacts will be considered less than significant for public protection.

Refuse collection services for the proposed project is operated and managed by Price Environmental Services, Inc. Refuse collected is transported to one of two landfills, the Metropolitan Bakersfield Sanitary Landfill at (Bena Landfill) or Shafter-Wasco Sanitary Landfill. Calculations made utilizing the Kern County Waste Management Department methodology of solid waste estimation; the proposed project is anticipated to generate 12,883 tons of construction waste to buildout, and 13,519 tons of solid waste annually thereafter. Bena Landfill has reported the remaining capacity at 22,174,654 tons and the landfill is projected to accommodate solid waste for 26.8 years and is currently scheduled for closure in the year 2038. Shafter-Wasco Landfill has reported the remaining capacity at 3,671,755 tons and is projected to accommodate solid waste for 16.4 years (McIntosh & Associates 2017).

The County's waste management facility standard adopted in the CIP is 38.45 tons of landfill capacity per capita. This standard is based on the existing per capita landfill capacity. A planned system-wide transition from the several local sanitary landfill sites to regional sanitary landfills supplemented by local transfer stations is currently in process. The Kern County Waste Management Department presently has plans for eleven new facilities, several facility closures, and numerous miscellaneous capital projects which expand existing disposal facilities, consolidate local disposal sites to three regional disposal sites, and protect landfills from encroachment of incompatible land uses by acquiring buffer zones around disposal sites. Implementation of the project will contribute to the overall service needs for the Kern County Waste Management Department on a Countywide level. Implementation of the mitigation measures below will reduce impacts to waste management to a less than significant level.

General government facilities provide space for the Board of Supervisors and for general County administration including the Assessor, Treasures, Tax Collector and the Auditor-Controller County Clerk. Some general government facilities are primarily used to provide service and administration in unincorporated areas, while others provide service on an equal basis countywide. It is estimated that new development, Countywide, between now and the year 2030 would result in an increase of service population by 448,500 people (residents and workers combined). The Kern County CIP identifies a general government facility standard of 0.25 building square feet per capita, which was

the existing standard of general government facilities at the time the CIP was adopted. The County anticipates that less than 0.25 general government building square feet per capita will be needed to accommodate new development through 2030, therefore, the general government impact fee is based on the cost of planned facilities per capita. With implementation of the mitigation measure below, impacts to general government facilities will be reduced to less than significant levels.

These increased facility demands to public protection, waste management, and general government go above and beyond those funded through the increase in property taxes generated as a result of rezoning the property to industrial use.

Schools

As mentioned above, the proposed Project is located within the Greenfield Union School District and the Kern High School District. No school age children would reside on the proposed Project because no residential structures are proposed for this property. The Project applicant would be required to pay applicable statutory school fees under California Government Code Section 65995-65996. The rate factor for the Greenfield Union School District's students is determined by the factors based on total student generation impact per 1,000 square feet of commercial and industrial development, as shown in Table 4.15-3.

Table 4.15-3. Total Student Generation Impact

Commercial and Industrial Category	Elementary School Inter-District Impact	Middle School Inter-District Impact	Total Inter-District Cost Impact
Banks	0.0878	0.0373	0.1251
Community Shopping Center	0.0477	0.0202	0.0679
Neighborhood Shopping Center	0.0870	0.0370	0.1240
Industrial Business Parks	0.1093	0.0464	0.1557
Industrial Parks/Warehousing	0.0419	0.0178	0.0597
Research & Development	0.0945	0.0402	0.1347
Hospitality (Lodging)	0.0352	0.0149	0.0501
Commercial Offices (Standard)	0.1489	0.0633	0.2122
Corporate Offices	0.0835	0.0355	0.1190
Medical Offices	0.1326	0.0563	0.1889

Source: McIntosh & Associates, Public Services Report, 2017.
Notes: Total student generation impact per 1,000 square feet of commercial and industrial development.

The proposed Project is projected, in a worst-case scenario, to indirectly cause the addition of some residents based on the number people that will move to the area to fill managerial and other positions created by the development. This increase may create a demand for housing that may include school age children, which will indirectly create a demand for school services. Therefore, although the proposed Project would increase the intensity of land use on the Project site, the proposed Project is a commercial and industrial development and will not directly create a demand for school services. Thus, impacts to schools in the proposed Project area would not be considered substantial, as no residential uses are proposed.

In addition, the proposed Project would be required to contribute development impact fees in accordance with Senate Bill 50 (SB 50) (Level 1 impact fees) and the above-mentioned standards and

policies. Therefore, Project-related impacts to schools regarding acceptable service levels would be reduced to less than significant levels following implementation of State law.

Parks and Recreation

The proposed Project includes industrial uses and would not directly result in a demand for park facilities. According to the Metropolitan Bakersfield Kern County General Plan, a level of service standard of 2.5 acres of park area per 1,000 residents shall be implemented; therefore, the demand for park facilities is based on the residential population with the County. Since the proposed Project does not include housing, the proposed Project would not result in a direct demand for park and recreation facilities.

Mitigation Measures

MM 4.15-1: **Fire Safety Plan.** Prior to the issuance of grading or building permits, the project proponent shall develop and implement a Fire Safety Plan for use during construction and operation. The project proponent will submit the Fire Safety Plan, along with maps of the project site and access roads, to the Kern County Fire Department for review and approval. The Fire Safety Plan will contain notification procedures and emergency fire precautions for construction and operations phases of the proposed project.

MM 4.15-2: **Land Development Services Fee Schedule.** Prior to the issuance of grading or building permits, the project proponent shall coordinate with Kern County to determine the need for payment of land development services fees, in accordance with the Kern County Land Development Services Fee Schedule, for impacts to countywide public protection, sheriff's patrol and investigative services, and fire services.

Level of Significance after Mitigation

Impacts would be less than significant.

Cumulative Impacts

Significant cumulative impacts to public services would occur if the cumulative projects would overburden the public service agencies and if utility providers were unable to provide adequate services. The cumulative impacts of this proposed Project, in conjunction with all the other projects, would result in the need for new fire, sheriff, library, and general governmental facilities. Implementation of the Development Impact Fee Program as directed by the Kern County Board of Supervisors, is appropriate mitigation to reduce cumulative impacts to public services. The cumulative projects would substantially increase the demand for public service providers and utility servers. However, public agencies and utilities have the opportunity to respond to an inquiry for information regarding potential increase in demand on their services. Monetary mitigation is determined on a project-by-project basis to mitigate for the increase in demand on public services and utilities. Incorporation of the mitigation measures would reduce impacts from the proposed Project, in conjunction with other projects in the area, to a less than significant cumulative level.

Mitigation Measures

Implement Mitigation Measures MM 4.15-1 and 4.15-2, above.

Level of Significance after Mitigation

Impacts would be less than significant.

Section 4.16

Transportation and Traffic

Section 4.16
Transportation and Traffic

4.16.1 Introduction

The purpose of this section is to evaluate existing traffic conditions and the potential traffic impacts of the proposed Project. The evaluation considers impacts on local roadways, intersections, and regional facilities, as well as proposed Project access and internal circulation. Mitigation measures are recommended to avoid or lessen impacts, as necessary. A Traffic Impact Study (Traffic Study) was prepared by McIntosh & Associates in November 2016, and a technical memo regarding trip generation counts was prepared in May 2018. See Appendix M, *Traffic Study*.

The following analysis scenarios are evaluated in this section:

- Existing 2016 Conditions
- Future Year 2025 (Project Buildout) Without Project Conditions
- Future Year 2025 (Project Buildout) With Project Conditions
- Future Year 2035 Without Project Conditions
- Future Year 2035 With Project Conditions

Project impacts were assessed based on intersection and roadway levels of service (LOS). Improvements needed to maintain or improve operational LOS were also identified.

4.16.2 Environmental Setting

Study Area

The proposed Project is located approximately 1.10 miles southeast of the Bakersfield city limits, within the Metropolitan Bakersfield General Plan in Kern County. The proposed Project consists of approximately 314.30 acres, generally located north of Houghton Road, east of State Route 99 (SR-99), west of South Union Avenue, and south of DiGiorgio Road. South Union Avenue, Houghton Road, and the DiGiorgio Road alignment provide the primary access to and from the proposed Project area. The Project study area is illustrated on the figures provided in this section. A total of 43 intersections were analyzed within the study area. Of these intersections, 36 currently exist and seven (7) are proposed. The seven (7) proposed intersections were assumed to be in operation by Year 2025.

Existing and Proposed Street Network

The following is a summary of roadways within the study area:

Panama Lane is a designated east-west arterial west of the SR-99 Southbound Off-Ramp to east of Cottonwood Road in various stages of widening. Panama Lane currently exists as a six-lane, divided

roadway from the west of SR-99 Southbound Off-Ramp to South H Street. It then continues east from South H Street as a four-lane, divided roadway to South Union Avenue. Panama Lane exists at a two-lane, undivided roadway from South Union Avenue to the east of Cottonwood Road.

Hosking Avenue is a designated east-west arterial that exists as a two-lane, undivided roadway from west of SR-99 to Cottonwood Road.

Taft Highway/ State Route 119 (SR-119)/Panama Road is a designated east-west expressway from west of Wible Road to SR-99 and a designated arterial from SR-99 to the east of Cottonwood Road. Taft Highway/SR-119 is aligned with Panama Road to the east of South Union Avenue. Taft Highway/SR-119 currently exists as a two-lane, undivided roadway from west of Wible Road to South Union Avenue. Panama Road exists as a two-lane, undivided roadway from South Union Avenue to the east of Cottonwood Road.

Curnow Road is a designated east-west collector that currently exists as a two-lane, undivided roadway from west of South Union Avenue to Cottonwood Road.

DiGiorgio Road is a designated east-west arterial that currently exists as a two-lane, undivided roadway from South Union Avenue to the east of Cottonwood Road. DiGiorgio Road will be constructed in the future along the project's frontage and from the future Chevalier Road to South Union Avenue. DiGiorgio Road will provide direct access to the project site via the project's northern frontage.

Lamb Avenue is a designated east-west collector that currently exists as a two-lane, undivided roadway to the east of South Union Avenue. Lamb Avenue will be constructed in the future within the project boundary from Chevalier Road to South Union Avenue, and it will serve as direct access to the project site via several entrances on both the north and south sides of Lamb Avenue.

Mugsy Avenue is a designated east-west local roadway that currently exists as a two-lane, undivided roadway from South Union Avenue to east of South Union Avenue. Mugsy Avenue will provide direct access to the project site via several entrances within the project's interior.

Houghton Road/ Buena Vista Boulevard is a designated east-west arterial that currently exists as a two-lane, undivided roadway from west of Stine Road to South Union Avenue. Houghton Road is aligned with Buena Vista Boulevard at South Union Avenue and becomes Buena Vista Boulevard to the east of South Union Avenue. Buena Vista Boulevard is a designated east-west arterial that currently exists as a two-lane, undivided roadway from South Union Avenue to east of Adobe Road. Houghton Road will front the project's southern boundary and provide direct access to the project site via entrances on the project's southern frontage.

Shafter Road is a designated east-west collector that currently exists as a two-lane, undivided roadway from Chevalier Road to South Union Avenue. Shafter Road then becomes a designated arterial to the east of South Union Avenue, and it exists as a two-lane, undivided roadway to the east of South Union Avenue.

Kaiser Lane is a designated east-west collector that currently exists as a two-lane, undivided roadway from Chevalier Road to South Union Avenue.

Bear Mountain Boulevard/State Route 223 (SR-223) is a designated east-west arterial that currently exists as a two-lane, undivided roadway from west of Costajo Street to east of South Union Avenue.

Stine Road is a designated north-south arterial that currently exists as a two-lane, undivided roadway from north of Houghton Road to south of Houghton Road.

Wible Road is a designated north-south arterial that currently exists as a two-lane, undivided roadway from north of Taft Highway/SR-119 to south of Houghton Road.

South H Street is a designated north-south arterial that currently exists in various stages of widening. South H Street currently exists as a four-lane, divided roadway to the north of Panama Lane, and it continues southerly from Panama Lane to south of Houghton Road as a two-lane, undivided roadway. South H Street is aligned with Curnow Road to the south of Taft Highway/SR-119, but it realigns with its original alignment on the west side of SR-99 to the south of Curnow Road.

SR-99 is a designated north-south freeway that currently exists as a six-lane, divided roadway from north of Panama Lane to south of Bear Mountain Boulevard/SR-223. The freeway right-of-way will serve as the western boundary of the project site.

Costajo Road is a designated north-south collector that currently exist as a two-lane, undivided roadway from Houghton Road to Bear Mountain Boulevard/SR-223.

Chevalier Road is a designated north-south collector that currently exists as a two-lane, undivided roadway from Houghton Road to Kaiser Lane. Chevalier Road will be constructed in the future within the project boundary from DiGiorgio Road to Houghton Road. Chevalier Road will provide direct access to the project via several entrances within the project's interior.

South Union Avenue (SR-204)/SR-99 Business is a designated north-south arterial that currently exists as a four-lane, divided roadway from north of Panama Lane to south of Bear Mountain Boulevard/SR-223. This roadway will provide direct access to the project site via entrances along the project's eastern frontage. SR-204 and Union Avenue coexist north of SR-58.

Cottonwood Road is a designated north-south arterial that currently exists as a two-lane, undivided roadway from north of Panama Road to Buena Vista Boulevard.

Adobe Road is a designated north-south arterial that currently exists as a two-lane, undivided roadway from north of Buena Vista Boulevard to south of Buena Vista Boulevard.

Performance Criteria

For California Environmental Quality Act (CEQA) purposes, defined performance criteria are utilized to determine if a proposed project causes a significant impact. In general, according to the Transportation Research Board, National Research Council's 2010 Highway Capacity Manual (HCM), LOS ranges from LOS "A" (free-flow conditions) to LOS "F" (severely congested conditions), based on the average delay experienced per vehicle. The Metropolitan Bakersfield General Plan performance criterion for intersections and roadway segments is LOS "C" or better.

Existing Traffic Conditions

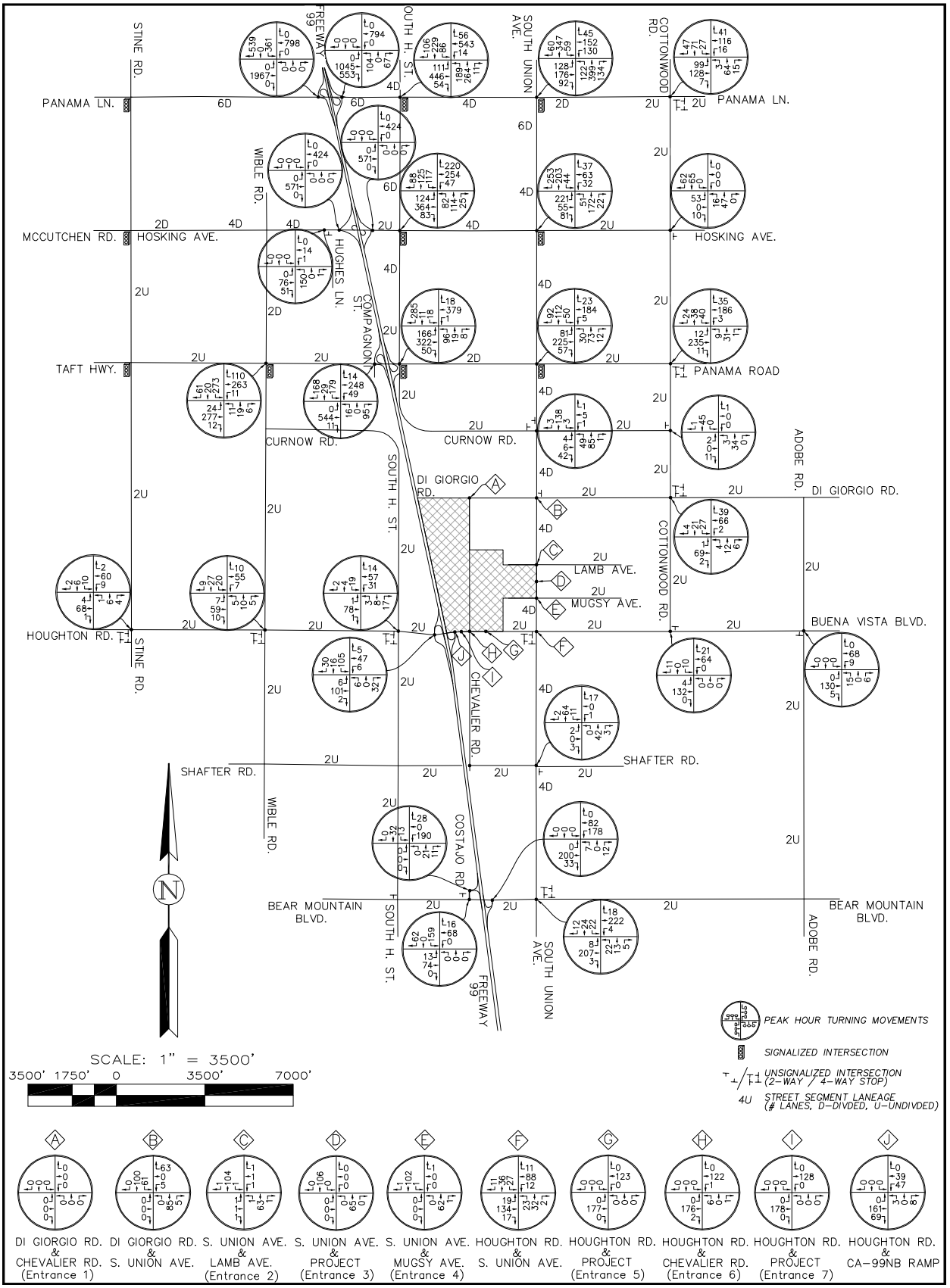
Existing Traffic Volumes

Traffic counts were taken at major intersections within the study area, as required by the City of Bakersfield, County of Kern, and the California Department of Transportation (Caltrans). The counts were used to determine the local peak-hour period, directional distribution, and existing operational LOS. Existing traffic counts were taken at the AM and PM peak hours for all intersections within the study area, and are illustrated in Figure 4.16-1a, *AM Peak Hour Turning Movements,* and Figure 4.16-1b, *PM Peak Hour Turning Movements.*

Existing Intersection Level of Service

Table 4.16-1, *Intersection Level of Service*, outlines the AM and PM peak hour LOS of the study intersections under Year 2016, Year 2025, and Year 2035 conditions. Based on the traffic counts taken for the Traffic Study, and as illustrated in Table 4.16-1, the following study intersections operate at an unacceptable LOS under existing 2016 conditions.

- Panama Lane and South H Street (PM Peak Hour LOS "D")
- Panama Lane and South Union (PM Peak Hour LOS "D")
- Hosking Avenue and South H Street (PM peak hour LOS "D")
- Taft Highway/SR-119 and SR-99 Southbound Ramp/Compagnoni Street (PM Peak Hour LOS "D")
- Taft Highway / SR-119 and South H Street (AM peak hour LOS "D")



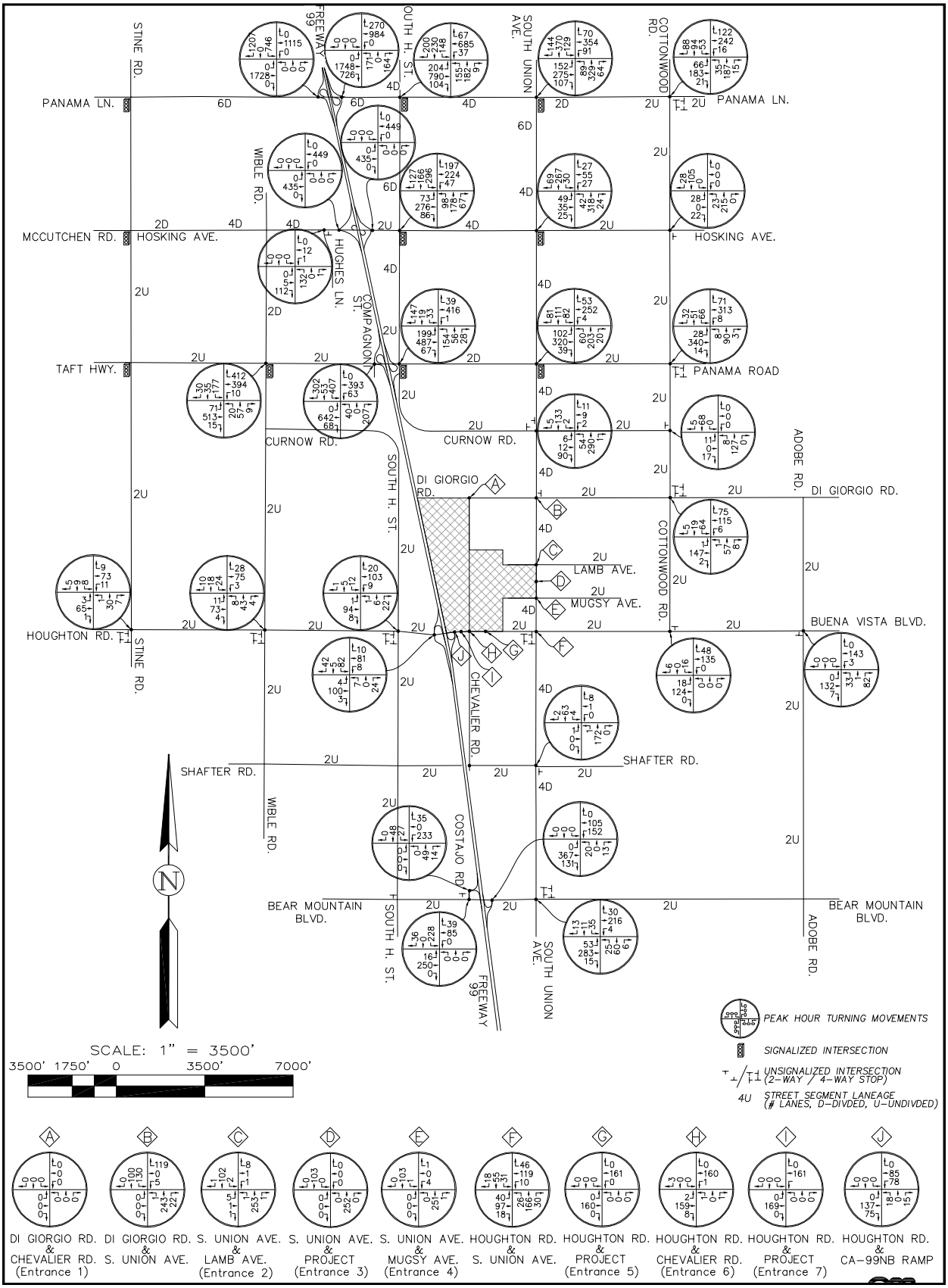
Source: McIntosh & Associates, 2016

99 HOUGHTON INDUSTRIAL PARK PROJECT

CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07 • AGRICULTURAL PRESERVE #13 EXCLUSION

AM Peak Hour Turning Movements

Figure 4.16-1a



Source: McIntosh & Associates, 2016

99 HOUGHTON INDUSTRIAL PARK PROJECT

CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07 • AGRICULTURAL PRESERVE #13 EXCLUSION

PM Peak Hour Turning Movements

Figure 4.16-1b

Table 4.16-1. Intersection Level of Service

Intersection	Scenario	Type	LOS
PANAMA LANE and SR-99 SB RAMP AM PEAK	Existing	S	B
	2025 Future w/o Project	S	B
	2025 Future with Project	S	B
	2035 Future w/o Project	S	C
	2035 Future with Project	S	C
PANAMA LANE and SR-99 SB RAMP PM PEAK	Existing	S	C
	2025 Future w/o Project	S	E
	2025 Future with Project	S	E
	2035 Future w/o Project	S	F
	2035 Future with Project	S	F
PANAMA LANE and SR-99 NB RAMP AM PEAK	Existing	S	B
	2025 Future w/o Project	S	B
	2025 Future with Project	S	B
	2035 Future w/o Project	S	B
	2035 Future with Project	S	B
PANAMA LANE and SR-99 NB RAMP PM PEAK	Existing	S	B
	2025 Future w/o Project	S	B
	2025 Future with Project	S	B
	2035 Future w/o Project	S	B
	2035 Future with Project	S	C
PANAMA LANE and SOUTH H STREET AM PEAK	Existing	S	C
	2025 Future w/o Project	S	C
	2025 Future with Project	S	C
	2035 Future w/o Project	S	D
	2035 Future with Project	S	D
PANAMA LANE and SOUTH H STREET PM PEAK	Existing	S	D
	2025 Future w/o Project	S	D
	2025 Future w/o Project (Improved)	S	D
	2025 Future with Project	S	D
	2035 Future w/o Project	S	E
	2035 Future with Project	S	E

Table 4.16-1 (Continued). Intersection Level of Service.

Intersection	Scenario	Type	LOS
PANAMA LANE and SOUTH UNION AVENUE AM PEAK	Existing	S	C
	2025 Future w/o Project	S	D
	2025 Future w/o Project (Improved)	S	C
	2025 Future with Project	S	D
	2025 Future with Project (Mitigated)	S	C
	2035 Future w/o Project	S	E
	2035 Future w/o Project (Improved)	S	C
	2035 Future with Project	S	D
PANAMA LANE and SOUTH UNION PM PEAK	Existing	S	D
	2025 Future w/o Project	S	E
	2035 Future w/o Project (Improved)	S	D
	2025 Future with Project	S	D
	2035 Future w/o Project	S	F
	2035 Future w/o Project (Improved)	S	C
	2035 Future with Project	S	C
PANAMA LANE and COTTONWOOD ROAD AM PEAK	Existing	AWS	A
	2025 Future w/o Project	AWS	B
	2025 Future with Project	AWS	C
	2035 Future w/o Project	AWS	E
	2035 Future w/o Project (Improved)	AWS	C
	2035 Future with Project	AWS	C
PANAMA LANE and COTTONWOOD ROAD PM PEAK	Existing	AWS	C
	2025 Future w/o Project	AWS	F
	2025 Future w/o Project (Improved)	S	C
	2025 Future with Project	S	C
	2035 Future w/o Project	S	F
	2035 Future w/o Project (Improved)	S	C
	2035 Future with Project	S	C
HOSKING AVENUE and HUGHES AM PEAK	Existing	U	A
	2025 Future w/o Project	U	A
	2025 Future with Project	U	A
	2035 Future w/o Project	U	F
	2035 Future w/o Project (Improved)	S	D
	2035 Future with Project	S	D
HOSKING AVENUE and HUGHES PM PEAK	Existing	U	A
	2025 Future w/o Project	U	F
	2025 Future w/o Project (Improved)	S	C
	2025 Future with Project	S	C
	2035 Future w/o Project	S	D
	2035 Future with Project	S	D

Table 4.16-1 (Continued). Intersection Level of Service.

Intersection	Scenario	Type	LOS
HOSKING AVENUE and SR-99 SB RAMP AM PEAK	Existing	N/A	
	2025 Future w/o Project	U	B
	2025 Future with Project	U	B
	2035 Future w/o Project	U	C
	2035 Future with Project	U	C
HOSKING AVENUE and SR-99 SB RAMP PM PEAK	Existing	N/A	
	2025 Future w/o Project	U	A
	2025 Future with Project	U	A
	2035 Future w/o Project	U	B
	2035 Future with Project	U	B
HOSKING AVENUE and SR-99 NB RAMP AM PEAK	Existing	N/A	
	2025 Future w/o Project	U	A
	2025 Future with Project	U	A
	2035 Future w/o Project	U	A
	2035 Future with Project	U	A
HOSKING AVENUE and SR-99 NB RAMP PM PEAK	Existing	N/A	
	2025 Future w/o Project	U	A
	2025 Future with Project	U	A
	2035 Future w/o Project	U	A
	2035 Future with Project	U	A
HOSKING AVENUE and SOUTH H STREET AM PEAK	Existing	S	C
	2025 Future w/o Project	S	E
	2025 Future w/o Project (Improved)	S	C
	2025 Future with Project	S	C
	2035 Future w/o Project	S	F
	2035 Future w/o Project (Improved)	S	E
	2035 Future with Project	S	E
HOSKING AVENUE and SOUTH H STREET PM PEAK	Existing	S	D
	2025 Future w/o Project	S	F
	2025 Future w/o Project (Improved)	S	D
	2025 Future with Project	S	D
	2035 Future w/o Project	S	F
	2035 Future w/o Project (Improved)	S	E
	2035 Future with Project	S	E
HOSKING AVENUE and SOUTH UNION AVENUE AM PEAK	Existing	S	C
	2025 Future w/o Project	S	F
	2025 Future w/o Project (Improved)	S	C
	2025 Future with Project	S	C
	2035 Future w/o Project	S	F
	2035 Future w/o Project (Improved)	S	C
	2035 Future with Project	S	C

Table 4.16-1 (Continued). Intersection Level of Service.

Intersection	Scenario	Type	LOS
HOSKING AVENUE and SOUTH UNION AVENUE PM PEAK	Existing	S	B
	2025 Future w/o Project	S	C
	2025 Future with Project	S	C
	2035 Future w/o Project	S	D
	2035 Future w/o Project (Improved)	S	C
	2035 Future with Project	S	C
HOSKING AVENUE and COTTONWOOD ROAD AM PEAK	Existing	U	A
	2025 Future w/o Project	U	A
	2025 Future with Project	U	A
	2035 Future w/o Project	U	A
	2035 Future with Project	U	A
HOSKING AVENUE and COTTONWOOD ROAD PM PEAK	Existing	U	A
	2025 Future w/o Project	U	A
	2025 Future with Project	U	A
	2035 Future w/o Project	U	A
	2035 Future with Project	U	A
TAFT HIGHWAY/SR-119 and WIBLE AM PEAK	Existing	S	B
	2025 Future w/o Project	S	C
	2025 Future with Project	S	C
	2035 Future w/o Project	S	E
	2035 Future w/o Project (Improved)	S	C
	2035 Future with Project	S	C
TAFT HIGHWAY/SR-119 and WIBLE PM PEAK	Existing	S	B
	2025 Future w/o Project	S	C
	2025 Future with Project	S	C
	2035 Future w/o Project	S	F
	2035 Future w/o Project (Improved)	S	C
	2035 Future with Project	S	C
TAFT HIGHWAY/SR-119 and COMPAGNONI STREET / SR-99 SB RAMP AM PEAK	Existing	S	C
	2025 Future w/o Project	S	D
	2025 Future w/o Project (Improved)	S	C
	2025 Future with Project	S	C
	2035 Future w/o Project	S	C
	2035 Future with Project	S	C
TAFT HIGHWAY/SR-119 and COMPAGNONI STREET / SR-99 SB RAMP PM PEAK	Existing	S	E
	2025 Future w/o Project	S	F
	2025 Future w/o Project (Improved)	S	D
	2025 Future with Project	S	D
	2035 Future w/o Project	S	F
	2035 Future w/o Project (Improved)	S	C
	2035 Future with Project	S	C

Table 4.16-1 (Continued). Intersection Level of Service.

Intersection	Scenario	Type	LOS
TAFT HIGHWAY/SR-119 and SOUTH H STREET AM PEAK	Existing	S	D
	2025 Future w/o Project	S	F
	2025 Future w/o Project (Improved)	S	C
	2025 Future with Project	S	C
	2035 Future w/o Project	S	F
	2035 Future w/o Project (Improved)	S	D
	2035 Future with Project	S	D
TAFT HIGHWAY/SR-119 and SOUTH H STREET PM PEAK	Existing	S	C
	2025 Future w/o Project	S	E
	2025 Future w/o Project (Improved)	S	C
	2025 Future with Project	S	C
	2035 Future w/o Project	S	E
	2035 Future w/o Project (Improved)	S	D
	2035 Future with Project	S	E
	2035 Future with Project (Mitigated)	S	D
TAFT HIGHWAY/ SR-119/PANAMA ROAD and SOUTH UNION AVENUE AM PEAK	Existing	S	B
	2025 Future w/o Project	S	C
	2025 Future with Project	S	C
	2035 Future w/o Project	S	C
	2035 Future with Project	S	C
TAFT HIGHWAY/SR-119/PANAMA ROAD and SOUTH UNION AVENUE PM PEAK	Existing	S	C
	2025 Future w/o Project	S	C
	2025 Future with Project	S	C
	2035 Future w/o Project	S	D
	2035 Future w/o Project (Improved)	S	C
	2035 Future with Project	S	C
PANAMA ROAD[1] and COTTONWOOD AM PEAK	Existing	AWS	A
	2025 Future w/o Project	AWS	C
	2025 Future with Project	AWS	C
	2035 Future w/o Project	AWS	F
	2035 Future w/o Project (Improved)	S	D
	2035 Future with Project	S	D
PANAMA ROAD[1] and COTTONWOOD PM PEAK	Existing	AWS	C
	2025 Future w/o Project	AWS	F
	2025 Future w/o Project (Improved)	S	D
	2025 Future with Project	S	D
	2035 Future w/o Project	S	F
	2035 Future w/o Project (Improved)	S	E
	2035 Future with Project	S	E

[1] Taft Highway/ SR-119 becomes Panama Road at South Union Avenue.

Table 4.16-1 (Continued). Intersection Level of Service.

Intersection	Scenario	Type	LOS
CURNOW ROAD and SOUTH UNION AVENUE AM PEAK	Existing	U	A
	2025 Future w/o Project	U	A
	2025 Future with Project	U	A
	2035 Future w/o Project	U	A
	2035 Future with Project	U	A
CURNOW ROAD and SOUTH UNION AVENUE PM PEAK	Existing	U	A
	2025 Future w/o Project	U	A
	2025 Future with Project	U	A
	2035 Future w/o Project	U	C
	2035 Future with Project	U	F
	2035 Future with Project (Mitigated)	U	C
CURNOW and COTTONWOOD AM PEAK	Existing	U	A
	2025 Future w/o Project	U	A
	2025 Future with Project	U	A
	2035 Future w/o Project	U	A
	2035 Future with Project	U	A
CURNOW and COTTONWOOD PM PEAK	Existing	U	A
	2025 Future w/o Project	U	A
	2025 Future with Project	U	A
	2035 Future w/o Project	U	A
	2035 Future with Project	U	A
DiGIORGIO and CHEVALIER (#1) AM PEAK	Existing	N/A	
	2025 Future w/o Project		
	2025 Future with Project	U	A
	2035 Future w/o Project		
	2035 Future with Project	U	A
DiGIORGIO and CHEVALIER (#1) PM PEAK	Existing	N/A	
	2025 Future w/o Project		
	2025 Future with Project	U	A
	2035 Future w/o Project		
	2035 Future with Project	U	A
DiGIORGIO and SOUTH UNION AVENUE AM PEAK	Existing	U	A
	2025 Future w/o Project	U	A
	2025 Future with Project	U	A
	2035 Future w/o Project	U	A
	2035 Future with Project	U	B

Table 4.16-1 (Continued). Intersection Level of Service.

Intersection	Scenario	Type	LOS
DiGIORGIO and SOUTH UNION AVENUE PM PEAK	Existing	U	A
	2025 Future w/o Project	U	A
	2025 Future with Project	U	E
	2025 Future with Project (Mitigated)	U	C
	2035 Future w/o Project	U	B
	2035 Future with Project	U	A
DiGIORGIO and COTTONWOOD AM PEAK	Existing	AWS	A
	2025 Future w/o Project	AWS	A
	2025 Future with Project	AWS	A
	2035 Future w/o Project	AWS	A
	2035 Future with Project	AWS	A
DiGIORGIO and COTTONWOOD ROAD PM PEAK	Existing	AWS	A
	2025 Future w/o Project	AWS	A
	2025 Future with Project	AWS	A
	2035 Future w/o Project	AWS	A
	2035 Future with Project	AWS	B
LAMB AVENUE and SOUTH UNION AVENUE (#2) AM PEAK	Existing	U	A
	2025 Future w/o Project	U	A
	2025 Future with Project	U	A
	2035 Future w/o Project	U	A
	2035 Future with Project	U	A
LAMB AVENUE and SOUTH UNION AVENUE (#2) PM PEAK	Existing	U	A
	2025 Future w/o Project	U	A
	2025 Future with Project	U	A
	2035 Future w/o Project	U	A
	2035 Future with Project	U	D
	2035 Future with Project (Mitigated)	U	A
ENTRANCE # 3 and SOUTH UNION AM PEAK	Existing	N/A	
	2025 Future w/o Project	U	
	2025 Future with Project	U	A
	2035 Future w/o Project	U	
	2035 Future with Project	U	A
ENTRANCE # 3 and SOUTHUNION AVENUE PM PEAK	Existing	N/A	
	2025 Future w/o Project	U	
	2025 Future with Project	U	A
	2035 Future w/o Project	U	
	2035 Future with Project	U	A

Table 4.16-1 (Continued). Intersection Level of Service.

Intersection	Scenario	Type	LOS
MUGSY AVENUE (#4) and SOUTH UNION AVENUE AM PEAK	Existing	U	A
	2025 Future w/o Project	U	A
	2025 Future with Project	U	A
	2035 Future w/o Project	U	A
	2035 Future with Project	U	A
MUGSY (#4) and SOUTH UNION AVENUE PM PEAK	Existing	U	A
	2025 Future w/o Project	U	A
	2025 Future with Project	U	A
	2035 Future w/o Project	U	A
	2035 Future with Project	U	A
HOUGHTON and STINE AM PEAK	Existing	AWS	A
	2025 Future w/o Project	AWS	A
	2025 Future with Project	AWS	A
	2035 Future w/o Project	AWS	A
	2035 Future with Project	AWS	A
HOUGHTON and STINE PM PEAK	Existing	AWS	A
	2025 Future w/o Project	AWS	A
	2025 Future with Project	AWS	A
	2035 Future w/o Project	AWS	A
	2035 Future with Project	AWS	A
HOUGHTON and WIBLE AM PEAK	Existing	AWS	A
	2025 Future w/o Project	AWS	A
	2025 Future with Project	AWS	A
	2035 Future w/o Project	AWS	A
	2035 Future with Project	AWS	A
HOUGHTON and WIBLE PM PEAK	Existing	AWS	A
	2025 Future w/o Project	AWS	A
	2025 Future with Project	AWS	A
	2035 Future w/o Project	AWS	A
	2035 Future with Project	AWS	A
HOUGHTON and SOUTH H STREET AM PEAK	Existing	AWS	A
	2025 Future w/o Project	AWS	A
	2025 Future with Project	AWS	A
	2035 Future w/o Project	AWS	A
	2035 Future with Project	AWS	A
HOUGHTON and SOUTH H STREET PM PEAK	Existing	AWS	A
	2025 Future w/o Project	AWS	A
	2025 Future with Project	AWS	A
	2035 Future w/o Project	AWS	A
	2035 Future with Project	AWS	A

Table 4.16-1 (Continued). Intersection Level of Service.

Intersection	Scenario	Type	LOS
HOUGHTON and SR-99 SB RAMP AM PEAK	Existing	U	A
	2025 Future w/o Project	U	A
	2025 Future with Project	U	C
	2035 Future w/o Project	U	A
	2035 Future with Project	U	F
	2035 Future with Project (Mitigated)	S	C
HOUGHTON and SR-99 SB RAMPS PM PEAK	Existing	U	A
	2025 Future w/o Project	U	A
	2025 Future with Project	U	A
	2035 Future w/o Project	U	A
	2035 Future with Project	U	D
	2035 Future with Project (Mitigated)	U	C
HOUGHTON and SR-99 NB RAMPS AM PEAK	Existing	U	A
	2025 Future w/o Project	U	A
	2025 Future with Project	U	A
	2035 Future w/o Project	U	A
	2035 Future with Project	U	F
	2035 Future with Project (Mitigated)	S	C
HOUGHTON and SR-99 NB RAMPS PM PEAK	Existing	U	A
	2025 Future w/o Project	U	A
	2025 Future with Project	U	B
	2035 Future w/o Project	U	A
	2035 Future with Project	U	F
	2035 Future with Project (Mitigated)	S	C
HOUGHTON and PROJECT ENTRANCE #7 AM PEAK	Existing	N/A	
	2025 Future w/o Project	U	
	2025 Future with Project	U	A
	2035 Future w/o Project	U	
	2035 Future with Project	U	A
HOUGHTON and PROJECT ENTRANCE # 7 PM PEAK	Existing	N/A	
	2025 Future w/o Project	U	
	2025 Future with Project	U	A
	2035 Future w/o Project	U	
	2035 Future with Project	U	F
	2035 Future with Project (Mitigated)	U	A
HOUGHTON and CHEVALIER (#6) AM PEAK	Existing	U	A
	2025 Future w/o Project	U	A
	2025 Future with Project	U	C
	2035 Future w/o Project	U	A
	2035 Future with Project	U	F
	2025 Future with Project (Mitigated)	S	D

Table 4.16-1 (Continued). Intersection Level of Service.

Intersection	Scenario	Type	LOS
HOUGHTON and CHEVALIER (#6) PM PEAK	Existing	U	A
	2025 Future w/o Project	U	A
	2025 Future with Project	U	F
	2025 Future with Project (Mitigated)	S	C
	2035 Future w/o Project	U	A
	2035 Future with Project	S	F
	2035 Future with Project (Mitigated)	S	E
HOUGHTON and ENTRANCE #5 AM PEAK	Existing	N/A	
	2025 Future w/o Project	U	
	2025 Future with Project	U	A
	2035 Future w/o Project	U	
	2035 Future with Project	U	A
HOUGHTON and ENTRANCE # 5 PM PEAK	Existing	N/A	
	2025 Future w/o Project	U	
	2025 Future with Project	U	A
	2035 Future w/o Project	U	
	2035 Future with Project	U	B
HOUGHTON and SOUTH UNION AVENUE AM PEAK	Existing	AWS	A
	2025 Future w/o Project	AWS	A
	2025 Future with Project	AWS	B
	2035 Future w/o Project	AWS	B
	2035 Future with Project	AWS	C
HOUGHTON ROAD/ and SOUTH UNION AVENUE PM PEAK	Existing	AWS	A
	2025 Future w/o Project	AWS	B
	2025 Future with Project	AWS	D
	2025 Future with Project (Mitigated)	AWS	C
	2035 Future w/o Project	AWS	C
	2035 Future with Project	AWS	F
	2035 Future with Project (Mitigated)	S	D
BUENA VISTA BLVD and COTTONWOOD ROAD AM PEAK	Existing	U	A
	2025 Future w/o Project	U	A
	2025 Future with Project	U	A
	2035 Future w/o Project	U	A
	2035 Future with Project	U	A
BUENA VISTA BLVD and COTTONWOOD ROAD PM PEAK	Existing	U	A
	2025 Future w/o Project	U	A
	2025 Future with Project	U	A
	2035 Future w/o Project	U	A
	2035 Future with Project	U	A

Table 4.16-1 (Continued). Intersection Level of Service.

Intersection	Scenario	Type	LOS
BUENA VISTA BLVD and ADOBE ROAD AM PEAK	Existing	U	A
	2025 Future w/o Project	U	A
	2025 Future with Project	U	A
	2035 Future w/o Project	U	A
	2035 Future with Project	U	A
BUENA VISTA BLVD and ADOBE ROAD PM PEAK	Existing	U	A
	2025 Future w/o Project	U	A
	2025 Future with Project	U	A
	2035 Future w/o Project	U	A
	2035 Future with Project	U	A
SHAFTER ROAD and SOUTH UNION AVENUE AM PEAK	Existing	U	A
	2025 Future w/o Project	U	A
	2025 Future with Project	U	A
	2035 Future w/o Project	U	A
	2035 Future with Project	U	A
SHAFTER ROAD and SOUTH UNION AVENUE PM PEAK	Existing	U	A
	2025 Future w/o Project	U	A
	2025 Future with Project	U	A
	2035 Future w/o Project	U	A
	2035 Future with Project	U	A
SR-99 SB RAMP and COSTAJO ROAD AM PEAK	Existing	U	A
	2025 Future w/o Project	U	A
	2025 Future with Project	U	A
	2035 Future w/o Project	U	D
	2035 Future with Project	U	D
.			
SR-99 SB RAMP and COSTAJO ROAD PM PEAK	Existing	U	A
	2025 Future w/o Project	U	B
	2025 Future with Project	U	B
	2035 Future w/o Project	U	F
	2035 Future with Project	U	F
	2035 Future with Project (Mitigated)	U	F
BEAR MOUNTAIN BLVD and COSTAJO ROAD AM PEAK	Existing	U	A
	2025 Future w/o Project	U	A
	2025 Future with Project	U	A
	2035 Future w/o Project	U	A
	2035 Future with Project	U	A
BEAR MOUNTAIN BLVD and COSTAJO ROAD PM PEAK	Existing	U	A
	2025 Future w/o Project	U	B
	2025 Future with Project	U	B
	2035 Future w/o Project	U	F
	2035 Future with Project	U	F

Table 4.16-1 (Continued). Intersection Level of Service.

Intersection	Scenario	Type	LOS
BEAR MOUNTAIN BLVD and SR-99 NB RAMP AM PEAK	Existing	U	A
	2025 Future w/o Project	U	A
	2025 Future with Project	U	A
	2035 Future w/o Project	U	A
	2035 Future with Project	U	A
BEAR MOUNTAIN BLVD AND SR-99 NB RAMP PM PEAK	Existing	U	A
	2025 Future w/o Project	U	A
	2025 Future with Project	U	A
	2035 Future w/o Project	U	A
	2035 Future with Project	U	A
BEAR MOUNTAIN BLVD and SOUTH UNION AVENUE AM PEAK	Existing	AWS	B
	2025 Future w/o Project	AWS	B
	2025 Future with Project	AWS	B
	2035 Future w/o Project	AWS	C
	2035 Future with Project	AWS	C
BEAR MOUNTAIN BLVD/ SR-223 and SOUTH UNION AVENUE PM PEAK	Existing	AWS	B
	2025 Future w/o Project	AWS	C
	2025 Future with Project	AWS	C
	2035 Future w/o Project	AWS	E
	2035 Future with Project	AWS	E

U-Unsignalized Intersection; S-Signalized Intersection; AWS - All Way Stop
Notes:
[1] Taft Highway/ SR-119 becomes Panama Road at South Union Avenue.

Source: Traffic Impact Study for 99 Houghton, McIntosh & Associates, November 2016.

Existing Traffic Signal Warrants

Signalization of an intersection is not necessarily justified by the satisfaction of a single warrant. Poor operations (LOS) and poor safety characteristics, as well as satisfaction of multiple warrants are normally the criteria for installing a traffic signal. For purposes of the Traffic Study, a poor operational LOS for multiple movements, and satisfaction of signal warrants, was considered justification for traffic signal installations.

All unsignalized intersections within the Traffic Study scope were analyzed for traffic signal warrants using the procedures outlined in the California Manual on Uniform Traffic Control Devices (MUTCD) for Warrants 1A: ADT – Minimum Vehicular Traffic; 1B: ADT – Interruption of Continuous Traffic; 1A and 1B: ADT – Combinations of Warrants 1A and 1B; and 3: Peak Hour (70% Factor) Warrant.

Under Existing 2016 Conditions, traffic signal warrants are not satisfied at any of the study intersections.

Existing Roadway Volume to Capacity (V/C)

The volume-to-capacity (V/C) ratios were calculated for roadways under existing conditions, based on published average daily traffic (ADT) information. The proposed Project is located within the Metropolitan Bakersfield General Plan; therefore, Metropolitan Bakersfield General Plan performance criterion was utilized for intersections and roadway segments. A V/C of greater than 0.80 corresponds to a LOS "D", "E", or "F".

The following roadway segments operate at unacceptable LOS under Existing 2016 Conditions:

- Taft Highway/SR-119/SR-99 Northbound Ramp: South H Street (V/C=0.98; LOS "E")
- Taft Highway/SR-119/Panama Road: South H Street to South Union Avenue (V/C=1.03; LOS "F")
- Taft Highway/SR-119/Panama Road: South Union Avenue to Cottonwood Road (V/C=0.89; LOS "D")
- Panama Road: East of Cottonwood Road (V/C=0.85; LOS "D")
- Bear Mountain Boulevard/SR-223: SR-99 Northbound Ramp to South Union Avenue (V/C=0.93; LOS "E")
- Bear Mountain Boulevard/SR-223: East of South Union Avenue (V/C=0.94; LOS "E")

Non-Motorized Transportation

There are no dedicated pedestrian or bicycle facilities in the immediate proposed Project vicinity or along the surrounding roadways.

Public Transit

Public transportation in Kern County is provided by Kern Regional Transit. Kern County provides service between Bakersfield and rural communities, such as Lamont and the Kern River Valley, while the private carriers serve other major cities. Kern Regional Transit has 16 fixed routes, and also provides a dial-a-ride general public transportation service for residents in Lake Isabella, Lamont, Mojave, Rosamond, Tehachapi, and Frazier Park. In addition, Kern Regional Transit provides a non-emergency medical dial-a-ride service to passengers traveling to and from the Metropolitan Bakersfield area on the fixed routes for medical appointments.

The largest transit system for the Metropolitan Bakersfield area is Golden Empire Transit (GET), which is the local bus operator. GET operates 18 routes throughout the Metropolitan Bakersfield area and carries approximately 23,000 passengers per day. This amounts to one percent of total travel in the Metropolitan Bakersfield area. GET does not provide service outside of the Metropolitan Bakersfield area.

Intercity bus operators are Greyhound, Orange Belt Stages, Airport Bus of Bakersfield and Kern County. Paratransit providers include the taxicab system and various social service agencies that provide specialized transportation to their clients.

Amtrak provides rail service to and from Bakersfield. The Amtrak station is located at Truxtun Avenue and S Street.

Existing rail lines include two major railroads that provide freight service to Bakersfield: Burlington Northern-Santa Fe (BNSF) and Southern Pacific. The BNSF and the Union Pacific (UPRR) rail yard is located in East Bakersfield between Kentucky and Sumner Streets.

Airport Facilities

Commercial air travel in the area is provided by Meadows Field Airport, which is owned by Kern County and is one of seven airports operated by the Department of Airports. Located approximately seven (7) miles north of downtown Bakersfield and approximately 12 miles north of the proposed Project site, Meadows Field Airport serves more than 700,000 people in or near the southern San Joaquin Valley. The airport is approximately 1,400 acres in size.

The Bakersfield Municipal Airport, owned by the City of Bakersfield, is approximately 200 acres in size with two runways and is located approximately five (5) miles northeast of the proposed Project site. It is a corporate airport that is home to over 100 general aviation aircraft and primarily serves general aviation small aircraft for destinations in southern California.

Costerisan Farms Airport, a private airstrip, was located approximately two (2) miles northwest of proposed Project site. Costerisan Farms Airport was serviced by two grass runways. This private airstrip is no longer in use (pilotnav 2017).

Because several miles exist between the airports and the proposed Project site, neither construction nor completion of the proposed Project is expected to have any effect on air traffic patterns. Thus, air traffic patterns are not further addressed in the impact analysis for this proposed Project.

4.16.3 Regulatory Setting

Federal

Federal Aviation Administration (FAA)

The FAA regulates aviation at regional, public, private, and military airports, such as Lemoore Naval Air Station Tejon Ag Airport. The FAA regulates objects affecting navigable airspace and structures taller than 200 feet according to Federal Aviation Regulation 14 Code of Federal Regulations Part 77 (14 CFR 77). The U.S. and California Departments of Transportation also require the proponent to submit FAA Form 7460-1, Notice of Proposed Construction or Alteration.

As described in 14 CFR 77.9 (Construction or alteration requiring notice), each sponsor who proposes any of the following construction or alteration scenarios shall notify the FAA in the form and manner as follows:

> If requested by the FAA, or if you propose any of the following types of construction or alteration, you must file notice with the FAA of:
>
> (a) Any construction or alteration that is more than 200 feet AGL at its site.

(b) Any construction or alteration that exceeds an imaginary surface extending outward and upward at any of the following slopes:

(1) 100 to 1 for a horizontal distance of 20,000 feet from the nearest point of the nearest runway of each airport described in paragraph (d) of this section with its longest runway more than 3,200 ft. in actual length, excluding heliports.

(2) 50 to 1 for a horizontal distance of 10,000 feet from the nearest point of the nearest runway of each airport described in paragraph (d) of this section with its longest runway no more than 3,200 feet in actual length, excluding heliports.

(3) 25 to 1 for a horizontal distance of 5,000 feet from the nearest point of the nearest landing and takeoff area of each heliport described in paragraph (d) of this section.

(c) Any highway, railroad, or other traverse way for mobile objects, of a height which, if adjusted upward 17 feet for an Interstate Highway that is part of the National System of Military and Interstate Highways where overcrossings are designed for a minimum of 17 feet vertical distance, 15 feet for any other public roadway, 10 feet or the height of the highest mobile object that would normally traverse the road, whichever is greater, for a private road, 23 feet for a railroad, and for a waterway or any other traverse way not previously mentioned, an amount equal to the height of the highest mobile object that would normally traverse it, would exceed a standard of paragraph (a) or (b) of this section.

(d) Any construction or alteration on any of the following airports and heliports:

(1) A public use airport listed in the Airport/Facility Directory, Alaska Supplement, or Pacific Chart Supplement of the U.S. Government Flight Information Publications;

(2) A military airport under construction, or an airport under construction that will be available for public use;

(3) An airport operated by a Federal agency or the DOD.

(4) An airport or heliport with at least one FAA-approved instrument approach procedure.

(e) You do not need to file notice for construction or alteration of:

(1) Any object that will be shielded by existing structures of a permanent and substantial nature or by natural terrain or topographic features of equal or greater height, and will be located in the congested area of a city, town, or settlement where the shielded structure will not adversely affect safety in air navigation;

(2) Any air navigation facility, airport visual approach or landing aid, aircraft arresting device, or meteorological device meeting FAA-approved siting criteria or an appropriate military service siting criteria on military airports, the location and height of which are fixed by its functional purpose;

(3) Any construction or alteration for which notice is required by any other FAA regulation.

(4) Any antenna structure of 20 feet or less in height, except one that would increase the height of another antenna structure.

Per 14 CFR 77.7, notification requirements include sending one executed form set of FAA Form 7460-1, Notice of Proposed Construction or Alteration, to the Manager, Air Traffic Division, FAA Regional Office having jurisdiction over the area within which the construction or alteration will be located. The notice required must be submitted at least 45 days before the earlier of the following dates: (1) the date the proposed construction or alteration is to begin, or (2) the date an application for a construction permit is to be filed.

State

California Department of Transportation

The California Department of Transportation (Caltrans) is responsible for operating and maintaining the State highway system. In the project vicinity, SR-99 and associated freeway ramps and ramp terminal intersections fall under Caltrans jurisdiction. Caltrans provides administrative support for transportation programming decisions made by the California Transportation Commission (CTC) for state funding programs. The State Transportation Improvement Program (STIP) is a multi-year capital improvement program that sets priorities and funds transportation projects envisioned in long-range transportation plans. The Caltrans *Guide for the Preparation of Traffic Impact Studies* provides general guidance regarding the preparation of traffic impact studies for projects that may have an impact on the State Highway System. The Caltrans *Highway Design Manual* (HDM) establishes uniform policies and procedures for State highway designs. Caltrans also sets maximum load limits for trucks and safety requirements and administers the following regulations for oversized vehicles that operate on State highways:

California Vehicle Code (CVC), Division 15, Chapters 1 through 5 (Size, Weight, and Load)

Includes regulations pertaining to licensing, size, weight, and load of vehicles operated on highways.

California Street and Highway Code Sections 660-711, 670-695

Requires permits from Caltrans for any roadway encroachment during truck transportation and delivery, includes regulations for the care and protection of State and county highways and provisions for the issuance of written permits, and requires permits for any load that exceeds Caltrans weight, length, or width standards for public roadways.

Local

Metropolitan Bakersfield General Plan

Traffic analysis in the State of California is guided by policies and standards set at the state level by Caltrans and local jurisdictions. Transportation policies that may apply to the proposed Project are discussed within the Metropolitan Bakersfield General Plan. The Metropolitan Bakersfield General Plan is the product of a joint planning effort between the City of Bakersfield and Kern County, and it covers all territory within the Bakersfield Metropolitan Priority Area of the Kern County General Plan. The goals and policies that apply to transportation are discussed below in Table 4.16-2, *Metropolitan Bakersfield General Plan Goals and Policies for Traffic and Circulation.*

Kern Council of Governments (Kern COG) Congestion Management Program (CMP)

All urbanized areas larger than 200,000 persons are required to have a Congestion Management System, Program, or Process. Kern COG refers to its congestion management activities as the Congestion Management Program (CMP). Kern COG was designated as the Congestion Management Agency.

The CMP is a systematic process for managing congestion that provides information on: (1) transportation system performance, and (2) alternative strategies for alleviating congestion and enhancing the mobility of persons and goods to levels that meet state and local needs.

The purpose of the CMP is to help ensure that a balanced transportation system is developed that relates population growth, traffic growth and land use decisions to transportation system LOS performance standards and air quality improvement. The CMP is an effort to more directly link land use, air quality, transportation and the use of new advanced transportation technologies as an integral and complementary part of this region's plans and programs.

The purpose of defining the CMP network is to establish a system of roadways that will be monitored in relation to established LOS standards. At a minimum, all State highways and principal arterials must be designated as part of the Congestion Management System of Highways and Roadways. Kern County has 18 designated state highways.

This Page Intentionally Left Blank

Table 4.16-2. Metropolitan Bakersfield General Plan Goals and Policies for Traffic and Circulation
GOALS AND POLICIES
Circulation Element - Streets Goals
Streets Goal #1: Provide a safe and efficient street system that links all parts of the area for movement of people and goods.
Streets Goal #2: Provide for safe and efficient motorized, non-motorized, and pedestrian traffic movement.
Streets Goal #3: Minimize the impact of truck traffic on circulation, and on noise sensitive land uses.
Streets Goal #4: Provide a street system that creates a positive image of Bakersfield and contributes to residents' quality of life.
Streets Goal #6: Provide a local street network that contributes to the quality and safety of residential neighborhoods and commercial districts.
Streets Goal #7: Develop and maintain a circulation system that supports the land use plan shown in the General Plan.
Circulation Element - Streets Policies
Streets Policy #3: Provide additional right-of-way and pavement width to accommodate turn lanes at intersections.
Streets Policy #4: Provide additional right-of-way and pavement width at other locations for turn lanes, bus lanes, etc., as needed, based on engineering study.
Streets Policy #5: Place traffic signals to minimize delay.
Streets Policy #6: Design and locate site access driveways to minimize traffic disruption where possible considering items such as topography, past parcelization and other factors.
Streets Policy #7: Minimize direct and uncontrolled property access from arterials.
Streets Policy #8: Limit full access median breaks on arterials to a maximum of three per mile and include left-turn lanes at each.
Streets Policy #10: Design local streets to conform to topography. Allow for deviation from "grid" system on local streets when they do not interfere with other traffic policies and traffic flows.
Street Policy #11: Design local collector street systems to minimize through traffic movements and include short block lengths to discourage excessive speeds.
Streets Policy #12: Maintain the integrity of the circulation system.
Streets Policy #18: Provide and maintain landscaping on both sides and in the median of arterial streets within incorporated areas. In unincorporated areas, landscaping within road right-of-way may be allowed and shall be limited to low shrubs; blank irrigation conduit only will be provided within the median of arterial streets.
Streets Policy #19: Provide and maintain landscaping on both sides of collector streets. In unincorporated areas, landscaping within road right-of-way may be allowed and shall be limited to low shrubs.
Streets Policy #21: Route traffic around, rather than through, pedestrian-oriented areas.
Streets Policy #22: Design transportation improvements to minimize noise impacts on adjacent uses.

Table 4.16-2. Metropolitan Bakersfield General Plan Goals and Policies for Traffic and Circulation
GOALS AND POLICIES
Streets Policy #32: Reserve or acquire right-of-way for all future transportation facilities in conformance with the Circulation Plan Map.
Streets Policy #35: Require new development and expansion of existing development in incorporated areas to fully provide for on-site transportation facilities including, streets, curbs, traffic control devices, etc. Within unincorporated areas street improvements will be determined by County Ordinance.
Streets Policy #36: Prevent streets and intersections from degrading below Level of Service "C" where possible due to physical constraints (as defined in a Level of Service Ordinance) or when the existing Level of Service is below "C" prevent where possible further degradation due to new development with a three-part mitigation program: adjacent right-of-way dedication, access improvements and/or on area-wide impact fee. The area-wide impact fee would be used where the physical changes for mitigation are not possible due to existing development and/or the mitigation measures is part of a larger Project, such as freeways, which will be built at a later date.
Streets Policy #37: Require new development and expansion of existing development to pay for necessary access improvements, such as street extensions, widenings, turn lanes, signals, etc., as identified in the transportation impact report as may be required for a Project.
Streets Policy #39: Require new development and expansion of existing development to pay or participate in its pro rata share of the costs of expansions in area-wide transportation facilities and services which it necessitates.
Streets Policy #40: Provide new local street systems that are logical and comprehensible and systems of street names and addresses that are simple, consistent, and understandable.
Streets Policy #41: Plan alignments for local streets to permit economical and practical patterns, shapes, and sizes of development parcels.
Circulation Element - Transit Goals
Transit Goal #2: Provide a street system and land development policies that support public transportation.
Transit Goal #3: Provide cost-effective public transportation services.
Transit Goal #4: Reduce traffic congestion and parking requirements and improve air quality through improved transportation services.
Circulation Element - Transit Policies
Transit Policy #1: Consider transit service issues in the design of the arterial and collector street system.
Transit Policy #2: Consider for bus turnouts along arterials and collectors where appropriate.
Transit Policy #3: Consider transit service issues in the site planning review process.
Transit Policy #4: Coordinate with GET [Golden Empire Transit] to locate bus stops as close as possible to the facilities they serve.
Circulation Element - Bikeways Goals
Bikeways Goal #1: Provide a circulation system which recognizes and responds to the needs of bicycle travel.
Bikeways Goal #2: Provide a circulation system that minimizes cyclist/motorist conflicts.

Table 4.16-2. Metropolitan Bakersfield General Plan Goals and Policies for Traffic and Circulation
GOALS AND POLICIES
Circulation Element - Bikeways Policies
Bikeways Policy #5: Consider bicycle safety when implementing improvements for automobile traffic operations.
Bikeways Policy #7: Provide bicycle parking facilities at activity centers such as shopping centers, employment sites, and public buildings.
Bikeways Policy #9: Require new subdivisions to provide bike lanes on collector and arterial streets in accordance with the Bikeway Master Plan.
Bikeways Policy #11: Construct bike lanes in conjunction with all street improvement Projects that coincide with the Bikeway Master Plan.
Circulation Element - Parking Goals
Parking Goal #1: Provide an efficient parking system to respond to the needs of motorists.
Parking Goal #2: Satisfy parking requirements in all new developments (residential, commercial, industrial, etc.) through off-street facilities.
Parking Goal #3: Preserve and enhance residential neighborhoods through parking policy.
Circulation Element - Parking Policies
Parking Policy #1: Periodic review and, if needed, revision of adopted minimum parking requirements based on parking demand.
Parking Policy #2: Periodic review and, if needed, revision of adopted stall and aisle widths that are convenient and efficient.
Parking Policy #5: Remove abandoned vehicles promptly from city streets.
Parking Policy #6: Regulate parking of vehicle, boats, trailers, etc. on city streets.
Parking Policy #7: Identify on-site parking needs in activity centers and outline procedures to finance and provide the facilities.
Parking Policy #8: Give top priority to satisfying short-term parking needs, i.e., less than or equal to three hours, and second priority to long-term parking needs.
Parking Policy #9: Locate short-term parking to be convenient to the businesses served.
Parking Policy #10: Locate long-term parking on peripheral lands, accessible to arterial streets.
Parking Policy #11: Discourage parking between the sidewalk and buildings in pedestrian sensitive areas.
Circulation Element - Pedestrian Ways Goals
Pedestrian Ways Goal #1: Encourage pedestrian travel as a viable mode of movement throughout the Planning area.
Pedestrian Ways Goal #2: Provide adequate sidewalks throughout the planning area.

Table 4.16-2. Metropolitan Bakersfield General Plan Goals and Policies for Traffic and Circulation
GOALS AND POLICIES
Circulation Element - Pedestrian Ways Policies
Pedestrian Ways Policy #1: Provide sidewalks along streets where pedestrian use warrants.
Pedestrian Ways Policy #4: Provide for the physically handicapped in the design of all pedestrian facilities.
Pedestrian Ways Policy #5: Encourage development of pedestrian sensitive uses and design characteristics in the following areas: a) Downtown b) Baker Street c) Southwest Center d) Northwest Center

4.16.4 Impacts and Mitigation Measures

Methodology

This section presents the methodologies used to perform the traffic analyses. The study methodology is consistent with the guidelines of the City of Bakersfield, Caltrans, Kern County, and the Metropolitan Bakersfield General Plan. The overall methodologies used to develop future traffic volume forecasts and the explicit traffic operations analysis methodologies are summarized herein.

Analyses were performed for Year 2016 for existing conditions, and Years 2025 and 2035 for both the "without Project" and "with Project" scenarios. The Traffic Study obtained Year 2016 traffic volumes by conducting traffic counts in accordance with all agencies within the study area: Kern County, City of Bakersfield, and Caltrans. Year 2025 and Year 2035 traffic volumes in the Traffic Study were determined using data from a regional cumulative projects traffic model prepared by Kern COG. Proposed Project impacts were assessed based on roadway and intersection LOS. Improvements needed to maintain or improve traffic operational LOS were also identified.

Intersection Analysis Methodology

Traffic LOS is commonly used as a qualitative description of intersection operation and is based on the capacity of the intersection and the volume of traffic using the intersection. The methods used to evaluate cumulative plus project traffic conditions were taken from the Transportation Research Board, National Research Council's 2010 Highway Capacity Manual (HCM). Additionally, the SYNCHRO 9 computer software package was utilized to coordinate and facilitate extensive HCM intersection calculations.

The 2010 HCM Operational Analysis Methodology describes the operation of an unsignalized intersection using a range from LOS "A" (free-flow conditions) to "F" (severely congested conditions), based on the average delay experienced per vehicle, as shown in Table 4.16-3, *Level of Service Criteria for Unsignalized Intersections.*

Table 4.16-3. Level of Service Criteria for Unsignalized Intersections

Level of Service	Average Control Delay (Seconds per Vehicle)	Expected Delay to Minor Street Traffic
A	= 10	Little or no delay
B	> 10 and = 15	Short traffic delays
C	> 15 and = 25	Average traffic delays
D	> 25 and = 35	Long traffic delays
E	> 35 and = 50	Very long traffic delays
F	> 50	When demand volume exceeds the capacity of the lane, extreme delays will be encountered. This condition usually warrants improvement to the intersection.

Source: 2010 Highway Capacity Manual.

Operating conditions at intersections are assessed in terms of the LOS during a typical hour-long period. The LOS is based on the volume of traffic passing through an intersection, the number of lanes available to serve the traffic demands, and the type of traffic control at the intersection (i.e., stop sign control or traffic signal). Table 4.16-4, *Level of Service Criteria for Signalized Intersections,* summarizes the LOS criteria for signalized intersections as identified by the HCM. LOS "A" represents free flow conditions, LOS "D" represents conditions where vehicles on some approaches may have to wait through more than one traffic signal cycle to pass through the intersection, LOS "E" represents the theoretical capacity of the intersection, and LOS "F" represents jammed conditions.

Table 4.16-4. Level of Service Criteria for Signalized Intersections

Level of Service	Control Delay (Seconds per Vehicle)	Volume/Capacity
A	< 10	< 0.60
B	> 10 and = 20	0.61-0.70
C	> 20 and = 35	0.71-0.80
D	> 35 and = 55	0.81-0.90
E	> 55 and = 80	0.91-1.00
F	> 80	> 1.0

Source: 2010 Highway Capacity Manual.

Roadway Analysis Methodology

Operating conditions for roadway segments are based on corresponding V/C ratios shown in Table 4.16-5, *LOS Criteria – Roadway Segments*. A V/C of greater than 0.80 corresponds to an LOS "D", "E" or "F", as defined in the Highway Capacity Manual. The Metropolitan Bakersfield General Plan performance criterion for intersections and roadway segments is LOS "C".

Table 4.16-5. LOS Criteria – Roadway Segments

Level of Service (LOS)	Description	Volume/Capacity Ratio
A	Free flow conditions, unimpeded ability to maneuver and pass, very little delay, no platoons, highest average travel speeds.	≤ 0.60
B	Mostly free flow conditions, presence of other vehicles beings to be noticeable. Passing is required to maintain speeds, slightly less average travel speeds than Level of Service "A'.	0.61 – 0.70
C	Traffic density clearly affects the ability to pass and maneuver within the stream. Speeds are reduced to about 50 mph on highways and about 50% of the average on urban arterials.	0.71 – 0.80
D	Unstable flow. Speeds are reduced from 40% to 60% of normal. Passing demand is high although mostly impossible on 2-land highways. Traffic disruptions usually cause extensive queues.	0.81 – 0.90

Table 4.16-5. LOS Criteria – Roadway Segments

Level of Service (LOS)	Description	Volume/Capacity Ratio
E	Very unstable flow at or near capacity. Passing and maneuvering virtually impossible. Extensive platooning on highways and queuing on arterials. Speeds range from 20 mph to less on arterials and 2-lane highways, and up to 50 mph on multi-lane highways.	0.91 – 1.00
F	Forced or breakdown flow. Demand exceeds capacity. Vehicles experience short spurts of movement followed by stoppages. Intersection congestion, long queues and delays are common.	> 1.00

Source: 2010 Highway Capacity Manual.

Definition of Deficiency and Significant Impact

The definition of deficiency was obtained from the Metropolitan Bakersfield General Plan Circulation Element. The performance criteria for all intersections and street segments is LOS "C". Kern County has two standards for determining whether project traffic has a significant impact, and therefore, requires mitigation:

- Mitigation would be required when the addition of project traffic causes the LOS of an intersection or street to drop below LOS "C".
- If an intersection or street operates below LOS "C" prior to the addition of project traffic, mitigation would be required only as necessary to maintain the status quo.

Thresholds of Significance

The traffic issues related to the proposed land use and development have been evaluated in the context of CEQA and the Kern COG Regional Transportation Plan (RTP). Kern County is the lead agency responsible for preparation of the traffic impact analysis, in accordance with both CEQA and CMP authorizing legislation.

The Kern County CEQA Implementation Document and Kern County Environmental Checklist state that a project could potentially have a significance effect if it would:

- Conflict with an applicant plan, ordinance, or policy establishing measures of effectiveness (as designated in a general plan policy, ordinance, etc.), taking into account all relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;
- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency or adopted County threshold for designated roads or highways. Specifically, would implementation of the project cause the LOS for roadways and/or intersections to decline below the following thresholds or further degrade already degraded segment(s);

- Metropolitan Bakersfield General Plan, below LOS "C";

- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access;
- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts and bicycle racks).

A project is considered to have a significant transportation impact where it causes the LOS to drop below LOS "C" on local roadways and intersections and LOS "D" of state facilities and intersections. A project is also considered to have a significant impact if it adds substantial traffic volumes to a roadway segment or intersection that is already operating at unacceptable LOS.

Project Impacts

Impact 4.16-1: The project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

The proposed Project components are described in detail in Section 3.0*, Project Description.* The proposed Project would allow for development of a light to medium industrial park containing approximately 4,613,004 square feet (net building area) of warehousing, distribution, and retail showroom uses. South Union Avenue, Houghton Road, and the DiGiorgio Road alignment provide the primary access to and from the Project area.

Project Trip Generation and Design Hour Volumes

The trip generation and design hour volumes indicated in Table 4.16-6, *Project Trip Generation*, were calculated using the Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition, 2012. Project traffic was estimated for weekday AM and PM peak hour traffic. Rate equations and directional splits for ITE Land Use Code 130 (Industrial Park) and 820 (Shopping Center) were used to estimate trip generation for the Project based on 314.30 acres of development. The ITE Land Use Code of 130 represents a conservative estimate for future traffic generated from the project site because it reflects the maximum vehicle trip generation for the various uses that would be permitted for the potential land uses and zoning of the proposed project (McIntosh and Associates, 2018).

Table 4.16-6. Project Trip Generation

ITE Code	Development Type	Variable / Acres	Daily Trips	AM Peak Hour Trips		PM Peak Hour Trips	
			ADT	In Split/ Trips	Out Split/ Trips	In Split/ Trips	Out Split/ Trips
130	Light Industrial / Service Industrial	267.30 acres	16,351	1,819	373	502	1,778
820	General Commercial	47 acres	15,702	257	165	877	912
20% Reduction to Account for "Pass By"				(44)	(37)	(175)	(183)
	Totals	314.30 acres	32,053 trips	2,029	501	1,203	2,508

Source: May 29, 2018 Response Letter to Kern County Planning from McIntosh & Associates regarding the November 2016 Traffic Impact Study for 99 Houghton.

The Circulation Element of the Metropolitan Bakersfield General Plan is the primary guidance document detailing the planning tools essential for achieving the local transportation goals and policies. The Circulation Element consists of the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, and other local public utilities and facilities, all correlated with the Land Use Element of the Metropolitan Bakersfield General Plan.

It is not possible to build transportation projects fast enough to keep pace with development in all instances. Both the Metropolitan Bakersfield Circulation Plan and the Kern County Circulation Plan operate on the theory that existing roads will be widened as land use intensity increases. The County is uniquely dependent on State Highway construction and retrofits to satisfy inter-city road travel and assumes that future development will be the trigger for the development of new roads. As such, it is the policy of the County to protect all surveyed section and mid-section lines, through right-of-way dedications in the Valley and Desert Regions of the County for arterial and collector highways. The Circulation Element road standards for arterial and collector highways are identified below. Modifications to these standards are considered on a case-by-case basis.

- Arterial (Major Highway) Minimum 110-foot right-of-way:
- County Standard 110 feet
- Collector (Secondary Highway) Minimum 90-foot right-of-way:
- County Standard 90 feet

In reviewing the total number of trips estimated for the development of the proposed Project site, it is anticipated that implementation of the proposed Project would not exceed the capacity of the identified circulation system when the roadways are built to the identified standards. Roadway dedications are required for all development and are implemented through compliance with the Kern County Land Division Ordinance, Zoning Ordinance and Development Standards. The proposed Project does not include any amendments to the existing Circulation Element. As such, impacts to

the existing road network are considered less than significant through implementation of local and state right-of-way dedication requirements.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.16-2: The Project Would not Conflict with an Applicable Congestion Management Program, Including, but not Limited to Level of Service Standards and Travel Demand Measures, or Other Standards Developed by the County Congestion Management Agency for Designated Roads or Highways.

Unlike future road right-of-way dedications, which can be protected in advance of development, LOS for adjacent and surrounding road segments or roadway intersections are directly impacted by the type of development proposed in a given area. The proposed Project is located within the administrative boundaries of the Metropolitan Bakersfield General Plan. As previously stated, for all roads subject to the Metropolitan Bakersfield General Plan, it is the objective and policy to maintain a minimum LOS "C" or better.

LOS standards are primarily addressed through improvements to intersections such as the installation of signal lights and the addition of turning lanes among other site- specific transportation related improvements. Mitigation is required if development causes affected roadways to fall below LOS "C".

Additionally, State law requires that urbanized counties prepare an annual CMP. City and County eligibility for new gas tax subventions is contingent upon their participation in the congestion management program. The County has designated Kern COG as the County's Congestion Management Agency. To qualify for funding provided through the State Transportation Improvement Program (STIP) or the Federal Transportation Improvement Program (FTIP), the regional transportation agency must keep a current Regional Transportation Plan (RTP) that contains the CMP. Also, the CMP offers local jurisdictions the opportunity to find cooperative solutions to the multi-jurisdictional problems of air pollution and traffic congestion. Requiring projects to maintain a LOS "C" ensures the County is in compliance with the adopted CMP.

The following information was included in the Traffic Study (refer to Appendix M, *Traffic Impact Study*).

Trip Distribution and Assignment

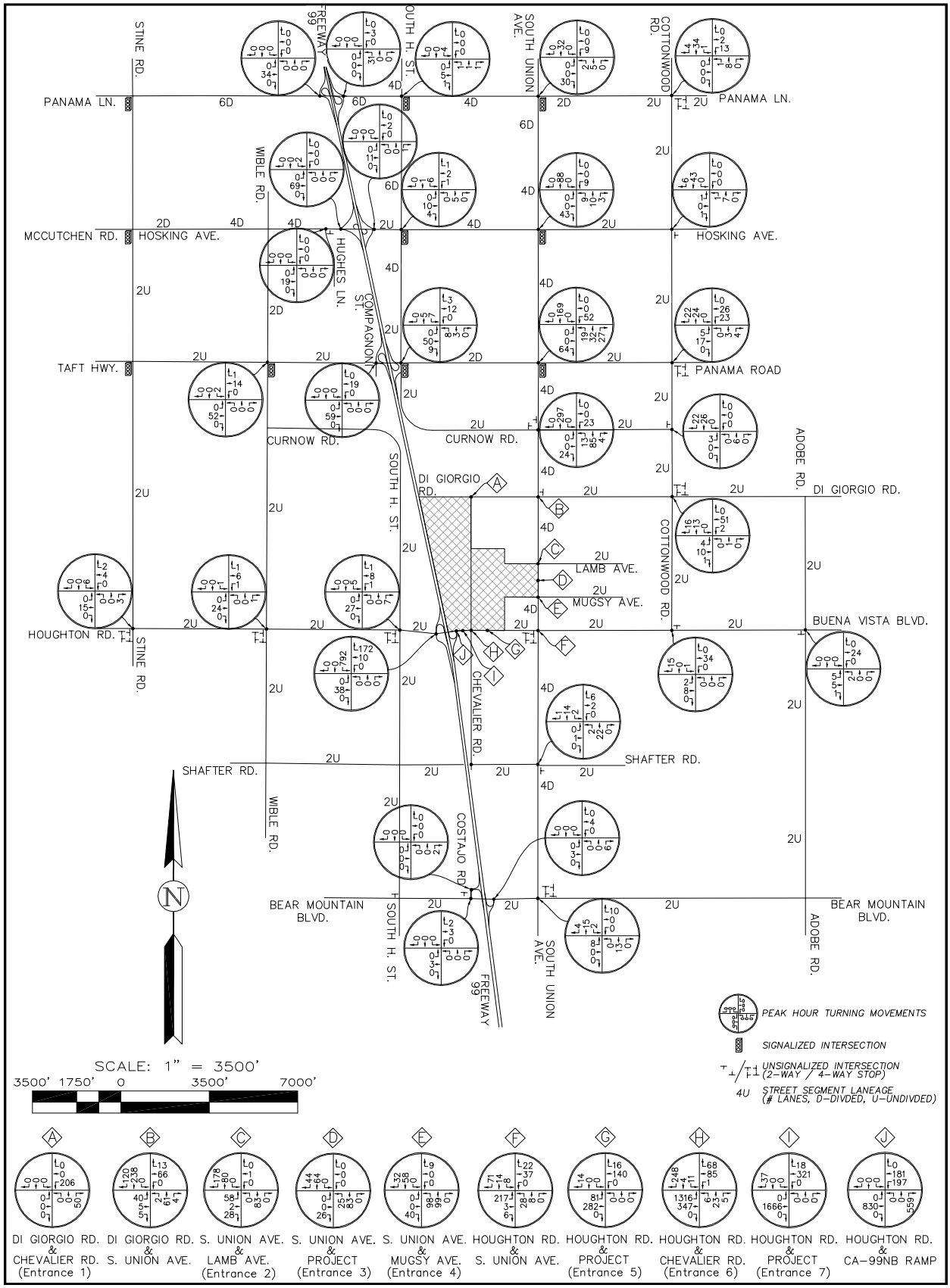
The proposed Project trip distribution and assignment assumptions within the study area are illustrated on Figure 4.16-2a, *Total Project Generated AM Peak Hour Turning Movements*, and Figure 4.16-2b, *Total Project Generated PM Peak Hour Turning Movements*. Project traffic

distribution was estimated based on Kern COG traffic model output and a review of existing development and proposed growth within the study area.

Future Year 2025 Without Project Traffic Volumes

Future Year 2025 peak hour turning movements without Project traffic are illustrated in Figure 4.16-3a, *Future Year 2025 AM Peak Hour Turning Movements Without Project*, and Figure 4.16-3b, *Future Year 2025 PM Peak Hour Turning Movements Without Project*.

This Page Intentionally Left Blank



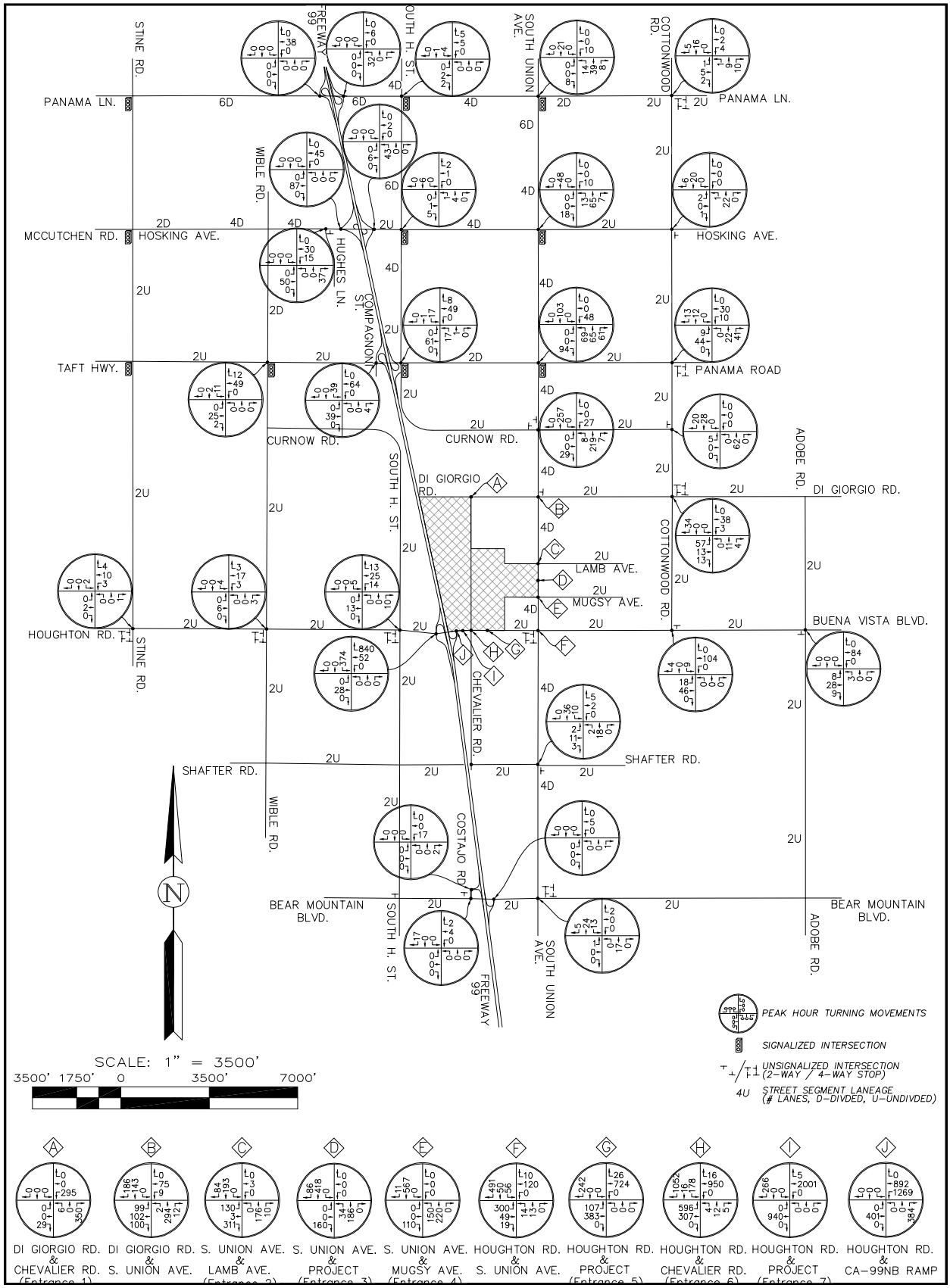
Source: McIntosh & Associates, 2016

99 HOUGHTON INDUSTRIAL PARK PROJECT

CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07 • AGRICULTURAL PRESERVE #13 EXCLUSION

Total Project Generated AM Peak Hour Turning Movements

Figure 4.16-2a



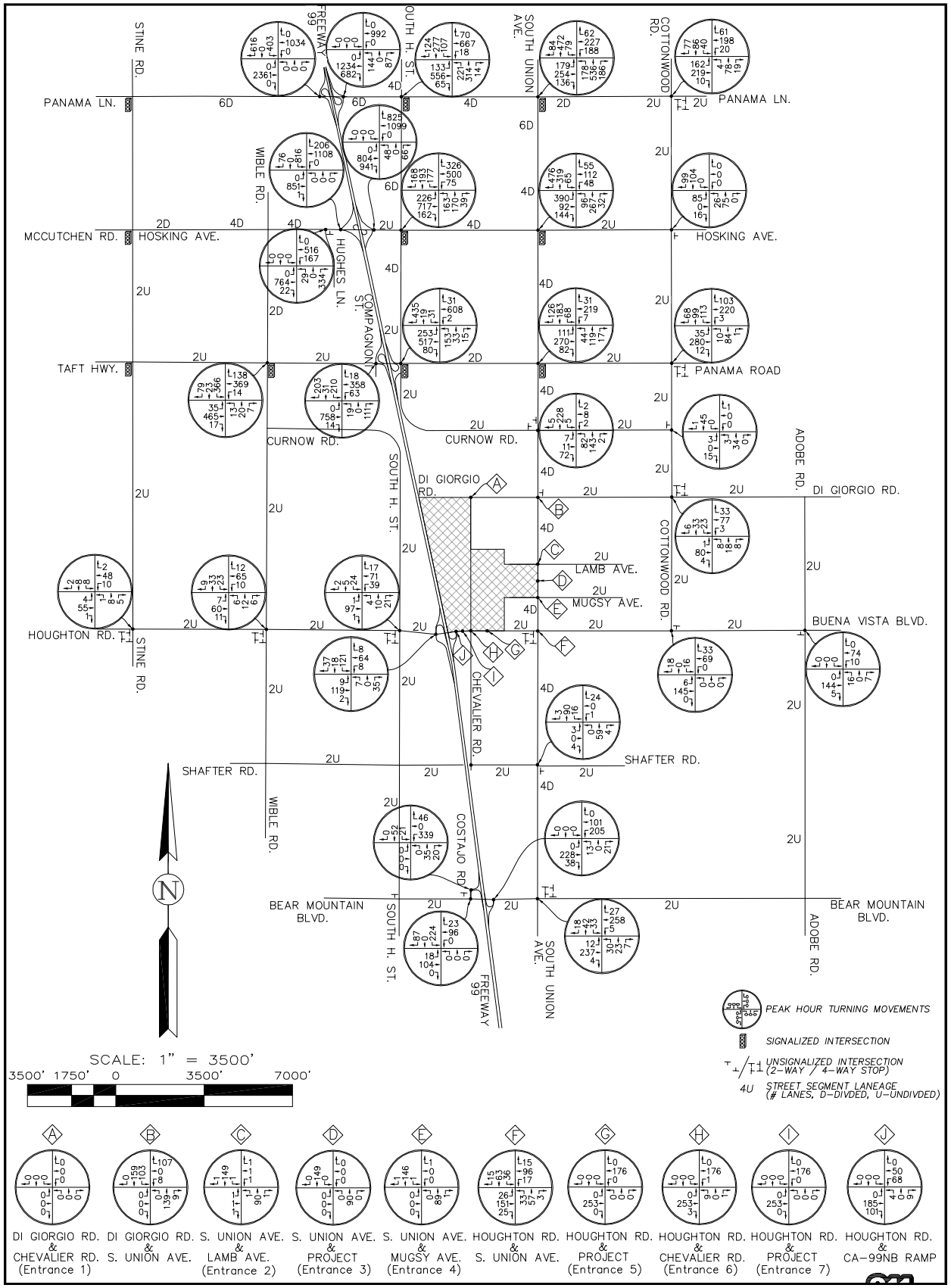
Source: McIntosh & Associates, 2016

99 HOUGHTON INDUSTRIAL PARK PROJECT

CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07 • AGRICULTURAL PRESERVE #13 EXCLUSION

Total Project Generated PM Peak Hour Turning Movements

Figure 4.16-2b



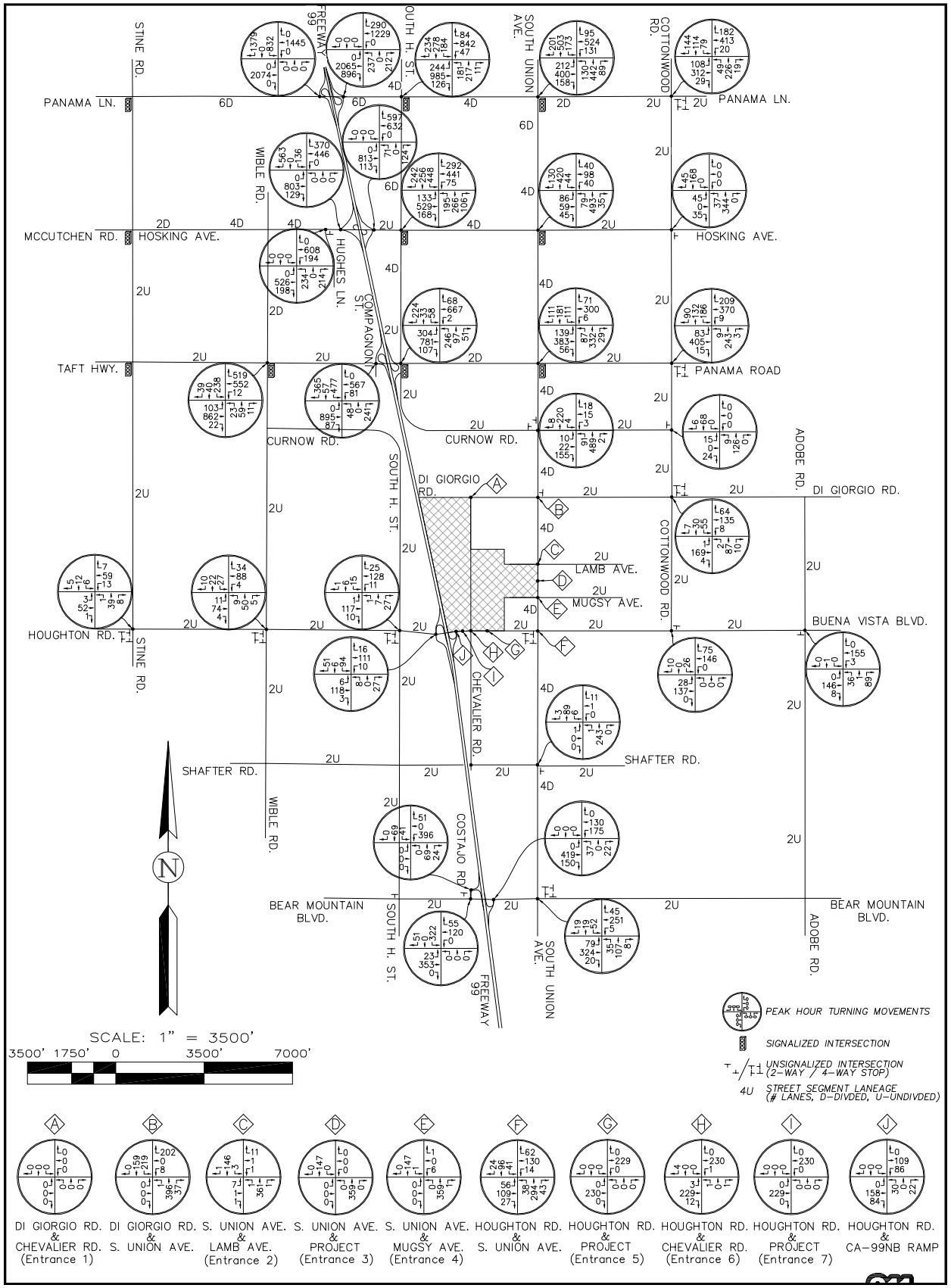
Source: McIntosh & Associates, 2016

99 HOUGHTON INDUSTRIAL PARK PROJECT

CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07 • AGRICULTURAL PRESERVE #13 EXCLUSION

Future Year 2025 AM Peak Hour Turning Movements Without Project

Figure 4.16-3a



Source: McIntosh & Associates, 2016

99 HOUGHTON INDUSTRIAL PARK PROJECT

CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07 • AGRICULTURAL PRESERVE #13 EXCLUSION

Future Year 2025 PM Peak Hour Turning Movements Without Project

Figure 4.16-3b

Future Year 2025 Without Project Intersection LOS

Table 4.16-1, *Intersection Level Of Service*, outlines the AM and PM peak hour LOS of the study intersections under Future Year 2025 Without Project conditions. The Metropolitan Bakersfield General Plan considers LOS "C" acceptable within the general plan area; therefore, as indicated in Table 4.16-1, the anticipated growth in traffic volumes by the Year 2025 would cause the following study intersections to operate at a deficient LOS (LOS "D", "E", or "F") under Future Year 2025 Without Project conditions:

- Panama Lane and South H Street (PM peak hour LOS "D")
- Panama Lane and SR-99 Southbound Ramp (PM peak hour LOS "E")
- Panama Lane and South Union Avenue (AM peak hour LOS "D" and PM peak hour LOS "E")
- Panama Lane and Cottonwood Road (PM peak hour LOS "F")
- Hosking Avenue and Hughes Lane (PM peak hour LOS "F")
- Hosking Avenue and South H Street (AM peak hour LOS "E" and PM peak hour LOS "F")
- Hosking Avenue and South Union Avenue (AM peak hour LOS "F")
- Taft Highway/SR-119 and Compagnoni Street / SR-99 Southbound Ramp (AM peak hour LOS "D" and PM peak hour LOS "F")
- Taft Highway/SR-119 and South H Street (AM peak hour LOS "F" and PM peak hour LOS "E")
- Panama Road and Cottonwood Road (PM peak hour LOS "F")

Future Year 2025 Without Project Traffic Signal Warrants

The results of the signal warrant analysis under Future Year 2025 Without Project conditions are indicated in Table 4.16-7, *Traffic Signal Warrants – Future Year 2025 Without Project Conditions*.

Table 4.16-7. Traffic Signal Warrants – Future Year 2025 Without Project Conditions

Intersection	Warrant(s) Satisfied[1]	Notes
Panama Lane and Cottonwood Road	1 and 3	Signalization of this intersection is included in the Phase IV Metropolitan Bakersfield Regional Transportation Impact Fee Program (RTIF).
Hosking Avenue and Hughes Lane	1 and 3	Signalization of this intersection is included in the Phase IV Metropolitan Bakersfield Regional Transportation Impact Fee (RTIF) Program.
Hosking Avenue and SR-99 Northbound Ramp	1 and 3	Signalization of this intersection is included in the Phase IV Metropolitan Bakersfield Regional Transportation Impact Fee Program (RTIF).
Hosking Avenue and SR-99 Southbound Off-Ramp	1 and 3	Signalization of this intersection is included in the Phase IV Metropolitan Bakersfield Regional Transportation Impact Fee Program (RTIF).
Panama Road[2] and Cottonwood Road	1 and 3	Signalization of this intersection is included in the Phase IV Metropolitan Bakersfield Regional Transportation Impact Fee Program (RTIF).

Table 4.16-7. Traffic Signal Warrants – Future Year 2025 Without Project Conditions

Intersection	Warrant(s) Satisfied[1]	Notes

[1] Warrants 1A: ADT – Minimum Vehicular Traffic; 1B: ADT – Interruption of Continuous Traffic; 1A and 1B: ADT – Combinations of Warrants 1A and 1B; and 3: Peak Hour (70% Factor) Warrant

[2] Taft Highway/ SR-119 becomes Panama Road at South Union Avenue.

Source: Traffic Impact Study for 99 Houghton, McIntosh & Associates, November 2016.

As indicated in Table 4.16-7, the traffic signal warrant is satisfied at the following intersections under Future Year 2025 Without Project conditions:

- Panama Lane and Cottonwood Road
- Hosking Avenue and Hughes Lane
- Hosking Avenue and SR-99 Northbound Ramp
- Hosking Avenue and SR-99 Southbound Ramp
- Panama Road and Cottonwood Road

Future Year 2025 Without Project Roadway V/C

The V/C ratios were calculated for roadways with published ADT information and future traffic projections. Ultimate capacity is based on functional classification. A V/C of greater than 0.80 corresponds to a LOS "D" or below. Future traffic would cause the following studied roadway segments to operate at a deficient LOS (LOS "D", "E," or "F") in their existing configurations under Future Year 2025 Without Project conditions:

- Panama Lane - South Union Avenue to Cottonwood Road (V/C=1.02, LOS "F")
- Taft Highway/SR-119 – Compagnoni Street/SR-99 Southbound Ramp to SR-99 Northbound Ramp (V/C = 0.85, LOS "D")
- Taft Highway/SR-119 – SR-99 Northbound Ramp to South H Street (2015), (V/C = 1.17, LOS "F")
- Taft Highway/SR-119/Panama Road - South H Street to South Union Avenue (V/C= 1.53, LOS "F")
- Taft Highway/SR-119/Panama Road - South Union Avenue to Cottonwood Road (V/C 1.20, LOS "F")
- Panama Road - East of Cottonwood Road (V/C 1.15, LOS "F")
- Bear Mountain Road/SR-223 – SR-99 Northbound Ramp to South Union Avenue (V/C 1.19, LOS "F")
- Bear Mountain Road – East of South Union Avenue (SR-204) (V/C 1.24, LOS "F")

Future Year 2025 With Project Traffic Volumes

Future Year 2025 peak hour turning movements with Project traffic are illustrated in Figure 4.16-4a, *Future Year 2025 AM Peak Hour Turning Movement with Project*, and Figure 4.16-4b, *Future Year 2025 PM Peak Hour Turning Movement with Project.*

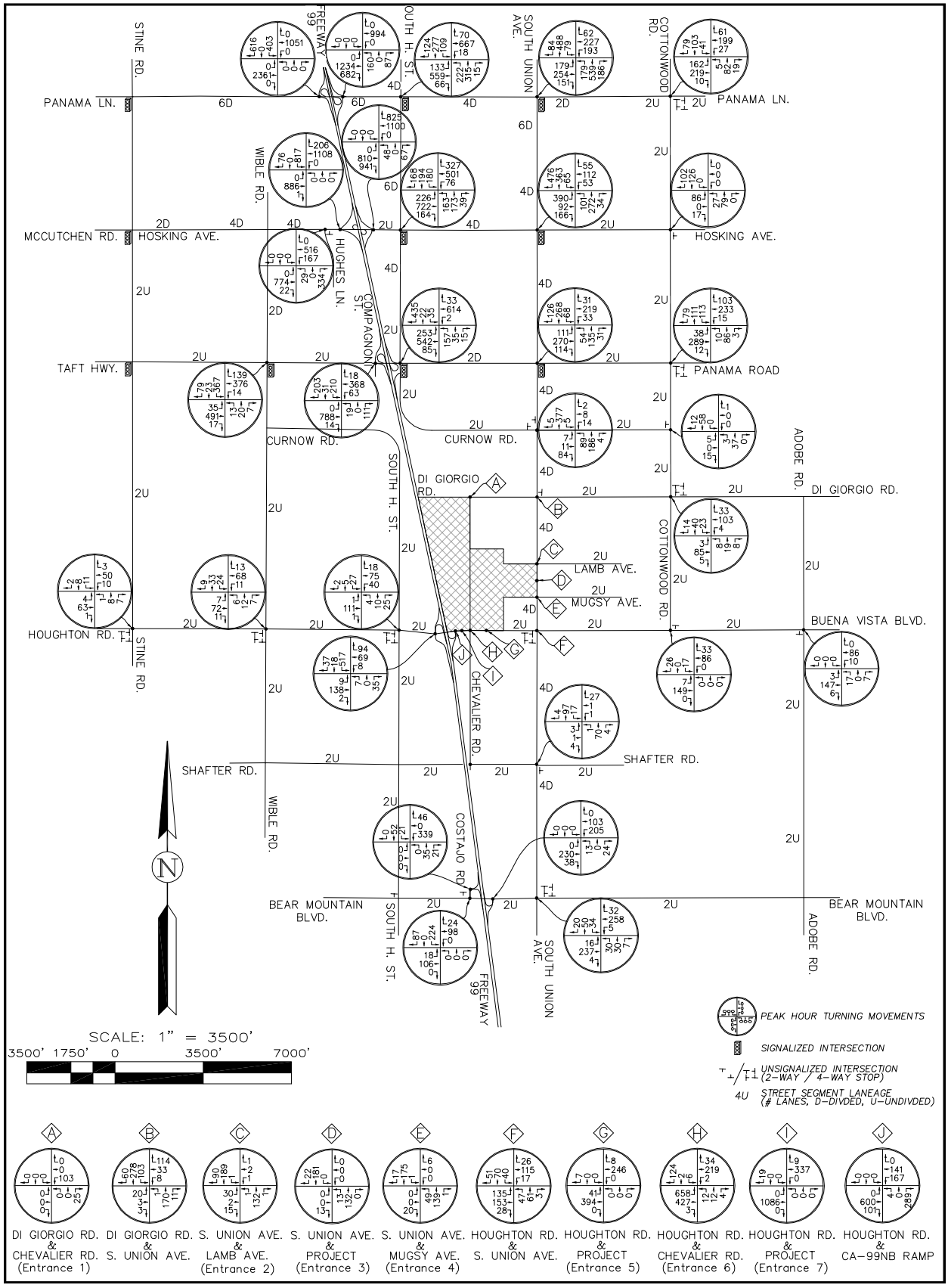
Future Year 2025 With Project Intersection LOS

Table 4.16-1, *Intersection Level of Service*, outlines the AM and PM peak hour LOS of the study intersections under Future Year 2025 With Project conditions. The Metropolitan Bakersfield General Plan considers LOS "C" acceptable within the general plan area; therefore, as indicated in Table 4.16-1, the anticipated growth in traffic volumes by the Year 2025 would cause the following study intersections to operate at a deficient LOS (LOS "D", "E", or "F") under Future Year 2025 With Project conditions:

- Panama Lane and SR-99 Southbound Ramp (PM peak hour LOS "E")
- Panama Lane and South H Street (PM peak hour LOS "D")
- Panama Lane and South Union Avenue (AM and PM peak hour LOS "D")
- Hosking Road and South H Street (PM peak hour LOS "D")
- Taft Highway/SR-119 and Compagnoni Street/SR-99 Southbound Ramp (PM peak hour LOS "D")

Panama Road and Cottonwood Road (PM peak hour LOS "D")

This Page Intentionally Left Blank



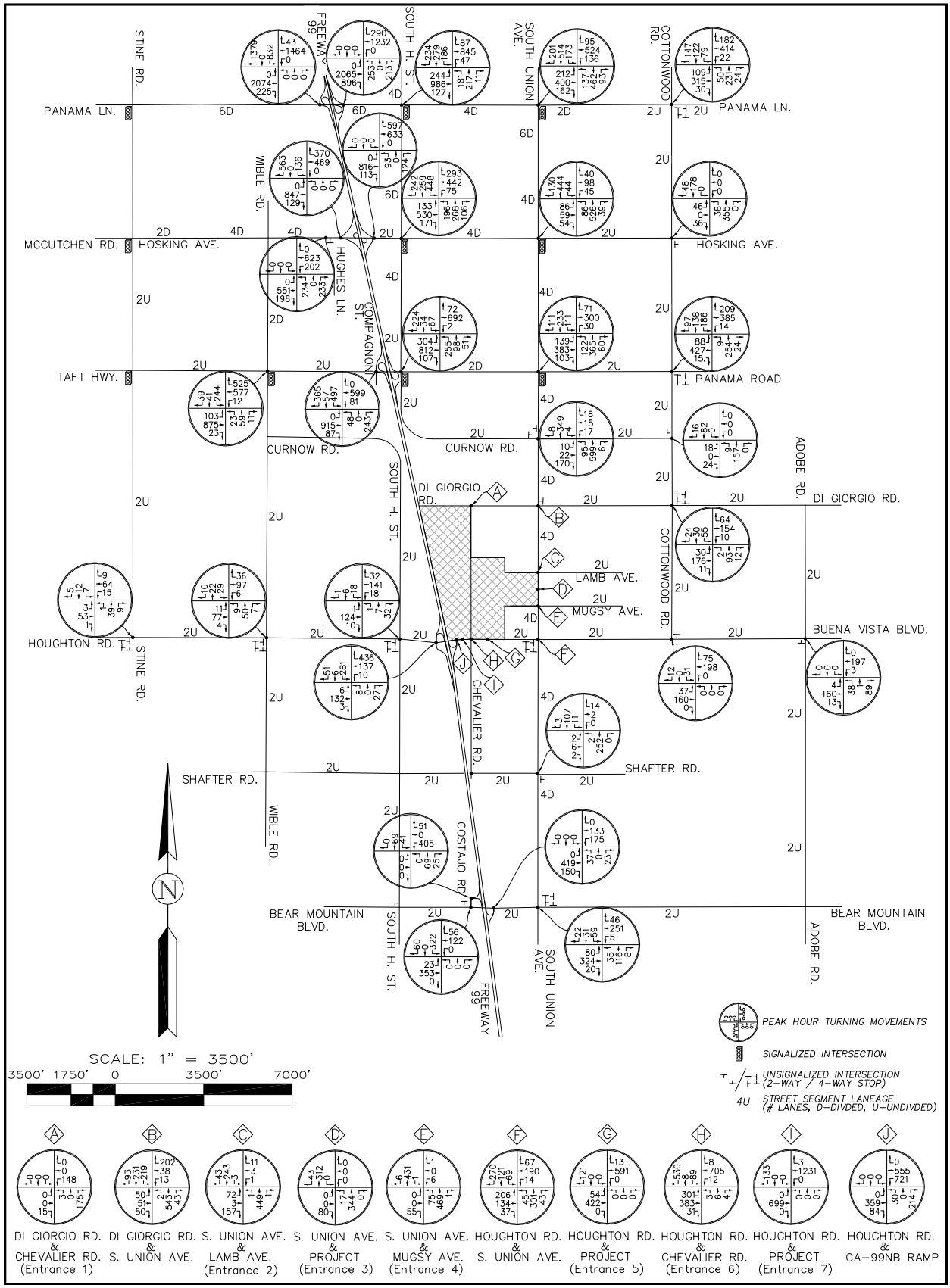
Source: McIntosh & Associates, 2016

99 HOUGHTON INDUSTRIAL PARK PROJECT

CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07 • AGRICULTURAL PRESERVE #13 EXCLUSION

Future Year 2025 AM Peak Hour Turning Movements With Project

Figure 4.16-4a



Source: McIntosh & Associates, 2016

99 HOUGHTON INDUSTRIAL PARK PROJECT

CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07 • AGRICULTURAL PRESERVE #13 EXCLUSION

Future Year 2025 PM Peak Hour Turning Movements With Project

Figure 4.16-4b

- DiGiorgio Road and South Union Avenue (PM peak hour LOS "E")
- Houghton Road and Chevalier (#6) Road (PM peak hour LOS "F")
- Houghton Road and South Union Avenue (PM peak hour LOS "D")

Future Year 2025 With Project Traffic Signal Warrants

The results of the signal warrant analysis under Future Year 2025 With Project conditions are indicated in Table 4.16-8, *Traffic Signal Warrants – Future Year 2025 With Project Conditions*. Only one traffic signal warrant is satisfied under Future Year 2025 With Project conditions.

Table 4.16-8. Traffic Signal Warrants – Future Year 2025 With Project Conditions

Intersection	Warrant(s) Satisfied*	Notes
Houghton Road and Chevalier Road	1 and 3	Signalization of this intersection is not included in the Phase IV Metropolitan Bakersfield Regional Transportation Impact Fee Program (RTIF).

* Warrants 1A: ADT – Minimum Vehicular Traffic; 1B: ADT – Interruption of Continuous Traffic; 1A and 1B: ADT – Combinations of Warrants 1A and 1B; and 3: Peak Hour (70% Factor) Warrant

Source: Traffic Impact Study for 99 Houghton, McIntosh & Associates, November 2016.

Future Year 2025 With Project Roadway V/C

The V/C ratios were calculated for roadways with published ADT information and future traffic projections. Ultimate capacity is based on functional classification. A V/C of greater than 0.80 corresponds to a LOS "D" or below. Future traffic would cause the following studied roadway segments to operate at a deficient LOS (LOS "D", "E" or "F") in their existing configurations under Future Year 2025 With Project conditions:

- Taft Highway/SR-119 - South H Street to South Union Avenue (V/C = 0.82, LOS "D")
- Houghton Road – SR-99 Southbound Ramp to SR-99 Northbound Ramp (V/C = 1.10, LOS "F")
- Houghton Road – SR-99 Northbound Ramp to Project Entrance #7 (V/C = 2.44, LOS "F")
- Houghton Road – Project Entrance #7 to Chevalier Road (Project Entrance #6) (V/C 2.35, LOS "F")
- Houghton Road - Chevalier Road (Project Entrance #6) to Project Entrance #5 (V/C 1.35, LOS "F")
- Houghton Road – Project Entrance #5 to South Union Avenue (V/C 1.09, LOS "F")
- Chevalier Road – DiGiorgio Road to Houghton Road (V/C = 0.85, LOS "D")

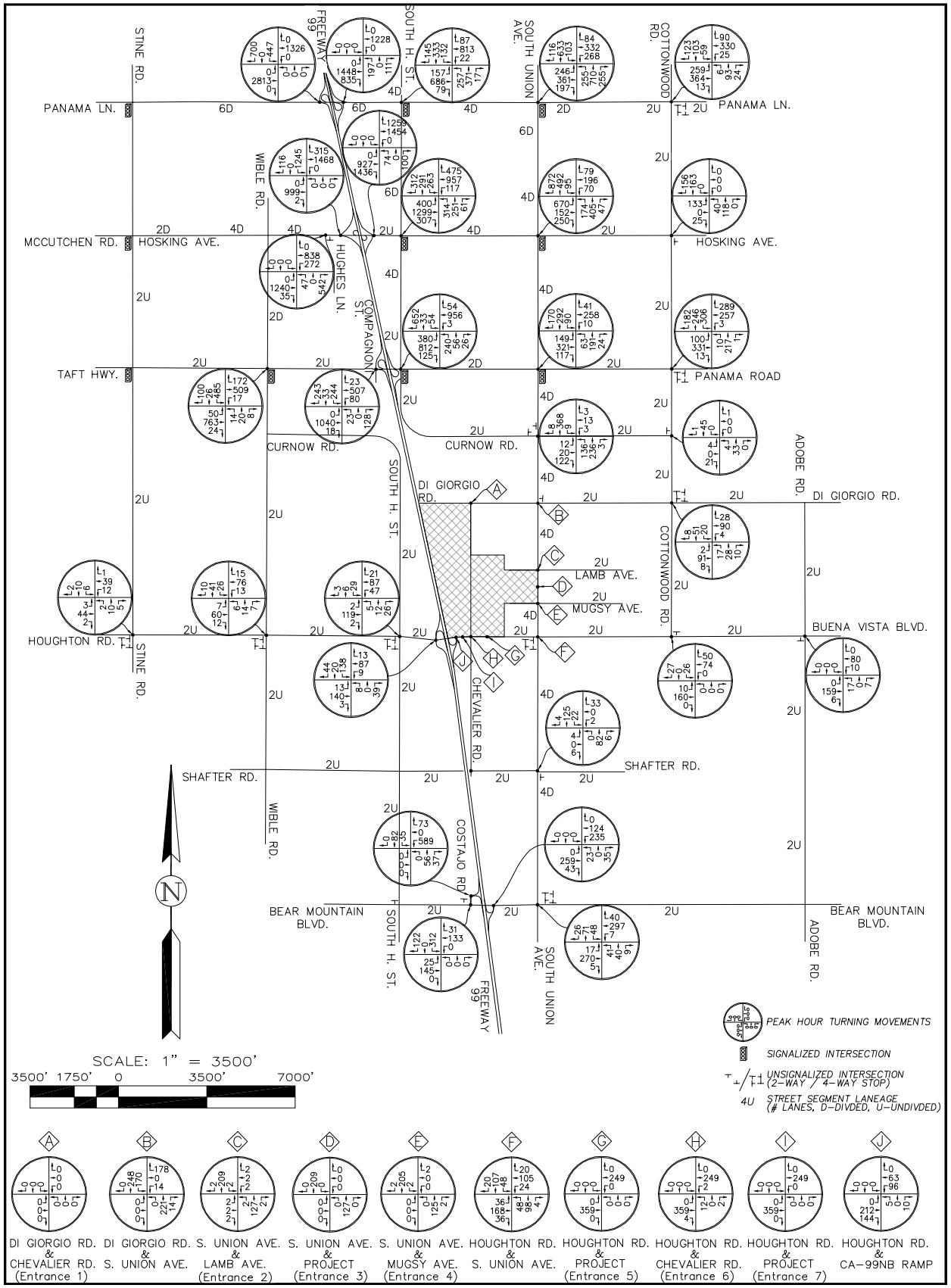
Future Year 2035 Without Project Traffic Volumes

Future Year 2035 peak hour turning movements without Project traffic are illustrated in Figure 4.16-5a, *Future Year 2035 AM Peak Hour Turning Movement Without Project*, and Figure 4.16-5b, *Future Year 2035 PM Peak Hour Turning Movement Without Project.*

Future Year 2035 Without Project Intersection LOS

Table 4.16-1, *Intersection Level of Service*, outlines the AM and PM peak hour LOS of the study intersections under Future Year 2035 Without Project conditions. The Metropolitan Bakersfield General Plan considers LOS "C" acceptable within the general plan area; therefore, as indicated in Table 4.16-1, the anticipated growth in traffic volumes by the Year 2035 would cause the following study intersections to operate at a deficient LOS (LOS "D", "E", or "F") under Future Year 2035 Without Project conditions:

- Panama Lane and SR-99 Southbound Off-Ramp (PM peak hour LOS "F')
- Panama Lane and South H Street (AM peak hour LOS "D" and PM peak hour LOS "E")
- Panama Lane and South Union Avenue (AM peak hour LOS "E" and PM peak hour LOS "F")
- Panama Lane and Cottonwood Road (AM peak hour LOS "E" and PM peak hour LOS "F")
- Hosking Avenue and Hughes Lane (AM peak hour LOS "F" and PM peak hour LOS "D")
- Hosking Avenue and South H Street (AM and PM peak hour LOS "F")
- Hosking Avenue and South Union Avenue (AM peak hour LOS "F" and PM peak hour LOS "D")
- Taft Highway/SR-119 and Wible Road (AM peak hour LOS "E" and PM peak hour LOS "F")
- Taft Highway/SR-119 and Compagnoni Street/SR-99 Southbound Ramp (PM peak hour LOS "F")
- Taft Highway/SR-119 and South H Street (AM peak hour LOS "F" and PM peak LOS "E")



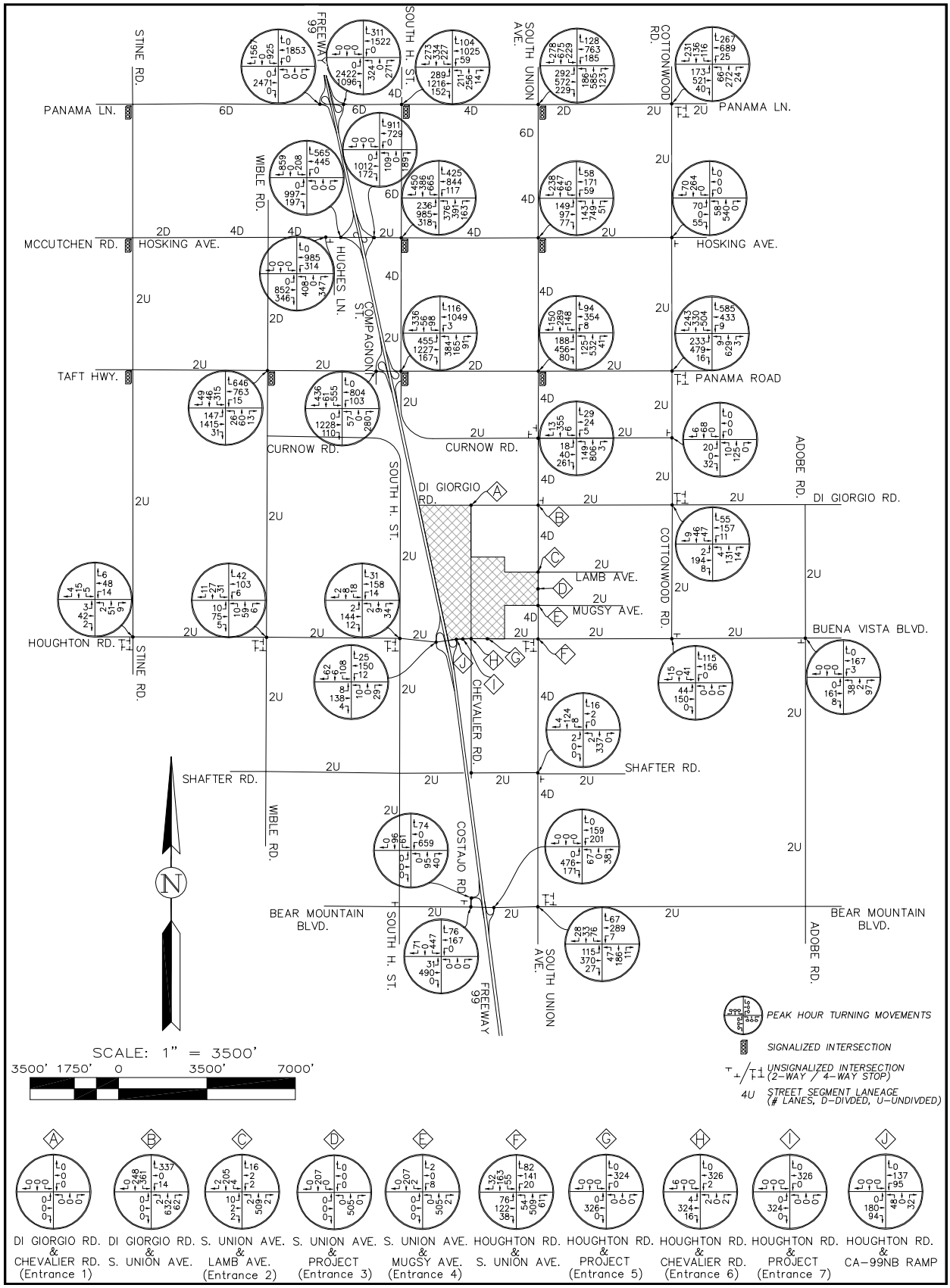
Source: McIntosh & Associates, 2016

99 HOUGHTON INDUSTRIAL PARK PROJECT

CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07 • AGRICULTURAL PRESERVE #13 EXCLUSION

Future Year 2035 AM Peak Hour Turning Movements Without Project

Figure 4.16-5a



Source: McIntosh & Associates, 2016

99 HOUGHTON INDUSTRIAL PARK PROJECT

CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07 • AGRICULTURAL PRESERVE #13 EXCLUSION

Future Year 2035 PM Peak Hour Turning Movements Without Project

Figure 4.16-5b

- Taft Highway/SR-119/Panama Road and South Union Avenue (PM peak hour LOS "D")
- Panama Road and Cottonwood Road (AM and PM peak hour LOS "F")
- Costajo Road and SR-99 Southbound Ramp (AM peak hour LOS "D" and PM peak hour LOS "F")
- Bear Mountain Boulevard/SR-233 and Costajo Road (PM peak hour LOS "F")
- Bear Mountain Boulevard/SR-223 and South Union Avenue (PM peak hour LOS "E")

Future Year 2035 Without Project Traffic Signal Warrants

The results of the signal warrant analysis provided in the 2016 Traffic Study (refer to Appendix M, *Traffic Study*) determined that there are no traffic warrants under Future Year 2035 without Project conditions.

Future Year 2035 Without Project Roadway V/C

The V/C ratios were calculated for roadways with published ADT information and future traffic projections. Ultimate capacity is based on functional classification. A V/C of greater than 0.80 corresponds to a LOS "D" or below. Future traffic would cause the following studied roadway segments to operate at a deficient LOS (LOS "D", "E" or "F') in their existing configurations under Future Year 2035 Without Project conditions:

- Panama Lane - West of SR-99 Southbound Ramp – (V/C = 0.94, LOS "E")
- Panama Lane - East of Cottonwood Road – (V/C = 0.93, LOS "E")
- Taft Highway/SR-119 – West of Wible Road – (V/C = 1.03, LOS "F")
- Taft Highway/SR-119 - Wible Road to Compagnoni Street/SR-99 Southbound Ramp (V/C = 1.08, LOS "F")
- Taft Highway/SR-119/Panama Road – South H Street to South Union Avenue (V/C= 0.94, LOS "E")
- Bear Mountain Road – SR-99 Northbound Ramp to South Union Avenue (V/C = 1.36, LOS "F")
- Bear Mountain Road - East of South Union Avenue (V/C = 1.43, LOS "F")
- South H Street - Berkshire Road to Hosking Avenue (V/C = 0.96, LOS "E")
- South H Street - Hosking Avenue to Taft Highway/SR-119 (V/C = 1.09, LOS "F")
- Cottonwood Road – North of Panama Lane (V/C = 0.81, LOS "D")

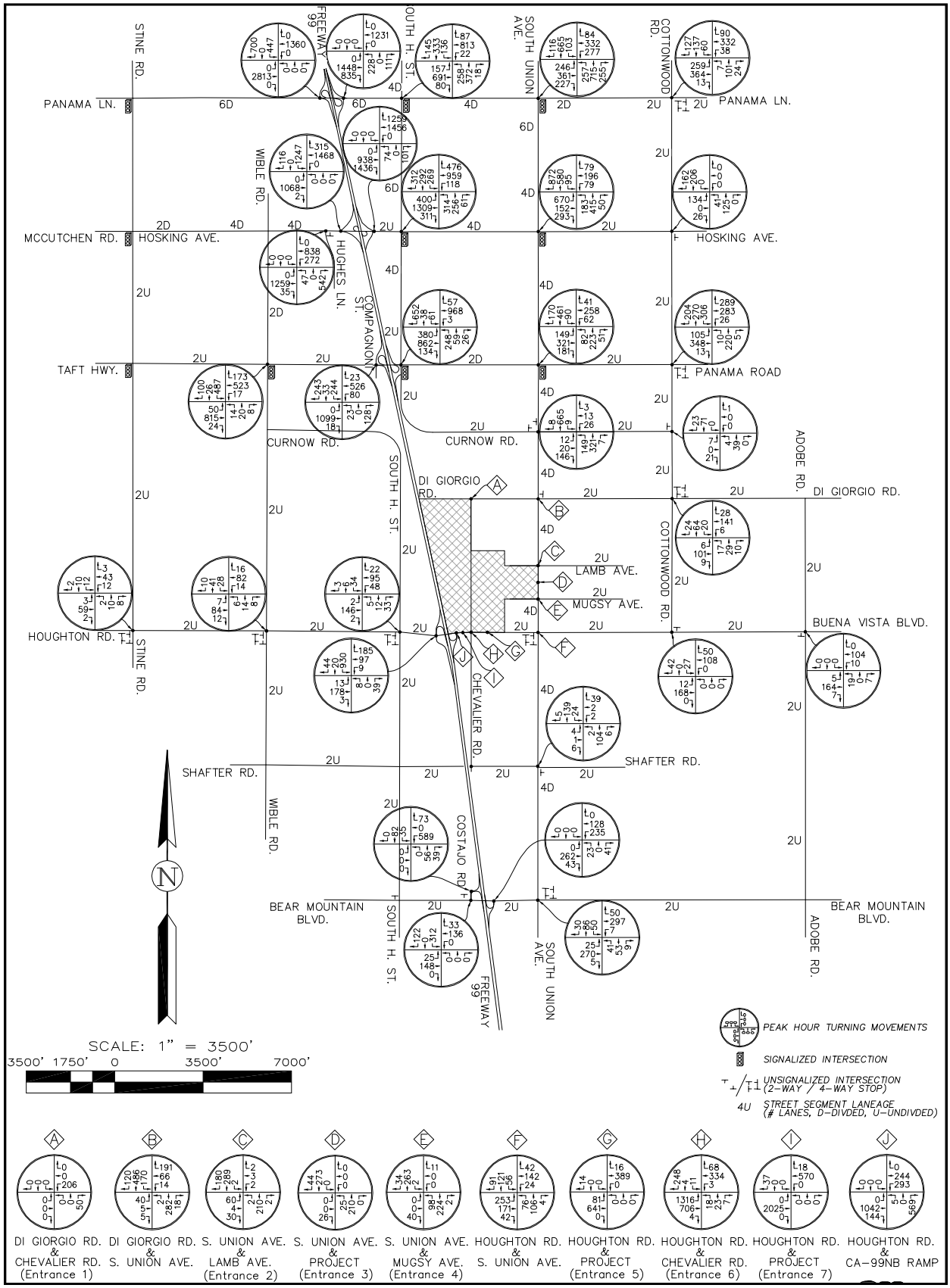
Future Year 2035 With Project Traffic Volumes

Future Year 2035 peak hour turning movements without Project traffic are illustrated in Figure 4.16-6a, *Future Year 2035 AM Peak Hour Turning Movements with Project*, and Figure 4.16-6b, *Future Year 2035 PM Peak Hour Turning Movements with Project*.

Future Year 2035 With Project Intersection LOS

Table 4.16-1, *Intersection Level of Service*, outlines the AM and PM peak hour LOS of the study intersections under Future Year 2035 With Project conditions. The Metropolitan Bakersfield General Plan considers LOS "C" acceptable within the general plan area; therefore, as indicated in Table 4.16-1, the anticipated growth in traffic volumes by the Year 2035 would cause the following study intersections to operate at a deficient LOS (LOS "D", "E", or "F") under Future Year 2035 With Project conditions:

- Panama Lane and SR-99 Southbound Ramp (PM peak hour LOS "F")
- Panama Lane and South H Street (AM peak LOS "D" and PM peak "LOS "E")
- Panama Lane and South Union Avenue (AM peak hour LOS "D")
- Hosking Avenue and Hughes Lane (AM and PM peak hour LOS "D")
- Hosking Avenue and South H Street (AM and PM peak hour LOS "E")
- Taft Highway/SR-119 and South H Street (AM peak hour LOS "D" and PM peak hour LOS "E")
- Panama Road and Cottonwood Road (AM peak hour; LOS "D" and PM peak hour LOS "E")
- Curnow Road and South Union Avenue (PM peak hour LOS "F")
- Lamb Avenue and South Union Avenue (#2) (PM peak hour LOS "D")
- Houghton Road and SR-99 Southbound Ramp (AM peak hour LOS "F" and PM peak hour LOS "D")
- Houghton Road and SR-99 Northbound Ramp (AM and PM peak hour LOS "F")
- Houghton Road and Project Entrance #7 (PM peak hour LOS "F")



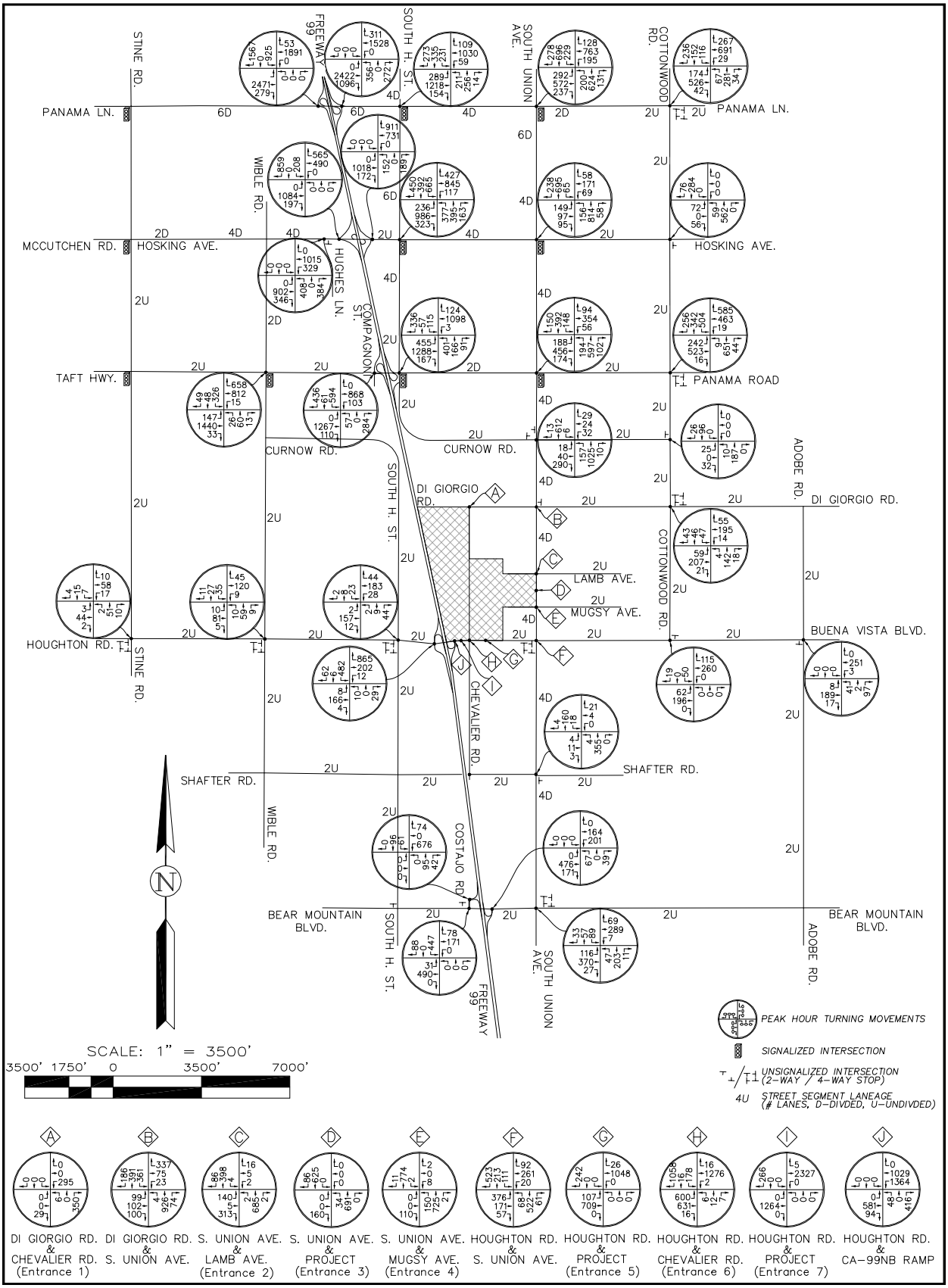
Source: McIntosh & Associates, 2016

99 HOUGHTON INDUSTRIAL PARK PROJECT

CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07 • AGRICULTURAL PRESERVE #13 EXCLUSION

Future Year 2035 AM Peak Hour Turning Movements With Project

Figure 4.16-6a



Source: McIntosh & Associates, 2016

99 HOUGHTON INDUSTRIAL PARK PROJECT

CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07 • AGRICULTURAL PRESERVE #13 EXCLUSION

Future Year 2035 PM Peak Hour Turning Movements With Project

Figure 4.16-6b

- Houghton Road and Chevalier Road (#6) (AM and PM peak hour; LOS "F")
- Houghton Road/Buena Vista Boulevard and South Union Avenue (PM peak hour LOS "F")
- SR-99 Southbound Ramp and Costajo Road (AM peak hour LOS "D" and PM peak hour LOS "F")
- Bear Mountain/SR-233 and Costajo Road (PM Peak hour LOS "F")
- Bear Mountain/SR-233 and South Union Avenue (PM peak hour LOS "E")

Future Year 2035 With Project Traffic Signal Warrants

The results of the signal warrant analysis under Future Year 2035 With Project conditions are indicated in Table 4.16-9, *Traffic Signal Warrants – Future Year 2035 With Project Conditions*.

Table 4.16-9. Traffic Signal Warrants – Future Year 2035 With Project Conditions

Intersection	Warrant(s) Satisfied[1]	Notes[2]
Hosking Road and Cottonwood Road	1 and 3	Acceptable service levels can be achieved without the addition of a traffic signal.
South Union Avenue and Curnow Road	1 and 3	Acceptable service levels can be achieved without the addition of a traffic signal.
South Union Avenue and Mugsy Avenue	1 and 3	Acceptable service levels can be achieved without the addition of a traffic signal.
South Union Avenue and DiGiorgio Road	1 and 3	Acceptable service levels can be achieved without the addition of a traffic signal.
South Union Avenue and Lamb Avenue	1 and 3	Acceptable service levels can be achieved without the addition of a traffic signal.
South Union Avenue and Project Entrance #3	1 and 3	Acceptable service levels can be achieved without the addition of a traffic signal.
Houghton Road and SR-99 Southbound Ramps	1 and 3	None
Houghton Road and SR-99 Northbound Ramps	1 and 3	None
Houghton Road and Project Entrance #7	1 and 3	None
Houghton Road and Project Entrance #5	1 and 3	Acceptable service levels can be achieved without the addition of a traffic signal.
Houghton Road/Buena Vista Blvd and South Union Avenue	1 and 3	None
Costajo Road and Bear Mountain Boulevard/SR-223	1 and 3	Acceptable service levels can be achieved without the addition of a traffic signal.
Bear Mountain Boulevard/SR-223 and South Union Avenue	1 and 3	Acceptable service levels can be achieved without the addition of a traffic signal.

[1] Warrants 1A: ADT – Minimum Vehicular Traffic; 1B: ADT – Interruption of Continuous Traffic; 1A and 1B: ADT – Combinations of Warrants 1A and 1B; and 3: Peak Hour (70% Factor) Warrant
[2] Signalization of intersections are not included in the Phase IV Metropolitan Bakersfield Regional Transportation Impact Fee Program (RTIF)

Source: Traffic Impact Study for 99 Houghton, McIntosh & Associates, November 2016.

Future Year 2035 With Project Intersection Improvements

Intersection improvements needed by the Year 2035 to maintain or improve the operational LOS of the street system in the vicinity of the Project are indicated in Table 4.16-10, *Future Intersection Improvements and Local Mitigation*. As mitigation for the Project, it is recommended that the Project pay fees in accordance with the RTIF program. For mitigation improvements not covered by the RTIF, it is recommended that the Project pay the proportionate share for the local mitigation improvements. Table 4.16-10 identifies which RTIF intersection improvements are not covered by the program.

Table 4.16-10. Future Intersection Improvements and Local Mitigation

Intersection	Total Improvements Required by 2035 Without Project[1]	Total Improvements Required by 2035 With Project[2]	Local Mitigation (Improvements not covered by RTIF)
Panama Lane & South H Street	Add 1 ET & 1 NT	No additional improvements required	
Panama Lane & South Union Avenue	Add 1 ET, 1 EL, 2 WT, 1 WL, 1 WR, 1 NT, 1 NL, 1 SL, 1 ST, & 1 SR	No additional improvements required	
Panama Lane & Cottonwood Road	Provide Signal; Add 1 EL, 1 ER, 1 ET, 1 WL, 1 WR, 1 WT, 1 NL, 1 SL, & 1 SR & NR	No additional improvements required	
Hosking Avenue & Hughes Lane	Provide Signal; Add 1 ET, 1 WT, 1 WL & 1 NR	No additional improvements required	
Hosking Avenue & South H Street	Add 1 EL, 1 ET, 1 ER, 1 WL, 1 WT, 1 NL, 2 NT, 1 NR, 1 SL, 2 ST & 1 SR	No additional improvements required	
Hosking Avenue & South Union Avenue	Add 2 ET, 1 EL, 1 ER, 1 WT, 1 NL, 1 NT, 1 NR, 1 ST, 2 SR & Overlapping SR	No additional improvements required	
Taft Highway/SR-119 & Wible Road	Add 1 ET, 1 WT, 1 NL, 2 SL, & 1 SR	No additional improvements required	
Taft Highway/SR-119 & SR-99 Southbound Ramp/ Compagnoni Street	Add 2 ET, 2 WT, 1 NR, Convert SL to ST/L & 1 SR	No additional improvements required	
Taft Highway/ SR-119 & South H Street	Add 1 EL, 2 ET, 2 WT, 1 WR and 1 SR	Add 1 NL	NL
Taft Highway/ SR-119/ Panama Road & South Union Avenue	Add 1 ET and 1 WT	No additional improvements required	
Taft Highway/ SR-119/ Panama Road & Cottonwood Road	Provide signal; Add 2 EL, 2 ET, 1 ER, 2 WT, 1 WL, 2 WR, 1 NL, 1 NR, 2 NT, 2 ST, 1 SL, & 1 SR	No additional improvements required	
Curnow Road & South Union Avenue	No additional improvements required	Add 1 ER	ER
DiGiorgio Road & Chevalier Road/Project Entrance #1	No additional improvements required	Construct entrance with 1 ET/R, 1 WT/L, & 1 NL/R	ET/R, WT/L, NL/R
DiGiorgio Road & South Union Avenue	No additional improvements required	Construct east approach with 1 EL, 1 ET/R; & 1 SR & 1 WL	EL, ET/R, SR & WL
South Union Avenue & Lamb Avenue/Project Entrance #2	No additional improvements required	Add 1 ER	ER

Table 4.16-10. Future Intersection Improvements and Local Mitigation

Intersection	Total Improvements Required by 2035 Without Project[1]	Total Improvements Required by 2035 With Project[2]	Local Mitigation (Improvements not covered by RTIF)
South Union Avenue & Project Entrance #3	No additional improvements required	Construct entrance with 1 ER; Add 1 NL	ER, NL
South Union Avenue & Mugsy Road/Project Entrance #4	No additional improvements required	Construction east approach	East approach
Houghton Road & SR-99 Southbound Ramp/ Costajo Road	No additional improvements required	Provide Signal; Add 1 EL, 1 WL, 1 NL, & 2 SL	Signal, EL, WL, NL, 2SL,
Houghton Road & SR-99 Northbound Ramp	No additional improvements required	Provide Signal; Add 2 ET, 2 WL, 2 WT & Overlapping NR	Signal, 2 ET, 2 WL, 2 WT, Overlapping NR
Houghton Road & Project Entrance #7	No additional improvements required	Add 1 ET, 1 WT, 1 WR & 1 SR	1 ET, 1 WT, 1 WR & SR
Houghton Road & Chevalier Road/Project Entrance #6	No additional improvements required	Provide Signal; Construct entrance; Add 2 EL, 2 ET, 1 ER, 1 WL, 1 WT, 1 WR, 1 NT, 2 SL, 1 ST, 1 SR, & Overlapping SR	Signal, 2 EL, 2 ET, ER, WL, WT, WR, NT, SL, ST, SR, & Overlapping SR
Houghton Road & Project Entrance #5	No additional improvements required	Construct entrance with 1 SR; Add 1 EL & 1 WR	EL, WR
Houghton Road/ Buena Vista Boulevard & South Union Avenue	No additional improvements required	Provide Signal; Add 2 EL, 1 ET, 1 WL, 1 WT, 1 NL, 1 SL, & 1 SR	Signal, EL, ET, WL, WT, NL, SL, SR
Bear Mountain Boulevard/ SR-223/ Costajo Road & SR-99 Southbound Ramp	No additional improvements required	Add 1 NR	NR

[1]Improvements listed include any improvements needed in 2025 without project and 2035 without project.

[2]Improvements listed include any improvements needed at "opening day," 2025 with project, and 2035 with project.

*NL needed at 2035 w/o only if Project is not built at 2025+Project

Notes:
RTIF = Regional Transportation Impact Fee
NL = Northbound Left Lane, **NT** = Northbound Through Lane, **NR** = Northbound Right Lane, **EL** = Eastbound Left Lane, **ET** = Eastbound Through Lane, **ER** = Eastbound Right Lane, **SL** = Southbound Left Lane, **ST** = Southbound Through Lane, **SR** = Southbound Right Lane, **WL** = Westbound Left Lane, **WT** = Westbound Through Lane, **WR** = Westbound Right Lane

Source: Traffic Impact Study for 99 Houghton, McIntosh & Associates, November 2016.

Future Year 2035 With Project Roadway V/C

The V/C ratios were calculated for roadways with published ADT information and future traffic projections. Ultimate capacity is based on functional classification. A V/C of greater than 0.80 corresponds to a LOS "D" or below. Future traffic would cause the following studied roadway segments to operate at a deficient LOS (LOS "D", "E" or "F") in their existing configurations under Future Year 2035 With Project conditions:

- Panama Lane – West of SR-99 Southbound Ram (V/C – 0.95, LOS "E")
- Bear Mountain Boulevard/SR-223 – SR-99 Northbound Ramp to South Union Avenue (V/C = 1.36, LOS "F")
- Bear Mountain Boulevard/SR-223 - East of South Union Avenue (V/C = 1.44, LOS "F")
- Chevalier Road – DiGiorgio Road to Houghton Road (V/C = 0.85, LOS "D"

It should be noted that the roadway segments along Bear Mountain Boulevard/SR-223 and Panama Lane segment indicated above, currently operation at LOS "E" and Future Year 2035 With Project Conditions are similar to Future Year 2035 Without Project Conditions, with these segments operating at LOS "F" under both scenarios.

Future Year 2035 With Project Roadway Improvements

Roadway improvements needed by the Year 2035 to maintain or improve the operational LOS of the street system in the vicinity of the Project are indicated in Table 4.16-11, *Future Roadway Improvements and Local Mitigation*. As mitigation for the Project, it is recommended that the Project pay fees in accordance with the RTIF program. For mitigation improvements not covered by the RTIF, it is recommended that the Project pay the proportionate share for the local mitigation improvements.

Table 4.16-11. Future Roadway Improvements and Local Mitigation

Roadway	Improvements Required by 2035 Without Project	Improvements Required by 2035 With Project	Project Share for Local Mitigation
Panama Lane – South Union Avenue to Cottonwood Road	Improve 4-lane Collector	No additional improvements required	0.55%
Panama Lane – East of Cottonwood Road	Improve to 4-Lane Collector	No additional improvements required	1.48%
Taft Highway/ SR-119 – West of Wible Road	Improve to 4-lane, undivided	No additional improvements required	6.28%
Taft Highway/SR-119 –Wible Road to Compagnoni Street/SR-99 SB Ramp	Improve to 4-Lane Collector	No additional improvements required	7.0%
Taft Highway/SR-119/ Panama Road – South H Street to South Union Avenue	Improve to 4-Lane Arterial	No additional improvements required	11.83%
Taft Highway/SR-119/ Panama Road – Compagnoni Street/ SR-99 SB Ramp to East of Cottonwood Road	Improve to 4-lane Collector	No additional improvements required	10.72%
DiGiorgio Road – West of Chevalier Road (Project Entrance #1)	No additional improvements required	Construction 2-lane Collector	100%
DiGiorgio Road – Chevalier Road (Project Entrance #1) to South Union Avenue	No additional improvements required	Construction 2-lane Collector	100%
Cottonwood Road – North of Panama Lane	Improve to 4-Lane Collector	No additional improvements required	2.5%
Houghton Road – SR-99 SB Ramp to SR-99 NB Ramp	No additional improvements required	Improve to 4-Lane Collector	75.62%
Houghton Road – SR-99 NB Ramp to Chevalier Road	No additional improvements required	Improve to 6-Lane Arterial	82.14%
Houghton Road – Project Entrance #5 to South Union Avenue	No additional improvements required	Improve to 4-Lane Collector	62.15%
Chevalier Road – DiGiorgio Road to Houghton Road	No additional improvements required	Construct 2-Lane Collector	100%

-- = No percentage provided.

Source: Traffic Impact Study for 99 Houghton, McIntosh & Associates, November 2016.

If the existing operational LOS of a facility is below "C" prior to the addition of project generated traffic and the addition of project traffic substantially degrades the LOS further, then mitigation to

restore the facility to at least its existing operational LOS is deemed appropriate. The following intersection would improve their 2035 LOS levels with the proposed project, but LOS would remain below a "C":

- Panama Lane and S. Union Avenue (AM peak hour), has a LOS "E" under 2035 Future Without Project conditions, and a LOS "D" under 2035 Future with Project conditions;
- Hosking and Hughes (AM peak hour), has a LOS "F" under 2035 Future Without Project conditions, and a LOS "D" under 2035 Future with Project conditions;
- Hosking and South H. Street (AM Peak hour and PM Peak hour), have a LOS "F" under 2035 Future Without Project Conditions, and a LOS "E" under 2035 Future with Project conditions;
- Taft Highway/SR-119 and South H. Street (AM Peak hour), has a LOS "F" under 2035 Future Without Project conditions, and a LOS "D" under 2035 Future with Project conditions;
- Taft Highway/Panama Road and Cottonwood Road (AM Peak hour), has a LOS "F" under 2035 Future Without Project conditions, and a LOS "D" under 2035 Future with Project conditions; and
- Taft Highway/Panama Road and Cottonwood Road (PM Peak hour), has a LOS "F" under 2035 Future Without Project conditions, and a LOS "E" under 2035 Future with Project conditions.

Therefore, all study roadways would operate at an acceptable LOS (LOS "C" or better) under Future Year 2035 With Project conditions (in their mitigated configurations). Thus, with implementation of the recommended roadway improvements, implementation of the proposed Project would result in less than significant impacts on study area roadway segments under Future Year 2035 With Project conditions.

The following CMP intersections are included in the study area:

Existing

- Panama Lane and SR-99 Southbound Off-Ramp
- Panama Lane and SR-99 Northbound Off-Ramp
- Taft Highway/SR-119 and Wible Road
- Taft Highway/SR-119 and SR-99 Southbound Off-Ramp/Compagnoni Street
- Taft Highway/SR-119 and South H Street
- Taft Highway/SR-119/Panama Road and South Union Avenue
- Houghton Road and SR-99 Southbound Ramps/Costajo Street
- Houghton Road and SR-99 Northbound Ramps
- SR-99 Southbound Ramp and Costajo Street
- Bear Mountain Boulevard/SR-223 and Costajo Street

- Bear Mountain Boulevard/SR-223 and SR-99 Northbound Ramp
- Bear Mountain Boulevard/SR-223 and South Union Avenue
- Hosking Avenue and SR-99 Southbound Off-Ramp
- Hosking Avenue and SR-99 Northbound Off-Ramp

Future Year 2025 With Project CMP Intersection LOS

The AM and PM peak hour LOS of the study intersections, including the CMP intersections, under Future Year 2025 With Project conditions are outlined above. Based on established thresholds of significance, the addition of Project-generated trips would not result in significant impacts on CMP intersections and no mitigation is required.

Future Year 2035 With Project CMP Intersection LOS

The AM and PM peak hour LOS of the study intersections, including the CMP intersections, under Future Year 2035 With Project conditions are outlined above. Based on established thresholds of significance, the addition of Project-generated trips is anticipated to result in a significant impact at the following CMP study intersections under Future Year 2035 With Project conditions:

- Taft Highway/SR-119 and South H Street
- Houghton Road and SR-99 Southbound Ramps/Costajo Street
- SR-99 Southbound Ramp and Costajo Street

Mitigation measures, which involve improvements to the impacted CMP intersections, are recommended to reduce or eliminate traffic impacts for Future Year 2025 and 2035 With Project conditions.

Future Year 2025 With Project CMP Traffic Signal Warrants

The results of the signal warrant analysis under Future Year 2025 With Project conditions are outlined above. As indicated above, the traffic signal warrant is satisfied at the following CMP intersection under Future Year 2025 With Project conditions:

- Houghton Road and Chevalier Road (Warrants 1 and 3)

Future Year 2035 With Project CMP Traffic Signal Warrants

The results of the signal warrant analysis under Future Year 2035 With Project conditions are outlined above. As indicated above, the traffic signal warrant is satisfied at the following three CMP intersections under Future Year 2035 With Project conditions:

- Houghton Road and SR-99 Northbound Ramps (Warrants 1 and 3)
- Houghton Road and SR-99 Southbound Ramps/Costajo Street (Warrants 1 and 3)
- Bear Mountain Boulevard/SR-223 and South Union Avenue

Mitigation measures, which involve improvements to the impacted CMP intersections, are recommended to reduce or eliminate traffic impacts for Future Year 2025 and 2035 With Project conditions.

Conclusion

The proposed Project would contribute its pro-rata share for supplemental mitigation not covered under any regional transportation impact fee. The estimated supplemental mitigation amount, as determined by the Kern County Public Works Department, must be paid to the Kern County Public Works Department prior to recordation of any parcel map(s) or issuance of any grading or building permit if a parcel map is not required.

Mitigation Measures

MM 4.16-1: Supplemental Road Improvements. Prior to final approval of any Master Precise Development Plan or recordation of any parcel map, the project proponent will provide to the County a written statement of intent, which will detail the approach used to satisfy obligations for supplemental road improvements. This written statement of intent and method proposed will be approved by the Kern County Public Works Department- Development Review. The applicant will have three approaches to fulfill the road improvement responsibilities:

1. Lump Sum Payment: Any lump sum payment will be made prior to final approval of any Master Precise Development Plan, parcel map recordation or issuance of grading or building permits. All monies will be paid to the Kern County Roads Department. At the time of payment, the Kern County Roads Department will conduct a review of the distributed share amount and make adjustments, if required, based on increases to the construction cost index, other changes in standards or technology for required signalization or improvements, or updated development projects or proposals. The Kern County Roads Department may request, at a cost to be borne by the applicant, a supplemental traffic analysis to determine the correct lump sum payment.

2. Construction of Road Improvements: If, in an approved summary of intent, the Project Applicant seeks to construct road improvements in lieu of a lump sum payment, the improvements will be constructed and accepted by the County prior to issuance of the Certificate of Occupancy for the related building permits. Deviations from this sequence of events may be approved by the Kern County Roads Department.

3. Combination of Approach A and Approach B: The Project Applicant may choose to provide construction for certain roadway improvements and payment for others. This approach must be used in communication with the Kern County Roads Department.

4. All monies designated for roadway improvements shall initially be identified and calculated during processing of the Master Precise Development Plan or parcel map, whichever comes first. All final payments and or construction of

roadway improvements shall be completed at the issuance of any grading or building permit.

MM 4.16-2: Construction Traffic Control Plan. Prior to the issuance of construction or building permits, the project proponent shall:

1. Prepare and submit a Construction Traffic Control Plan to Kern County Public Works Department- Development Review and the California Department of Transportation offices for District 9, as appropriate, for approval. The Construction Traffic Control Plan must be prepared in accordance with both the California Department of Transportation Manual on Uniform Traffic Control Devices and Work Area Traffic Control Handbook and must include, but not be limited to, the following issues:

    a. Timing of deliveries of heavy equipment and building materials;

    b. Directing construction traffic with a flag person;

    c. Placing temporary signing, lighting, and traffic control devices if required including pedestrians and bicyclist; including, but not limited to, appropriate signage along access routes to indicate the presence of heavy vehicles and construction traffic;

    d. Ensuring access for emergency vehicles to the project sites;

    e. Temporarily closing travel lanes or delaying traffic during materials delivery, transmission line stringing activities, or any other utility connections;

    f. Maintaining access to adjacent property; and,

    g. Specifying both construction-related vehicle travel and oversize load haul routes, minimizing construction traffic during the AM and PM peak hour, distributing construction traffic flow across alternative routes to access the project sites, and avoiding residential neighborhoods to the maximum extent feasible.

2. Obtain all necessary encroachment permits for the work within the road right-of-way or use of oversized/overweight vehicles that will utilize county-maintained roads, which may require California Highway Patrol or a pilot car escort. Copies of the approved traffic plan and issued permits shall be submitted to the Kern County Planning and Natural Resources Department and the Kern County Public Works Department-Development Review.

3. Enter into a secured agreement with Kern County to ensure that any County roads that are demonstrably damaged by project-related activities are promptly repaired and, if necessary, paved, slurry-sealed, or reconstructed as per requirements of the state and/or Kern County.

4. Submit documentation that identifies the roads to be used during construction. The project proponent shall be responsible for repairing any damage to non-county-maintained roads that may result from construction activities. The project proponent shall submit a preconstruction video log and inspection report regarding roadway conditions for roads used during construction to the Kern County Public Work Department-Development Review and the Kern County Planning and Natural Resources Department.

5. Within 30 days of completion of construction, the project proponent shall submit a post-construction video log and inspection report to the County. This information shall be submitted in DVD format. The County, in consultation with the project proponent's engineer, shall determine the extent of remediation required, if any.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.16-3: The Project Would Cause an Increase in Operation-Related Safety Hazards or result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that would result in substantial safety risks.

By increasing traffic on area roadways, there is the potential to increase safety hazards by increasing vehicle turning movements and increasing potential for vehicle/pedestrian or vehicle/bicycle conflicts. However, with implementation of the mitigation measures MM 4.16-1 through MM 4.16-3, traffic controls will be included to help calm and control traffic where necessary, including signals, signage, sidewalks, crosswalks, and bicycle lanes, among other safety features. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.16.4: The Project Would Cause an Increase in Construction-Related Safety Hazards or Would Substantially Increase Hazards Due to a Design Feature (e.g., Sharp Curves or Dangerous Intersections) or Incompatible Uses (e.g., Farm Equipment).

No obstacles to sight distance are expected to result from Project construction. No sharp roadway curves currently exist in the proposed Project area, nor would such curves be created by the proposed Project. However, the maneuvering of construction-related vehicles and equipment among the general-purpose traffic on area roadways could cause safety hazards. This impact is considered potentially significant but can be reduced to a less than significant level with implementation of mitigation measure MM 4.16-2.

Mitigation Measures

Implement mitigation measure MM 4.16-2.

Level of Significance After Mitigation

Impacts would be less than significant.

Impact 4.16.5: The Project Would Result in Inadequate Emergency Access.

Anticipated construction-related traffic and circulation impacts would be considered a temporary nuisance that would cease upon completion of Project construction. Preparation of a detailed Traffic Management Plan (TMP) would be required prior to construction of the proposed Project. The TMP would delineate all road closures, provisions to maintain access to adjacent residential properties at all times, prior notices, adequate sign-postings, detours, provisions for pedestrian and bicycle transportation and permitted hours of construction activity. Proper detours and warning signs would be established along the proposed Project perimeter to ensure public safety. The TMP shall be devised so that construction would not interfere with emergency response or evacuation plans. With implementation of the TMP and mitigation measures, less than significant impacts are anticipated. Therefore, no significant impacts to vehicular and emergency access would occur during construction activities.

South Union Avenue, Houghton Road, and the DiGiorgio Road alignment provide the primary access to and from the proposed Project area. The design of the proposed access locations would allow for adequate vehicular and emergency access to public roadways. Project implementation would result in a less than significant impact in this regard.

Mitigation Measures

Implement MM 4.16-2.

Level of Significance After Mitigation

Impacts would be less than significant.

Impact 4.16.6: The Proposed Project Would Conflict with Adopted Policies, Plans or Programs Supporting Alternative Transportation (e.g., bus turnouts and bicycle racks).

As indicated in the Metropolitan Bakersfield General Plan Environmental Impact Report, as development and population increases within the Metropolitan Bakersfield area, the demand for alternative transportation (i.e., bus transit service, bikeways and pedestrian facilities) would increase. The Metropolitan Bakersfield General Plan Bikeway Master Plan is implemented to link schools, civic centers, service areas, parks, employment centers, and regional bike paths. As the proposed Project vicinity is mostly undeveloped land, or land currently under construction, there are no pedestrian and bicycle facilities in the area. However, as the proposed Project area becomes developed, adherence to General Plan roadway standards and policies would allow for adequate pedestrian and bicycle circulation.

Transit service within the Metropolitan Bakersfield area consists of approximately one percent of the total travel. In accordance with the goals and policies of the Metropolitan Bakersfield General Plan, the Project Applicant shall work with the GET and Kern Transit to locate bus stops as close as possible to the proposed Project site in an effort to provide residents with sufficient access to public transit service. Bus stops would most likely be placed on major arterials. Therefore, development of the proposed Project would not result in a significant impact to transit service in the proposed Project vicinity.

The County requires installation of sidewalks in conjunction with development. Sidewalks would be required to allow for safe and convenient pedestrian movement and would connect with sidewalks planned for adjacent developments. The proposed Project would construct internal roads to the County's roadway standards, which would include sidewalks on both sides of the streets. Therefore, with the proposed Project designed to City and County standards, there would be no impacts to pedestrian and bicycle circulation.

Development of the Project site in accordance with the goals and policies of the Metropolitan Bakersfield General Plan and site plan review by the County, GET and Kern Transit would serve to enhance alternative modes of transportation within the Project area. This would be a long-term beneficial impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Cumulative Impacts

The analysis of cumulative impacts in this section included all of the cumulative projects discussed in Chapter 3, Project Description. Projections of future traffic conditions incorporate regional population and employment growth that is expected to occur by the future analysis year, independent of the proposed Project. Because of this, future condition scenarios (2035) without the proposed Project capture the effects of cumulative projects. Future condition scenarios (2035) with the proposed Project capture the effects of both cumulative projects and those of the proposed Project.

Cumulative projects plus anticipated growth in traffic volumes by the Year 2035 will cause 21 intersections to operate below acceptable LOS (without the proposed Project). Additionally, by 2025, future traffic conditions without the Project would result in five (5) intersections meeting signal warrants under future peak hour traffic loads. By 2035, future traffic conditions without the Project would result in an additional zero (0) intersections meeting signal warrants under future peak hour traffic loads. Future cumulative projects and ambient growth would cause 17 studied roadway segments to operate below acceptable LOS in their existing configurations for Future Year 2035 Without Project conditions (LOS "D" or below for the Metropolitan Bakersfield General Plan).

The proposed Project would add 32,053 vehicle trips per day to the existing and future year conditions. With the addition of this Project traffic, six of the intersections that will operate at

acceptable LOS under future traffic loads (2035) will drop below acceptable LOS when Project traffic is added to future peak hour traffic (2035 with project). The proposed Project traffic would also result in 14 intersections meeting signal warrants under future peak hour traffic loads. In addition, three studied roadway segments would operate below acceptable LOS (LOS "C" for Metropolitan Bakersfield General Plan) in their existing configurations under Future Year 2035 With Project conditions. When added to future cumulative conditions, the Project-generated traffic would result in the continued worsening of existing intersections that are at or above operating capacity. However, many of the improvements identified above will be necessary even without the addition of Project-generated traffic. The proposed Project shall contribute its proportionate share of costs to construct necessary improvements required due to future traffic growth projections in the study area.

Additionally, the proposed Project is located approximately 1.10 miles southeast of the Bakersfield City limits, within the Metropolitan Bakersfield General Plan in Kern County. Therefore, it is anticipated that trips generated will utilize the Metropolitan Bakersfield transportation system. The cumulative impacts of the existing and proposed growth in the Metropolitan Bakersfield area on the transportation system has been the subject of various studies since the development of the Transportation Impact Fee (TIF) in 1992. The Kern County Public Works Department and City of Bakersfield Public Works Department have worked with Kern COG since that time to identify major improvements and seek funding for completion of the appropriate segments to ensure roadway capacity. In 1997, the Metropolitan Bakersfield Major Transportation Investment Strategy (MTIS) was completed to identify overall transportation needs and develop a long-term improvement plan. Mass transit options including increased bus systems, transportation systems management, and commuter/light rail transit were considered in the study. However, the MTIS concluded that in Metropolitan Bakersfield, stand-alone mass transit solutions would not provide the same benefits that improvements to the roadway network would provide. The inefficient roadway system, lacking connectivity, was the primary transportation element in need of significant improvement.

The physical constraints that affect the alignment and design of an efficient regional transportation system include:

- the Kern River cutting diagonally across Bakersfield from northeast to the southwest that inhibits both north-south and east-west travel;
- SR-99, which divides Bakersfield east and west;
- SR-58, which divides the east side of Bakersfield into north and south;
- the mainline of both the BNSF and the UPRR run through Bakersfield, dividing the west from the northwest, the northeast from the southwest, and splitting central Bakersfield;
- existing development that breaks up continuity and numerous canals and branch rail lines, which must be crossed to provide a functional roadway network.

To address these challenges, in 2000–2001, Kern County, the City of Bakersfield, Caltrans, and Kern COG jointly commissioned the Bakersfield System Study to perform a comprehensive evaluation of the region's roadway network. The results of that study are reflected in the current adopted circulation element of the Metropolitan Bakersfield General Plan. It identifies a regional network of freeways, parkways, arterials, and collectors that when fully implemented are proposed to provide regional mobility and reduced congestion. Estimates for full buildout of all the necessary regional

improvements, along with additional facilities such as Seventh Standard Road, the South Beltway, and the Snow Road interchange with SR-99, range from $2 to $3 billion in today's dollars. Although construction of regional roadways has occurred with money from TIF, development-constructed improvements, and federal and state highway money, the freeways have not been completed.

The accelerated growth from 2002 to 2004 in the Metropolitan Bakersfield area of 4.7 percent per year resulted in housing construction and amendments to the plan that required road network improvements that are still in the design stage. Environmental clearance, design, right-of-way (ROW) acquisition and construction of a new freeway requires 10 to 15 years to complete. Given the size and scope of required improvements, the impacts from project amendments in the noncore area of the Metropolitan Bakersfield area are significant and cannot be accommodated by the TIF program or the localized supplemental funding proposed by the Bakersfield System Study. While a regional network has been identified, the issues of timing (when the actual improvements will be completed) and funding (guaranteed sources of money that will increase to match inflation) are still considered potentially significant.

Kern County and the City of Bakersfield have commenced a comprehensive update of the Metropolitan Bakersfield General Plan that will include a complete review of the circulation element and propose solutions to resolve the cumulative impacts past 2030. As an interim solution, the Kern County Public Works Department, in consultation with the City of Bakersfield, has reviewed the proposed regional network along with the known funding sources. The proposed future circulation system includes all existing and future arterials, based on the sectional grid system, constructed to their ultimate six-lane width. It also includes a freeway system composed of all existing and currently proposed facilities, constructed to a width of up to 10 lanes as needed. The proposed future freeway system includes the following facilities:

- West Beltway
- Westside Parkway (Completed)
- Centennial Corridor
- Fruitvale Avenue at SR-65 connection/extension
- Snow Road at SR-99 interchange
- South Beltway
- North Beltway (north of Seventh Standard Road)

The issues to be examined include a realistic assessment of the design and available funding over the next 30 years against the background that the County does not have a dedicated sales tax for transportation funding, the funding from the STIP is limited by competition among agency requests across California, federal money (Thomas Road Improvement Program) will not build complete infrastructure, and local matching funds were limited.

Funding for Regional Transportation Improvements

Local Sales Tax

State law provides that a countywide sales tax on goods and services can be applied with two-thirds voter approval for use in operation, maintenance, and construction of transportation projects. The County is then deemed a self-help county and receives priority consideration during state and federal funding allocations. Currently, 19 counties in California are self-help counties. Kern COG estimates that a countywide 0.5-cent sales tax would generate $931.6 million over a 20-year period, while a 1-cent tax would generate $1.8 billion over the same time period. Such funding is then used to match funding for state and federal allocations and to finance local projects that will reduce critical congestion points. Kern County voters failed to pass a proposed 0.5-cent sales tax in 1989 and 2006. There are no legal limits on the number of times the measure may be qualified for the ballot.

Other Local Sources

Supplemental impact fees for regional impacts could be assessed on all new proposals in the metropolitan Bakersfield area under the jurisdiction of the County. An example of this approach is San Joaquin County, which assesses two different fees to address regional and local connectively improvements.

Additional funding could be generated by conditioning development proposals to create geographical funding districts such as bridge and thoroughfare districts or capital facilities districts that would assess new homes for regional improvements. Given the regional nature of the circulation system, identifying the facilities and appropriate segments for assessment that would comply with legal requirements for equity and nexus could be difficult.

In addition to matching funding of over $100 million that the City of Bakersfield has allocated from revenue, Kern County has approved a financing plan that will generate $148 million for transportation projects. Presented to the Board of Supervisors on December 4, 2007, the plan proposes to issue bonds that will provide a framework for debt financing. The financing plan includes the following projects that have been identified in priority order with estimated cost and time periods when bond proceeds will be needed:

1. Seventh Standard Road Corridor from SR-99 to Santa Fe Way (SR-43)	$34.3 million, 12 months
2. Local Transportation Projects	$ 42.3 million, 12 months
3. Thomas Road Improvement Program, County Match	$ 72.0 million, 6 years
Total	**$148.6 million**

This funding could provide immediate construction dollars to implement projects to relieve critical congestion points and ensure timely implementation of TRIP. In addition, the proposed financing plan includes setting aside funds ranging in amounts from $9.5 million to $17.5 million annually to defray future capital costs associated with the transportation projects.

Conclusion

All roadway segments would operate at acceptable LOS under cumulative conditions. In addition, required mitigation measures would result in acceptable LOS for all intersections. Roadway and intersection improvements require participation in the RTIF Program. However, given the uncertainty of the timing and/or ultimate implementation of the recommended improvements which require pro-rata, fair share funding from various sources, along with those improvements necessary within Metropolitan Bakersfield, the proposed Project's contribution would result in significant and unavoidable impacts.

Mitigation Measures

Implement mitigation measure MM 4.16-2.

Level of Significance after Mitigation

Cumulative impacts would be significant and unavoidable.

This Page Intentionally Left Blank

Section 4.17

Utilities

Section 4.17
Utilities

4.17.1 Introduction

This section addresses impacts of the proposed Project pertaining to demand for operational utilities (i.e., water, sewer/wastewater, stormwater control, solid waste disposal, electricity, and natural gas). For each of the utilities addressed in this section, existing infrastructure and levels of service are described, as are improvements that would be required to accommodate the proposed Project. A Public Services Report was prepared by McIntosh & Associates in October 2008 (refer to Appendix N, *Original Technical Studies*). A subsequent Public Services Report was prepared by McIntosh & Associates in June 2017 (Appendix J, *Public Services Report*), and most recently, a Water Supply Assessment was prepared by Yarne & Associates, Inc. in January 2019 [Appendix H, *99 Houghton Industrial Park SB 610 Water Supply Assessment (WSA*)].

4.17.2 Environmental Setting

Water Resources

The existing water purveyor for the proposed Project, who currently provides irrigation water solely for agricultural purposes, would not service the Project site with domestic water. Instead, potable water would be provided to the Project site by the California Water Service Company (Cal Water). Cal Water supplies water service to 1.7 million Californians through 435,000 connections in a total of 24 Districts. The proposed Project is located approximately 0.5 miles from the southern boundary of the Cal Water Bakersfield District (District) near the intersection of State Route (SR-99) and West Curnow Road. In 2015, an Urban Water Management Plan (UWMP) was prepared for the District, but because the proposed Project site is outside the current District boundaries, it was not specifically included in the UWMP. Because the proposed Project was not included in the UWMP, a WSA was prepared to address water service requirements. The information in the WSA was based on the 2015 UWMP, which is the most recent UWMP for the District, as well as information from Cal Water that was compiled from the most recent 2016-2017 data. This information has been used for the analysis in the RDEIR.

Cal Water would require approval from the California Public Utility Commission (CPUC) to expand its service area to include the proposed Project. Cal Water plans on submitting an application to the CPUC and receiving approval for the service extension in mid to late 2019.

Sewer Services

The Metropolitan Bakersfield area is served by five major wastewater treatment facilities: the City of Bakersfield Treatment Plant No. 2, the City of Bakersfield Treatment Plant No. 3, the North of River Sanitary District (NORSD) Treatment Plant, the Mount Vernon/Panorama District Plant and the Lamont Public Utility District Plant (located outside the Metropolitan Bakersfield boundary).

The proposed Project site area has never been served by a sewer system. Currently, neighboring residential and commercial properties are served by individual, privately-owned septic systems. A private package sewer treatment plant is proposed to provide services for the Project site.

Solid Waste

Solid waste is a mixture of items discarded as useless or unwanted arising from residential, commercial, industrial, institutional, agricultural, industrial and mining activities. These wastes include construction and demolition-generated (C&D) waste as well as inert wastes. The general waste classifications utilized by the Kern County Waste Management Department are:

- Non-hazardous solid waste consists mostly of household garbage, commercial wastes, agricultural waste and litter.
- Special waste, which is any waste that requires special handling, includes infectious waste, pesticide containers, sewage sludge, oilfield waste, household hazardous waste, and asbestos waste.
- Designated waste is a waste that consists of or contains pollutants that could be released at concentrations in excess of applicable water quality objectives and standards or hazardous waste that has been granted a variance from hazardous waste management requirements.
- Hazardous waste is a waste that, because of its quantity, concentration, physical, chemical, or infectious characteristics, may either (a) cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness or (b) pose a substantial present or potential hazard to human health or the environment when improperly managed.
- Industrial wastes are hazardous and non-hazardous by-products produced by oil and gas extraction, pesticide, paper, petrochemical, rubber, plastics, electronics, and other industries.

Not all of the above-defined wastes may be disposed of at a landfill. State law regulates the disposal of wastes at landfills. Refer to the following section for a description of appropriate disposal methods of waste generated at the proposed Project site.

Kern County is responsible for meeting the California Integrated Wastewater Management Act of 1989, Assembly Bill 939 (AB 939). AB 939 requires that cities and counties reduce the amount of solid waste being sent to landfills by 50 percent by January 1, 2000, and it requires cities and counties to prepare AB 939 solid waste planning documents. These documents include the Source Reduction and Recycling Element (SRRE), the Household Hazardous Waste Element (HHWE), and the Non-Disposal Facility Element (NDFE). All three of these documents have been approved for Kern County, as well as an Integrated Waste Management Plan approved February 1998 by the California Integrated Waste Management Board [California Integrated Waste Management Board (CIWMB) 2009]. The Kern County Integrated Waste Management Plan is the long-range planning document for landfill facilities.

C&D waste is heavy, inert material. These are processed and reused in construction and improvement projects. Three sites, all in the City of Bakersfield have been approved to accept these wastes. Since C&D waste is heavier than paper and plastic, it is more difficult for the counties and cities to reduce the tonnage of disposed waste. For this reason, C&D waste has been specifically targeted by the State of California for diversion from the waste stream. Projects that will generate C&D waste should emphasize deconstruction and diversion planning, rather than demolition. Deconstruction is the planned, organized dismantling of a prior construction project, which allows maximum use of the

deconstructed materials for recycling in other construction projects and sends a minimum of the deconstruction material to landfills.

The Kern County Waste Management Department administers or sponsors the following recycling programs that contribute towards meeting the State-mandated solid waste diversion goals:

- Recycling programs at landfills to recycle or divert a wide variety of products, such as wood waste, cathode ray tubes, tires, inert materials, appliances, etc.
- Kern County and the City of Bakersfield operate drop-off recycling centers for household recyclables located within the unincorporated metropolitan area and within the City. County and City drop-off recycling centers may be used by both County and City residents.
- Financial assistance for the operation of the City of Bakersfield Green Waste Facility.
- Kern County Special Waste Facility provides disposal of household hazardous waste services to all Kern County residents.
- Cosponsors semi-annual Bulky Waste Collection Events, which are held in the Bakersfield area and are available to both County and City residents.
- Participates, jointly with the City of Bakersfield, on a Christmas Tree Recycling campaign.
- Cosponsors, jointly with the Community Clean Sweep, a Telephone Book Recycling program.
- Sponsors the Community Clean Sweep to conduct summer workshops called "Trash to Treasure", which educates children on recycling and other Kern County Waste Management Department programs.
- Operates, in collaboration with the Community Clean Sweep, an innovative elementary school education program called "Clean Kids Hit the Road Puppet Show".
- Provides recycling trailers to churches, schools and non-profit organization.

Solid waste generated from the proposed Project would be collected by solid waste hauler Price Environmental Services, Inc. For additional details regarding solid waste services, refer to Appendix J, Public Services Report.

Landfills

Refuse collected by the franchise hauler is transported to one of two landfills, the Metropolitan Bakersfield Sanitary Landfill (MBSL) at Bena, located approximately 18 miles east of downtown Bakersfield, or Shafter-Wasco Sanitary Landfill. The Kern County Waste Management Department (KCWMD) opened the MBSL in 1992.

According to the City of Bakersfield Solid Waste Division, refuse from the proposed Project would be deposited at the Bena Landfill located at 2951 Neumarkel Road in Caliente, California and the Shafter-Wasco Sanitary Landfill located at 17621 Scofield Avenue in Shafter, California. Refuse collection services for the proposed Project is operated and managed by Price Environmental Services, Inc.

Bena Landfill has reported the remaining capacity at 22,174,654 tons and the landfill is projected to accommodate solid waste for 26.8 years and is currently scheduled for closure in 2038. Shafter-

Wasco Landfill has reported the remaining capacity at 3,671,755 tons and is projected to accommodate solid waste for 16.4 years.

Should the California Integrated Waste Management Board (CIWMB) grant additional permits to develop the remainder of the site and waste diversion stabilizes at 50 percent, the potential total capacity for the Bena Landfill site exceeds 60 years. The Shafter-Wasco Sanitary Landfill is estimated to reach capacity by July 2024.

Electrical Services

Most of the County's electrical energy is consumed by residential, commercial, industrial, agricultural, and transportation uses. Electric power supply and distribution for the proposed Project area is furnished by Pacific Gas & Electric (PG&E). Two PG&E substations, Old River Substation and Panama Substation presently serve the proposed Project area. Existing PG&E electrical distribution facilities are located on the south side of DiGiorgio Road, on the northeast side of SR-99, along the north side of Houghton Road, and on the west side of South Union Avenue with a little intrusion into the area from South Union Avenue and Houghton Road.

Four pole-mounted electrical transformer locations were observed on the proposed Project site. PG&E is the owner of the transformers and should be contacted for their removal prior to Project site development.

Natural Gas

Natural gas is primarily consumed by the City's residential land uses for heating and cooking purposes. The entire proposed Project site is within PG&E's service territory; therefore, natural gas will be provided by PG&E. Currently, there is approximately 5,000 linear feet of PG&E Transmission Line 300B located in the northeast corner of the proposed Project. There is also a six-inch diameter gas distribution line located on the east side of the proposed Project.

4.17.3 Regulatory Setting

At the federal level, the United States Environmental Protection Agency (U.S. EPA) promulgates regulations that protect surface waters under the Water Pollution Control Act Amendments of 1972, commonly referred to as the Clean Water Act. These federal regulations, published in the Federal Register and codified in Code of Federal Regulations Title 40, establish wastewater treatment policies, effluent requirements for surface water disposal, and requirements for biosolids management and disposal. Regulations also set forth pretreatment requirements for preventing pollutants from entering publicly owned treatment works at levels that could interfere with treatment operation or solids management.

Federal

Clean Water Act (CWA)

At the federal level, the United States Environmental Protection Agency (U.S. EPA) promulgates regulations that protect surface waters under the Water Pollution Control Act Amendments of 1972,

commonly referred to as the Clean Water Act. These federal regulations, published in the Federal Register and codified in Code of Federal Regulations Title 40, establish wastewater treatment policies, effluent requirements for surface water disposal, and requirements for biosolids management and disposal. Regulations also set forth pretreatment requirements for preventing pollutants from entering publicly owned treatment works at levels that could interfere with treatment operation or solids management.

Safe Drinking Water Act

The Safe Drinking Water Act of 1974 (SDWA) gave the U.S. EPA the authority to set standards for contaminants in drinking water supplies. The U.S. EPA was required to establish primary regulations for the control of contaminants that affected public health and secondary regulations for compounds that affect the taste, odor, and aesthetics of drinking water. Under the provisions of SDWA, the California Department of Health Services (DHS) has primary enforcement responsibility. Title 22 of the California Administrative Code establishes DHS authority and stipulates State drinking water quality and monitoring standards.

State

California Department of Resources Recycling and Recovery (CalRecycle) Formerly California Integrated Waste Management Board (CIWMB)

CalRecycle is the State agency designated to oversee, manage, and track California's 76 million tons of waste generated each year. It is one of the six agencies under the umbrella of the California Environmental Protection Agency. CalRecycle develops regulations to control and manage waste, for which enforcement authority is typically delegated to the local government. The board works jointly with local government to implement regulations and fund programs.

Assembly Bill (AB) 939 and Senate Bill (SB) 1016

The California Integrated Waste Management Act of 1989, or Assembly Bill (AB) 939, established the Integrated Waste Management Board, required the implementation of integrated waste management plans, and mandated that local jurisdictions divert at least 50 percent of all solid waste generated (from 1990 levels), beginning January 1, 2000, and divert at least 75 percent by 2010. Projects that would have an adverse effect on waste diversion goals are required to include waste diversion mitigation measures to assist in reducing these impacts to less-than-significant levels. With the passage of Senate Bill (SB) 1016 (the Per Capita Disposal Measurement System) in 2006, only per capita disposal rates are measured to determine if a jurisdiction's efforts are meeting the intent of AB 939.

Assembly Bill (AB) 341

In response to reducing commercial solid waste that is landfilled, the State Legislature passed AB 341 declaring that it is the policy goal of the State that not less than 75 percent of solid waste generated be source separated, reduced, recycled, or composted by the year 2020. AB 341 sets forth the requirements of the statewide mandatory commercial recycling program which defines that a business, including any commercial or public entity, generating four cubic yards or more of commercial solid waste per week are required to recycle. Businesses are required to take one or any

combination of the following actions in order to reuse, recycle, or otherwise divert solid waste from disposal:

- Subscribe to a source separated recycling service with a regional franchise hauler authorized to provide service for the area in which the business is located;
- Subscribe to a mixed solid waste recycling service with a regional franchise hauler authorized to provide service for the area in which the business is located;
- Self-recycle and certify compliance with Kern County Ordinance No. G-8337.

Assembly Bill (AB) 1826

AB 1826, created to drive the recycling of yard trimmings and food scraps, became effective April 2016. The bill requires businesses generating a specified amount of organic solid waste per week to arrange for recycling for that material. This bill will also require the contract or work agreement between a business and a gardening or landscaping service to require the organic waste generated by those services to comply with the requirements of the law. Business within the County would be required to comply with any codes/regulations promulgated from AB 1826.

California Green Building Standards Code

Construction- and demolition-generated (C&D) waste is heavy, inert material. This material creates significant problems when disposed of in landfills. Since C&D debris is heavier than paper and plastic, it is more difficult for counties and cities to reduce the tonnage of disposed waste. For this reason, C&D waste debris has been specifically targeted by the State of California for diversion from the waste stream.

The California Green Building Standards Code (Standards Code) will apply to the construction related activities of this project. The purpose of the Standards Code is to improve public health, safety, and general welfare by enhancing the design and construction of buildings using building concepts that have a positive environmental impact and encouraging sustainable construction practices. Provisions of the Standards Code shall apply to the design and construction of building structures subject to State regulation.

Per Code Section 708.3 – Construction Waste Reduction, Disposal, and Recycling of the Standards Code, a commercial entity is to recycle and/or salvage for reuse a minimum of 50 percent of the nonhazardous construction and demolition debris, or meet a local construction and demolition waste management ordinance, whichever is more stringent.

State Water Resources Control Board

The National Pollution Discharge Elimination System (NPDES) was established per the 1972 amendments to the Federal Water Pollution Control Act, or CWA, to control discharges of pollutants from point sources (Section 402). Amendments to the CWA created a new section to the Act, which is devoted to stormwater permitting (Section 402[p]), with individual states designated for administration and enforcement of the provisions of the CWA and the NPDES permit program. The SWRCB issues both general construction permits and individual permits under this program.

Biosolids generated during wastewater treatment are regulated by the State under SWRCB Water Quality Order No. 2004-0012-DWQ, titled the "Final General Waste Discharge Requirements for Land Application of Biosolids for Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities." This order, implemented under the federal biosolids rules set forth in 40 CFR Part 503, applies to all land application of Class A and Class B biosolids as well as "exceptional quality" biosolids-derived mixtures consisting of 50% or more biosolids. The order establishes permitting, monitoring, and reporting requirements. Local ordinances, described below, would also regulate the disposal of biosolids in Kern County.

Central Valley Regional Water Quality Control Boards

The primary responsibility for the protection of water quality in California rests with the State Water Resources Control Board (SWRCB) and nine regional water quality control boards (RWQCBs). The SWRCB sets Statewide policy for the implementation of State and Federal laws and regulations. The RWQCBs adopt and implement Water Quality Control Plans (Basin Plans) that recognize regional differences in natural water quality, actual and potential beneficial uses, and water quality problems associated with human activities. The jurisdiction of the Central Valley RWQCB extends from the Oregon border, over the valley and foothills, through the Central Valley, to the border with Los Angeles County.

California Department of Water Resources (DWR)

The DWR is a department within the California Resources Agency. The DWR is responsible for the State's management and regulation of water usage.

California Water Code Section 13260

California Water Code Section 13260 requires any person who discharges waste, other than into a community sewer system, or proposes to discharge waste that could affect the quality of waters of the State, to submit a report of waste discharge to the applicable RWQCB. Any actions of the proposed Project that would be applicable under California Water Code Section 13260 would be reported to the Central Valley Regional Water Quality Control Boards (Central Valley RWQCB).

Porter-Cologne Water Quality Control Act

The Porter Cologne Act, passed in 1969, acts in concert with the Federal CWA. The act established the SWRCB and divided the State into nine regions, each overseen by an RWQCB. The SWRCB is the primary State agency responsible for protecting the quality of the State's surface and groundwater supplies; however, much of its daily implementation authority is delegated to the nine RWQCBs. The Project Area is under the jurisdiction of the Central Valley RWQCBs.

The Porter Cologne Act provides for the development and periodic review of water quality control plans (basin plans) that designate beneficial uses of California's major rivers and groundwater basins and establish narrative and numerical water quality objectives for those waters. Basin plans are primarily implemented by using the NPDES permitting system to regulate waste discharges so that water quality objectives are met. Basin plans, updated every three years, provide the technical basis for determining waste discharge requirements, taking enforcement actions, and evaluating clean water grant proposals. The act also assigns responsibility for implementing CWA Sections 401, 402, and

303(d) to the SWRCB and RWQCBs. There are two basin plans in the Central Valley RWQCB region, the Water Quality Control Plan for the Sacramento and San Joaquin Rivers and the Water Quality Control Plan for the Tulare Lake Basin.

Assembly Bill (AB) 1881

AB 1881 expanded previous legislation related to landscape water use efficiency. AB 1881, the Water Conservation in Landscaping Act of 2006, enacted landscape efficiency recommendations of the California Urban Water Conservation Council (CUWCC) for improving the efficiency of water use in new and existing urban irrigated landscapes in California. AB 1881 required the DWR to update the existing Model Local Water Efficient Landscape Ordinance and local agencies to adopt the updated model ordinance or an equivalent. The law also requires the California Energy Commission to adopt performance standards and labeling requirements for landscape irrigation equipment, including irrigation controllers, moisture sensors, emission devices, and valves to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy or water.

Assembly Bill (AB) 2882

AB was passed in 2008 and encourages public water agencies throughout California to adopt conservation rate structures that reward consumers who conserve water. AB 2882 clarifies the allocation-based rate structures and establishes standards that protect consumers by ensuring a lower base rate for those who conserve water.

Sustainable Groundwater Management Act of 2014

In 2014, California enacted the Sustainable Groundwater Management Act (SGMA; Water Code Section 10720 et seq.). SGMA, and related amendments to California law, require that all groundwater basins designated as high or medium priority in the DWR California Statewide Groundwater Elevation Monitoring (CASGEM) Program, and that are subject to critical overdraft conditions, must be managed under a new Groundwater Sustainability Plan (GSP) or a coordinated set of GSPs, by January 31, 2020. High or medium priority basins that are not subject to a critical overdraft must be regulated under one or more GSPs by 2022. Where GSPs are required, one or more local Groundwater Sustainability Agencies (GSAs) must be formed to implement applicable GSPs. A GSA has the authority to require registration of groundwater wells, measure and manage extractions, require reports and assess fees, and to request revisions of basin boundaries, including establishing new subbasins. GSAs must have been formed for high and medium priority basins by June 2017. All of the Kern County Subbasin has been included in exclusive GSA's as mandated by SGMA.

The 2.8 million acres of valley portion of Kern County has been designated a high priority and the 250,000 acres of the Indian Wells Valley sub-basin which includes the City of Ridgecrest and China Lake Naval Weapons Station has been classified a medium priority basin. Both are under mandatory requirements to form a GSA (or multiple GSA's) and create a GSP that achieves sustainability in 20 years.

Each GSP must include a physical description of the covered basin, such as groundwater levels, groundwater quality, subsidence, information on groundwater-surface water interaction, data on

historical and projected water demands and supplies, monitoring and management provisions, and a description of how the plan will affect other plans, including city and county general plans Under the Act, the GSA is authorized to restrict pumping, levy assessments and fees and undertake water quality and quantity projects to rebalance the basin. The DWR must adopt regulations for the preparation of a GSP by January 2016. Emergency regulations for the preparation of the GSP's were approved by the California Water Commission on May 18, 2016. As defined by the Act, "sustainable groundwater management" means that groundwater use within basins managed by a GSP will not cause any of the following "undesirable results:" (a) chronic lowering of groundwater levels (not including overdraft during a drought, if a basin is otherwise managed); (b) significant and unreasonable reductions in groundwater storage; (c) significant and unreasonable seawater intrusion; (d) significant and unreasonable degradation of water quality; (e) significant and unreasonable land subsidence; and (f) surface water depletions that have significant and unreasonable adverse impacts on beneficial uses (Water Code Section 10721(w)).

Kern County is a member of the following GSA's: Cuyama Basin Groundwater Sustainability Agency, Indian Wells Valley Groundwater Authority and Kern Groundwater Authority which manages a portion of the valley sub-basin. The Valley portion of Kern County also is managed by the Kern River Groundwater Sustainability Agency which is comprised of the City of Bakersfield, Kern Delta Water District and Improvement District No. 4 of the Kern County Water Agency. An additional nine GSA's have been formed to sustainably manage their respective portions of the Kern County subbasin.

Note: Effective December 11, 2018, the County of Kern withdrew from the Kern Groundwater Authority. The Kern County Water Agency (KCWA) was brought in as a cooperative member of Joint Powers Agreement to manage the white spaces. Five GSA's are preparing GSP's to manage the Kern subbasin per a Kern County Subbasin Coordination Agreement.

Recycled Water Policy

On February 3, 2009, by Resolution No. 2009-0011, the SWRCB adopted a Recycled Water Policy in an effort to move towards a sustainable water future. In the Recycled Water Policy states "we declare our independence from relying on the vagaries of annual precipitation and move towards sustainable management of surface waters and groundwater, together with enhanced water conservation, water reuse and the use of stormwater."

The following goals were included in the Recycled Water Policy:

- Increase use of recycled water over 2002 levels by at least one million acre-feet per year by 2020 and at least two million acre-feet per year by 2030.
- Increase the use of stormwater over use in 2007 by at least 500,000 acre-feet per year by 2020 and at least one million acre-feet per year by 2030.
- Increase the amount of water conserved in urban and industrial areas by comparison to 2007 by at least 20 percent by 2020.
- Included in these goals is the substitution of as much recycled water for potable water as possible by 2030.

The Recycled Water Policy provides direction to the RWQCBs regarding issuing permits for recycled water projects, addresses the benefits of recycled water, addresses a mandate for use of recycled water and indicates the SWRCB will exercise its authority to the fullest extent possible to encourage the use of recycled water.

The Recycled Water Policy also indicates that some groundwater basins contain salts and nutrients that exceed or threaten to exceed water quality objectives established in basin plans and states that it is the intent of this Recycled Water Policy that all salts and nutrients be managed on a basin-wide or watershed-wide basis through development of regional or sub-regional management plans. Finally, the Recycled Water Policy addresses the control of incidental runoff from landscape irrigation projects, recycled water groundwater recharge projects, anti-degradation, control of emerging constituents and chemicals of emerging concern and incentives for use of recycled water.

In accordance with the provisions of the Recycled Water Policy, a Constituents of Emerging Concerns (CEC) Advisory Panel was established to address questions about regulating CECs with respect to the use of recycled water. The CEC Advisory Panel's primary charge was to provide guidance for developing monitoring programs that assess potential CEC threats from various water recycling practices, including groundwater recharge/reuse and urban landscape irrigation. On June 25, 2010, the CEC Advisory Panel provided recommendations to the SWRCB and California Department of Public Health in their Final Report "Monitoring Strategies for Chemicals of Emerging Concern in Recycled Water – Recommendations of a Scientific Advisory Panel". The SWRCB used those recommendations to amend the Recycled Water Policy in 2013 (SWRCB Resolution No. 2013-003).

The April 2013 amendment provides direction to the RWQCBs on monitoring requirements for CECs in recycled water. The monitoring requirements pertain to the production and use of recycled water for groundwater recharge reuse by surface and subsurface application methods, and for landscape irrigation. The amendment identifies three classes of constituents to monitor:

- Human health-based CECs: CECs of toxicological relevance to human health.
- Performance indicator CECs: An individual CEC used for evaluating removal through treatment of a family of CECs with similar physicochemical or biodegradable characteristics.
- Surrogates: A measurable physical or chemical property, such as chlorine residual or electrical conductivity, that provides a direct correlation with the concentration of an indicator compound. Surrogates are used to monitor the efficiency of CEC treatment.

Only groundwater recharge reuse facilities will be required to monitor for CECs and surrogates. Surface application and subsurface application facilities will have different mandatory CECs and a different monitoring schedule. Monitoring is not required for recycled water used for landscape irrigation projects that qualify for streamlined permitting unless monitoring is required under the adopted salt and nutrient management plan. Streamlined permitting projects must meet the criteria specified in the Policy including: compliance with Title 22, application at agronomic rates, compliance with any applicable salt and nutrient management plan, and appropriate use of fertilizers.

Senate Bills 610 (Chapter 643, Statutes of 2001) and 221 (Chapter 642, Statutes of 2001)

SB 610 and SB 221 are companion measures that seek to promote more collaborative planning among local water suppliers and cities and counties. They require that water supply assessments occur early in the land use planning process for all large-scale development projects. If groundwater is the supply source, the required assessments must include detailed analyses of historic, current, and projected groundwater pumping and an evaluation of the sufficiency of the groundwater basin to sustain a new project's demands. They also require an identification of existing water entitlements, rights, and contracts and a quantification of the prior year's water deliveries. In addition, the supply and demand analysis must address water supplies during single and multiple dry years presented in 5-year increments for a 20-year projection. Under SB 221, approval by a county of a subdivision of more than 500 homes requires an affirmative written verification of a sufficient water supply.

California Water Conservation Executive Orders

Beginning in January 2014, Governor Jerry Brown issued three Executive Orders (EOs), B-26-14, B-28-14, B-29-15, B-37-16, and B-40-17 regarding water supply, water demand, and water use within the State during severe drought conditions. EO B-29-15, issued April 1, 2015, sets limitations not only for existing land uses and water supply systems, but also for new construction. Some of these restrictions include:

- The Water Board shall prohibit irrigation with potable water of ornamental turf on public street medians. (EO B-29-15, Save Water, Action #6)
- The Water Board shall prohibit irrigation with potable water outside of newly constructed homes and buildings that is not delivered by drip or microspray systems. (EO B-29-15, Save Water, Action #7)
- The California Energy Commission shall adopt emergency regulations establishing standards that improve the efficiency of water appliances, including toilets, urinals, and faucets available for sale and installation in new and existing buildings. (EO B-29-15, Increase Enforcement Against Water Waste, Action #16)

In addition, EO B-29-15 requires that DWR update the State Model Water Efficient Landscape Ordinance through expedited regulation by the end of 2015. This ordinance will increase water efficiency standards for new and existing landscapes through more efficient irrigation systems, greywater usage, on-site stormwater capture, and by limiting the portion of landscapes that can be covered in turf (EO B-29-15, Increase Enforcement Against Water Waste, Action #11).

On November 13, 2015, Governor Brown issued EO B-36-15, which upheld the previous EOs, and directed the SWRCB to extend of urban water use restrictions through October 31, 2016 based on drought conditions known through January 2016. The SWRCB issued Emergency Regulations on February 2, 2016, in compliance with EO B-36-15. These emergency regulations maintain the current tiers of required water reductions; however, additional adjustments in response to stakeholders; equity concerns were included in the Emergency Regulations.

In addition, DWR and the U.S. Bureau of Reclamation finalized the 2016 Drought Contingency Plan that outlines State Water Project and Central Valley Project operations from February through November 2016. The 2016 Drought Contingency Plan was developed in coordination with staff from State and federal agencies. The 2016 Drought Contingency Plan communicates overarching goals for 2016 water management and the potential operations needed to achieve those goals.

In May 2016, Governor Brown issued EO B-37-16, which upheld the previous EOs, and directs local agencies to provide new permanent water use targets for each urban water supplier and concrete improvements to drought preparedness. The order bolstered the State's drought resilience and preparedness by establishing longer-term water conservation measures that include permanent monthly water use reporting, new urban water use targets, reducing system leaks and eliminating clearly wasteful practices, strengthening urban drought contingency plans and improving agricultural water management and drought plans. Local agencies are required to publicly disclose the projections and calculations used to determine their conservation standards, and to continue monthly water conservation reporting. EO B-37-16 calls for wise water use and less water waste to become permanent changes to prepare for more frequent and persistent periods of limited water supply. On April 7, 2017, EO B-40-17 lifted the drought emergency in all California counties except Fresno, Kings, Tulare, and Tuolumne counties. EO B-40-17 builds on EO B-37-16, which continues to remain in effect, to continue to make water conservation a way of life in California.

Local

Metropolitan Bakersfield General Plan

The Metropolitan Bakersfield General Plan Public Services and Facilities Elements include relevant goals and policies related to utilities. Refer to Table 4.17-1, *Metropolitan Bakersfield General Plan Goals and Policies for Utilities*, below.

Table 4.17-1. Metropolitan Bakersfield General Plan Goals and Policies for Utilities
Goals and Policies: Public Services and Facilities Element
General Utilities
Policy #5: Require all new development to pay its pro rata share of the cost of necessary expansion in municipal utilities, facilities and infrastructure for which it generates demand and upon which it is dependent.
Water Distribution
Goal #1: Ensure the provision of adequate water service to all developed and developing portions of the planning area.
Policy #3: Require that all new development proposals have an adequate water supply available.
Sewer Services
Goal #3: Provide trunk sewer availability to and treatment/disposal capacity for all metropolitan urban areas, to enable cessation or prevention of the use of septic tanks where such usage crates potential public health hazards or may impair groundwater quality, and to assist in the consolidation of sewerage systems. Provide sewer service for urban development regardless of jurisdiction.
Solid Waste
Goal #1: Ensure the provision of adequate solid waste disposal services to meet the demand for these services in the Planning area.

Table 4.17-1. Metropolitan Bakersfield General Plan Goals and Policies for Utilities
Goals and Policies: Public Services and Facilities Element
Storm Drainage
Goal #1: Ensure the provision of adequate storm drainage facilities to protect Planning area residents from flooding resulting from stormwater excess.
Street Lighting
Goal #1: Provide uniform and adequate public lighting for all developed and developing portions of the Planning area.
Policy #4: Require developers to install street lighting in all new development in accord with adopted city standards and county policies.

4.17.4 Impacts and Mitigation Measures

Thresholds of Significance

The Kern County California Environmental Quality Act (CEQA) Implementation Document and Kern County Environmental Checklist state that a project could potentially have a significant effect if it:

- Exceeds wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- Requires or results in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which would cause significant environmental effect;
- Requires or results in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Has insufficient water supplies available to serve the Project from existing entitlement and resources and new or expanded entitlement is needed;
- Results in a determination by the wastewater treatment provider which serves or may serve the Project that it does not have adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments;
- Is served by a landfill that does not have sufficient permitted capacity to accommodate the Project's solid waste disposal needs; and/or
- Does not comply with federal, state, and local statues and regulations related to solid waste.
- Exceeds the capacity of the electrical and natural gas facilities within the project area.

Impact 4.17-1: The Project Would Exceed Wastewater Treatment Requirements of the Applicable Regional Water Quality Control Board.

With the future urban development of the site, the proposed Project would result in an increase in wastewater in the form of stormwater runoff. The discharge of materials other than stormwater from a particular site is prohibited. With urban development projects, the pollutants of concern include silt and sediment, oil and grease, floatable trash, nutrients (including fertilizers), heavy metals, pathogens

(such as coliform bacteria) and other substances. Referred to as "controlled pollutants", discharge of these substances into waters of the United States, are prohibited.

Future proposed developments that involve grading and construction would contribute to an increase in pollution discharge. Individual development projects would be required to mitigate short-term construction impacts pursuant to the National Pollutant Discharge Elimination System (NPDES) criteria and standards on a project-by-project basis. The purpose of the NPDES permit is to ensure the Project area will eliminate or reduce construction-related sediments and pollutants during stormwater runoff. Construction sediment erosion can be adequately controlled through the application of standard construction Best Management Practices (BMPs). The goal of BMPs is to capture and treat "first flush" stormwater run-off generated by surrounding and on-site watersheds. Water quality management BMPs for grading and construction scenarios may include the use of sand bags and straw bales for run-off diversion and velocity reduction, mulch topping, hydro-seeding and siltation fencing to prevent soil loss and measures to minimize vehicular leaking and spilling. Implementation and compliance with the NPDES requirements would reduce construction-related impacts to water quality to less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.17-2: The Project Would Require or Result in the Construction of New Water or Wastewater Treatment Facilities or Expansion of Existing Facilities, the Construction of Which Would Cause Significant Environmental Effects.

The implementation of the proposed Project would result in the generation of wastewater on the property. The proposed Project is located outside of the Metropolitan Bakersfield boundary and is not served by a sewer system. The proposed Project would require the construction of a new wastewater package plant facility that could cause significant environmental effects. Based on the wastewater generation rate for general commercial and industrial uses utilized by the County of Kern, the proposed Project would result in the generation of a normal, unpeaked flow of approximately 1.46 million gallons per day, with a peak flow maximum generation of approximately 2.91 million gallons per day of wastewater. Implementation of applicable mitigation measures would reduce impacts to less than significant.

Additional infrastructure would be required to accommodate the proposed Project. A water service line would be extended from an existing 12" Cal Water main located on the east side of Wible Road at the intersection with Engle Road (CR 918), then east along an alignment along the section line, currently a disturbed unimproved dirt dairy access road within the County's road reservation, to the intersection of S. H St. and DiGiorgio Road (CR 704), then continue east and across S.R. 99 to the northwest corner of the proposed project site along DiGiorgio Road. If needed by Cal Water, a second water main extension would begin at the current end of the 12" water main located on the south side of Shafter Road at the east side of the General Shafter Elementary School, continue east along Shafter

Road in an existing right-of-way to the intersection with Costajo Road, then continue east and across S.R. 99 to the intersection with Chevalier Road in existing right-of-way, then continue north in existing right-of-way to the south side of the proposed project north of Houghton Road. A treated water service line would be constructed from the southwest corner of the proposed WWTP westerly under S.R. 99, continuing to the Kern Island Canal and the Kern Island Recharge Basins located near the northwest corner of S. H Street and Houghton Road as an outfall location for excess treated recycled water. It should be noted, although the specific volumes are unknown at this time, the developer intends to work with KDWD to accept any unused recycled water for either blending with irrigation canal water for agricultural irrigation or recharging groundwater at the nearby groundwater recharge basin. This would not require any new infrastructure beyond that already analyzed in the RDEIR but would assist in groundwater recharge.

As development progresses within the Project site water distribution infrastructure would be installed. Water infrastructure within the interior of the proposed Project would occur in areas that would be disturbed as part of the Project and none of these improvements would have an effect on an environmental resource beyond those disclosed in any other section of this RDEIR. The proposed improvements would be required to comply with all applicable development standards required by Kern County. This would ensure that impacts associated with the expansion of water facilities would be less than significant.

Mitigation Measures

MM 4.17-1: All special equipment for the proposed Project, such as package treatment plants, their appurtenances, and their effluent disposal areas and methods shall be designed, located, and constructed in coordination with the Kern County Public Works Department, so as to preclude contamination, pollution, nuisance, and structural and mechanical instability.

MM 4.17-2: **Package Treatment and Disposal Facilities.** Proposals and plans for package treatment and disposal facilities shall be subject to the review and approval of:

1. The State and County Environmental Health Services Departments for design and contamination aspects;

2. The Regional Water Quality Control Board for elements of pollution and nuisance; and

3. The Kern County Public Works Department for structural and mechanical integrity. Special structures, such as pump stations, pressure lines and sags, etc. shall be subject to the approval of the Kern County Public Works Department and the maintaining District.

MM 4.17-3: **Wastewater Package Plant Facility.** The new wastewater package plant facility shall be constructed according to State specifications, with coordination of Kern County Public Works and Kern County Environmental Health Services Departments and shall be operated in such a way as to not contaminate the underlying unconfined aquifer.

MM 4.17-4: **Water System.** All facilities of the water system shall be designed and constructed to comply with Kern County Development Standards and approved by the Kern County Public Works Department.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.17-3: The Project Would Require or Result in the Construction of New Stormwater Drainage Facilities or Expansion of Existing Facilities.

The development of industrial uses and associated landscaping and roadways would alter the drainage pattern within the proposed Project site through the introduction of impervious surfaces. Water that is anticipated to drain off-site would be required by the County to drain to storm drain structures, including detention or retention basins. Drainage collection facilities within the proposed Project would be constructed as development occurs and would be designed in accordance with local improvement standards and specifications. A stormwater drainage study may be needed to determine the size of a retention basin and optimal pipeline sizes that are needed to accommodate stormwater from the proposed project. This master drainage system would be designed to contain on-site waters within conveyance structures by appropriate means and that are acceptable to Kern County. Drainage waters shall be prevented from flowing onto adjacent properties or topping over the street system. Site improvement standards for drainage areas would be determined by the County of Kern as a function of the Precise Development Plan, Conditional Use Permit, or land division procedure. This would ensure that all drainage facilities are designed to accommodate runoff stormwater.

Mitigation Measures

Implementation of Mitigation Measure MM 4.7-8, as described in Section 4.7, *Geologic and Seismic Hazards Implement*

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.17-4: The Project Would Have Insufficient Water Supplies Available to Serve the Project from Existing Entitlement and Resources and New or Expanded Entitlement is Needed.

Kern Delta Water District (KDWD) supplies surface water for agricultural irrigation from the Kern Island Canal via an irrigation ditch. The project site has two agricultural wells that supply groundwater. It is estimated that 50% of the irrigation supply is from wells and the other 50% from KDWD surface waters. These sources; however, would not serve the Project site with domestic water. The proposed Project would be served by the Cal Water Bakersfield District upon approval of the application to the CPUC for the service extension to the Project site. Water supply for the District comes from groundwater; untreated local surface water purchased from the City of Bakersfield and treated by Cal Water; and treated local surface water and imported water purchased from KCWA.

Past water demand within the District was calculated between 2015 to 2017 based on seven use categories that included single family, multi-family, commercial, industrial, institutional/ governmental, other, and loses. In 2015 total system demand was 55,033 AFY, and 57,559 AFY, and 62,218 AFY, in 2016 and 2017, respectively. It should be noted that in May of 2015, the Emergency Regulations adopted by the State Water Resources Control Board were in effect and later extended by Executive Order B-37-16. The Bakersfield District was ordered to reduce potable water use by 32 percent over this period and reduced water use approximately by approximately 32.1 percent. However, in 2017 with the end of the drought water use increased at a greater percentage than the year before by approximately 4,659 AFY compared to 2,526 AFY.

Projected water uses within the District is predicated on unrestricted demands under normal weather conditions and is shown in Table 4.17-2 *Bakersfield District Projected Water Demand*, through 2040. Projected water demands are based on customer category and are estimated based on anticipated demand of future services that are based on historical growth rates in the District and the UWMP. In addition, anticipated water demand accounts for weather-normalized historical use, adjusted for future expected water savings from water efficiency requirements of plumbing codes and District conservation programs. The projected average annual growth rate in services across all customer categories is approximately 0.9 percent.

Table 4.17-2. Bakersfield District Projected Water Demand

Use	(AFY)				
	2020	2025	2030	2035	2040
Single Family	49,340	52,107	54,974	57,574	60,273
Multi-Family	3,748	3,859	40,020	4,166	4,334
Commercial	11,976	12,209	12,486	12,651	12,825
Industrial	49	50	50	50	50
Institutional/Governmental	6,690	7,281	7,898	8,492	9,130
Other	216	219	221	221	221
Losses	5,763	6,153	6,543	6,892	7,257
Total	**77,781**	**81,878**	**86,191**	**90,019**	**94,088**

Source: Yarne & Associates, 2019

Cal Water determined water use rates for industrial uses similar in classification to those of the proposed Project on a gallon per day per square foot of development (gallons/day/ft2). The WSA evaluated water use rates for industrial businesses that are similar to those that would occur under the proposed Project. The use rates ranged from 0.0042 to 0.1590 gallons/day/ft^2 and result in an average consumption of 0.0816 gallons/day/ft^2. Based on the total proposed Project square footage, 4,101,174, the resulting demand is approximately 334,660 gallons/day

Commercial office space water usage was estimate using a representative office complex at 0.00834 gallons/day/ft2. Because the specific square footage for the commercial component of the proposed Project is not known, the areas were estimated to be 65 % retail (0.20) + 15% restaurants (1.10) + 20% (office space) (0.00834) = 0.297 gallons/day/ft2. This results in an estimated commercial water use for the proposed Project is of 151,720 gallons/day. Taken in sum with the Industrial development the total water use at build out in 2025 would be approximately 486,380 gallons/day or 544.5 AFY.

As indicated in the WSA, prepared by Yarne & Associates, during the 6-year period from 2010 to 2015 the average annual agricultural water demand on the Project site was 977.2 acre-feet per year

(AFY). Existing groundwater recharge on the site is estimated to be, on average, 25% of the irrigated amount. Based on this, the total water lost to evapotranspiration after being applied for irrigation is approximately 732 AFY. Considering the proposed Project, at build out, would use approximately 544.5 AFY, the proposed Project would require approximately 187.5 AFY less water than the existing uses. The following discussion outlines existing and projected future water supplies compared to Project demand.

The 544.5 AFY equates to approximately 0.66% of projected 2025 Bakersfield District demand (81,191 AFY). In 2040, the proposed Project demand would be approximately 0.57% of the projected 2040 Bakersfield District demand (94,088 AFY). In addition, water demand within the District is project to increase by approximate 26,799 AFY between 2015 and 2025 (81,878 - 55,079). The proposed Project would account for approximately 2.0% of that increase.

The proposed Project includes a wastewater treatment facility to meet Title 22 requirements and use recycled water for landscape irrigation and other non-potable uses. The initial irrigation water requirement for landscaped areas of the proposed Project is estimated to be 39 AFY and at project build out would be approximately 86.7 AFY. This would be supplied entirely by recycled water, which would further reduce the proposed Project's water demand.

The effect of substituting recycled water for potable water further reduces the proposed Project's water demand. Conservatively, estimating that the 39 AFY for landscape irrigation are not included in the estimated project build out demand and that later uses substitute recycled water for potable water (47.7 AFY), this would result in a further reduction of water use by the proposed Project compared to existing agricultural. Accordingly, the proposed Project would reduce water demand, by 187.5 AFY + 47.7 = 235.2 AFY.

The proposed project also was evaluated to determine water use for normal year, single dry year, and multiple dry year periods. Table 4.17-3 *Multiple Dry Years Supply and Demand Comparison* shows the projected supply and demand totals for multiple dry years based on the conservative assumption that demand will increase slightly for a 3-year drought period even though the most recent drought experience (2012 – 2016) shows the opposite. Demand in 2015 decreased by 27.6% compared to demand in 2013 as discussed above. Although treated surface water supplies were reduced due to lower quantities of surface runoff and storage, the difference was made up by groundwater. Importantly, due to very effective conservation programs and public responsiveness ground water pumping decreased by 12,109 AF - the amount pumped in 2014 was 45,499 AF and in 2015 it was 33,390 AF.

Table 4.17-3: Multiple Dry Years Supply and Demand Comparison (AF)

		2020	2025	2030	2035	2040
First Year	Supply Totals	79,717	83,915	88,335	92,259	96,429
	Demand Totals	79,717	83,915	88,335	92,259	96,429
	Difference	0	0	0	0	0
Second Year	Supply Totals	79,717	83,909	88,329	92,252	96,422
	Demand Totals	79,717	83,909	88,329	92,252	96,422
	Difference	0	0	0	0	0

Third Year	Supply Totals	79,717	82,851	87.215	91,089	95,207
	Demand Totals	79,717	82,851	87,215	91,089	95,207
	Difference	0	0	0	0	0
Source: Yarne & Associates						

Cal Water coordinates on an ongoing basis with other water agencies in Kern County to optimize use of surface and groundwater water supplies. Cal Water concludes that for the next 21 years (2019 – 2040), the Bakersfield District will have adequate water supplies to meet projected demands associated with the proposed Project and those of all existing customers and other anticipated future customers for normal, single dry year and multiple dry year conditions (Yarne & Associates, 2019). While adequate water supply is anticipated, MM 4.17-4 related to water supply and the following mitigation measure will help ensure water use is within a reasonable range for future Project uses.

MM 4.17-5: **Water Meters.** Water meters shall be installed on all facilities. Once operations of the first facility constructed on-site have commenced, the Master Developer or subsequent future land owners shall be required to submit annual reports to the Kern County Planning Department and the Kern County Environmental Health Services Department detailing the annual water usage on-site.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.17-5: The Project Would Result in a Determination by the Wastewater Treatment Provider Which Serves or May Serve the Project That it Does Not Have Adequate Capacity to Serve the Project's Projected Demand in Addition to the Provider's Existing Commitments.

As noted above, no sewer lines are currently located on-site and no wastewater is conveyed from the proposed Project site. Currently, neighboring residential and commercial properties are served by individual, privately-owned septic systems. A private package sewer treatment plant is proposed to provide services for the Project site. Implementation of applicable mitigation measures and service fees would reduce impacts to water facilities to less than significant levels.

Mitigation Measures

Implement Mitigation Measures MM 4.17-1 through MM 4.17-3.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.17-6: The Project Would be Served by a Landfill That Has Sufficient Permitted Capacity to Accommodate the Project's Solid Waste Disposal Needs.

Implementation of the proposed Project would result in an increase demand for solid waste services and generate additional solid waste disposed of at landfills. As noted above, the City of Bakersfield

Solid Waste Division has indicated that solid waste generated by the proposed Project would go to the Bena Landfill and the Shafter-Wasco Sanitary Landfill. Although C&D waste impacts are short-term and cease upon construction completion, C&D waste disposed of at either landfill would decrease the remaining capacity available. This is considered a potentially significant impact; however, recycling of C&D waste would reduce the amount of waste disposed of at landfills and contribute to the recycling goals set forth by Kern County and AB 939. For any C&D waste disposed of at a landfill, the Kern County Waste Management Department charges a fee of up to $54.50 per ton for the disposal of construction waste. Implementation of the required mitigation measures below would reduce impacts to less than significant in this regard.

Based on an average generation rate for light- and medium-industrial properties of 6 pounds (lb) of refuse per square foot annually, and general commercial/highway commercial properties of 7 lb of refuse per square foot annually, the proposed Project would result in the generation of approximately 37 tons of refuse per day or approximately 13,519 tons per year. The total waste generated during the course of one year of construction (255 working days) is estimated at approximately 12,883 tons, and the daily total is estimated at 50.5 tons (McIntosh & Associates 2017).

As a worst-case situation, it is assumed that all of the project-generated refuse would be deposited at the Bena Landfill. Based on growth projections, 22,174,654 tons of capacity is available at the Bena Landfill, and it is anticipated to have capacity for approximately 26.8 years. Based on the remaining capacity and the anticipated life of the landfill, the average amount of solid waste deposited at the landfill is approximately 827,412 tons per year or 2,267 tons per day over 26.8 years. The solid waste generated by the proposed project would increase refuse deposited at the Bena Landfill by approximately 1.63 percent. This increase in considered a nominal impact on the remaining capacity of the Bena Landfill, and the Landfill would have the available capacity to serve the proposed Project. As identified under Section 4.15, *Public Services*, the proposed Project is subject to the Public Facilities Mitigation Program and mitigation measures have been included that would result in less than significant impacts in this regard.

Mitigation Measures

MM 4.17-6: **Recycling On-Site.** During construction, demolition debris and construction wastes shall be recycled to the extent feasible.

1. An on-site recycling coordinator will be designated by the Project Applicant/ Developer to facilitate recycling of all construction waste through coordination with the on-site contractors, local waste haulers, and/or other facilities that recycle construction/demolition wastes.

2. The name and phone number of the coordinator will be provided to the Kern County Waste Management Department prior to issuance of building permits

3. The on-site recycling coordinator will also be responsible for ensuring that wastes requiring special disposal are handled according to state and County regulations that are in effect at the time of disposal.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.17-7: The Project Would Comply with Federal, State, and Local Statues and Regulations Related to Solid Waste.

Refer to Section 4.11, *Land Use and Planning*, Table 4.11-2, for a brief explanation of how the proposed Project complies with the goals and policies of the Metropolitan Bakersfield General Plan. The proposed Project would be required to comply with all federal, state, and local statues and regulations related to solid waste. Implementation of the required mitigation measures would help local jurisdictions comply with Assembly Bill 939. Therefore, implementation of the proposed Project would result in less than significant impacts in this regard.

Mitigation Measures

Implement Mitigation Measure MM 4.17-6.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.17-8: The Project Would Exceed the Capacity of the Electrical and Natural Gas Facilities Within the Project Area.

Electrical Services

The proposed Project site is currently served by PG&E's Old River Substation and Panama Substation. According to PG&E, based on the rough size of proposed facilities, the proposed Project would result in a demand for approximately 20 Megawatts (Mw); however, more information is needed. Estimates for electric demands are based on the square footages of the proposed facilities. PG&E has indicated the existing electrical facilities are not adequate to accommodate the proposed Project. PG&E anticipates the Project would result in impacts to existing electric facilities, and that the Old River and Panama Substation be overloaded, as well as distribution facilities in the area. These facilities would need to be upgraded and new distribution and substation equipment would be required to serve the proposed Project. Potential impacts may be reduced if main lines adjacent to roadways are brought to the ultimate width at the initiation of proposed Project construction and if utility easements are made readily available as needed; however, more information is needed to determine specifically what will be required.

Construction of the proposed Project would require temporary electrical power supply for certain equipment and lighting. The proposed Project would also require electricity for street lighting along the roadway. County development standards require street lights at intersections, and at mid-block, where streets are greater than 600 feet in length, with the exception of some industrial areas in which street lights are required only at intersections. For new development, the County does not install street lights, thus, the County requires a developer to install lights and dedicate them to the County.

Street lights installed at the proposed Project are expected to be provided by PG&E at the company's Rate Schedule LS-1 Class A rate (LS-1A). In utilizing the LS-1A rate PG&E would install, own, and maintain the entire street lighting system. The connections would be constructed in accordance with the requirements of the County and PG&E. Therefore, implementation of recommended mitigation measures will ensure that adequate electricity is provided to the Project site; therefore, resulting in a less than significant impact.

Natural Gas

As noted above, the entire proposed Project is in PG&E gas service territory. Approximately 5,000 linear feet of PG&E Transmission Line 300B is located in the northeast corner of the proposed Project. According to PG&E, the proposed Project's gas needs will be supplied by the PG&E distribution system, either by the six-inch pipeline located on the east side of the Project site, on the west side of South Union Avenue, or a new distribution line throughout the development from the adjacent regulating stations. The PG&E Transmission Line 300B would not provide natural gas to the proposed Project. The average estimated gas consumption is calculated at 0.5 million cubic feet per hour (MCFH) for every 2,500 square feet of commercial building space. Therefore, the proposed Project would consume approximately 922.60 MCFH of natural gas (0.5 MCFH per 2,500 SF x 4,613,004 SF). PG&E would prefer that the request for service include all gas appliances in order to calculate a more accurate load.

It is anticipated that new distribution pipelines would be required to accommodate the proposed Project. Where necessary, natural gas pipelines would be installed to serve the proposed Project at the expense of the Project Applicant/Developer. The Project Applicant/Developer would be required to consult with PG&E early in the planning stages to ensure adequate facilities are incorporated into the Project design. New connections would be constructed by the proposed Project in accordance with the requirements of the County of Kern and PG&E. PG&E would not allow new users to connect to the existing natural gas facilities unless there is adequate capacity and supplies to accommodate the proposed Project. Implementation of the recommended mitigation measures will ensure that adequate natural gas supplies and facilities exist prior to Project construction; therefore, resulting in a less than significant impact in this regard.

With respect to safety, the on-site transmission pipeline is under high pressure, and like others, has the potential to rupture, resulting in uncontrolled releases of natural gas. A pipeline rupture could result in environment contamination and human health effects in the residential areas, once they are developed. For safety reasons, State regulations prohibit the construction of any structures directly over the pipeline, and a right-of-way (ROW) is usually established. The width of the ROW is negotiated between the property owner and the pipeline operator and usually ranges between 20 to 50 feet. Shared ROWs may span 60 to 70 feet. Vegetation around and over pipelines may be restricted. Compliance with Federal, State and applicable local regulations would reduce future potential impacts health and safety related to pipelines to less than significant levels.

Mitigation Measures

MM 4.17-7: **Electrical Services.** Prior to approval of a Master Precise Development Plan or modification to an existing precise development plan on-site, the Master Developer or future land owner shall coordinate with Pacific Gas and Electric Company

(PG&E) staff early in the planning stages to ensure that adequate facilities are incorporated into the Project design.

1. Prior to issuance of grading and building permits the Project proponent shall coordinate with PG&E staff to determine the specific requirements regarding any potential electric service or facility issues needed to adequately accommodate the proposed Project. The Project proponent shall comply with and adhere to all requirements identified by PG&E to full mitigate impacts to electric services and facilities, as needed as Project construction progresses.

MM 4.17-8: **Natural Gas.** Prior to approval of a Master Precise Development Plan or modification to an existing precise development plan on-site, the Master Developer or future land owner shall coordinate with Pacific Gas and Electric Company (PG&E) staff early in the planning stages to ensure that adequate facilities are incorporated into the Project design.

1. Prior to issuance of grading and building permits the Project proponent shall coordinate with PG&E staff to determine the specific requirements regarding any potential natural gas service or facility issues needed to adequately accommodate the proposed Project. The Project proponent shall comply with and adhere to all requirements identified by PG&E to fully mitigate impacts to natural gas services and facilities, as needed as Project construction progresses.

MM 4.17-9: **PG&E Notification.** The Project proponent shall notify PG&E six months prior to any construction activities in the immediate vicinity of PG&E Transmission Line 300B.

Level of Significance after Mitigation

Impacts would be less than significant.

Cumulative Impacts

Significant cumulative impacts to public services would occur if the cumulative projects would overburden the public service agencies and if utility providers were unable to provide adequate services. The cumulative projects would substantially increase the demand for public service providers and utility servers. However, public agencies and utilities have the opportunity to respond to an inquiry for information regarding potential increase in demand on their services. Development fees are assessed on a project-by-project basis to mitigate for the increase in demand on public services and utilities. Incorporation of the mitigation measures would reduce impacts from the proposed Project, in conjunction with other projects in the area, to a less than significant cumulative level.

Mitigation Measures

Implement Mitigation Measures MM 4.17-1 through MM 4.17-9.

Level of Significance after Mitigation

Impacts would be less than significant.

Section 4.18

Wildfire

Section 4.18
Wildfire

4.18.1 Introduction

The purpose of this section is to identify, to the extent feasible, the potential for wildland fires in connection with the proposed Project site and to identify potential risks to human health, including future residents surrounding the site, users of the proposed Project site, workers and construction workers. A Wildfire Assessment was prepared by McIntosh & Associates in April 2019. See Appendix P, *Wildfire Assessment*.

4.18.2 Environmental Setting

The proposed Project site is undeveloped and is used mainly for agricultural purposes. As discussed in *Section 4.11, Land Use and Planning*, a steel storage building associated with agricultural activities is located in the eastern portion of the site, near South Union Avenue (SR-204). There is one plugged and abandoned oil well located within the proposed Project boundaries (Big McKittrick Oil Company "Sea Cliff-Houghton" 1). In addition, one active, diesel-powered irrigation well, one idle irrigation well, and one domestic well are located on-site. As discussed in *Section 4.9, Hazards and Hazardous Materials*, a Pacific Gas and Electric (PG&E) natural gas transmission pipeline, number L-300B, traverses the site at a diagonal from northwest to southeast. Six pole-mounted electrical transformers (PMT) were observed within and adjacent to the proposed Project boundaries. Existing adjacent land uses include vacant land and agricultural uses to the north, agricultural uses and a small cluster of single-family residential homes to the east, SR-99 to the west, and agricultural uses and an automobile wrecking yard located south/southeast of proposed Project site.

4.18.3 Regulatory Setting

Federal

There are no relevant federal regulations in regard to wildfires.

State

Senate Bill 1241

Senate Bill 1241 requires the legislative body of a city of county to adopt a comprehensive, long-term general plan that includes various elements, including a safety element for the protection of the community from unreasonable risks associated with among other things, wildland and urban fires. The safety element requires for state responsibility areas (SRA), as defined, and very high fire hazard severity zones (FHSZ) as defined in California Government Code (CGC) §51177 & 51178 that is not a SRA, to be updated as necessary to address the risk of fire in these areas pursuant to CGC §65302(g)(3).

California Environmental Quality Act

CEQA, PRC §21000, et seq., was amended in 2018 to address numerous legislative changes to CEQA, to clarify certain portions of existing CEQA Guidelines, and to update the CEQA Guidelines to be consistent with recent court decisions.

Impacts of wildfire to development and a development's contribution to the potential creation of wildfire risk at the Wildland-Urban Interface (WUI) are now addressed as a separate "Environmental Factor" to be addressed in the initial study checklist in Appendix G. The Natural Resources Agency expanded the requirements of SB 1241 to also include development projects "near" the SRA and Very High FHSZs.

California Building Standards Codes

The State of California provides minimum standards for building design through the California Building Code (CBC). The CBC is based on the International Building Code (IBC), which is used widely throughout the United States (generally adopted on a state-by-state or district-by-district basis) and has been modified to address particular California concerns. The primary codes with respect to development in or near the WUI include the California Building Code, Chapter 7A "Materials and Construction Methods for Exterior Wildfire Exposure" and the California Fire Code, Chapter 49 "Requirements for Wildland-Urban Interface Fire Areas". These codes require what materials are required to be used for construction for any Building Permit submitted after January 1, 2009 within the geographical areas with FHSZs designated as Very High, High, or Moderate in SRA's and Very High within Local Response Areas (LRA). Maps of these areas were developed in 2007 for California and each county.

Local

Kern County Wildland Fire Management Plan

The Kern County Wildland Fire Management Plan documents the assessment of wildland fire situations throughout the SRAs within the County. The Kern County Fire Department Wildland Fire Management Plan provides for systematically assessing the existing levels of wildland protection services and identifying high-risk and high-value areas that are potential locations for costly and damaging wildfires. The goal of the plan is to reduce costs and losses from wildfire by protecting assets at risk through focused pre-fire management prescriptions and increasing initial attack success. Based on this assessment, preventive measures are implemented, including the creation of wildfire protection zones.

Kern County Building and Construction Ordinance (Title 17 of the Ordinance Code of Kern County)

Chapter 17.32 Fire Code

Kern County has adopted, by reference, portions of the California Building Standards Code and the International Fire Code, with modifications and amendments. The

purpose of this code is to prescribe the minimum requirements necessary to establish a reasonable level of fire safety to protect life and property from hazards created by fire, explosion, and dangerous conditions.

The Kern County Fire Code defines a hazardous fire area as any land that is covered with grass, grain, brush, or forest and situated (e.g., in an inaccessible location) so that a fire originating upon such land would present an abnormally difficult job of suppression and would result in great and unusual damage through fire or the resulting erosion.

Chapter 17.34 Wildland-Urban Interface Code

Kern County has adopted, by reference the Urban Wildland Interface Code, published by the International Fire Code Institute, with modifications and amendments. The purpose of this code is to safeguard life and property and maintain public welfare to a reasonable degree by addressing hazards related to wildland fire exposures and fire exposures from adjacent structures, and to prevent structure fires from spreading to wildland fuels.

Metropolitan Bakersfield General Plan (MBGP)

The Metropolitan Bakersfield General Plan cites policies to provide decision-makers with long-range guidance affecting the future character of the Metropolitan Bakersfield planning area. The elements within the Metropolitan Bakersfield General Plan provide goals, policies and implementation measures in order to reduce impacts related to public safety. Applicable wildfire goals and policies relative to the proposed Project are listed in Table 4.18-1, *Metropolitan Bakersfield General Plan Goals and Policies for Wildfires*, below.

Table 4.18-1. Metropolitan Bakersfield General Plan Goals and Policies for Wildfires

Goals and Policies: Public Safety Element
Goal #1: Ensure that the Bakersfield metropolitan area maintains a high level of public safety for its citizenry.
Goal #2: Ensure that adequate police and fire services and facilities are available to meet the needs of current and future metropolitan residents through the coordination of planning and development of metropolitan police and fire facilities and services.
Goal #3: Provide for the coordinated planning and development of service areas for police and fire protection to ensure an equitable burden of responsibility between County and City in Metropolitan Bakersfield.
Goal #4: Assure that fire, hazardous substance regulation and emergency medical service problems are continuously identified and addressed in a proactive way, in order to optimize safety and efficiency.
Policy #4: Monitor, enforce and update as appropriate all emergency plans as needs and conditions in the Planning area change, including the California Earthquake Response Plan, the Kern County Evacuation Plan, and the City of Bakersfield Disaster Plan.
Policy #6: Promote fire prevention methods to reduce service protection costs and costs to the taxpayer.
Policy #9: Restrict, after appropriate public hearings, the use of fire-prone building materials in areas defined by the fire services as presenting high-conflagration risk.

4.18.4 Impacts and Mitigation Measures

Methodology

The potential impacts associated with the proposed project are evaluated on a qualitative basis through a comparison of existing conditions within the proposed Project site and the anticipated Project effects. The potential for impacts from wildfires would occur if the effect described under the criteria below occurs. The evaluation of Project impacts is based on professional judgment, analysis of the County's hazards/hazardous materials policies, and the significance criteria established by Appendix G of the State CEQA Guidelines, which the County has determined to be appropriate criteria for this Recirculated Draft EIR.

Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the CEQA Guidelines, to determine if a project could potentially have a significant impact. Such an impact would occur if the proposed Project would:

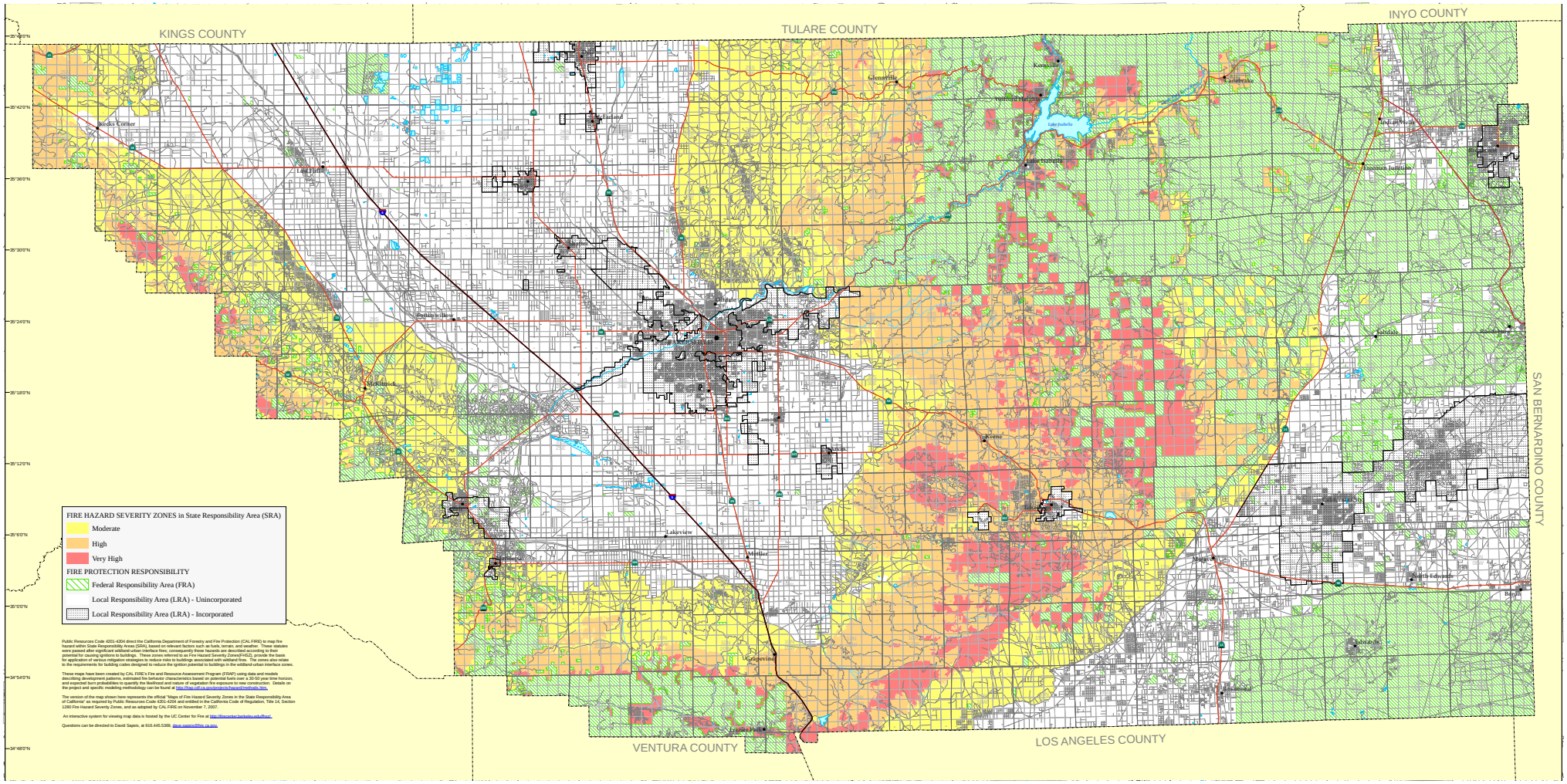
- Substantially impair an adopted emergency response plan or emergency evacuation plan;
- Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;
- Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment;
- Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

The analysis of the existing environment and the impact analysis indicate that this proposed Project could result in a significant environmental impact if it would result in impacts from wildfires that would, if not mitigated, adversely affect the public health and safety of future residents, surrounding residents and workers.

Project Impacts

Impact 4.18-1: The Project Would Substantially Impair an Adopted Emergency Response Plan or Emergency Evacuation Plan.

According to the Kern County Wildland Fire Management Plan, the proposed Project is located within the "Valley" Fuel Plan Management Area and the "Agricultural, non-wildland" classification for FHSZ. The Wildfire Assessment prepared by McIntosh & Associates shows that that proposed Project is not located within or adjacent to a SRA or a Very High FHSZ as shown in Figure 4.18-1, *Fire Hazard Severity Zones in SRA* and Figure 4.18-2, *Fire Hazard Severity Zones in LRA*. In



Public Resources Code 4201-4204 direct the California Department of Forestry and Fire Protection (CAL FIRE) to map fire hazard within State Responsibility Areas (SRA), based on relevant factors such as fuels, terrain, and weather. These statutes were passed after significant wildland-urban interface fires; consequently these hazards are described according to their potential for causing ignitions to buildings. These zones referred to as Fire Hazard Severity Zones(FHSZ), provide the basis for application of various mitigation strategies to reduce risks to buildings associated with wildland fires. The zones also relate to the requirements for building codes designed to reduce the ignition potential to buildings in the wildland-urban interface zones.

These maps have been created by CAL FIRE's Fire and Resource Assessment Program (FRAP) using data and models describing development patterns, estimated fire behavior characteristics based on potential fuels over a 30-50 year time horizon, and expected burn probabilities to quantify the likelihood and nature of vegetation fire exposure to new construction. Details on the project and specific modeling methodology can be found at http://frap.cdf.ca.gov/projects/hazard/methods.htm.

The version of the map shown here represents the official "Maps of Fire Hazard Severity Zones in the State Responsibility Area of California" as required by Public Resources Code 4201-4204 and entitled in the California Code of Regulation, Title 14, Section 1280 Fire Hazard Severity Zones, and as adopted by CAL FIRE on November 7, 2007.

An interactive system for viewing map data is hosted by the UC Center for Fire at http://firecenter.berkeley.edu/fhsz/

Questions can be directed to David Sapsis, at 916.445.5369, dave.sapsis@fire.ca.gov.

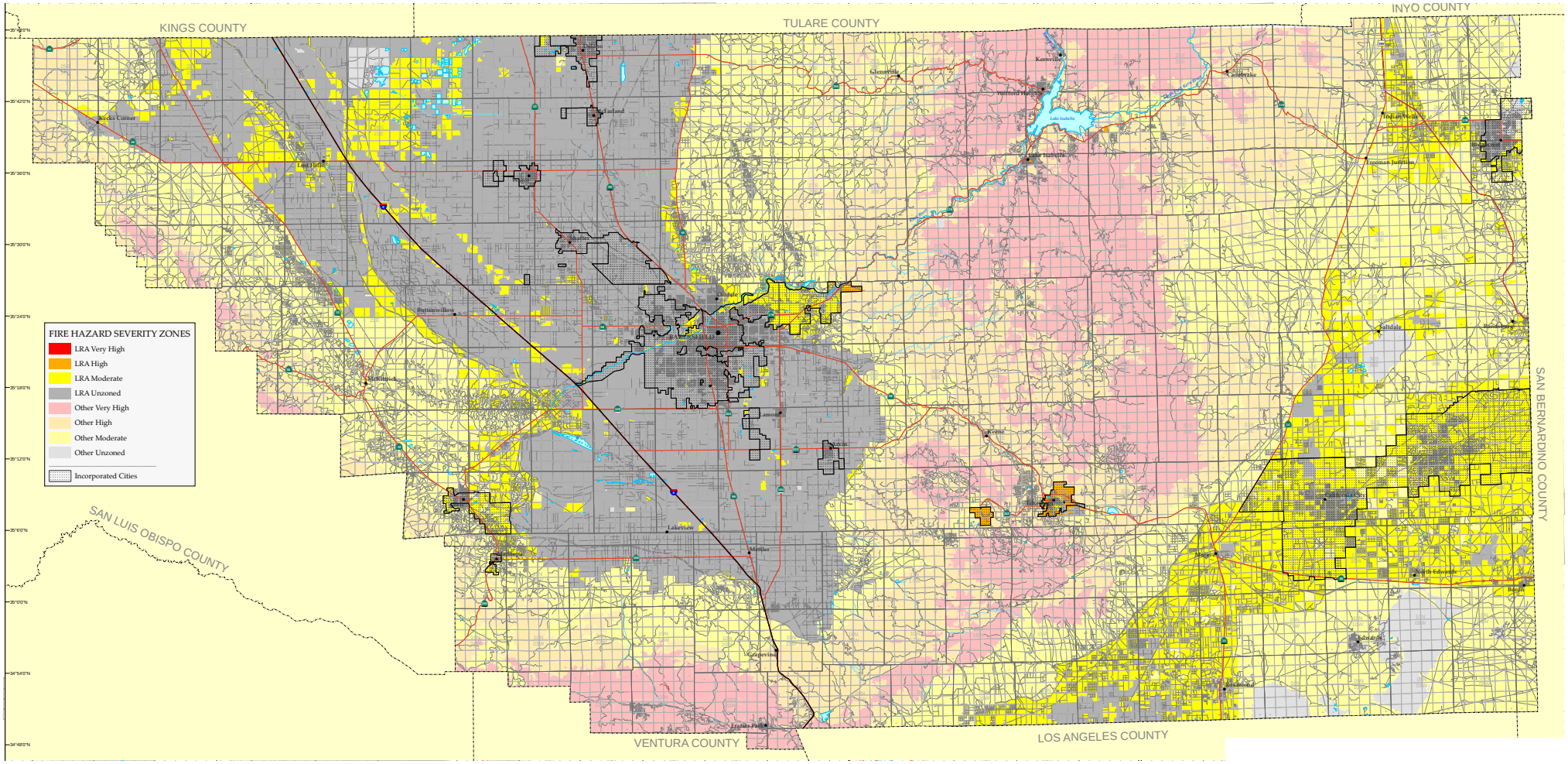
99 HOUGHTON INDUSTRIAL PARK PROJECT

CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07

AGRICULTURAL PRESERVE #13 EXCLUSION

Fire Hazard Severity Zones in SRA

Figure 4.18-1



99 HOUGHTON INDUSTRIAL PARK PROJECT

CUP #5, CUP #6, GPA #1, ZCC #2, MAP 143-07

AGRICULTURAL PRESERVE #13 EXCLUSION

Fire Hazard Severity Zones in LRA

Figure 4.18-2

addition, there is no information in the record to date that indicates the proposed Project would interfere with the operation of any roadway, facility, or area that would be used as part of an emergency response plan or emergency evacuation plan. Thus, impacts would be less than significant and mitigation is not required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.18-2: The Project Would Due to Slope, Prevailing Winds, and Other Factors, Exacerbate Wildfire Risks, and Thereby Expose Project Occupants to, Pollutant Concentrations from a Wildfire or the Uncontrolled Spread of a Wildfire.

The proposed Project site is located adjacent to vacant land and agricultural uses to the north, agricultural uses and a small cluster of single-family residential homes to the east, SR-99 to the west, and agricultural uses and an automobile wrecking yard located south/southeast of proposed Project site. The on-site topography is flat. According to windrose data for the Project area, wind generally travels from the northwest and travels at 8.05 miles per hour (NRCS, 2003). Therefore, the general wind patterns toward the Project site are from other agricultural sites that would not be susceptible to wildland fires. This fact would reduce the impact to the Project site from the uncontrolled spread of wildfire. In addition, the proposed Project is not located within or adjacent a SRA or a Very High FHSZ as discussed in Impact 4.18-1. Thus, impacts would be less than significant.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.18-3: The Project Would Require the Installation or Maintenance of Associated Infrastructure (Such As Roads, Fuel Breaks, Emergency Water Sources, Power Lines or Other Utilities) That May Exacerbate Fire Risk or That May Result In Temporary or Ongoing Impacts to The Environment.

As discussed in *Sections 4.16 Transportation and Traffic and 4.17, Utilities*, the proposed Project would require the extension of utilities and other infrastructure, such as roadways, into the Project site. These extensions are needed to provide services for the proposed future uses. Natural gas and electricity would be supplied by PG&E. Natural gas and electric improvements would be constructed only after planning and coordination with PG&E to ensure that services could be efficiently, and safety delivered to the project site. As part of these efforts, any extension and any connections or new infrastructure would be built in accordance with the requirements of the County of Kern and PG&E. Cal Water would provide water services to the project site and would require approval from the California Public Utility Commission (CPUC) to expand its service area to include the proposed Project. Water service lines would be extended into the project site and improvements also would be made in some adjacent roadways and previously disturbed areas. The construction of new on-site roadways also would be required, and some off-site roadway and transportation improvements would be made to ensure adequate traffic service is maintained.

The proposed Project is surrounded by areas that are predominantly under agricultural production or consist of rural residential uses. or industrial and heavy commercial uses that are themselves not in wildland areas and are not susceptible to wildland fires. In addition, the addition of roads internal to the Project site would allow emergency response personnel to access the Project area, if necessary to suppress fires, if they occur. Further, the Kern County Fire Department, as part of the County's environmental review process, will review all plans to ensure they contain adequate fire suppression, fire access, and emergency evacuation.

Thus, coordination with PG&E regarding natural gas and electric improvements, improvements in the circulation system, and adherence to standard City and Fire Department policies would reduce impacts are less than significant. In addition, *Section 4.17 Utilities*, includes MM 4.17-7 through MM 4.17-9, which require, as part of the Master Precise Development Plan and any electric or natural gas utility improvements, coordination with PG&E to ensure improvements adhere to all requirements and to provide adequate time to review plans for potential conflicts with existing utility locations or demand on service. Implementation of these measures would ensure impacts remain less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 4.18-4: The Project Would Expose People or Structures to Significant Risks, Including Downslope or Downstream Flooding or Landslides, as a Result of Runoff, Post-Fire Slope Instability, or Drainage Changes.

As described in *Section 4.10, Hydrology and Water Quality*, potential hazards related to downstream flooding are less than significant. The proposed Project site is not located within a 100-year flood hazard area. The proposed Project is located within the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map Zone X, which is described by FEMA as an area determined to be outside the 0.2 percent annual chance floodplain. Due to this small percentage, it is not anticipated that flooding hazards would occur within the Project site. In addition, as described in *Section 4.7 Geology and Seismic Hazards*, the proposed Project area is flat and not susceptible to landslides. Thus, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Cumulative Impacts

The incremental effects of the proposed Project related to wildfire, if any, are anticipated to be minimal, and any effects would be site specific. Compliance with Federal, State, and local regulations would ensure that impacts from wildfires are avoided or controlled to minimize the risk to the public on a project-by-project basis, as the cumulative projects are constructed. Therefore, the proposed Project would not result in incremental effects to wildfire that could be compounded or increased when considered together with similar effects from other past, present, and reasonably foreseeable probable future projects. The proposed Project would not result in cumulatively considerable impacts to or from wildfires.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

This Page Intentionally Left Blank

Chapter 5

Consequences of Project Implementation

Chapter 5
Consequences of Project Implementation

5.1 ENVIRONMENTAL EFFECTS FOUND TO BE LESS THAN SIGNIFICANT

Section 15128 of the CEQA Guidelines requires that an EIR contain a statement briefly indicating the reasons that various, possible, new significant effects of a project were determined not to be significant, and were therefore not discussed in detail in the RDEIR. The County has engaged the public to participate in the scoping of the environmental document.

The contents of this Recirculated Draft EIR were established based on an NOP/IS prepared in accordance with the CEQA Guidelines, as well as public and agency input that were received during the scoping process. The comments to the NOP/IS are found in Appendix A. Those specific issues that are found to have no impact or less-than-significant impacts during preparation of the NOP/IS do not need to be addressed further in this RDEIR. Based on the findings of the NOP/IS and the results of scoping, a determination was made that this RDEIR must contain a comprehensive analysis of all environmental issues identified in Appendix G of the CEQA Guidelines. After further study and environmental review in this Recirculated Draft EIR, the following environmental impacts (both project-specific and cumulative) were determined to be less than significant or could be reduced to less-than-significant levels with mitigation measures:

- aesthetics,
- biological resources,
- cultural resources,
- energy,
- geologic and seismic hazards,
- hazards and hazardous materials,
- hydrology and water quality,
- land use and planning,
- mineral resources,
- population and housing,
- public services,
- utilities, and
- wildfire

5.2 SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED

Section 15126.2(b) of the CEQA Guidelines requires that the EIR describe any significant impacts, including those that can be mitigated but not reduced to less-than-significant levels. Potential environmental effects of the proposed Project and proposed mitigation measures are discussed in detail in Chapter 4 of this RDEIR. The impacts described in Table 5-1 *Summary of Significant Impacts of the Proposed* Project, would result in significant and unavoidable impacts, even with the incorporation of feasible mitigation measures that attempt to reduce impacts to less-than-significant levels.

Table 5-1. Summary of Significant Impacts of the Proposed Project

Resources	Project Impacts	Cumulative Impacts
Agricultural Resources	The conversion of approximately 314.30 acres of agricultural farmland is considered **significant and unavoidable.**	Although the Metropolitan Bakersfield General Plan has various Land Use policies that direct development to encourage site compatibility with surrounding uses, the cumulative loss of agricultural land results in a significant and unavoidable impact. Notwithstanding this conclusion, Project implementation, when combined with the potential loss of other agricultural lands within the Planning area, over time, would remain a **significant and unavoidable** cumulative impact.
Air Quality	Surrounding sensitive receptors could potentially be exposed to substantial ROG pollutant concentrations from the proposed Project. In addition, operational impacts would result in **significant and unavoidable** impacts of ROG, NO_x, CO, and PM_{10} emissions.	While all feasible and reasonable mitigation has been included, however, the proposed mitigation measures do not result in a reduction of ROG, NO_x, CO, and PM_{10}, below the thresholds. Therefore, the remaining unmitigated emissions and related health effects are considered **cumulatively significant and unavoidable.**
Greenhouse Gases	Project-related greenhouse gases impacts would be reduced to **less than significant** levels with incorporation of mitigation measures.	The cumulative impacts of the proposed Project on global climate change are not known with certainty; therefore, cumulative impacts on global climate change and associated health effects are considered **significant and unavoidable.**
Noise	Given a specific Project use is not currently proposed, and the fact that permitted uses within the M-1 and M-2 Zone Districts allow for operations to be conducted outside of a fully enclosed building, the proposed Project may result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies. Impacts are considered **significant and unavoidable.**	While all feasible and reasonable mitigation has been included, noise levels at 14 roadway segments a result of the proposed Project and at 15 roadway segments considering the project with past, present and reasonably, would be significant. In addition, noise levels at one residence in proximity to the proposed Project would exceed thresholds. Therefore, even with the implementation of all feasible mitigation, impacts would be both **significant and unavoidable and cumulatively significant and unavoidable**
Transportation and Traffic	Project-related transportation and traffic impacts would be reduced to **less than**	Given the uncertainty of the timing and/or ultimate implementation of the recommended improvements which

	significant levels with incorporation of mitigation measures.	require pro-rata, fair share funding from various sources, along with those improvements necessary within Metropolitan Bakersfield, the proposed Project's contribution would result in **significant and unavoidable impacts.**

5.3 IRREVERSIBLE IMPACTS

Section 15126.2(c) of the CEQA Guidelines defines the nature of an irreversible impact as an impact that uses nonrenewable resources during the initial and continued phases of the project. Irreversible impacts can also result from damage caused by environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to ensure that such consumption is justified.

Build-out of the proposed Project would commit nonrenewable resources during construction and ongoing utility services. During the operations of the proposed Project, oil, gas, and other nonrenewable resources would be consumed. Therefore, an irreversible commitment of nonrenewable resources would occur as a result of long-term operation under the proposed Project. However, assuming that those commitments occur in accordance with the adopted goals, policies, and implementation measures of the Metropolitan Bakersfield General Plan, as a matter of public policy, those commitments have been determined to be acceptable. The Metropolitan Bakersfield General Plan ensures that any irreversible environmental changes associated with those commitments will be minimized.

5.4 SIGNIFICANT CUMULATIVE IMPACTS

According to Section 15355 of the CEQA Guidelines, the term cumulative impacts "...refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Individual effects that may contribute to a cumulative impact may be from a single project or a number of separate projects. Individually, the impacts of a project may be relatively minor, but when considered along with impacts of other closely related or nearby projects, including newly proposed projects, the effects could be cumulatively considerable. This RDEIR has considered the potential cumulative effects of the proposed Project along with other current and reasonably foreseeable projects. Impacts for the following have been found to be cumulatively considerable:

- agricultural resources;
- air quality;
- greenhouse gases;
- noise; and
- transportation and traffic.

5.5 GROWTH-INDUCING IMPACTS

The Metropolitan Bakersfield General Plan recognizes that certain forms of growth are beneficial, both economically and socially. CEQA associates development of new utilities and other infrastructure and public services with growth inducement. These facilities will be provided as an accommodation to proposed growth, and growth is expected to occur in the region. A project could induce population growth in an area either directly or indirectly. More specifically, the development of new homes or businesses could induce population growth directly, whereas the extension of roads or other infrastructure could induce population growth indirectly.

This proposed Project would not directly increase population or the housing stock. The Project proposes to amend the Metropolitan Bakersfield General Plan to allow for service industrial and light industrial uses. This allows for additional employment opportunities, which can lead to the relocation of people to jobs and ultimately and increase in population. However, the size of the labor force within Kern County and the current unemployment rates are considered to be sufficient for the current County population to accommodate jobs generated by the proposed Project. Additionally, the proposed Project site is in the vicinity of a Metropolitan Bakersfield General Plan designation for "intensified activity center," and anticipates development of the southern activity center and surrounding areas. Therefore, the introduction of industrial uses on the Project site would not create a growth-inducing impact.

Chapter 6

Alternatives

CHAPTER 6
ALTERNATIVES

6.1 INTRODUCTION AND OVERVIEW

The California Environmental Quality Act (CEQA) requires that an EIR include a discussion of reasonable project alternatives that would "feasibly attain most of the basic objectives of the project, but would "avoid or substantially lessen any significant effects of the project, and evaluate the comparative merits of the alternatives" (CEQA Guidelines Section 15126.6). This chapter identifies potential alternatives to the proposed Project and evaluates them, as required by CEQA.

Key provisions of the CEQA Guidelines on alternatives (Section 15126.6(a) through (f)) are summarized below to explain the foundation and legal requirements for the alternatives analysis in the RDEIR.

- "The discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly" (15126.6(b)).
  - "The specific alternative of 'no project' shall also be evaluated along with its impact" (15126.6(e)).
  - "The no project analysis shall discuss the existing conditions at the time the Notice of Preparation is published, and at the time the environmental analysis is commenced, as well as what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives" (15126.6(e)(2)).
  - "The range of alternatives required in an EIR is governed by a 'rule of reason' that require the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project" (15126.6(f)).
  - "Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability or infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent)" (15126.6(f)(1)).
  - For alternative locations, "only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR" (15126.6(f)(2)(A)).

- "An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative" (15126.6(f)(3)).

Per the CEQA Guidelines Section 15126.6(d), additional significant effects of the alternatives are discussed in less detail than the significant effects of the Project as proposed.

For each alternative, the analysis: 1) Describes the alternative; 2) Analyzes the impact of the alternative as compared to the proposed Project; 3) Identifies the impacts of the Project which would be avoided or lessened by the alternative; 4) Assesses whether the alternative would meet most of the basic Project objectives; and 5) Evaluated the comparative merits of the alternative and the Project.

6.2 APPLICANT PROJECT OBJECTIVES

As described in Section 3.4, the following objectives have been established for the proposed Project and will aid decision makers in the review of the Project and associated environmental impacts:

- Facilitate quality development that is consistent with and implements the goals of the Kern County General Plan and Metropolitan Bakersfield General Plan.
- To develop the site consistent with the provisions of the Kern County Zoning Ordinance, Land Division Ordinance, and Development Standards.
- Assure adequate planning for all community facilities including circulation improvements, drainage facilities, water, and wastewater facilities.
- Ensure that the project, in and of itself, does not contribute to the conversion of adjacent agricultural areas.
- Cluster commercial retail uses that provide goods and services near an interchange with SR-99 to accommodate interstate freight and reduce traffic congestion and air emissions.
- Accommodate new development that channels land uses in a phased, orderly manner and is coordinated with the provision of infrastructure and public improvements.
- Address community circulation, both vehicular and pedestrian, utilizing available capacity with the existing circulation system, and provide fair-share system improvements to deficient intersections or road segments.
- Facilitate a planned development and related in-line tenants consistent with the market objectives of the applicant and its tenants.
- Accommodate growth within the proposed Project while balancing environmental considerations.
- Provide an industrial center at the Houghton Road and SR-99 interchange in the southern metropolitan area adjacent to the City that would provide a broad range of goods and services that serve the regional market area.

- Allow for the development of a variety of commercial and industrial centers which are differentiated by their function, intended users and level of intensity.
- Provide new industrial development that captures the economic demands generated by the marketplace.
- Provide new development that will assist the County of Kern in obtaining fiscal balance in the years and decades ahead.

6.3 PROPOSED PROJECT SUMMARY

The proposed Project includes a General Plan Amendment (GPA) and concurrent Change of Zoning District (ZCC) to modify the existing MBGP land use designations, and the Kern County Zoning Ordinance classifications on the 314-acre Project site. In addition, the Project includes a petition to exclude the Project site from Agricultural Preserve No. 13. The GPA and ZCC would allow for development of a light to medium industrial park containing approximately 4,613,004 square feet (net building area) of warehousing, distribution, and retail showroom uses. Table 6-1, *Existing and Proposed Land Use and Zoning*, below, provides the proposed GPA and ZCC summary for the proposed Project.

Table 6-1. Proposed Project Site and Surrounding Land Uses

Existing MBGP Land Use Designations	Proposed MBGP Amendment (Land Use Designations)	Existing Zone Classification	Proposed Zone Change (Zone Classification)	Gross Acres
R-IA (Resource-Intensive Agriculture) HC (Highway Commercial)	GC (General Commercial)	A (Exclusive Agriculture)	C-2 PD (General Commercial, Precise Development Combining)	22
	LI (Light Industrial)		M-1 PD (Light Industrial, Precise Development Combining)	108
	SI (Service Industrial)		M-2 PD (Medium Industrial, Precise Development Combining)	159
	HC (Highway Commercial)		CH PD (Highway Commercial, Precise Development Combining)	25
			Total	**314***

Numbers have been rounded to the nearest whole number.
* Petition for Exclusion from Agricultural Preserve No. 13

6.4 ALTERNATIVES ELIMINATED FROM FURTHER CONSIDERATION

Alternatives may be eliminated from detailed consideration in an EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid or substantially lessen any significant environmental effects (CEQA Guidelines, Section 15126.6[c]). Alternatives that are remote or speculative, or the effects of which cannot be reasonably predicted, also do not need to be considered (CEQA Guidelines, Section 15126[f][2]). Kern County considered several alternatives to reduce impacts on agriculture, air quality, greenhouse gas emissions, noise, or transportation and traffic. Per CEQA, the lead agency

may make an initial determination as to which alternatives are feasible and warrant further consideration and which are infeasible. The following alternative was initially considered but were eliminated from further consideration in this RDEIR because it does not meet project objectives and/or are infeasible.

Alternate Site Alternative

In developing a reasonable range of alternatives, the County considered the potential for an alternate site. To meet the project objectives, the applicant would be required to find a comparable site within Kern County that would meet most of the project objectives. Key project attributes considered included a site adjacent to, or in close proximity of, a major interstate freeway, close proximity to an existing water supply conveyance system, and close proximity to dry utilities (e.g., natural gas, electricity and telecommunication lines), all of which avoid the need for substantial off-site infrastructure construction with related impacts. A further key attribute is a site that is adjacent, or within very close proximity, to existing residential land uses that provide residential and related community land uses for employees. The project site must also be of sufficient size to provide industrial and commercial land uses as well as a water treatment facility and wastewater treatment facility to achieve key objectives such as providing an industrial center that serves a regional market need in the southern metropolitan area. The site would also have to be available for acquisition (e.g., listed as for sale by one land owner). Finally, to serve as a CEQA alternative, it would also need to avoid or significantly reduce at least one project-level or cumulative impact.

There were no alternative sites that met these criteria. For example, to avoid or substantially reduce project-related agricultural impacts (including cumulative impacts or conversion of adjacent agricultural land to non-agricultural land), the alternate site location would need to be in an area with minimal land identified as prime farmland, unique farmland, or farmland of statewide importance, as well as with minimal land currently under agricultural cultivation. In addition, it would need to be proximate to residential land uses to provide appropriate workforce, thus reducing the need for new housing on nearby agricultural land. An alternate site within the Kern County would result in land that is considered prime farmland, unique farmland, or farmland of statewide importance, much of which is currently under agricultural cultivation within the San Joaquin Valley or grazing and other agricultural cultivation within the Mojave Desert. Such a site would have greater agricultural impacts than the project site, and both State and County laws and policy have long discouraged large scale urbanized conversion of agricultural lands.

Alternate sites within existing cities within the County were not considered because these cities already have or have planned for industrial and commercial land uses, and would not achieve a key project objective of developing commercial and industrial centers in close proximity to residential areas, for the workforce, as well as being located in areas proximate to backbone infrastructure.

If an alternate site were identified, development of the project on an alternate site would have similar, if not greater, environmental impacts with respect to cumulative impacts that are more generally linked to air quality and greenhouse gas emissions, noise, and transportation and traffic. Alternate sites in more remote locations, not served by or immediately adjacent to proximate highway, water, and dry utility infrastructure would generally have greater project-level and cumulative impacts than

the proposed Project, based on the need for construction of infrastructure extensions to highway, water, and dry utility infrastructure.

The alternate site alternative has been rejected from further consideration because there were no alternative sites that have the attributes required to achieve key project objectives, and because if an alternate site was available it would likely have impacts that are generally similar to, or for some resources greater than, the 99 Houghton Industrial Park Project.

It should also be noted that, while CEQA requires an EIR to identify project alternatives, it does not require the EIR to identify alternative project locations. Per the CEQA Guidelines, an EIR must include a reasonable range of "alternatives to the project, *or* to the location of the project." (14 California Code of Regulations Section 15126.6(a)(emphasis added)). Applicable case law recognizes that CEQA grants lead agencies flexibility to elect to analyze either onsite or offsite alternatives, or both (Mira Mar Mobile Community v. City of Oceanside (2004) 119 Cal.App.4th 447, 491). There is no requirement under CEQA that an EIR always explore an alternative site, or offsite, alternative (California Native Plant Society v. City of Santa Cruz (2009) 177 Cal.App.4th 957, 933). Thus, CEQA does not require this RDEIR to analyze the Alternative Site Alternative.

6.5 ALTERNATIVES ANALYZED IN THIS RDEIR

The following five alternatives have been determined to represent a reasonable range of alternatives which have the potential to feasibly attain most of the basic objectives of the Project but which may avoid or substantially lessen any of the significant impacts of the proposed Project. The "Environmentally Superior" Alternative, as required by CEQA is described in Section 6.6, *"Environmentally Superior" Alternative*. These alternatives are analyzed in detail below:

- Alternative A "No Project/No Development" Alternative
- Alternative B "Buildout Existing General Plan Designation" Alternative
- Alternative C "Reduced Density" Alternative
- Alternative D "Reduced Project Size" Alternative

Table 6-2 *Summary of Development Alternatives*, provides a summary of the relative impacts and feasibility of each Alternative. A complete discussion of each Alternative is provided below.

Table 6-2. Summary of Development Alternatives

Alternative	Description	Basis for Selection and Summary of Analysis
Proposed Project	4,613,004 ft2 of light to medium industrial park, and highway and general commercial uses	
Alternative A No Project/No Development	• No GPA, ZCC, or development. • Existing agricultural uses are maintained	• Required by CEQA • Avoids need for GPA, ZCC, and CUPs • No agricultural preserve exclusion needed • No annexation • Avoids significant impacts

Table 6-2. Summary of Development Alternatives

Alternative	Description	Basis for Selection and Summary of Analysis
		• Does not meet 9 of the 13 Project objectives
Alternative B Buildout Existing General Plan Designation	• Existing land use, R-IA and HC, and zoning, A, designations remain • Develop 15 SFR, 7.6 acres of HC, approximately 132,422 ft2	• Required by CEQA • Avoids need for GPA and ZCC • No agricultural preserve exclusion needed • No annexation • Does not meet 7 of the 13 Project objectives
Alternative C Reduced Density	• Develop entire 314.30-acre site • Reduce development to 3,850,689 ft2 of medium and light industrial facilities	• May lessen some impacts • Does not avoid significant environmental impacts • Meets Project objectives, but not to the degree of the proposed Project
Alternative D Reduced Project Size	• Develop approximately 184.58 acres – area proposed as SI • 2,171,789 ft2 of Service Industrial/Medium Industrial facilities	• May lessen some impacts • Does not avoid significant environmental impacts • Meets most Project objectives, but not to the degree of the proposed Project.

Notes:

R-IA = Intensive Agriculture: minimum 20-acre parcel size; HC = Highway Commercial – Industrial;
A = Exclusive Agriculture; GPA = General Plan Amendment; ZCC = Zone Change; SI = SI – Service Industrial; FAR = Floor Area Ratio; ft^2 = square feet; SFR = single-family residential

Table 6-3. Comparison of Alternatives

Environmental Resource	Project	Alternative A	Alternative B	Alternative C	Alternative D
Agriculture: Convert Prime, Unique or Statewide important farmland	Significant / Unavoidable	Fewer	Fewer	Similar	Fewer but still Significant/Unavoidable
Agriculture: Other changes resulting in agricultural conversion	Significant / Unavoidable	Fewer	Similar	Similar	Similar
Agriculture: Cumulative conversion of agricultural or forest land	Significant / Unavoidable	Fewer	Fewer	Similar	Fewer but still Significant/Unavoidable
Air Quality: Operational Emission of ROG, NO_x, and CO	Significant / Unavoidable	Fewer	Fewer but still Significant/Unavoidable	Fewer but still Significant/Unavoidable	Fewer but still Significant/Unavoidable
Air Quality: Cumulative net increase of nonattainment pollutants	Significant / Unavoidable	Fewer	Fewer but still Significant/Unavoidable	Fewer but still Significant/Unavoidable	Fewer but still Significant/Unavoidable
Air Quality: Exposure of sensitive receptors to ROG, NO_x, and CO	Significant / Unavoidable	Fewer	Fewer but still Significant/Unavoidable	Fewer but still Significant/Unavoidable	Fewer but still Significant/Unavoidable
Air Quality: Total Cumulative Project Emissions	Significant / Unavoidable	Fewer	Fewer but still Significant/Unavoidable	Fewer but still Significant/Unavoidable	Fewer but still Significant/Unavoidable
Greenhouse Gas Emission: Cumulative effects	Significant / Unavoidable	Fewer	Fewer but still Significant/Unavoidable	Similar	Fewer but still Significant/Unavoidable
Noise: Expose Persons in Excess of Standards	Significant / Unavoidable	Fewer	Fewer	Fewer	Fewer
Noise: Expose Persons to Ground Borne Noise and Vibration	Significant / Unavoidable	Fewer	Fewer	Fewer	Fewer
Noise: Create Substantial Temporary Above Existing Levels	Significant / Unavoidable	Fewer	Fewer	Fewer	Fewer
Noise: Cumulative increase in noise	Significant / Unavoidable	Fewer	Fewer	Fewer	Fewer
Traffic: Cumulative increase in transportation and traffic impacts	Significant / Unavoidable	Fewer	Fewer	Similar	Fewer

Alternative A - "No Project/No Development" Alternative

The "No Project/No Development" Alternative assumes that the proposed GPA, ZCC and subsequent development would not be implemented. Under this scenario, the General Plan Land Use Designation on the Project site would remain R-IA (Resource-Intensive Agriculture) and HC (Highway Commercial); the zoning would remain A (Exclusive Agriculture). Additionally, this Alternative assumes that existing land uses on the Project site would remain unchanged, and, as such, would remain under agricultural production. Because the Project site would remain unchanged, few or no environmental impacts would occur. This Alternative serves as the baseline against which to evaluate the effects of the proposed Project and other Project Alternatives presented below.

Impacts Compared to Project Impacts

The following compares environmental impacts associated with Alternative A, the "No Project/No Development" Alternative, to those identified for the proposed Project.

Aesthetics

Under the "No Project/No Development" Alternative, the Project site would not be altered. Therefore, views across the Project site would remain unobstructed, and no additional lights are proposed. Therefore, under this Alternative no impacts to aesthetics, light and glare would occur.

Agriculture Resources

This Alternative would not alter the existing conditions within the Project site. Therefore, the site will remain under agricultural production and as fallow agricultural land. This Alternative would not require an agricultural preserve exclusion. Thus, no impacts to agricultural resources would occur.

Air Quality

Alternative A, the "No Project/No Development" Alternative, would not result in alterations to the land uses within the Project site. Therefore, any existing impacts to air quality that currently exist on-site will continue to occur, however, no new impacts to air quality would occur under this Alternative.

Biological Resources

Alternative A, the "No Project/No Development" Alternative, would not impact potential habitat for biological resources. The continued agricultural uses would not increase impacts on the biological resources currently within the Project site. No new impacts to biological resources would occur under this Alternative.

Cultural Resources

As this Alternative would not result in alterations to the ground surface within the Project site, no impacts to cultural resources would occur.

Energy Resources

Alternative A, the "No Project/No Development" Alternative, would not result in alterations to the land uses within the Project site. Therefore, any existing impacts to energy that currently exist on-site will continue to occur, however, no new impacts to energy would occur under this Alternative.

Geologic and Seismic Hazards

Under this Alternative, new structures would not be constructed. Therefore, impacts to structures as a result of geologic and seismic hazards would not occur under this Alternative.

Greenhouse Gases

Implementation of this Alternative would result the Project site remaining as cultivated and fallow agricultural land. The land use would remain the same; therefore, no impacts to greenhouse gas emissions would occur beyond what already exists.

Hazards/Hazardous Materials

Under this Alternative, the existing environmental conditions, including those that may be defined as either adverse or significant, would continue to prevail. This Alternative would continue to expose individuals to agricultural production related activities and their associated effects, and to nuisances (i.e., soil contamination, noise, dust). Therefore, no impacts to hazards/hazardous materials would occur under Alternative A, the "No Project/No Development" Alternative.

Hydrology and Water Quality

No industrial structures would be developed under this Alternative; therefore, no change in the usage of groundwater would occur, and no additional storm drain infrastructure would be required. Therefore, no impacts to hydrology and water quality would occur under this Alternative.

Land Use and Relevant Planning

This Alternative would not require a GPA or zone change, as it does not propose to develop the Project site. This Alternative would be consistent with the existing land uses identified in the Metropolitan Bakersfield General Plan. Implementation of this Alternative would not result in any improvements to the Project site; therefore, no impacts to land use would occur.

Mineral Resources

Under this Alternative this proposed Project site would remain under agricultural production and the on-site prospect well would remain. Therefore, under this Alternative no impacts to mineral resources would occur.

Noise

As no development is proposed on the Project site under this Alternative, no change in the existing noise on the Project site would occur.

Population and Housing

Under Alternative A, the "No Project/No Development" Alternative, no industrial structures would be constructed. This Alternative would not directly or indirectly induce an increase in population and would not displace houses or people because the 314.30-acre site would remain agricultural land. No impacts to population and housing would occur under this Alternative.

Public Services and Utilities

With implementation of Alternative A, the "No Project/No Development" Alternative, no industrial structures would be constructed. No changes in demand of public services and utilities would occur.

Traffic and Circulation

Development of this Alternative would not result in changes to average daily vehicle trips (ADT) as no development is proposed. Additionally, this Alternative would not result in impacts on the intersections and roadway segments surrounding the Project site. Overall, this Alternative would not result in an impact on circulation.

Wildfire

Under this alternative no development is proposed, and the existing land uses of the Project site would remain in agricultural production. The potential for the Project site to be affected by wildfire from adjacent areas would be the same and no changes or impacts associated with wildfire would occur.

Conclusion

Avoid or Substantially Lessen Project Impacts

No development would occur under this Alternative; therefore, Project related impacts under the environmental categories discussed above would not occur. Thus, all Project impacts would be avoided or lessened.

Attainment of Project Objectives

Alternative A, the "No Project/No Development" Alternative, does not meet the following Project objectives, as described in Section 6.2:

- Cluster commercial retail uses that provide goods and services near an interchange with SR-99 to accommodate interstate freight and reduce traffic congestion and air emissions.
- Accommodate new development that channels land uses in a phased, orderly manner and is coordinated with the provision of infrastructure and public improvements.
- Address community circulation, both vehicular and pedestrian, utilizing available capacity with the existing circulation system, and provide fair-share system improvements to deficient intersections or road segments.

- Facilitate a planned development and related in-line tenants consistent with the market objectives of the applicant and its tenants.
- Accommodate growth within the proposed Project while balancing environmental considerations.
- Provide an industrial center at the Houghton Road and SR-99 interchange in the southern metropolitan area adjacent to the City that would provide a broad range of goods and services that serve the regional market area.
- Allow for the development of a variety of commercial and industrial centers which are differentiated by their function, intended users and level of intensity.
- Provide new industrial development that captures the economic demands generated by the marketplace.
- Provide new development that will assist the County of Kern in obtaining fiscal balance in the years and decades ahead.

Comparative Merits

This Alternative would reduce impacts compared to the proposed Project in all categories. However, this Alternative was rejected because it does not fulfill 9 of the 13 objectives of the proposed Project described in Section 6.2, *Applicant Project Objectives*.

Alternative B - "Buildout Existing General Plan Designation" Alternative

Under Alternative B, the "Buildout Existing General Plan Designation" Alternative, the Project site would be developed to the maximum intensity allowed under the existing General Plan land use designation. Implementation of this Alternative would consist of development on the 314.30-acre Project site under the current land use designation of R-IA (Resource – Intensive Agriculture) and HC (Highway Commercial). The R-IA designation allows the development of dwelling units at a density of one unit per 20 acres. The HC designation allows the development of 7.6 acres for commercial uses. Therefore, this Alternative would yield 15 single-family dwelling units and approximately 132,422 square feet of highway commercial facilities. This number is based on the allowable Floor Area Ratio (FAR) of 0.4. Therefore, 7.6 acres = 331,056 square feet. The maximum allowable building square footage would be 132,422 square feet (331,056 x 0.4 = 132,422).

Impacts Compared to Project Impacts

The following compares environmental impacts associated with Alternative B, the "Buildout Existing General Plan Designation" Alternative, to those identified for the proposed Project.

Aesthetics

Development of 15 residential units and approximately 132,411 square feet of highway commercial facilities associated with this Alternative would slightly alter views of and across the Project site from surrounding uses. Views of the Project site are currently of agricultural activities. Under this Alternative, these views would be replaced with views of fields subdivided into 20-acre parcels, with

one single-family dwelling unit developed on each parcel and the remaining land would consist of approximately 132,411 square feet of highway commercial. This Alternative would result in a less than significant impact related to aesthetics, light and glare due to the limited development proposed and the limited addition of lighting.

Agriculture

As a limited amount of development would be allowed under this Alternative, minor impacts to agricultural uses would occur. However, approximately 306.71 acres of the Project site would remain under agricultural production. This acreage could potentially be broken down into 20-acre parcels, which could remain in agricultural production. In addition, this Alternative would not require an agricultural preserve exclusion. Therefore, impacts would be less than the impacts for the proposed Project.

Air Quality

Implementation of this Alternative would result in 15 residential units and approximately 132,422 square feet of highway commercial facilities; which would result in a reduction of construction activities and traffic trips. This lower intensity of development would result in a smaller amount of particulate matter greater than 10 microns (PM_{10}) being released during construction activities, compared to the proposed Project. Additionally, the smaller volume of Project-related traffic would result in lower air pollutant emissions associated with traffic. However, this Alternative would still result in a cumulatively significant impact to air quality given the increase in daily trips associated with the increased development.

Biological Resources

Alternative B, the "Buildout Existing General Plan Designation" Alternative, would result in the development of up to 15 single-family residential units, with one unit per 20 acres, and 132,422 square feet of highway commercial on 7.6 acres. Impacts to biological resources would still occur; however, they would be reduced from that of the proposed Project because of the lower intensity of development. Individual dwelling unit locations could be customized as to avoid biologically sensitive areas. The area designated for highway commercial land uses is in the southwest corner of the Project site, adjacent to Houghton Road and SR-99. Overall, this Alternative would result in reduced impacts when compared to the proposed Project; however, compliance with the Metropolitan Bakersfield Habitat Conservation Plan (MBHCP) would be required.

Cultural Resources

This Alternative would have a reduced footprint size because of the introduction of up to 15 dwelling units and a maximum of 132,422 square feet of highway commercial facilities. Therefore, the intensity of development would be less, and less ground disturbing activities would be required. However, similar mitigation measures identified for the proposed Project would be applicable to this Alternative to reduce potential impacts to undocumented cultural and paleontological resources within the areas of the site to be developed.

Energy

Implementation of this Alternative would result in the construction of 15 residential units and 132,422 square feet of highway commercial; which would result in a reduction of construction activities and traffic trips as compared to the proposed Project. The reduced intensity of project development would reduce the amount of energy needed for construction as well as operation of the proposed Project. The reduced ultimate size of the proposed Project also would reduce the overall demand for energy needed for project operation over the long-term. However, the Alternative would include residential uses but a reduction in overall population and vehicle trips. This would result in decreased energy use compared to the proposed Project. This Alternative also would be required to comply with all state and local regulations pertaining to energy reduction and use of alternative energy sources. Although conformance to the green energy requirements would still be required for this Alternative, this would result in further reduced impacts associated with Energy use.

Geologic Resources

Under this Alternative, residential structures would be introduced to the Project site. The site conditions within the development area would remain the same as the proposed Project. Therefore, the geologic resources impacts would be similar to those identified for the proposed Project, including seismic activity, soil erosion and soil conditions. Any existing regulations and mitigation measures identified for the proposed Project would be applicable to this Alternative.

Greenhouse Gases

Implementation of this Alternative would result in the construction of 15 residential units and 132,422 square feet of highway commercial; which would result in a reduction of construction activities and traffic trips as compared to the proposed Project. Additionally, the smaller volume of Project-related traffic would result in substantially lower air pollutant emissions associated with traffic. Although smaller, greenhouse gas emission impacts would need to be mitigated in order to reduce the business as usual (BAU) greenhouse gas emissions by 29 percent to be consistent with the standards established by the California Air Resources Board and the California Global Warming Solutions Act of 2006. Therefore, greenhouse gas emissions impacts would be similar to the proposed Project.

Hazards/Hazardous Materials

Similar to the proposed Project, implementation of Alternative B, the "Buildout of the Existing General Plan" Alternative, would result in potentially significant impacts on public health and safety. With the development of approximately 15 residences and 132,422 square feet of highway commercial, this Alternative would reduce the potential of the transport of hazardous materials. Alternative B, "Buildout Existing General Plan Designation" Alternative, would have a similar impact on the existing PG&E pipeline as the proposed Project. In addition, closure of the prospect well would continue to be required. With the development of 15 single-family homes and 132,422 square feet of highway commercial facilities, this Alternative would expose individuals to similar effects associated with agricultural land uses (i.e., soil contamination, noise, dust). This Alternative would replace a large number of people working on-site, with a smaller number of workers and a small number of people living within the Project boundaries; therefore, public health and safety

impacts would be similar to those of the proposed Project. The mitigation measures identified for the proposed Project would be included in this Alternative.

Hydrology and Water Quality

Development in accordance with the existing General Plan Designation would result in similar impacts to the proposed Project. No change in the usage of groundwater would occur, similar to the proposed Project**.** Implementation and compliance with the NPDES, SUSMP and BMP requirements would reduce construction-related impacts on water quality to a less than significant level.

Land Use and Relevant Planning

This Alternative would not require a GPA, ZCC, annexation into the City, or an Agricultural Preserve exclusions as it proposes to develop the Project site in accordance with the current land use designation. This Alternative would be consistent with land uses identified in the General Plan. Implementation of this Alternative would provide a maximum of 132,422 square feet of highway commercial on 7.6 acres and up to 15 dwelling units on approximately 306.71 acres. The development intensity and subsequent environmental impacts would be less than those identified for the proposed Project.

Mineral Resources

This Alternative proposes to provide up to 132,422 square feet of highway commercial facilities and up to 15 dwelling units. The existing abandoned exploration well would not necessarily be required to be altered. Therefore, overall, this Alternative would result in reduced levels of impacts on mineral resources than the proposed Project, as access to the existing wells would remain available.

Noise

Under Alternative B, the Buildout Existing General Plan Designation Alternative, the Project site would be developed with up to 15 residences on 20-acre parcels and 132,422 square feet of highway commercial facilities. Mitigation measures similar to the proposed Project would be applied to ensure short-term construction impacts remain less than significant. This Alternative would introduce new noise-sensitive land uses as a result of the development of up to 15 dwelling units. Noise from introduced traffic would be reduced for the overall project site; however, the highway commercial would experience a higher volume of ingress and egress customers to the southwest corner of the Project site. The potential for increased noise due to higher traffic volumes at the highway commercial property would be minor. The development of residential instead of industrial land uses would reduce noise impacts as compared to the proposed Project. Therefore, overall, this Alternative would result in reduced noise impacts as compared to the proposed Project.

Population and Housing

Alternative B, the "Buildout Existing General Plan Designation" Alternative, would result in a direct increase in population because it would introduce 15 new residences to Kern County. These 15 residences could increase the Kern County Population by approximately 47 people, assuming an

average of 3.096 persons per household[1], an increase compared to the proposed Project. An increase of approximately 47 people is within the Metropolitan Bakersfield General Plan forecast for anticipated population growth for the area. The introduction of approximately 132,422 square feet of highway commercial development is less than the proposed Project. Impacts under Alternative B would be slightly more than those identified for the proposed Project because of the introduction of residential land uses.

Public Services and Utilities

Alternative B, the "Buildout Existing General Plan Designation" Alternative, would result in the introduction of approximately 15 dwelling units to the Project site. Highway commercial facilities would be provided in the southwest corner of the Project site. The introduction of residents would result in additional public service requirements not needed under the proposed Project. Utility services required may be reduced because there would be an overall reduction in the size of the proposed Project and the developed area within the site. Therefore, overall impacts to public services would be greater for this Alternative than the proposed Project; however, impacts to utilities would be reduced when compared to the proposed Project.

Traffic and Circulation

Development of this Alternative would have no industrial uses and would introduce 15 dwelling units and approximately 132,422 square feet of highway commercial. This changes the site population from employees to residents and a small number of employees, resulting in an overall smaller population within the Project site and consequently fewer average daily vehicle trips (ADT) as compared to the proposed Project. Because of the smaller number of trips when compared to the proposed Project, this Alternative would result in a less than significant impact on the intersections and roadway segments surrounding the Project site. Overall, Alternative B, the "Buildout Existing General Plan Designation" Alternative, would result in a lesser impact on circulation compared to the proposed Project.

Wildfire

This Alternative proposes to provide up to 132,422 square feet of highway commercial facilities and up to 15 dwelling units. Under this alternative, surrounding land uses would not change and the change in on-site land uses would not change the findings related to wildfires. Therefore, the potential for the Project site to be affected by wildfire from adjacent areas would be the same and no changes or impacts associated with wildfire would occur.

[1] Average persons per household as determined by the Department of Finance and discussed in this EIR under Section 4.14, *Population and Housing*. 15 residences * 3.156 persons per household = approximately 47 people.

Conclusion

Avoid or Substantially Lessen Project Impacts

This Alternative would lessen impacts associated with aesthetics, biological resources, land use and relevant planning, noise, public services, utilities and traffic and circulation. However, there would still be significant and unavoidable impacts ~~to~~ on cumulative air quality. Additionally, if septic systems were proposed, then there could be additional impacts to hydrology and water quality, that were not considered with the proposed Project.

Attainment of Project Objectives

Alternative B, the "Buildout Existing General Plan Designation" Alternative, does not necessarily meet the proposed Project objectives, but would require similar mitigation measures to those that are currently proposed. Generally, Alternative B does not meet the following objectives:

- Ensure that the project, in and of itself, does not contribute to the conversion of adjacent agricultural areas.
- Address community circulation, both vehicular and pedestrian, utilizing available capacity with the existing circulation system, and provide fair-share system improvements to deficient intersections or road segments.
- Facilitate a planned development and related in-line tenants consistent with the market objectives of the applicant and its tenants.
- Provide an industrial center at the Houghton Road and SR-99 interchange in the southern metropolitan area adjacent to the City that would provide a broad range of goods and services that serve the regional market area.
- Allow for the development of a variety of commercial and industrial centers which are differentiated by their function, intended users and level of intensity.
- Provide new industrial development that captures the economic demands generated by the marketplace.
- Provide new development that will assist the County of Kern in obtaining fiscal balance in the years and decades ahead.

Comparative Merits

This Alternative would reduce impacts compared to the proposed Project in the categories of aesthetics, agriculture, air quality, biological resources, greenhouse gases, land use and relevant planning, noise, public services and utilities and traffic and circulation; and would have equivalent impacts in the categories of cultural resources, geologic and seismic hazards, hazards/hazardous materials, hydrology and water quality, and mineral resources.

Alternative C - "Reduced Density" Alternative

Under Alternative C, the "Reduced Density" Alternative, the Project site would be developed under the LI (Light Industrial) and SI (Service Industrial) land use designation; however, the industrial facilities would be reduced in area. This Alternative would develop the entire 314.30-acre Project site; however, the square footage of industrial facilities would be reduced by approximately 25 percent. This results in the development of approximately 3,459,753 square feet of light and medium industrial facilities. The Project site would continue to require a GPA, ZCC, annexation, and exclusion from Agricultural Preserve Number 13.

Impacts Compared to Project Impacts

The following discussion evaluates the potential environmental impacts associated with Alternative C, the "Reduced Density" Alternative, compared to impacts of the proposed Project.

Aesthetics

Under this Alternative, the aesthetic impacts would be similar to the proposed Project. This Alternative would continue to develop the entire proposed Project site, therefore, even though the size of the facilities will be reduced, the site would result in similar impacts from site illumination and conversion of open space to a permanent urban environment. Short-term construction impacts would occur under this Alternative, such impacts would be considered equivalent to the proposed Project impacts. Impacts from urban decay would be slightly less than those resulting from the proposed Project because this Alternative would result in fewer industrial and showroom facilities. On a cumulative level, implementation of this Alternative would result in a similar to the proposed Project.

Agriculture

This Alternative would result in the loss of agricultural land over the entire Project site. Agricultural land uses would not occur under this alternative. An exclusion from Agricultural Preserve Number 13 would continue to be required. Therefore, impacts would remain significant and unavoidable.

Air Quality

The "Reduced Density" Alternative would construct approximately 3,459,753 square feet of medium industrial facilities. The reduced size of the facilities would ultimately reduce the number of workers at the site and would therefore have fewer vehicle trips, compared to the proposed Project. As a result, this Alternative would slightly reduce PM_{10} and air pollutant emissions, compared to the proposed Project. Mitigation measures addressing long-term Project emissions similar to the proposed Project would be implemented under this Alternative, therefore, impacts under this Alternative would be similar to those of the proposed Project. Construction impacts to air quality would be similar to the proposed Project.

Biological Resources

This Alternative would occupy the same land as the proposed Project, even though the industrial facilities would be reduced in size. The Alternative would result in similar impacts as the proposed Project. Similar to the proposed Project, development of the site under this Alternative would be

required to fully comply with the applicable provisions of the MBHCP to mitigate for the conversion of undeveloped land to an urbanized condition. Additionally, mitigation measures similar to those recommended for the proposed Project would be required to reduce potential biological impacts, especially to burrowing owl and San Joaquin kit fox. Impacts would be the same under this Alternative as the proposed Project.

Cultural Resources

Because Alternative C, the "Reduced Density" Alternative, would occupy the same land as the proposed Project, the impacts for cultural resources would continue to be less than significant because no cultural resources were identified. Additionally, mitigation measures required for grading and construction activities for the proposed Project would apply to the same activities for this Alternative and would therefore result in less than significant impacts on undiscovered cultural resources. With regard to cultural resources, Alternative C, the "Reduced Density" Alternative, would be neither environmentally superior nor environmentally inferior to the proposed Project.

Energy

Implementation of this Alternative would result a slightly "Reduced Density" of development of on the Project site resulting in a slight reduction in the overall energy use. Although there is a similar amount of land that would be disturbed, fewer structures would be constructed and this alternative includes a reduction in overall Project square footage. This Alternative would be required to comply with all state and local regulations pertaining to energy reduction and use of alternative energy sources. Although conformance to the green energy requirements would still be required for this alterative, overall, the reduced intensity of this Alternative would reduce the amount of energy needed compared to the proposed Project.

Geologic and Seismic Hazards

Since the Project area would occupy the same area as the proposed Project, the geologic and seismic hazard impacts would be equivalent to those identified for the proposed Project, including seismic activity, soil erosion and soil conditions. Alternative C, the "Reduced Density" Alternative, would have equivalent impacts as the proposed Project and the same existing regulations and mitigation measures identified for the proposed Project would be applicable to this Alternative.

Greenhouse Gases

Implementation of this Alternative would result in 3,459,753 square feet of industrial building space to be constructed on the proposed Project site. Construction would continue to occur on the entire property; therefore, construction emissions would be similar to the proposed Project. Because this Alternative would result in slightly fewer workers, a slight reduction in traffic trips would occur as compared to the proposed Project; therefore, the long-term air quality impacts would be slightly less than the proposed Project. Greenhouse gas emission impacts would need to be mitigated in order to reduce the business as usual (BAU) greenhouse gas emissions by 29 percent to be consistent with the standards established by the California Air Resources Board and the California Global Warming Solutions Act of 2006. Therefore, greenhouse gas emissions impacts would be similar to the proposed Project.

Hazards/Hazardous Materials

Similar to the proposed Project, implementation of Alternative C, the "Reduced Density" Alternative, would result in potentially significant impacts on public health and safety. This Alternative includes the disturbance of a portion of the Project site for development of 3,459,753 square feet of industrial building space, slightly less than the proposed Project; therefore, this Alternative would slightly reduce the potential of the transport of hazardous materials. This Alternative would have a similar impact on the existing PG&E pipeline as the proposed Project. In addition, closure of the prospect well would continue to be required. This Alternative would expose individuals to similar effects associated with agricultural land uses (i.e., soil contamination, noise, dust). This Alternative would slightly reduce the number of people working on-site; however, public health and safety impacts would be similar to those of the proposed Project. The mitigation measures identified for the proposed Project would be included in this Alternative.

Hydrology and Water Quality

Development in accordance with this Alternative would result in similar amounts of impervious surfaces and, therefore, similar amounts of runoff volumes compared to the proposed Project. Water consumption would be slightly less than water usage under the proposed Project; however, the impacts would remain similar to those of the proposed Project. As with the proposed Project, this Alternative would comply with standard County provisions related to the incorporation of sufficient storm drain infrastructure to reduce the amount of surface runoff. Implementation and compliance with the NPDES, SUSMP and standard BMP requirements would reduce construction-related impacts on water quality to a less than significant level. Mitigation measures similar to the proposed Project would be applied to ensure short-term water quality construction impacts remain less than significant.

Land Use and Relevant Planning

Implementation of this Alternative would continue to require a GPA, ZCC, annexation, and an agricultural preserve exclusion on 314.30 acres to allow the development of approximately 3,459,753 square feet of light and industrial facilities. Industrial facility square footage would be reduced by 25 percent as compared to the proposed Project. Annexation into the City and agricultural preserve exclusion would still be required. Land use impacts resulting from this Alternative would be similar to the proposed Project because the entire 314.30-acre site would continue to be developed.

Mineral Resources

Although Alternative C, the "Reduced Density" Alternative, would have less intensity of development, the abandoned exploration well would continue to require reabandonment. This Alternative would result in similar impacts to mineral resources as the proposed Project due to the presence of the abandoned exploration oil well on-site.

Noise

Under this Alternative, the number of vehicles would be reduced because the square footage of industrial facilities would be reduced. Therefore, the noise from vehicle trips would be reduced in

comparison to the proposed Project. Noise from implementing the Alternative would be reduced slightly when compared to the proposed Project, because the development intensity would be reduced by approximately 25 percent. Mitigation measures similar to the proposed Project would be applied to ensure short-term construction impacts remain less than significant. Overall, with implementation of noise mitigation measures, noise impacts would be the slightly reduced when compared to the proposed Project.

Population and Housing

Alternative C, the "Reduced Density" Alternative, would reduce the proposed Project size by approximately 25 percent, resulting in the development of approximately 3,459,753 square feet of medium and light industrial facilities. The labor force needed for this Alternative would be less than the labor force needed for the proposed Project. Therefore, the impacts under Alternative C would be less than those identified for the proposed Project. Impacts would remain less than significant.

Public Services and Utilities

The demand for public services and utilities generated at the Project site would be reduced by approximately 25 percent. The reduced square footage for industrial facilities would result in fewer employees and fewer industrial businesses within the Project site, which would in turn have lesser impacts on public services and utilities. All standard mitigation measures identified under the proposed Project would be required in order to reduce impacts to a less than significant level. Therefore, this Alternative would be neither environmentally superior nor environmentally inferior to the proposed Project.

Traffic and Circulation

The reduced amount of square footage for industrial building space developed under this Alternative would result in a slightly reduced number of employees and delivery trucks, which in turn would result in a slight decrease in average daily vehicle trips (ADT) compared to the proposed Project. Slightly fewer AM and PM peak hour trips and ADT would result in slightly reduced impacts on intersections and roadway segments within the area surrounding the Project site. The temporary impacts on transportation within the area surrounding the Project site would be similar to those with the proposed Project because the proposed construction activities would be similar and short in duration. The planned improvements and mitigation measures identified for the proposed Project would still be applicable under this Alternative in order to reduce impacts to a less than significant level. Overall, impacts on traffic and circulation from this Alternative would be similar to those associated with the proposed Project.

Wildfire

This Alternative would result in a reduced development intensity of the Project Site. Under this alternative; however, surrounding land uses would not change and on-site changes to land uses would not change the findings related to wildfires. Therefore, the potential for the Project site to be affected by wildfire from adjacent areas would be the same and no changes or impacts associated with wildfire would occur.

Conclusion

Avoid or Substantially Lessen Project Impacts

This Alternative would lessen impacts associated with air quality, noise, population and housing, and traffic/circulation.

Attainment of Project Objectives

This Alternative would meet the Project objectives stated in Section 6.2.

Comparative Merits

This Alternative would reduce impacts compared to the proposed Project in the categories of air quality, and noise, ~~and traffic and circulation;~~ and would have equivalent impacts in the categories of aesthetics, agriculture, biological resources cultural resources, geologic and seismic hazards, greenhouse gases, hazards/hazardous materials, hydrology and water quality, land use and relevant planning, mineral resources, population and housing, public services and utilities, and traffic and circulation.

Alternative D - "Reduced Project Size" Alternative

Under Alternative D, the "Reduced Project Size" Alternative, the Project site size would be reduced by approximately 50 percent and the square footage size would be reduced accordingly. Therefore, Alternative D would develop the 159-acre portion of the Project site designated to be SI (Service Industrial) with 2,306,502 square feet of medium industrial facilities, as identified in the proposed Project. The approximately 22-acre General Commercial parcel on the north, the 9.01-acre High Commercial parcel, and the approximately 107.72-acres on the east of the Project site to be designated LI (Light Industrial) would not be developed. Therefore, this Alternative assumes that existing land uses on the northern and eastern portions of the site would remain unchanged, and would remain under their current state as fallow and cultivated land. This Alternative would continue to require the GPA, ZCC, annexation, and Agricultural Preserve Exclusion.

Impacts Compared to Project Impacts

The following discussion evaluates the potential environmental impacts associated with Alternative D, the "Reduced Project Size" Alternative, compared to impacts of the proposed Project.

Aesthetics

Under this Alternative, the aesthetic impacts would be less than the proposed Project. Implementation of this Alternative would involve less development on approximately 159 acres of the proposed Project site and the remaining approximately155.3 acres would remain under the current land uses. Overall, decreasing the amount of developed land would potentially result in less impacts from site illumination and conversion of open space to a permanent urban environment. Short-term construction impacts would occur under this Alternative; however, impacts would be considered less than significant. On a cumulative level, implementation of this Alternative would result in a similar less than significant impact as the proposed Project.

Agriculture

This Alternative would result in development on the approximately 184.58 acres of the Project site. As a result, the amount of agricultural land that would be taken out of production for the development of the industrial facilities would be less than the proposed Project. This Alternative lessens the impact on agricultural resources because the total conversion of farmland would be approximately 50 percent of the proposed Project. However, similar to the proposed Project, impacts to agricultural resources would still result in a significant and unavoidable impact on agriculture resources because of the cumulative loss of agricultural land within Kern County. Alternative D, the "Reduced Project Size" Alternative, would reduce the amount of land taken out of agricultural production; however, significant and unavoidable impacts would remain, as compared to the proposed Project.

Air Quality

The "Reduced Project Size" Alternative would construct approximately 2,306,502 square feet of medium to light industrial facilities. The reduced size of the facilities would ultimately reduce the number of workers at the site and would therefore have fewer vehicle trips, compared to the proposed Project. As a result, this Alternative has the potential to reduce operational PM_{10} emissions by enough to be below the threshold of 15 tons per year. The 50 percent reduction is not expected to reduce other air pollutant emissions below the thresholds. Therefore, this Alternative could slightly, reduce air pollutant emissions, compared to the proposed Project. In addition, mitigation measures addressing long-term Project emissions similar to the proposed Project would be implemented under this Alternative, therefore, impacts under this Alternative would be slightly reduced but would remain very similar to those of the proposed Project. Construction impacts to air quality would be reduced by about half compared to the proposed Project.

Biological Resources

This Alternative would continue to provide industrial services by constructing approximately 2,306,502 square feet of medium industrial facilities. This is a reduction of approximately 50 percent. Development of the SI (Service Industrial) area would continue to impact San Joaquin kit fox, as the majority of the kit fox sign identified for the proposed Project are located within the SI area. However, this Alternative may be able to avoid impacts to burrowing owls, as they are located outside the SI proposed boundary. Overall, impacts to biological resources would be reduced. Although total impacts on sensitive species, and habitat would be less compared to the proposed Project, similar mitigation measures would still be required to reduce impacts to a less than significant level. In addition, this Alternative would be required to comply with the MBHCP.

Cultural Resources

This Alternative would occupy 159 acres of the proposed 314.30 acres of land that the proposed Project would occupy. Because no cultural resources were identified for the Project site, impacts to cultural resources would be the same under this Alternative as under the proposed Project. Mitigation measures required for grading and construction activities would apply to the same activities for this Alternative, and would therefore result in less than significant impacts on undiscovered cultural resources. Thus, this Alternative, with regard to cultural resources, would be similar to the proposed Project.

Energy

Implementation of this Alternative would reduce the project site by approximately 50 percent and reduce the energy demand by approximately 50 percent. This Alternative also would be required to comply with all state and local regulations pertaining to energy reduction and use of alternative energy sources. Therefore, overall the reduced intensity of this Alternative would reduce the amount of energy needed compared to the proposed Project.

Geologic Resources

This Alternative would result in similar geologic impacts to the proposed Project as the surrounding geologic environmental remains the same. Therefore, any development on the Project site is subject to the same impacts due to geologic conditions. Mitigation measures comparable to those recommended for the proposed Project would be incorporated into this Alternative to minimize impacts.

Greenhouse Gases

Implementation of this Alternative would result in 2,306,502 square feet of industrial building space to be constructed on the proposed Project site. Construction would continue to occur on the entire property, therefore construction emissions would be similar to the proposed Project. Because this Alternative would result in slightly fewer workers, a slight reduction in traffic trips would occur as compared to the proposed Project; therefore, the long-term air quality impacts would be slightly less than the proposed Project. Greenhouse gas emission impacts would need to be mitigated in order to reduce the business as usual (BAU) greenhouse gas emissions by 29 percent to be consistent with the standards established by the California Air Resources Board and the California Global Warming Solutions Act of 2006. Therefore, greenhouse gas emissions impacts would be similar to the proposed Project.

Hazards/Hazardous Materials

Similar to the proposed Project, implementation of Alternative C, the "Reduced Density" Alternative, would result in potentially significant impacts on public health and safety. This Alternative includes the disturbance of a portion of the Project site for development of 2,306,502 square feet of industrial building space, slightly less than the proposed Project; therefore, this Alternative would slightly reduce the potential of the transport of hazardous materials. This Alternative would have a similar impact on the existing PG&E pipeline as the proposed Project. In addition, closure of the prospect well would continue to be required. This Alternative would expose individuals to similar effects associated with agricultural land uses (i.e., soil contamination, noise, dust). This Alternative would reduce the number of people working on-site by approximately 50 percent; however, the overall public health and safety impacts would be similar to those of the proposed Project. The mitigation measures identified for the proposed Project would be included in this Alternative.

Hydrology and Water Quality

Development in accordance with this Alternative would result in similar amounts of impervious surfaces and, therefore, slightly smaller amounts of runoff volumes compared to the proposed Project.

Water consumption would be slightly less than water usage under the proposed Project; however, the impacts would remain similar to those of the proposed Project. As with the proposed Project, this Alternative would comply with standard County provisions related to the incorporation of sufficient storm drain infrastructure to reduce the amount of surface runoff. Implementation and compliance with the NPDES, SUSMP and standard BMP requirements would reduce construction-related impacts on water quality to a less than significant level. Mitigation measures similar to the proposed Project would be applied to ensure short-term water quality construction impacts remain less than significant.

Land Use and Relevant Planning

Implementation of this Alternative would continue to require a GPA, ZCC, annexation, and an agricultural preserve exclusion. Alternative D, the Reduced Project Size Alternative, would develop 2,306,502 square feet of medium industrial facilities on approximately 159 acres, approximately 50 percent of the original Project site. Development would occur on the portion of the Project site proposed to be SI (Service Industrial). The remaining 50 percent of the Project site, approximately 155.3 acres, would continue to be used for agricultural purposes. Land use impacts from Alternative D, the Reduced Project Size Alternative, would be proportionally reduced from those of the proposed Project.

Mineral Resources

Alternative D, the "Reduced Project Size" Alternative, would develop only the portion of the Project site proposed to be SI (Service Industrial). The development would not occur in the area of the abandoned well and therefore, reabandonment would not be required under this Alternative. Alternative D, the Reduced Project Size Alternative, would result in reduced impacts on mineral resources as compared to the proposed Project.

Noise

Noise impacts from development under Alternative D, the "Reduced Project Size" Alternative, would be reduced compared to those identified for the proposed Project. The noise that would result during construction activities would be similar to the level that would occur from development of the proposed Project but may occur over a shorter duration due to the small project size. Operational noise would be reduced from the proposed Project because the total square footage of industrial space would be less than the proposed Project. Noise from vehicle trips would also be reduced proportionately to the reduction in industrial facility space. Impacts to the residence along Lamb Avenue, west of South Union Avenue, would be reduced due to the increase distance between the residence and area to be developed. Mitigation measures similar to the proposed Project would be applied and could reduce impacts to less than significant level. Overall, impacts would be proportionally reduced from those of the proposed Project.

Population and Housing

Alternative D, the "Reduced Project Size" Alternative, would reduce the proposed Project size by approximately 50 percent, resulting in the development of approximately 2,306,502 square feet of medium industrial facilities. The labor force needed for this Alternative would, be less than the labor

force needed for the proposed Project. Therefore, the impacts under Alternative D would be less than those identified for the proposed Project.

Public Services and Utilities

This Alternative would develop approximately 50 percent of the Project site. The demand for public services and utilities generated at the Project site would be reduced by approximately 50 percent. The reduced square footage for industrial facilities would result in fewer employees and fewer industrial businesses within the Project site, which would in turn have lesser impacts on public services and utilities. All standard mitigation measures identified under the proposed Project would be required in order to reduce impacts to a less than significant level. Therefore, this Alternative would result in reduced impacts on public services and utilities when compared to the proposed Project.

Traffic and Circulation

The reduced amount of square footage for industrial building space developed under this Alternative would result in a slightly reduced number of employees and delivery trucks, which in turn would result in a slight decrease in average daily vehicle trips (ADT) compared to the proposed Project. Fewer AM and PM peak hour trips and ADT would result in a proportional reduction of impacts on intersections and roadway segments within the area surrounding the Project site. The temporary impacts on transportation within the area surrounding the Project site would be similar to those with the proposed Project because the proposed construction activities would occur in a similar area and require access from the same roadways, but would be shorter in duration. The planned improvements and mitigation measures identified for the proposed Project would still be applicable under this Alternative in order to reduce impacts to a less than significant level. Overall, impacts on traffic and circulation from this Alternative would be proportionally reduced compared to those associated with the proposed Project.

Wildfire

This Alternative would result in a reduced development intensity of the Project Site by approximately 50%. Under this alternative; however, surrounding land uses would not change and on-site changes to land uses, although reduced, would not change the impacts associated with wildfires. Therefore, the potential for the Project site to be affected by wildfire from adjacent areas would be the same and no changes or impacts associated with wildfire would occur.

Conclusion

Avoid or Substantially Lessen Project Impacts

This Alternative would reduce impacts to agriculture, air quality, land use and relevant planning, noise, and traffic/circulation.

Attainment of Project Objectives

Alternative D, the "Reduced Project Size" Alternative, does not meet the following Project objectives, as described in Section 6.2.

- Cluster commercial retail uses that provide goods and services near an interchange with SR-99 to accommodate interstate freight and reduce traffic congestion and air emissions.
- Provide an industrial center at the Houghton Road and SR-99 interchange in the southern metropolitan area adjacent to the City that would provide a broad range of goods and services that serve the regional market area.
- Allow for the development of a variety of commercial and industrial centers which are differentiated by their function, intended users and level of intensity.

Comparative Merits

This Alternative would reduce the impacts compared to the proposed Project in the categories of air quality, noise, and traffic and circulation; and would have equivalent impacts in the categories of aesthetics, agriculture, biological resources cultural resources, geologic and seismic hazards, greenhouse gases, hazards/hazardous materials, hydrology and water quality, land use and relevant planning, mineral resources, population and housing, public services and utilities, and traffic and circulation.

6.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The purpose of the Alternatives evaluation is to develop Project Alternatives that have fewer or no significant impacts compared to the proposed Project. CEQA Section 15126(d)(2) indicates that, if the "No Project/No Development" Alternative is the "Environmentally Superior" Alternative, then the EIR shall also identify an Environmentally Superior Alternative among the other Alternatives. In this case, Alternative A, the "No Project/No Development" Alternative (Existing Conditions), is the environmentally superior Alternative, as it would not result in environmental impacts associated with construction. However, Alternative A, the "No Project/No Development" Alternative, would not satisfy the Project's objectives.

Alternative B, "Buildout Existing General Plan Designation", Alternative C "Reduced Density", and Alternative D "Reduced Project Size", would each result in fewer or equivalent environmental impacts when compared to the proposed Project.

Alternative B "Buildout Existing General Plan Designation", would reduce impacts compared to the proposed Project in the categories of aesthetics, agriculture, air quality, biological resources, energy, greenhouse gases, land use and relevant planning, noise, public services and utilities and traffic and circulation; and would have equivalent impacts in the categories of cultural resources, geologic and seismic hazards, hazards/hazardous materials, hydrology and water quality, mineral resources, and wildfire. This Alternative would only partially satisfy the Project objectives, as no industrial land uses would be developed.

Alternative C "Reduced Density", would reduce impacts compared to the proposed Project in the categories of air quality, energy, noise, and traffic and circulation; and would have equivalent impacts in the categories of agriculture, biological resources cultural resources, geologic and seismic hazards, greenhouse gases, hazards/hazardous materials, hydrology and water quality, and land use and

planning, mineral resources, population and housing, public services and utilities, and wildfire. This Alternative would satisfy the Project objectives.

Alternative D "Reduced Project Size", would proportionally reduce the impacts compared to the proposed Project in the categories of air quality, energy, noise, traffic and circulation, agriculture, biological resources cultural resources, geologic and seismic hazards, greenhouse gases, hazards/hazardous materials, hydrology and water quality, land use and relevant planning, mineral resources, population and housing, public services and utilities, and wildfire. This Alternative could eliminate noise impacts to sensitive receptors, and could eliminate associated impacts with some air pollutant emissions. This Alternative, however, would not satisfy any of the Project objectives.

Although development of the Project site in accordance with one of these Alternatives would result in fewer environmental impacts, only one of the Alternatives would fulfill all of the proposed Project's objectives. In addition, one of the Alternatives would have the potential to avoid significant and unavoidable impacts to agricultural resources. Despite the reduced project specific impacts, implementation would not reduce significant and unavoidable cumulative impacts to agriculture, air quality, greenhouse gases, noise, or traffic.

Based on the reasons stated above, Alternative D, the "Reduced Project Size" Alternative, is the environmentally superior Alternative because it significantly reduces the amount of agricultural land impacted, while reducing other Project specific impacts.

This Page Intentionally Left Blank

Chapter 7

Responses to Comments

Chapter 7.0
Responses to Comments

This Chapter is being reserved for, and will be included with, the Final Environmental Impact Report (EIR).

This Page Intentionally Left Blank

Chapter 8

Organizations and Persons Consulted

Chapter 8
Organizations and Persons Consulted

Note: All of the below entities were either notified or contacted directly to ask for or directly receive consultation on their applicable area of expertise in respect to this proposed project. This may not be an all-inclusive list.

State of California

California Resource Agency

Department of Conservation

Office of Historic Preservation

Department of Parks and Recreation

Department of Water Resources

Department of Fish and Wildlife

Department of Health Services

Native American Heritage Commission

Public Utilities Commission

Department of Transportation Division of Aeronautics

Department of Transportation District 06

Department of Toxic Substances Control

Regional Water Quality Control Board Central Valley Region

Regional and Local

California Native Plant Society

Kern County Department of Agriculture

Kern County Public Works Department

Kern County Parks and Recreation

Kern County Planning and Natural Resources Department

Kern County Sheriff Department

Kern County Superintendent of Schools

Kern County Water Agency

Kern Council of Governments

Pacific Gas & Electric Company

San Joaquin Valley Unified Air Pollution Control District

Southern San Joaquin Valley Information Center

Southern California Gas Company

Southern California Edison

Native American Consultation

In accordance with Senate Bill 18 and the California Tribal Consultation guidelines, the appropriate native groups were consulted with respect to the project's potential impacts on Native American places, features, and objects. As of the writing of this report, Staff has not received any comments from consulted tribes with regard to the department's SB 18 request. Staff notes consultation with appropriate Native American groups per Senate Bill 18 requirements has occurred.

Chapter 9

Preparers

Chapter 9
Preparers

Lead Agency

Kern County Planning and Natural Resources Department

Ms. Lorelei Oviatt, AICP – Planning and Natural Resources Director

Mr. Craig Murphy – Planning and Natural Resources Assistant Director

Mr. Terrance Smalls – Advanced Planning/Supervising Planner

Mr. Carlos Rojas – Advanced Planning/Planner III

Technical Assistance

Kimley-Horn

Alex Jewell, Project Manager

Brad Stoneman, Environmental Analyst

Maria Rodriguez, Environmental Analyst

Amanda McCallum, Production Manager

Jenes Anin, Production Specialist

Peter Salindong, Graphic Designer

This Page Intentionally Left Blank

Chapter 10

Bibliography

Chapter 10
Bibliography

Air and Waste Management Association (AWMA). 1992. Air Pollution Engineering Manual.

Agency for Toxic Substance and Disease Registry. 2004. Toxic FAQs for Vinyl Chloride. Available at http://www.atsdr.cdc.gov/tfacts20.html. Accessed 2006.

Bakersfield, City of, and County of Kern. 1993. *Metropolitan Bakersfield Habitat Conservation Plan*. August 1993.

Bollard Acoustical Consultants, Inc. July 2017. *Environmental Noise Assessment.*

Bollard Acoustical Consultants, Inc. May 2016. *Environmental Noise Assessment.*

Bollard Acoustical Consultants, Inc. April 2009. *Environmental Noise Assessment.*

CARB, California Air Resources Board. 2017. Emission Summary Segregated by Gas - Available: https://www.arb.ca.gov/cc/inventory/data/data.htm. Accessed August 16, 2017.

CARB, California Air Resources Board. 2017. Emission Summary CO_2 Only- https://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_sector_sum_2000-15co2.pdf. Accessed August 16, 2017.

CARB, California Air Resources Board. 2017. Emission Summary CH_4 only https://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_sector_sum_2000-15ch4.pdf. Accessed August 16, 2017.

CARB, California Air Resources Board. 2017. Emission Summary N_2O- https://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_sector_sum_2000-15n2o.pdf. Accessed August 16, 2017.

CARB, California Air Resources Board. 2017. Emission Summary High GWP - https://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_sector_sum_2000-15hgwp.pdf. Accessed August 16, 2017.

CARB, California Air Resources Board. 2016. *Ambient Air Quality Standards*. May 5, 2016. Available: http://www.arb.ca.gov/desig/desig.htm. Accessed August 19, 2016.

CARB, California Air Resources Board. Available: http://www.arb.ca.gov/homepage.htm. Accessed 2009.

California Department of Conservation, Division of Oil, Gas, and Geothermal Resources. 2009. *2007 Annual Report of the State Oil and Gas Supervisor.* Publication No. PR06. Sacramento.

Available: www.consrv.ca.gov/DOG/ pubs_stats/annual_reports/Pages/annual_reports.aspx. Accessed August 2009.

California Department of Finance (DOF). 2019. Table 2: E-5: City/County Population and Housing Estimates, January 1, 2019, . [online]: http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/Accessed May 1, 2019.

California Department of Finance (DOF). 2017b. New State Population Report: California Grew by 335,000 Residents in 2016. May 1, 2017. Available: http://www.dof.ca.gov/Forecasting/Demographics/Projections/ Accessed: August 15, 2017.

California Department of Finance (DOF). 2017c. Industry Employment & Labor Force. Available: http://www.labormarketinfo.edd.ca.gov/data/employment-by-industry.html Accessed: August 17, 2017

California Department of Finance (DOF). 2016. California's Population Increases by 295,000. Available: http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-2/2010-16/documents/pressrelease_Jul16.pdf Accessed: August 17, 2017

California Department of Mines and Geology. 2006. Alquist-Priolo Earthquake Fault Zones. Available: <http://www.consrv.ca.gov/CGS/rghm/ap/index.htm>. Accessed: June 2009.

California Department of Transportation (Caltrans). 2017. California Scenic Highway Mapping System – Kern County. Available at: http://www.dot.ca.gov/hq/LandArch/16_livability/ scenic_highways/. Accessed: September 25, 2017.

California Employment Development Department, 2017a – Report 400C – Monthly Labor Force Data for Counties: Available: http://www.labormarketinfo.edd.ca.gov/file/lfmonth/ 1706pcou.pdf. Accessed: August 17, 2017.

California Emissions Estimator Model (CalEEMod). 2016. CalEEMod User's Guide.

California Employment Development Department, 2017b – Annual Averages Unemployment Rate and Labor Force Data Table- Available: http://www.labormarketinfo.edd.ca.gov/data/unemployment-and-labor-force.html Accessed: August 17, 2017.

California Employment Development Department, 2019a – Kern County About this area: Available: https://www.labormarketinfo.edd.ca.gov/cgi/databrowsing/localAreaProfileQSResults.asp?selectedarea=Kern+County&selectedindex=15&menuChoice=localAreaPro&state=true&geogArea=0604000029&countyName= Accessed: May 1, 2019.

California Employment Development Department, 2019b- California Profile – About this area. Available: https://www.labormarketinfo.edd.ca.gov/cgi/databrowsing/localAreaProfileQSResults.asp?sel

ectedarea=California&selectedindex=0&menuChoice=localAreaPro&state=true&geogArea=0601000000&countyName= Accessed: May 1, 2019.

California Employment Development Department, 2019c – Current Industry Employment Statistics. Available: https://www.labormarketinfo.edd.ca.gov/geography/msa/bakersfield.html accessed: May 1, 2019.

California Energy Commission, 2017a – Electricity Consumption by County. Available: http://ecdms.energy.ca.gov/ Accessed May 3, 2019.

California Energy Commission, 2017b – Gas Consumption by County. Available: http://ecdms.energy.ca.gov/gasbycounty.aspx Accessed May 3, 2019.

California Energy Commission, 2007. 2006 Net System Power Report.

California Energy Commission, 2015. Energy Consumption Data Management Service. Electricity Consumption by County.

California Energy Commission, 2016. Final Integrated Energy Policy Report Update.

California Energy Commission, 2017a. Electricity Consumption by County.

California Energy Commission, 2017b. Energy Almanac, California's Electricity Data.

California Energy Commission, 2017c. California's Energy Efficiency Standards for Residential and Nonresidential Buildings.

California Native Plant Society (CPNS). 2006. Inventory of Rare and Endangered Plants, version 7.02. Available at: http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi.

California Public Utilities Commission and California Energy Commission (CPUC and CEC). 2008. 2008 Update, Energy Action Plan.

California State Board of Equalization (BOE.) 2017a. Net Taxable Gasoline Gallons.

California State Board of Equalization. 2017b. Taxable Diesel Gallons 10 year Report.

City of Bakersfield Website: www.ci.bakersfield.ca.us/

City of Bakersfield Public Works Department Wastewater Division, 2009. Available: http://www.bakersfieldcity.us/CityServices/pubwrks/wastewater/plant3. Accessed: June 2009.

DOC (California Department of Conservation) 2017. Alquist-Priolo. Available: http://www.conservation.ca.gov/cgs/rghm/ap/Pages/main.aspx. Accessed: August 16, 2017.

DOC (California Department of Conservation). 2014a. Kern County Important Farmland 2012. [online]: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2012/ker12_central.pdf. August 2014. Accessed August 15, 2017.

DOC (California Department of Conservation). 2014b. Williamson Act Program Basic Contract Provisions. [online]: http://www.conservation.ca.gov/dlrp/lca/basic_contract_provisions/Pages/wa_overview.aspx. Accessed September 30, 2014.

DOC (California Department of Conservation). 2016. The California Land Conservation Act of 1965 2016 Status Report. Available: http://www.conservation.ca.gov/dlrp/lca/stats_reports/Documents/2016%20LCA%20Status%20Report.pdf Accessed: August 15, 2017.

DOGGR (California Division of Oil, Gas, and Geothermal Resources). 2017. 2016 Annual Report of the State Oil & Gas Supervisor: Oil and Gas Production by County. Published September 2017. Available: ftp://ftp.consrv.ca.gov/pub/oil/annual_reports/2016/Wells_and_Production_by_County_2016.pdf. Accessed November 21, 2017.

DOGGR (California Division of Oil, Gas, and Geothermal Resources), 2017. Well Stimulation Treatment. Available: http://www.conservation.ca.gov/dog/Pages/WST.aspx. Accessed: 09/17/2017

EKAPCD (East Kern Air Pollution Control District). 2014. Eastern Kern APCD Attainment Status. Available: http://www.kernair.org/Documents/Reports/EKAPCD%20Attainment%20Status%2011-20-14.pdf. Accessed August 22, 2017.

Fierro, M. A., M.D., M. K. O'Rourke, Ph.D., and J. L. Burgess, M.D. M.P.H. 2001. Adverse health effects of exposure to ambient carbon monoxide. University of Arizona, College of Public Health, pp. 10.

Hudlow Cultural Resources Associates. 2009. *Phase I Cultural Resource Survey for a Residential Project APN 185-140-06, South Union Avenue, Bakersfield, Kern County, California.* October 2008. Revised May 2009.

———. 2016. *An Additional Field Check and Record Search for a Multi-Use Project, APN 185-140-08, South Union Avenue, Bakersfield, Kern County, California.* March 2016.

Insight Environmental Consultants. 2016. *Air Quality Impact Analysis Houghton and 99 Mixed Use Industrial Commercial Project*. July 2016.

Insight Environmental Consultants. 2009. *Air Quality Impact Analysis SR 99 and Houghton Road Mixed Use Development.* June 2009.

Insight Environmental Consultants. 2017. *Air Quality Impact Analysis Houghton and 99 Mixed Use Industrial Commercial Project.* July 2017.

Kern County Library. 2017. About the Kern County Library. Available: http://www.kerncountylibrary.org/about-the-kern-county-library/. Accessed: November 27, 2017.

Kern County Planning and Natural Resources Department and Department and City of Bakersfield Planning Department. 2009. Metropolitan Bakersfield Bikeway Master Plan. Adopted December 2002. Updated February 2009.

———. 2002. Final Metropolitan Bakersfield General Plan Update - Environmental Impact Report. June 26, 2002. Prepared by RBF Consulting for the City of Bakersfield. Irvine, CA.

———. 2002. Metropolitan Bakersfield General Plan. December 3. Bakersfield, CA.

———. 1994. Metropolitan Bakersfield Habitat Conservation Plan. April 1994. Prepared by the Metropolitan Bakersfield Habitat Conservation Plan Steering Committee. Bakersfield, CA.

Kern County. 2009. Kern County General Plan Energy Element.

Kern Council of Governments. Regional Transportation Plan, 2014 – Appendix H – Regional Housing Needs Allocation Plan. January 1, 2013 - December 31, 2023. Available: http://www.kerncog.org/images/docs/housing/RHNA_2013.pdf. Accessed: August 17, 2017.

Kern County Council of Governments. 2015-2023 Housing Element Update: Available: http://pcd.kerndsa.com/planning/latest-planning-news/415-housing-element-update. Accessed: August 17, 2017.

Kern County. Kern County General Plan. Adopted September 22, 2009. Kern County Planning and Natural Resources Department, Bakersfield, CA.

Kern County. 2015. Kern County General Plan Update 2015. Available: https://kernplanning.com/general-plan-update/. Accessed: August 15, 2017.

Kern County. 2015-2023 Housing Element. Adopted April 26, 2016. Kern County Planning and Natural Resources Department, Bakersfield, CA.

Kern County. 2017. Metropolitan Bakersfiedl Habitat Conservation Plan Informational Guides. Available: https://kernplanning.com/informational-guides/info-guide-mbhcp/. Accessed: August 16, 2017.

Kern County. 2005. Kern County Multi-Hazard Mitigation Plan. Available: hazardmitigation.calema.ca.gov/docs/lhmp/Kern_County_LHMP.pdf. Accessed: August 16, 2017.

McIntosh & Associates. 2009. *Biota Report for approximately 314.31 Acres Located in the Northeast Corner of Houghton Road and Highway 99.* June 2009.

McIntosh & Associates. 2008. *Hazardous Materials Evaluation for 99-Houghton, LLC Property.* November 2008.

McIntosh & Associates. 2017. *Hazardous Materials Evaluation for 99 Houghton Industrial Park.* July 2017.

McIntosh & Associates. May 2009. *Farmland Conversion Study for Approximately 314.31 Acres Located at the Northeast Corner of Houghton Road & Highway 99.*

McIntosh & Associates. June 2017. *Farmland Conversion Study Report Final for 99 Houghton Industrial Park.*

McIntosh & Associates. November 2010. *Water Supply Assessment for 99 Houghton, LLC.*

McIntosh & Associates. 2017. *Water Supply Assessment for 99 Houghton Industrial Park.* March 2017.

McIntosh & Associates. 2017. *Petroleum and Natural Gas Pipeline Assessment for 99 Houghton Industrial Park.* July 2017.

McIntosh & Associates. 2017. *Public Services Report*. June 2017.

McIntosh & Associates. 2008. *Public Services Report.* October 2008.

McIntosh & Associates. 2018. *Traffic Impact Study Comment Letter Response*. May 2018.

McIntosh & Associates. 2016. *Traffic Impact Study*. November 2016.

McIntosh & Associates. 2009. *Traffic Impact Study*. June 2009. Revised November 2009.

Natural Resources Conservation Service. 2003. *Bakersfield Windrose Plot*. April 2003.

The Natelson Dale Group, Inc., July 2010. *Administrative Draft Urban Decay Study for 99/ Hougton Project, Bakersfield, CA.*

Pacific Gas and Electric Company, August 12, 2008 / September 19, 3009. Email correspondence from Mr. Doug Snyder.

Pacific Gas and Electric Company. 2019a. Fast Facts.

Pacific Gas and Electric Company. 2019b. PG&E's 2017 Electric Power Mix Delivered to Retail Customers.

PilotNav. 2017. 55CL – Costerisan Farms Airport (Closed). Available: http://www.pilotnav.com/airport/airport-18271. Accessed: December 15, 2017.

SJVAPCD (San Joaquin Valley Air Pollution Control District). 2015. Guidance for Assessing and Mitigating Air Quality Impacts. March 19, 2015. Available: http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf Accessed: August 9, 2017.

State of California Department of Finance, Demographic and Research Unit, *E-4 Population Estimates for Cities, Counties and the State, 2001-2010, with 2000 Benchmark*. Sacramento, California. Available: http://www.dof.ca.gov/. Accessed: July 2010.

United States Energy Information Administration. 2017a. California Natural Gas Total Consumption.

United States Energy Information Administration, 2017b. Table F30: Total Energy Consumption, Price, and Expenditure Estimates, 2016.

United States Department of Energy (USDOE). 2016. Model Year 2015 Fuel Economy Guide.

U.S. Department of Health and Human Services. 2006. Registry of Toxic Effects of Chemical Substances (RTECS, online database).

United States Department of Labor. 2019. Current Employment Statistics CES (National). Available: https://www.bls.gov/ces/. Accessed: May 1, 2019.

United States Environmental Protection Agency. 1996. AP 42. Compilation of Air Pollutant Emission Factors, Volume 1. Fifth Edition. Chapter 3.4, Large Stationary Diesel and All Stationary Dual-fuel Engines.

United States Environmental Protection Agency (U.S. EPA). Tri Explorer. Available: www.epa.gov/triexplorer. Accessed 2009.

United States Environmental Protection Agency (U.S. EPA). 2017a. Health Effects Notebook for Hazardous Air Pollutants - Acetaldehyde. Available: <https://www.epa.gov/sites/production/files/2016-09/documents/acetaldehyde.pdf>. Accessed: November 30, 2017.

United States Department of Housing and Urban Development (HUD). 2011. Evidence Matters Newsletter, Summer.

Yarne & Associates, Inc. 2019. *99 Houghton Industrial Park SB 610 Water Supply Assessment*. January 2019.

———. 2017b. Health Effects Notebook for Hazardous Air Pollutants - Benzene. Available: <https://www.epa.gov/sites/production/files/2016-09/documents/benzene.pdf>. Accessed: November 30, 2017.

———. 2017c. Health Effects Notebook for Hazardous Air Pollutants – 1,3-Butadiene. Available: <https://www.epa.gov/sites/production/files/2016-08/documents/13-butadiene.pdf>. Accessed: November 30, 2017.

———. 2017d. Health Effects Notebook for Hazardous Air Pollutants –Carbon Tetrachloride. Available: <https://www.epa.gov/sites/production/files/2016-09/documents/carbon-tetrachloride.pdf>. Accessed: November 30, 2017.

———. 2017e. Health Effects Notebook for Hazardous Air Pollutants – Chromium Compounds. Available: <https://www.epa.gov/sites/production/files/2016-09/documents/chromium-compounds.pdf>. Accessed: November 30, 2017.

———. 2017f. Health Effects Notebook for Hazardous Air Pollutants – Chromium Compounds. Available: < https://www.epa.gov/sites/production/files/2016-09/documents/1-4-dichlorobenzene.pdf>. Accessed: November 30, 2017.

———. 2017g. Health Effects Notebook for Hazardous Air Pollutants - Formaldehyde. Available: < https://www.epa.gov/sites/production/files/2016-09/documents/formaldehyde.pdf >. Accessed: November 30, 2017

———. 2017h. Health Effects Notebook for Hazardous Air Pollutants – Methyl Chloride. Available: <https://www.epa.gov/sites/production/files/2016-09/documents/methyl-chloride.pdf>. Accessed: November 30, 2017.