



DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT

1010 10TH Street, Suite 3400, Modesto, CA 95354
Planning Phone: (209) 525-6330 Fax: (209) 525-5911
Building Phone: (209) 525-6557 Fax: (209) 525-7759

CEQA Referral

Initial Study and Notice of Intent to Adopt a Mitigated Negative Declaration

Date: March 11, 2020

To: Distribution List (See Attachment A)

From: Jeremy Ballard, Associate Planner, Planning and Community Development

Subject: REZONE APPLICATION NO. PLN2017-0098 – BEST RV CENTER

Comment Period: March 11, 2020 – April 13, 2020

Respond By: April 13, 2020

Public Hearing Date: Not yet scheduled. A separate notice will be sent to you when a hearing is scheduled.

You may have previously received an Early Consultation Notice regarding this project, and your comments, if provided, were incorporated into the Initial Study. Based on all comments received, Stanislaus County anticipates adopting a Mitigated Negative Declaration for this project. This referral provides notice of a 30-day comment period during which Responsible and Trustee Agencies and other interested parties may provide comments to this Department regarding our proposal to adopt the Mitigated Negative Declaration.

All applicable project documents are available for review at: Stanislaus County Department of Planning and Community Development, 1010 10th Street, Suite 3400, Modesto, CA 95354. Please provide any additional comments to the above address or call us at (209) 525-6330 if you have any questions. Thank you.

Applicant: Naiel M. Ammari, Trustee of the 2005 Naiel M. Ammari Revocable Trust

Project Location: 5100, 5340, 6424 and 6460 Taylor Court, and 4318 W. Warner Road, between E. Keyes Road and E. Taylor Road, in the Turlock area.

APN: 045-050-005, 009, and 013; 045-053-040, 042, 043, 044; and 045-062-001

Williamson Act Contract: N/A

General Plan: P-D (Planned Development)

Current Zoning: A-2-40 and A-2-10 (General Agriculture) and P-D (Planned Development) 194, 289, 306 and 307

Project Description: Request to rezone eight parcels to expand and reorganize an existing recreational vehicle (RV) sales business by allowing expansion in two phases. The sale of new and used RV's currently exists on two parcels (APN: 045-0530-043 and 044), which utilize two existing buildings for sales offices, service departments, parts counter, and RV wash facility. The existing business serves approximately 20 customers a day and include six truck delivers per day. The existing business includes a driveway from Taylor Court, and an emergency vehicle access, also from Taylor Court. APN 045-050-009, P-D 289, was approved for the sale of landscaping materials

and gardening accessories. APN: 045-050-005 and 013, are zoned A-2-40, and are not permitted to be utilized for RV sales without a rezone. The site is currently served by an existing private well and septic system. Phase 1 will include: expanding storage of sales inventory onto APN's 045-050-005, 045-050-009, and 045-050-013; developing and fully landscaping a new storm drain basin to serve all existing and proposed Phase 1 development; paving all vehicle areas and installing a 10-foot wide landscape strip along Taylor Court and State Route 99 frontage; and utilization of APN 045-053-040 for maintenance of RV's and overflow inventory storage. Phase 2 proposes to re-configure the existing sales and service operation by converting the existing service shop on APN 045-053-044 to additional sales offices; converting existing offices on APN 045-053-040 to a retail area for parts; construction of two roof-only structures for service and sales staging areas used in conjunction with the existing maintenance building; developing a drive-thru waste disposal and propane station; utilizing APN 045-062-001 for the storage of overflow RV inventory by paving the entire site in order to develop a customer parking lot; construct a landscaped storm drain basin; and install landscaping along the frontage of all parcels. The applicant proposes to be served by the Keyes Community Service District (CSD) for domestic water with an out of boundary service connection. The service connection will connect to an existing Keyes CSD water line at the western end of the North Golden State Boulevard and West Barnhart Road intersection, extending under State Route 99 to the rear of the existing Best RV office. The proposed 2-inch water line will provide domestic water to the development. The site will continue to be served by private septic systems for wastewater disposal. Phase 1 will include up to 65 total employees and is anticipated to be completed by 2020 and Phase 2 will include a total of 90 employees and will be completed by 2024.

Full document with attachments available for viewing at:
<http://www.stancounty.com/planning/pl/act-projects.shtm>

REZONE APPLICATION NO. PLN2017-0098 – BEST RV CENTER

Attachment A

Distribution List

X	CA DEPT OF CONSERVATION Land Resources / Mine Reclamation		STAN CO ALUC
X	CA DEPT OF FISH & WILDLIFE		STAN CO ANIMAL SERVICES
	CA DEPT OF FORESTRY (CAL FIRE)	X	STAN CO BUILDING PERMITS DIVISION
X	CA DEPT OF TRANSPORTATION DIST 10	X	STAN CO CEO
X	CA OPR STATE CLEARINGHOUSE		STAN CO CSA
X	CA RWQCB CENTRAL VALLEY REGION	X	STAN CO DER
	CA STATE LANDS COMMISSION	X	STAN CO ERC
	CEMETERY DISTRICT	X	STAN CO FARM BUREAU
	CENTRAL VALLEY FLOOD PROTECTION	X	STAN CO HAZARDOUS MATERIALS
X	CITY OF: TURLOCK		STAN CO PARKS & RECREATION
X	COMMUNITY SERVICES/SANITARY DIST: KEYES	X	STAN CO PUBLIC WORKS
X	COOPERATIVE EXTENSION		STAN CO RISK MANAGEMENT
	COUNTY OF:	X	STAN CO SHERIFF
X	FIRE PROTECTION DIST: KEYES	X	STAN CO SUPERVISOR DIST 2: CHIESA
	HOSPITAL DIST:	X	STAN COUNTY COUNSEL
X	IRRIGATION DIST: TURLOCK	X	StanCOG
X	MOSQUITO DIST: TURLOCK	X	STANISLAUS FIRE PREVENTION BUREAU
X	MOUNTIAN VALLEY EMERGENCY MEDICAL SERVICES	X	STANISLAUS LAFCO
X	MUNICIPAL ADVISORY COUNCIL: KEYES	X	STATE OF CA SWRBC – DIV OF DRINKING WATER DIST. 10
X	PACIFIC GAS & ELECTRIC		SURROUNDING LAND OWNERS
	POSTMASTER:	X	TELEPHONE COMPANY: ATT
X	RAILROAD: UNION PACIFIC		TRIBAL CONTACTS (CA Government Code §65352.3)
X	SAN JOAQUIN VALLEY APCD		TUOLUMNE RIVER TRUST
X	SCHOOL DIST 1: KEYES UNION		US ARMY CORPS OF ENGINEERS
X	SCHOOL DIST 2: TURLOCK JOINT UNION		US FISH & WILDLIFE
	WORKFORCE DEVELOPMENT		US MILITARY (SB 1462) (7 agencies)
X	STAN CO AG COMMISSIONER		USDA NRCS
			WATER DIST:

STANISLAUS COUNTY CEQA REFERRAL RESPONSE FORM

TO: Stanislaus County Planning & Community Development
1010 10th Street, Suite 3400
Modesto, CA 95354

FROM: _____

SUBJECT: REZONE APPLICATION NO. PLN2017-0098 – BEST RV CENTER

Based on this agency's particular field(s) of expertise, it is our position the above described project:

- _____ Will not have a significant effect on the environment.
_____ May have a significant effect on the environment.
_____ No Comments.

Listed below are specific impacts which support our determination (e.g., traffic general, carrying capacity, soil types, air quality, etc.) – (attach additional sheet if necessary)

- 1.
- 2.
- 3.
- 4.

Listed below are possible mitigation measures for the above-listed impacts: *PLEASE BE SURE TO INCLUDE WHEN THE MITIGATION OR CONDITION NEEDS TO BE IMPLEMENTED (PRIOR TO RECORDING A MAP, PRIOR TO ISSUANCE OF A BUILDING PERMIT, ETC.):*

- 1.
- 2.
- 3.
- 4.

In addition, our agency has the following comments (attach additional sheets if necessary).

Response prepared by:

Name	Title	Date
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CEQA INITIAL STUDY

Adapted from CEQA Guidelines APPENDIX G Environmental Checklist Form, Final Text, December 30, 2009

1. **Project title:** Rezone Application No. PLN2017-0098 – Best RV Center
2. **Lead agency name and address:** Stanislaus County
1010 10th Street, Suite 3400
Modesto, CA 95354
3. **Contact person and phone number:** Jeremy Ballard, Associate Planner
4. **Project location:** 5100, 5340, 6424 and 6460 Taylor Court, and 4318 W. Warner Road, between E Keyes Road and E Taylor Road, in the Turlock area. (APN's: 045-050-005, 009, 013; 045-053-040, 042, 043, 044; and 045-062-001).
5. **Project sponsor's name and address:** Naiel M. Ammari, Trustee of the 2005 Naiel M. Ammari Revocable Trust
6. **General Plan designation:** P-D (Planned Development)
7. **Zoning:** A-2-40 (General Agriculture), A-2-10, P-D (194) (Planned Development), P-D (289), P-D (306), and P-D (307)
8. **Description of project:**

Request to rezone eight parcels to expand and reorganize an existing recreational vehicle (RV) sales business by allowing the expansion in two phases. The sale of new and used RV's currently exists on two parcels (APN: 045-0530-043 and 044), which utilize two existing buildings for sales offices, service departments, parts counter, and RV wash facility. The existing business serves approximately 20 customers a day and include six truck delivers per day. The existing business includes a driveway from Taylor Court, and an emergency vehicle access, also from Taylor Court. APN 045-050-009, P-D 289, was approved for the sale of landscaping materials and gardening accessories. APN: 045-050-005 and 013, are zoned A-2-40, and are not permitted to be utilized for RV sales without a rezone. The site is currently served by an existing private well and septic system. Phase 1 will include: expanding storage of sales inventory onto APN's 045-050-005, 045-050-009, and 045-050-013; developing and fully landscaping a new storm drain basin to serve all existing and proposed Phase 1 development; paving all vehicle areas and installing a 10-foot wide landscape strip along Taylor Court and State Route 99 frontage; and utilization of APN 045-053-040 for maintenance of RV's and overflow inventory storage. Phase 2 proposes to re-configure the existing sales and service operation by converting the existing service shop on APN 045-053-044 to additional sales offices; converting existing offices on APN 045-053-040 to a retail area for parts; construction of two roof-only structures for service and sales staging areas used in conjunction with the existing maintenance building; developing a drive-thru waste disposal and propane station; utilizing APN 045-062-001 for the storage of overflow RV inventory by paving the entire site in order to develop a customer parking lot; construct a landscaped storm drain basin; and install landscaping along the frontage of all parcels. The applicant proposes to be served by the Keyes Community Service District (CSD) for domestic water with an out of boundary service connection. The service connection will connect to an existing Keyes CSD water line at the western end of the North Golden State Boulevard and West Barnhart Road intersection, extending under State Route 99 to the rear of the existing Best RV office. The proposed 2-inch water line will provide domestic water to the development. The site will continue to be served by private septic systems for

wastewater disposal. Phase 1 will include up to 65 total employees and is anticipated to be completed by 2020 and Phase 2 will include a total of 90 employees and will be completed by 2024.

9. **Surrounding land uses and setting:** Commercial and light industrial uses to the north and south of the site, row crops and the Union Pacific rail line to the west, and State Route 99 to the east of the site
10. **Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.):** CalTrans
Stanislaus County Department of Public Works
Department of Environmental Resources
11. **Attachments:** Mitigation Monitoring and Reporting Program
Maps
Traffic Impact Report

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture & Forestry Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology / Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology / Water Quality |
| <input type="checkbox"/> Land Use / Planning | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Population / Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input checked="" type="checkbox"/> Transportation | <input type="checkbox"/> Utilities / Service Systems | <input type="checkbox"/> Mandatory Findings of Significance |
| <input type="checkbox"/> Wildfire | <input type="checkbox"/> Energy | |

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

- ☐ I find that the proposed project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.
- ☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.
- ☐ I find that the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.
- ☐ I find that the proposed project **MAY** have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or **NEGATIVE DECLARATION** pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or **NEGATIVE DECLARATION**, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Jeremy Ballard, Associate Planner

Prepared by

March 6, 2020

Date

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, than the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.

4) “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, “Earlier Analyses,” may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration.

Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

a) Earlier Analysis Used. Identify and state where they are available for review.

b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

c) Mitigation Measures. For effects that are “Less than Significant with Mitigation Measures Incorporated,” describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). References to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project’s environmental effects in whatever format is selected.

9) The explanation of each issue should identify:

a) the significant criteria or threshold, if any, used to evaluate each question; and

b) the mitigation measure identified, if any, to reduce the impact to less than significant.

ISSUES:

I. AESTHETICS – Except as provided in Public Resources Code Section 21099, could the project:	Potentially Significant Impact	Less Than Significant With Mitigation Included	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			X	
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

Discussion: The site itself is not considered to be a scenic resource or unique scenic vista. The project site consists of eight separate parcels and is partially developed with an existing recreational vehicle (RV) sales and service operation. The proposed project fronts along State Highway 99 and Taylor Court. The frontage along the state highway is highly visible to the traveling public. The application proposes lighting along the perimeter of the entire site and on the interior parking lot areas. Additionally, the project proposes to utilize existing landscaping along Taylor Court and to install additional landscaping along both road frontages, as well as interior landscaping. Conditions of approval will be applied to the project that require the final landscaping design be approved by the Planning Department and that the landscaping be maintained, including the replacement of dead or dying plants. A condition of approval will also be added to ensure that nighttime lighting be aimed downward towards the project site to prevent glare offsite. No adverse impacts to the existing visual character of the site or its surroundings are anticipated as a result of the proposed project.

Mitigation: None.

References: Application information; Stanislaus County Zoning Ordinance; the Stanislaus County General Plan; and Support Documentation¹.

II. AGRICULTURE AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Included	Less Than Significant Impact	No Impact

a) 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 non-agricultural use?			X	
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?			X	
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) 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?			X	

Discussion: None of the parcels included in this project request are enrolled in a Williamson Act Contract. Of the eight parcels requested to be rezoned only three are currently zoned A-2 (General Agriculture) and the five remaining parcels have various Planned Development zoning designations, which allowed for uses like RV sales, sale of outdoor landscaping accessories, vehicle repair, and storage.

According to the California Department of Conservation Farmland Mapping and Monitoring Program the project site is comprised of Urban and Built-Up Land. The USDA Natural Resources Conservation Services' Eastern Stanislaus County Soil Survey indicates that the property is made up of Dinuba sandy loam (DrA) with a Storie Index Rating of 77 and grade 2, shallow (DsA) with a Storie Index Rating of 43 and grade 3, slightly saline alkali (DyA) with a Storie Index Rating of 33 and grade 4, and Tujunga loamy sand (TuA) with a Storie Index Rating of 76 and grade 3. Based on this information none of the parcel included in the project request qualify as prime farmland.

A referral response was received from the Turlock Irrigation District regarding irrigation facilities within the project site. The District identified an irrigation pipeline and easement that lies within parts of the project site and has required that the facilities be removed as they no longer serve any users west of the State Highway. A condition of approval will be added to address the District's requirements.

The three parcels zoned A-2 have a General Plan designation of Planned Development and have not been utilized for agricultural operations for an extended period of time. The project site is bordered on the east by State Highway 99 and on the west by Taylor Court. Properties west of Highway 99 are zoned Planned Development and A-2-40 (General Agriculture) and include a mixture of vacant properties, ranchettes, and light industrial development. There are agricultural operations to the west of the project site, separated by Taylor Court and a Union Pacific rail line. It is not anticipated that the proposed project will result in the conversion of farmland to non-agricultural use or conversion of forest land to non-forest use.

In December of 2007, Stanislaus County adopted an updated Agricultural Element which incorporated guidelines for the implementation of agricultural buffers applicable to new and expanding non-agricultural uses within or adjacent to the A-2 Zoning District. The purpose of these guidelines is to protect the long-term health of agriculture by minimizing conflicts such as spray-drift and trespassing resulting from the interaction of agricultural and non-agricultural uses. Alternatives may be approved provided the Planning Commission finds that the alternative provides equal or greater protection than the existing buffer standards. Additionally, the agricultural buffer exempts areas utilized for parking of vehicles. The project proposes a maximum of 90 employees at full build-out including retail activities with customers on-site, which would be considered to be people intensive and require a 300-foot setback from the proposed use to adjacent agriculturally zoned property. The site is surrounded by light industrial uses to the north, retail to the south, SR 99 to the east and agriculturally zoned parcels 165 feet to the west, at its closet point. The existing business was approved prior to the Agricultural Buffer policy and is within the 300-foot buffer, including the existing building at 245 feet east of the agricultural parcel. Accordingly, the applicant is proposing an alternative to the buffer requirement which consists of landscaping fencing. No new construction of buildings within the 300-foot buffer is being proposed. Additionally, the majority of areas within the 300 feet will be used for storage and parking of RV's and customer vehicles, which is exempt from the Agricultural buffer policy.

Mitigation: None.

References: California Department of Conservation Farmland Mapping and Monitoring 2016 Stanislaus County Map; USDA National Resources Conservation District Web Soil Survey and Eastern Stanislaus Soil Survey; Referral Response from Turlock Irrigation District, dated April 09, 2018; Stanislaus County General Plan and Support Documentation¹.

III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Included	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?			X	
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those odors adversely affecting a substantial number of people?			X	

Discussion: The proposed project is located within the San Joaquin Valley Air Basin (SJVAB) and; therefore, falls under the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD). In conjunction with the Stanislaus Council of Governments (StanCOG), the SJVAPCD is responsible for formulating and implementing air pollution control strategies. The SJVAPCD's most recent air quality plans are the 2007 PM10 (respirable particulate matter) Maintenance Plan, the 2008 PM2.5 (fine particulate matter) Plan, and the 2007 Ozone Plan. These plans establish a comprehensive air pollution control program leading to the attainment of state and federal air quality standards in the SJVAB, which has been classified as "extreme non-attainment" for ozone, "attainment" for respirable particulate matter (PM-10), and "non-attainment" for PM 2.5, as defined by the Federal Clean Air Act.

The primary source of air pollutants generated by this project would be classified as being generated from "mobile" sources. Mobile sources would generally include dust from roads, farming, and automobile exhausts. Mobile sources are generally regulated by the Air Resources Board of the California EPA which sets emissions for vehicles and acts on issues regarding cleaner burning fuels and alternative fuel technologies. As such, the District has addressed most criteria air pollutants through basin wide programs and policies to prevent cumulative deterioration of air quality within the Basin.

The San Joaquin Valley Air Pollution Control District's Small Project Analysis Level (SPAL) analyses indicates that the minimum threshold of significance for criteria pollutant emissions for commercial projects is 1,673 trips/day and 1,506 trips/day for industrial projects. Based on the traffic impact analysis performed the proposed project is anticipated to generate 710 trips per day at full build-out. This would be below the District's thresholds of significance for criteria pollutant emissions.

Construction activities associated with new development can temporarily increase localized PM10, PM2.5, volatile organic compound (VOC), nitrogen oxides (NOX), sulfur oxides (SOX), and carbon monoxide (CO) concentrations a project's vicinity. The primary source of construction-related CO, SOX, VOC, and NOX emission is gasoline and diesel-powered, heavy-duty mobile construction equipment. Primary sources of PM10 and PM2.5 emissions are generally clearing and demolition activities, grading operations, construction vehicle traffic on unpaved ground, and wind blowing over exposed surfaces.

Construction activities associated with the proposed project would consist primarily of grading and paving the site, interior tenant improvements of existing buildings and construction of a two new shade structure. These activities would not require any substantial use of heavy-duty construction equipment and would require little or no demolition or grading as the site is presently unimproved and considered to be topographically flat. Consequently, emissions would be minimal. Furthermore, all construction activities would occur in compliance with all SJVAPCD regulations; therefore, construction emissions would be less than significant without mitigation.

The proposed project was referred to the Air District who responded that they did not have comments on the project.

The proposed project is considered to be consistent with all applicable air quality plans. Also, the proposed project would not conflict with applicable regional plans or policies adopted by agencies with jurisdiction over the project and would be considered to have a less than significant impact.

Mitigation: None.

References: Application Material; Referral Response from San Joaquin Valley Air Pollution Control District, dated April 12, 2018; Traffic Impact Analysis performed by Pinnacle Traffic Engineering, dated December 31, 2018; Stanislaus County General Plan and Support Documentation¹

IV. BIOLOGICAL RESOURCES -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Included	Less Than Significant Impact	No Impact
a) 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 California Department of Fish and Game or U.S. Fish and Wildlife Service?			X	
b) 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 California Department of Fish and Game or U.S. Fish and Wildlife Service?			X	
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			X	
d) 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?			X	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?			X	

Discussion: It does not appear this project will result in impacts to endangered species or habitats, locally designated species, or wildlife dispersal or mitigation corridors. There is no known sensitive or protected species or natural community located on the site. The project is located within the Ceres Quad of the California Natural Diversity Database. Some of the threatened species known to populate the Ceres Quad include: Swainson's hawk, the tricolored blackbird, Steelhead (Central Valley DPS), and the Valley Elderberry Longhorn Beetle. Portions of the project site have been previously developed with commercial uses, with the remaining portions disturbed from previous agricultural practices. Because of this, the site would have a low probability of containing suitable habitat.

The project will not conflict with a Habitat Conservation Plan, a Natural Community Conservation Plan, or other locally approved conservation plans. Impacts to endangered species or habitats, locally designated species, or wildlife dispersal or mitigation corridors are considered to be less than significant.

An early consultation was referred to the California Department of Fish and Wildlife (formerly the Department of Fish and Game) and no response was received.

Mitigation: None.

References: California Department of Fish and Wildlife's Natural Diversity Database Quad Species List; Stanislaus County General Plan and Support Documentation¹

V. CULTURAL RESOURCES -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Included	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to in § 15064.5?		X		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?		X		
c) Disturb any human remains, including those interred outside of formal cemeteries?		X		

Discussion: A records search conducted by the Central California Information Center for the project site indicated that there are no historical, cultural, or archeological resources recorded on-site and that the site has a low sensitivity for the discovery of such resources. It does not appear that this project will result in significant impacts to any archaeological or cultural resources. Portions of the project site have already been developed and the proposed construction is within areas of the project site, which has already been disturbed. However, standard conditions of approval regarding the discovery of cultural resources during the construction process will be added to the project.

Mitigation: None.

References: Central California Information Center Report for the project site, dated March 1, 2018; Stanislaus County General Plan and Support Documentation¹

VI. ENERGY. - Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Included	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			X	

Discussion: The CEQA Guidelines Appendix F states that energy consuming equipment and processes, which will be used during construction or operation (such as energy requirements of the project by fuel type and end use; energy conservation equipment and design features; energy supplies that would serve the project; and total estimated daily vehicle trips to be generated by the project and the additional energy consumed per trip by mode) shall be taken into consideration when evaluating energy impacts. Additionally, the project's compliance with applicable state or local energy legislation, policies, and standards must be considered.

The proposed project will include the sales, storage and limited maintenance of RVs. Construction activities associated with the proposed project would consist primarily of grading and paving the site, interior tenant improvements of existing buildings and construction of a two new shade structures. Existing sales and maintenance buildings will continue to be utilized. Proposed tenant improvements in Phase 2 and any future construction is required to comply with Title 24, Green Building Code, which includes energy efficiency requirements.

A referral response received from the Turlock Irrigation District (TID) stated that the project site receives electrical service from existing TID facilities. The District did not indicate any significant impact the proposed project would have on their facilities resulting in wasteful, inefficient or unnecessary consumption of energy resources during project construction or operation.

Mitigation: None

References: Application Material, Referral Response from Turlock Irrigation District, dated April 9, 2018; Stanislaus County General Plan EIR

VII. GEOLOGY AND SOILS -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Included	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:			X	
i) 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? Refer to Division of Mines and Geology Special Publication 42.			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?			X	
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) 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?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?			X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?			X	
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X	

Discussion: USDA Natural Resources Conservation Services' Eastern Stanislaus County Soil Survey indicates that the property is made up of Dinuba sandy loam (DrA) with a Storie Index Rating of 77, shallow (DsA) with a Storie Index Rating of 43, slightly saline alkali (DyA) with a Storie Index Rating of 33 and Tujunga loamy sand (TuA) with a Storie Index Rating of 76. As contained in Chapter 5 of the General Plan Support Documentation, the areas of the County subject to significant geologic hazard are located in the Diablo Range, west of Interstate 5; however, as per the California Building Code, all of Stanislaus County is located within a geologic hazard zone (Seismic Design Category D, E, or F) and a soils test may be required at building permit application. Results from the soils test will determine if unstable or expansive soils are present. If such soils are present, special engineering of the structure will be required to compensate for the soil deficiency. Any structures resulting from this project will be designed and built according to building standards appropriate to withstand shaking for the area in which they are constructed. Any earth moving will be subject to the Department of Public Works requirements for grading, drainage, and erosion/sediment control plan, subject to Public Works review and Standards and Specifications. Likewise, any addition or expansion of a septic tank or alternative waste water disposal system would require the approval of the Department of Environmental Resources (DER) through the building permit process, which also takes soil type into consideration within the specific design requirements.

The project site is not located near an active fault or within a high earthquake zone. Landslides are not likely due to the flat terrain of the area.

The project proposes to include a drive-thru waste disposal and propane station for customers. A referral response from DER stated that the dump station associated with the waste disposal for customers requires a holding vault that will need to be regularly pumped and haul to an approved facility. A condition of approval will be added to the project to address this requirement.

DER, Public Works, and the Building Permits Division review and approve any building or grading permit to ensure their standards are met. Conditions of approval regarding these standards will be applied to the project and will be triggered when a building permit is requested.

Mitigation: None.

References: Referral response from the Department of Environmental Resources (DER), dated April 10, 2018; Stanislaus County General Plan and Support Documentation¹

VIII. GREENHOUSE GAS EMISSIONS -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Included	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

Discussion: The principal Greenhouse Gases (GHGs) are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride (SF₆), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), and water vapor (H₂O). CO₂ is the reference gas for climate change because it is the predominant greenhouse gas emitted. To account for the varying warming potential of different GHGs, GHG emissions are often quantified and reported as CO₂ equivalents (CO₂e). In 2006, California passed the California Global Warming Solutions Act of 2006 (Assembly Bill [AB] No. 32), which requires the California Air Resources Board (ARB) design and implement emission limits, regulations, and other measures, such that feasible and cost effective statewide GHG emissions are reduced to 1990 levels by 2020.

The San Joaquin Valley Air Pollution Control District's Small Project Analysis Level (SPAL) Analysis indicates that the minimum threshold of significance for criteria pollutant emissions for commercial projects is 1,673 trips/day and 1,506 trips/day for industrial projects. Based on the traffic impact analysis performed state the proposed project is anticipated to generate 710 trips per day at the completion of Phase 2. This would be below the District's thresholds of significance for emissions. The project may be required to obtain applicable Air District permits, including an Authority to Construct (ATC) Permit and may be subject to the following District Rules: Regulation VIII, Rule 4102, Rule 4601, Rule 4641, Rule 4002, Rule 4102, Rule 4550, and Rule 4570. Staff will include a condition of approval on the project requiring that the applicant contact the District prior to issuance of any permit to determine what regulations apply.

The Air District was referred the proposed project and responded that they did not have comments on the project

Mitigation: None.

References: San Joaquin Valley Air Pollution Control District referral response, April 12, 2019; Stanislaus County General Plan and Support Documentation¹

IX. HAZARDS AND HAZARDOUS MATERIALS -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Included	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project 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 result in a safety hazard or excessive noise for people residing or working in the project area?				X
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?			X	

Discussion: The County Department of Environmental Resources (DER) is responsible for overseeing hazardous materials and has not indicated any particular concerns in this area. The proposed inventory for sale are non-motorized and would not include hazardous wastes such as gasoline or oil. However, Phase 2 will develop a drive-thru waste disposal and propane station, which is subject to permitting by the HAZMAT division of DER. Prior to operation of the propane service, the applicant would be responsible to receive all permits and license through the County and State. A condition of approval will be added to ensure this takes place. Consequently, the proposed use is not recognized as a generator and/or consumer of hazardous materials itself, therefore no significant impacts associated with hazards or hazardous materials are anticipated to occur as a result of the proposed project. Any on-site maintenance of RV's, will only include service to the wheels or cosmetic items such as interior cabinetry or furniture.

The project site is not within the vicinity of any airstrip or wildlands.

Mitigation: None.

References: Referral response from the Department of Environmental Resources, dated April 10, 2018; Stanislaus County General Plan and Support Documentation¹.

X. HYDROLOGY AND WATER QUALITY -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Included	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			X	

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:			X	
(i) result in substantial erosion or siltation on – or off-site;			X	
(ii) substantially increase the rate of amount of surface runoff in a manner which would result in flooding on- or off-site;			X	
(iii) 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; or				
(iv) impede or redirect flood flows?			X	
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			X	
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	

Discussion: Areas subject to flooding have been identified in accordance with the Federal Emergency Management Act (FEMA). The project site is located in FEMA Flood Zone X, which includes areas determined to be outside the 0.2% annual chance floodplains. Any flood zone requirements will be addressed by the Building Permits Division during the building permit process. All stormwater is required to be maintained on-site. Phase 1 proposes to consolidate all storm drain facilities within the existing developed area to the northern most portion of the site. Phase 2 proposes to consolidate the remaining. The basin will be landscaped. A Grading and Drainage Plan will be included as a requirement in this project's conditions of approval. The City of Turlock in a referral response stated that potential impacts to the on-site waste disposal facility to ground water quality needed to be addressed. The proposed inventory for sale are non-motorized and would not include hazardous wastes such as gasoline or oil nor have an impact on groundwater quality. Any on-site maintenance of RV's within inventory or returned for service by customers, will only include service to the non-mechanical or cosmetic items such as interior cabinetry or furniture. Phase 2 of the project proposes development of a waste dump station for customers. A referral response from DER stated the dump station cannot be connected to the wastewater treatment system and will be required to install a holding vault to be regularly pumped by a permitted company to haul to an approved facility. A condition of approval will be added to address this requirement and ensure compliance. The on-site septic system facilities will only serve employee or customer bathrooms and will not be used to dispose hazardous wastes. Furthermore, DER regulates the size and capacity of wastewater discharge and have not indicated that the wastewater discharge facilities would have any significant impacts to groundwater sources.

The proposed project proposes to connect to the Keyes Community Service District for potable water. The project site also features a domestic well which is currently used for their existing operations. If that connection were not to take place, the project site would be required to go through the Public Water permitting process.

The California Safe Drinking Water Act (CA Health and Safety Code Section 116275(h)) defines a Public Water System as a system for the provision of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out of the year. A public water system includes the following:

- (1) Any collection, treatment, storage, and distribution facilities under control of the operator of the system that are used primarily in connection with the system.
- (2) Any collection or pretreatment storage facilities not under the control of the operator that are used primarily in connection with the system.

- (3) Any water system that treats water on behalf of one or more public water systems for the purpose of rendering it safe for human consumption.

If that existing well that would be used in lieu of the Keyes CSD connection, does not meet public water system standards the applicant may need to either drill a new well or install a water treatment system for the current well. Goal Two, Policy Seven, of the Stanislaus County General Plan's Conservation/Open Space Element requires that new development that does not derive domestic water from pre-existing domestic and public water supply systems be required to have a documented water supply that does not adversely impact Stanislaus County water resources. This Policy is implemented by requiring proposals for development that will be served by new water supply systems be referred to appropriate water districts, irrigation districts, community services districts, the State Water Resources Board and any other appropriate agencies for review and comment. Additionally, all development requests shall be reviewed to ensure that sufficient evidence has been provided to document the existence of a water supply sufficient to meet the short and long-term water needs of the project without adversely impacting the quality and quantity of existing local water resources.

If the applicant is required to install a water treatment system, it will be required to be approved by the Regional Water Quality Control Board and the Department of Environmental Resources. Regardless of which avenue the applicant takes to meet public water system standards, public water supply permits require on-going testing.

If the connection to the CSD does not take place, prior to receiving occupancy of any building permit, the property owner must obtain concurrence from the State of California Water Resources Control Board (SWRCB), Drinking Water Division, in accordance to CHSC, Section 116527 (SB1263) and submit an application for a water supply permit with the associated technical report to Stanislaus County DER. This will be added as condition of approval.

The Sustainable Groundwater Management Act (SGMA) was passed in 2014 with the goal of ensuring the long-term sustainable management of California's groundwater resources. SGMA requires agencies throughout California to meet certain requirements including forming Groundwater Sustainability Agencies (GSA), developing Groundwater Sustainability Plans (GSP), and achieving balanced groundwater levels within 20 years. The site is located in the Turlock Sub-Basin under the jurisdiction of the Turlock Groundwater Basin Association (TGBA) GSA. The TGBA GSA, along with other GSAs located in the Turlock Sub-Basin including the County, are collaboratively developing one GSP Turlock Sub Basin Regions GSA. The GSP is currently in draft form and must be finalized by January 31, 2020.

Stanislaus County adopted a Groundwater Ordinance in November 2014 (Chapter 9.37 of the County Code, hereinafter, the "Ordinance") that codifies requirements, prohibitions, and exemptions intended to help promote sustainable groundwater extraction in unincorporated areas of the County. The Ordinance prohibits the unsustainable extraction of groundwater and makes issuing permits for new wells, which are not exempt from this prohibition, discretionary. For unincorporated areas covered in an adopted GSP pursuant to SGMA, the County can require holders of permits for wells it reasonably concludes are withdrawing groundwater unsustainably to provide substantial evidence that continued operation of such wells does not constitute unsustainable extraction and has the authority to regulate future groundwater extraction.

As a result of the development standards required for this project, impacts associated with drainage, water quality, and runoff are expected to have a less than significant impact.

Mitigation: None.

References: Referral response from the Department of Environmental Resources, dated April 10, 2018, Stanislaus County General Plan and Support Documentation¹

XI. LAND USE AND PLANNING -- Would the project:				
	Potentially Significant Impact	Less Than Significant With Mitigation Included	Less Than Significant Impact	No Impact
a) Physically divide an established community?			X	
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?			X	

Discussion: Each parcel that comprises the project site has a General Plan Designation of Planned Development in the Stanislaus County's Land Use Element of the General Plan. Of the eight parcels requested to be rezoned only three are currently zoned A-2 (General Agriculture) and the five remaining parcels have various Planned Development zoning designations, which allowed for uses like RV sales, sale of outdoor landscaping accessories, vehicle repair and storage. The applicant is requesting to rezone all eight parcels to Planned Development for RV sales, service and storage in two phases. In total, the propose development will consist of approximately 18.5± acres. If approved the new Planned Development zoning district adopted would be consistent with the currently Planned Development General Plan Designation.

The project will not physically divide an established community nor conflict with any habitat conservation plans.

Mitigation: None.

References: Application Material, Stanislaus County General Plan and Support Documentation¹

XII. MINERAL RESOURCES -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Included	Less Than Significant Impact	No Impact
a) 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?			X	
b) 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?			X	

Discussion: The location of all commercially viable mineral resources in Stanislaus County has been mapped by the State Division of Mines and Geology in Special Report 173. There are no known significant resources on the site, nor is the project site located in a geological area known to produce resources.

Mitigation: None.

References: Stanislaus County General Plan and Support Documentation¹

XIII. NOISE -- Would the project result in:	Potentially Significant Impact	Less Than Significant With Mitigation Included	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b) Generation of excessive groundborne vibration or groundborne noise levels?			X	
c) For a project located within the vicinity of a private airstrip or 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?				X

Discussion: The Stanislaus County General Plan identifies noise levels up to 70 dB Ldn (or CNEL) as the normally acceptable level of noise for commercial uses. On-site grading and construction resulting from this project may result in a temporary increase in the area's ambient noise levels; however, noise impacts associated with on-site activities and traffic are not anticipated to exceed the normally acceptable level of noise. The site itself is impacted by the noise generated from

California Highway 99. The area's ambient noise level will temporarily increase during grading/construction. As such, the project will be conditioned to comply with County regulations related to hours and days of construction.

The site is not located within an airport land use plan.

Mitigation: None.

References: Stanislaus County General Plan and Support Documentation¹

XIV. POPULATION AND HOUSING -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Included	Less Than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?			X	

Discussion: The site is not included in the vacant sites inventory for the 2016 Stanislaus County Housing Element, which covers the 5th cycle Regional Housing Needs Allocation (RHNA) for the county and will therefore not impact the County's ability to meet their RHNA. No population growth will be induced, nor will any existing housing be displaced as a result of this project.

Mitigation: None.

References: Stanislaus County General Plan and Support Documentation¹

XV. PUBLIC SERVICES --	Potentially Significant Impact	Less Than Significant With Mitigation Included	Less Than Significant Impact	No Impact
a) Would the project result in the substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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:				
Fire protection?			X	
Police protection?			X	
Schools?			X	
Parks?			X	
Other public facilities?			X	

Discussion: The County has adopted Public Facilities Fees, as well as Fire Facility Fees on behalf of the appropriate fire district, to address impacts to public services. Although, if future new building construction occurs, applicable school district fees will be required as well. Two new shade structures are being proposed to be constructed. The shade structures will be used for vehicle staging prior to possession being taken by the customer. The project will also feature remodeling of existing buildings to reorganize the existing sales, parts and service departments. Any construction occurring on the property as part of this project will be required to pay all adopted public facility fees at the time of building permit issuance. The proposed project will not have any impacts to schools or parks.

This project was circulated to all applicable school, fire, police, irrigation, and public works departments and districts during the early consultation referral period. As stated in the project description, the project proposes to connect to the Keyes Community Service District (CSD) for public water services. The applicant has been issued a will serve letter from the Keyes Community Service District, agreeing to provide the service. The project site is not within the Community Service District's service boundary nor within their LAFCO adopted sphere influence. The applicant proposes an agreement with the CSD to construct a 2-inch water line that will be installed under State Route 99 to the rear of the existing Best RV office. The domestic water provided by the CSD will be utilized for domestic consumption for the commercial development. Consequently, to connect to the District, the applicant will be required to gain approval of an out of boundary service agreement through LAFCO. A condition of approval will be added to reflect this.

A referral response was received from the City of Turlock, stating that the project could have a significant impact on the environment for areas such as traffic, air quality, fire and police services, and water quality impacts. The City stated that the project size and scope was never evaluated as part of the City's Northwest Triangle Specific Plan. The City has requested that the applicant mitigate the potential impact by payment of police and fire impact fees in addition to the transportation impact fees. Additionally, the City requested that the applicant coordinate with the City of Turlock's Fire Marshall and County Fire Marshall to install necessary improvements and equipment for fire protection as well as developments standards for the site regarding: landscaping, drive aisle sizes and parking dimensions.

Based on the City of Turlock's Northwest Triangle Specific Plan, the project site was never evaluated for this type of use because the site is outside the boundaries of the Specific Plan itself. The Specific Plan's northern boundary is Taylor Road, ending at the Highway 99 southbound onramp and offramp. Furthermore, the project site is outside of the City of Turlock's LAFCO Sphere of Influence. As part of a mutual aid agreement between the City and County's emergency services exist, City emergency services could be responding to calls for service at the project site. However, a portion of the development is already existing, the proposed expansion only includes two new structures, both of which are freestanding structures to be utilized for sales vehicles prepped before sale. The existing structures will go through tenant improvements to improve efficiency or design but will not increase in square footage nor will they increase the intensity of their existing uses. Furthermore, being that the site is not located within the City's Sphere of Influence nor within any specific plan areas, payment of any City Capital Facility Fees would not be warranted at this time. Any services related to emergency services is anticipated to be minimal as well, the only structures proposed are roof only for staging of vehicles for sale. Additionally, as discussed in Section XVII – Transportation, the applicant will be required to pay a fair share amount for upgrades to the Taylor Road/SR 99 future interchange to account for impacts to traffic. A full discussion, of payment of City of Turlock Capital Facility Fees will be discussed in the staff report.

Lastly, the City of Turlock stated that an evaluation should be done to determine if there is adequate water on-site to serve employees that would meet water quality standards. As mentioned above, the applicant proposes to connect to the Keyes Community Service District for public water. The District is responsible for maintaining water quality that meets Federal, State and local standards. However, if the out of boundary service agreement is not obtained, the project site would fall under the State of California's definition of a Public Water System and the existing well would be required to meet the regulatory requirement for public water consumption prior to expansion. A comprehensive discussion on the Public Water System can be found in Section X Hydrology and Water Quality. A condition of approval will be added to reflect both requirements prior to issuance of a grading or building permit.

Mitigation: None.

References: City of Turlock referral response dated on April 11, 2018, Department of Environmental Resources referral April 10, 2018, Stanislaus County General Plan and Support Documentation¹

XVI. RECREATION --	Potentially Significant Impact	Less Than Significant With Mitigation Included	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			X	

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			X	
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Discussion: This project will not increase demands for recreational facilities, as such impacts typically are associated with residential development.

Mitigation: None.

References: Stanislaus County General Plan and Support Documentation¹

XVII. TRANSPORTATION-- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Included	Less Than Significant Impact	No Impact
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?		X		
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?			X	
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
d) Result in inadequate emergency access?			X	

Discussion: The project is a request to rezone eight parcels to expand and reorganize an existing recreational vehicle (RV) sales business by allowing the storage of vehicles in two phases. Phase 1 will include: expanding storage of sales inventory onto APN's 045-050-005, 045-050-009 and 045-050-013; developing and fully landscaping a new storm drain basin to serve all existing and proposed Phase 1 development; paving all vehicle areas and installing a 10-foot wide landscape strip along Taylor Court and State Route 99 frontage; and utilization of APN: 045-053-040 for maintenance of RVs and overflow inventory storage. Phase 2 proposes to re-configure the existing sales and service operation by converting the existing service shop on APN: 045-053-044 to additional sales offices; converting existing offices on APN: 045-053-040 to a retail area for parts; construction of two roof-only structures for service and sales staging areas used in conjunction with the existing maintenance building; and developing a drive-thru waste disposal and propane station and utilizing APN: 045-062-001 for the storage of overflow RV inventory by paving the entire site in order to develop a customer parking lot, construct a landscaped storm drain basin, and landscaping of all parcel frontages. Phase 1 will include up to 65 total employees and is anticipated to be completed by 2020 and Phase 2 proposes to include a total of 90 employees and to be completed by 2024.

Project response from both Stanislaus County Environmental Review Committee and the City of Turlock requested the impacts to traffic be further evaluated. A Traffic Impact Analysis (TIA) for the proposed project was prepared by Pinnacle Traffic Engineering dated, December 31, 2018. The scope was developed in consultation with County and City of Turlock staff. Both jurisdictions have identified a need for improvements at the State Route 99 (SR 99) and Taylor Road interchange. The analysis evaluated the potential project impacts on weekday operations at adjacent intersections along Taylor Road, Taylor Court, on-ramps for SR 99, and North Golden State Boulevard. The analysis concluded that the proposed project is anticipated to generate 710 trips per day at full build-out. The analysis also found that existing service levels along Taylor Road and SR 99 southbound intersection already exceeds the threshold for adequate levels of service, warranting signalization. Taking into account the proposed project, the analysis identified potentially significant impacts to the intersections of SR 99 and Taylor Road. In both scenarios the analysis stated that mitigation measures to reduce congestion and delays at these intersections are not feasible without significant improvements to the interchange. To address traffic impacts from the proposed project, the analysis recommends the applicant pay County Public Facilities fee and a fair-share contribution towards the future improvements at the SR 99 and Taylor Road interchange. In review of the TIA, Caltrans recommends that the County collect a proportional share from the applicant, to hold for contribution for future improvements to SR 99 facilities. Additionally, Caltrans suggested "All Way Stop Control" be provided for both North Bound and Southbound onramps and offramps. Consequently, Taylor Road, which intersects with all four onramps to SR 99 is a City

of Turlock maintained road. The City of Turlock has not requested any additional traffic control measures at this time. To ensure that a fair-share is collected from future improvements to the intersection, a mitigation measure has been added for the applicant to pay a fair-share of traffic impacts to the City of Turlock prior to development. As described in the TIA, the City of Turlock's Capital Facility Fee Nexus Study the Taylor Road/SR 99 Interchange is anticipated to cost \$10,353,703. Based on trip volume comparisons between the proposed project and the City's General Plan, the project is anticipated to comprise 1.3% of the interchange. The applicant's fair-share amount to be paid is \$143,878.83, which was adjusted for inflation.

Mitigation:

1. Prior to the issuance of a grading or building permit, or business license, a fair-share payment of 1.13% of the SR 99/Taylor Road Interchange estimated cost (\$143,878.83) as adjusted to meet the most current Engineering News-Record Construction Cost Index, as recommended by the Best RV Center Traffic Impact Analysis, prepared by Pinnacle Traffic Engineering December 31, 2018) shall be made to the City of Turlock for future improvements to State Route 99 and Taylor Road interchange.

References: City of Turlock referral response dated on April 11, 2018; Stanislaus County Environmental Review Committee referral response dated on April 09, 2018 Stanislaus County General Plan and Support Documentation¹.

XIX. UTILITIES AND SERVICE SYSTEMS -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Included	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X	
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			X	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X	

Discussion: The site is served by the Turlock Irrigation District (TID) for electrical services. TID provided a referral comment on the project stating that all landscaping cannot exceed 15 feet in height when located below any overhead electrical lines and all landscaping would have to remain outside of any existing easements. A condition of approval will be placed on the project requiring compliance with the District's comments.. All stormwater will be maintained on-site and collected by an on-site storm drain basin. Phase 1 proposes to consolidate all storm drain facilities within the existing developed area to the northern most portion of the site. Phase 2 proposes to consolidate the remaining. The basin will be landscaped. As stated previously, the applicant has been issued a will serve letter from the Keyes Community Service District (CSD), agreeing to provide water service. The project site is not within the Community Service District's service boundary nor within their LAFCO adopted sphere of influence. The applicant proposes an agreement with the CSD to construct a 2-inch water line that will be installed under State Route 99 to the rear of the existing Best RV office. The domestic water provided by the CSD will be utilized for the commercial development. Consequently, to connect to the District, the applicant will be required to gain approval of an out of boundary service agreement through LAFCO. A condition of approval will be added to reflect this.

Phase 2 of the project proposes development of a waste dump station for customers. A referral response from DER stated the dump station cannot be connected to the wastewater treatment system and will be required to install a holding vault to be regularly pumped by a permitted company to haul to an approved facility. A condition of approval will be added to address this requirement and ensure compliance. All on-site septic systems would be tied to employee or customer bathrooms and are not considered to be hazardous wastes generators. Furthermore, DER regulates the size and capacity of wastewater discharge and have not indicated that the wastewater discharge facilities would have any significant impacts to groundwater resources. Additionally, any new septic facilities would be required to adhere to current Local Agency Management Program (LAMP) standards, which include minimum setbacks from wells to prevent negative impacts to groundwater.

Mitigation: None.

References: Referral Response from Turlock Irrigation District, dated April 9, 2018, Referral response from the Department of Environmental Resources, dated April 10, 2018; Stanislaus County General Plan and Support Documentation¹

XX. WILDFIRE – If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Included	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?			X	
b) 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?			X	
c) Require the installation of 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?			X	
d) 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?			X	

Discussion. The project site is served by the Keyes Fire Protection District. The site is not located in a State Responsibility Area. The project site has access to a County-maintained road. The terrain is relatively flat, and it is not located near any bodies of water. Wildfire risk and risks associated with postfire land changes are considered to be less than significant.

Mitigation: None.

References: Application Material; Stanislaus County General Plan Safety Element and Support Documentation¹

XXI. MANDATORY FINDINGS OF SIGNIFICANCE --	Potentially Significant Impact	Less Than Significant With Mitigation Included	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			X	

b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)		X		
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		X		

Discussion: Review of this project has not indicated any features which might significantly impact the environmental quality of the site and/or the surrounding area. The site is south of the adopted Keyes Community Plan, which includes areas already developed for residential, industrial and commercial uses. East of State Route 99 includes additional existing commercial development. Currently, three potential development projects are in various stages of the land use process that will include evaluation of potential environmental impacts. Agriculturally zoned parcels are west of the project site. No additional development is anticipated to occur into the agriculturally zoned area west of the project as the Union Pacific railroad and Taylor Court act as a buffer between existing development and the agricultural land. Additionally, the site is north and northwest of the City of Turlock, which would include development that outside of the County’s jurisdiction. Subsequently, it is not anticipated that approval of the expansion of this existing business will contribute to any cumulative impacts in connection with other existing conditions. With mitigation measures in place, impacts from the project have been lowered to less than significant.

Mitigation: None.

References: Initial Study; Stanislaus County General Plan and Support Documentation¹

¹Stanislaus County General Plan and Support Documentation adopted in August 23, 2016, as amended. **Housing Element** adopted on April 5, 2016.

DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT

1010 10th Street, Suite 3400, Modesto, CA 95354

Planning Phone: (209) 525-6330 Fax: (209) 525-5911

Building Phone: (209) 525-6557 Fax: (209) 525-7759

Stanislaus County
Planning and Community Development

Mitigation Monitoring and Reporting Program

Adapted from CEQA Guidelines sec. 15097 Final Text, October 26, 1998

SAME DATE AS INITIAL STUDY

- | | |
|---|---|
| 1. Project title and location: | Rezone Application No. PLN2017-0098 – Best RV Center

5100, 5340, 6424 and 6460 Taylor Court, between E Keyes Road and E Taylor Road, in the Turlock area. (APN's: 045-050-005, 009, and 013; 045-053-040, 042, 043, 044; and 045-062-001). |
| 2. Project Applicant name and address: | Naiel Ammari
5340 Taylor Ct
Turlock, CA 95382 |
| 3. Person Responsible for Implementing Mitigation Program (Applicant Representative): | Naiel Ammari |
| 4. Contact person at County: | Jeremy Ballard, Associate Planner (209) 525-6330 |

MITIGATION MEASURES AND MONITORING PROGRAM:

List all Mitigation Measures by topic as identified in the Mitigated Negative Declaration and complete the form for each measure.

XVI. TRANSPORTATION/TRAFFIC

- | | |
|--|--|
| No.1 Mitigation Measure: | Prior to the issuance of a grading or building permit, or business license, a fair share payment of 1.13% of the SR 99/Taylor Road Interchange estimated cost (\$143,878.83) as adjusted to meet the most current Engineering News-Record Construction Cost Index, as recommended by the Best RV Center Traffic Impact Analysis, prepared by Pinnacle Traffic Engineering December 31, 2018) shall be made to the City of Turlock for future improvements to State Route 99 and Taylor Road interchange. |
| Who Implements the Measure: | Stanislaus County Planning and Public Works Departments |
| 1. When should the measure be implemented: | Prior to issuance of a grading or building permit, or business license |
| When should it be completed: | Prior to issuance of a grading or building permit, or business license |
| Who verifies compliance: | Stanislaus County Planning and Public Works Departments |
| Other Responsible Agencies: | City of Turlock |

I, the undersigned, do hereby certify that I understand and agree to be responsible for implementing the Mitigation Program for the above listed project.

Signature on file.

Person Responsible for Implementing
Mitigation Program






Date

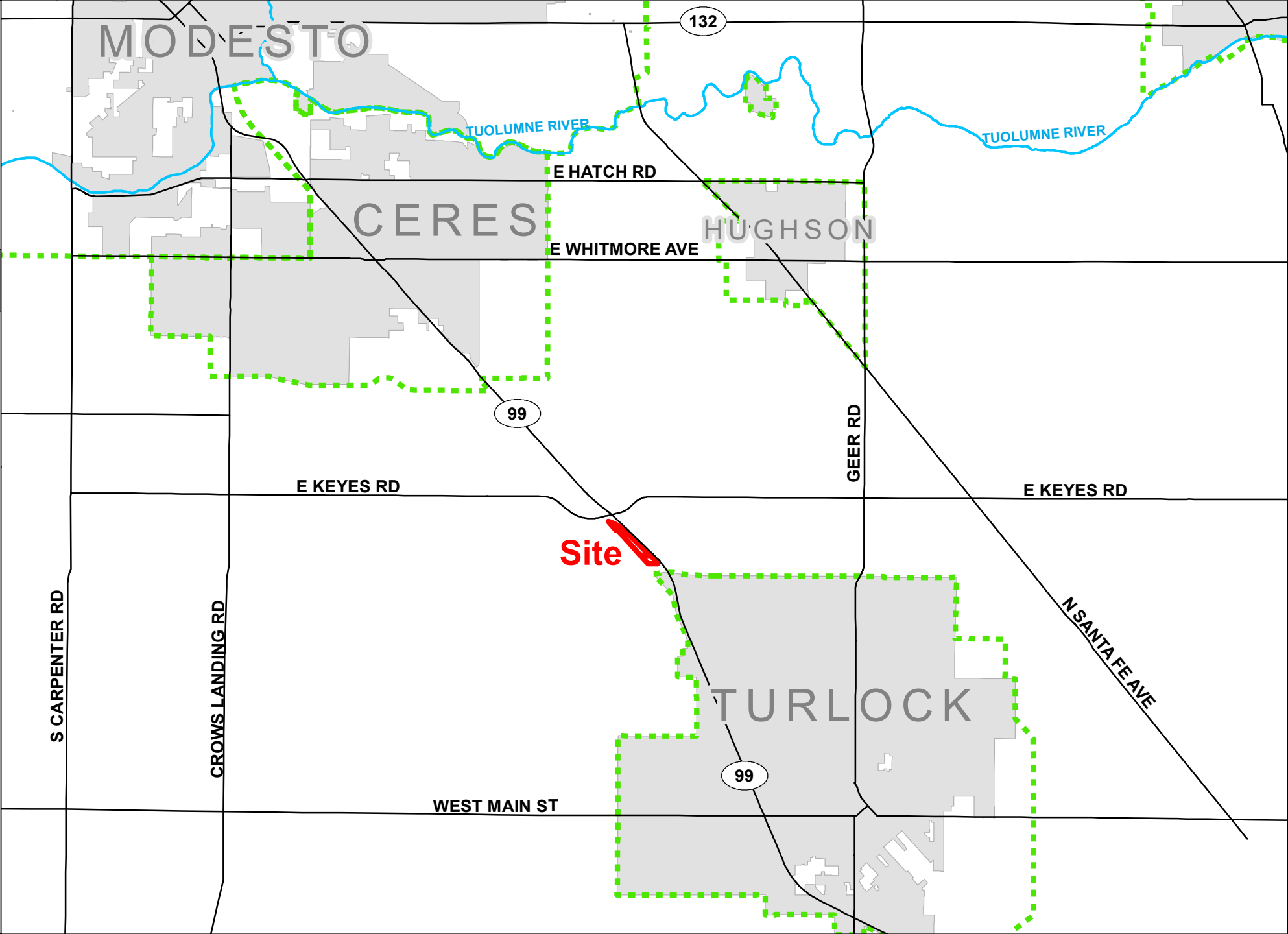
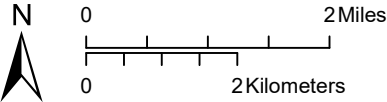
BEST RV CENTER

REZ APP
PLN2017-0098

AREA MAP

LEGEND

-  Project Site
-  Sphere of Influence
-  City
-  Road
-  River









BEST RV CENTER



REZ APP
PLN2017-0098

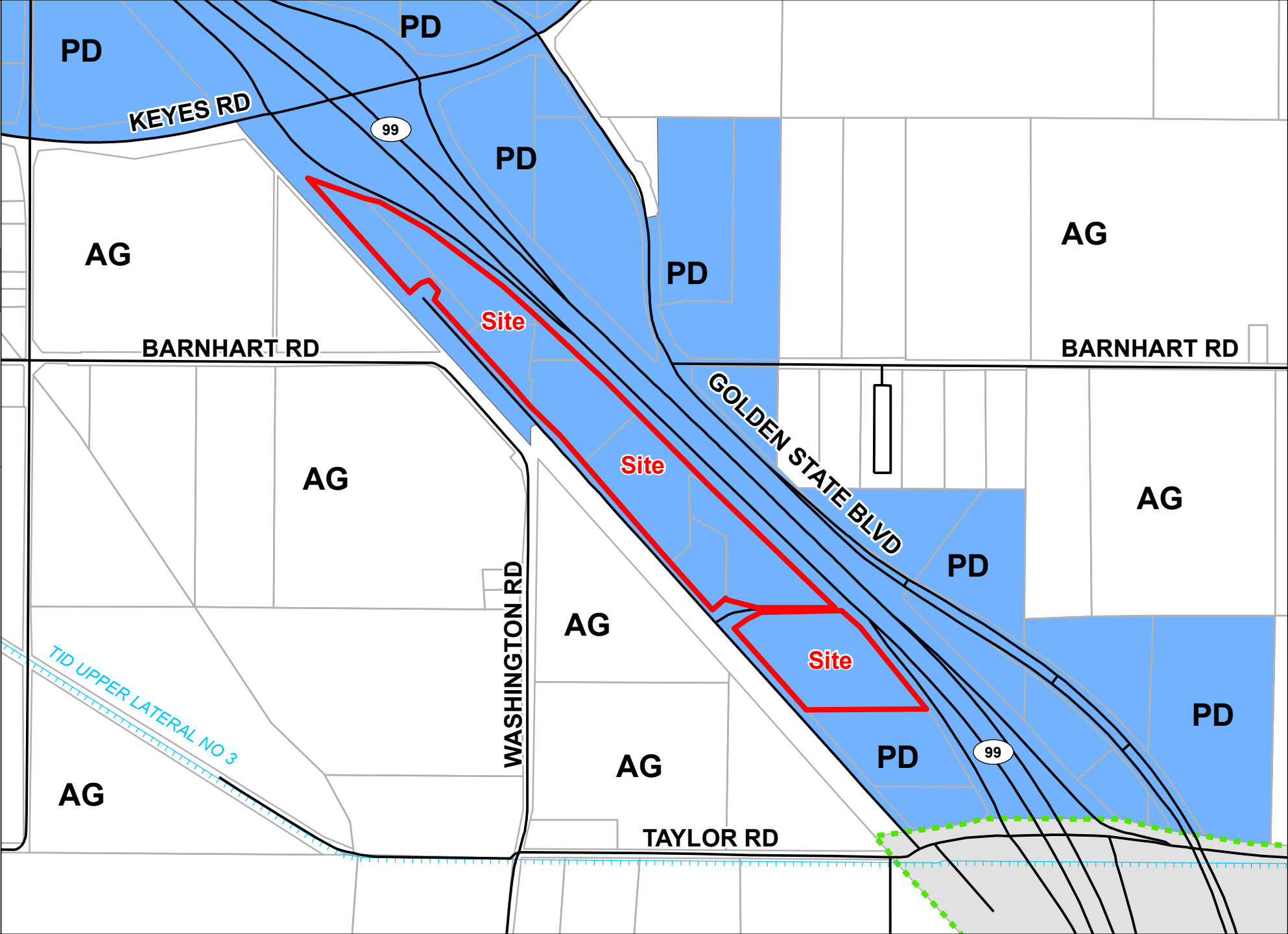
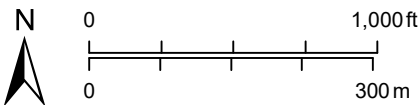
GENERAL PLAN MAP

LEGEND

-  Project Site
-  Sphere of Influence
-  City of Turlock
-  Parcel
-  Road
-  Canal

General Plan

-  Agriculture
-  Planned Development









BEST RV CENTER




REZ APP
PLN2017-0098

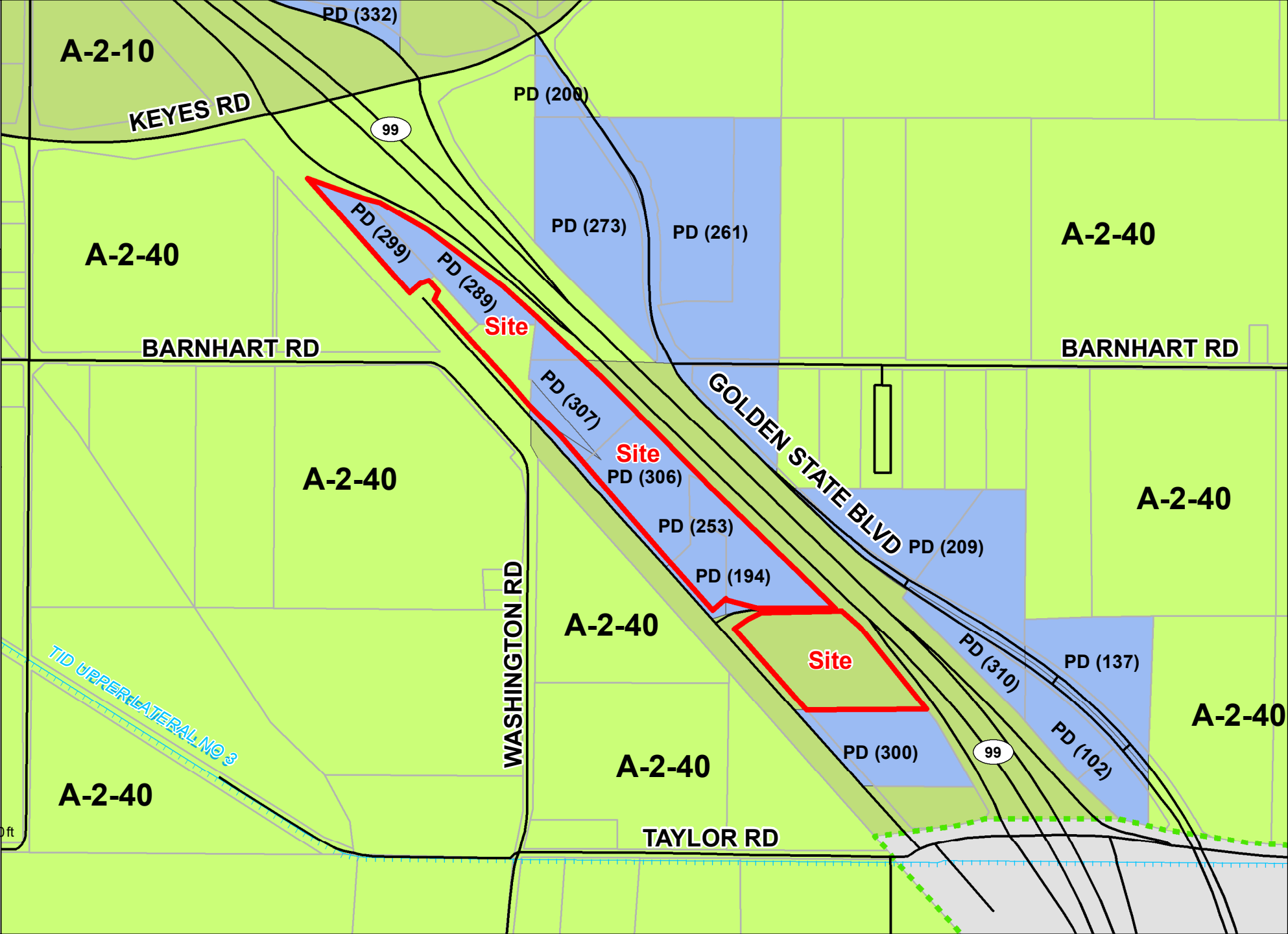
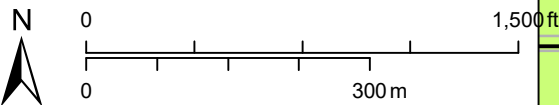
ZONING MAP

LEGEND

-  Project Site
-  Sphere of Influence
-  City of Turlock
-  Parcel
-  Road
-  Canal

Zoning Designation

-  A-2-10 General Agriculture 10 Acre
-  A-2-40 General Agriculture 40 Acre
-  P-D Planned Development









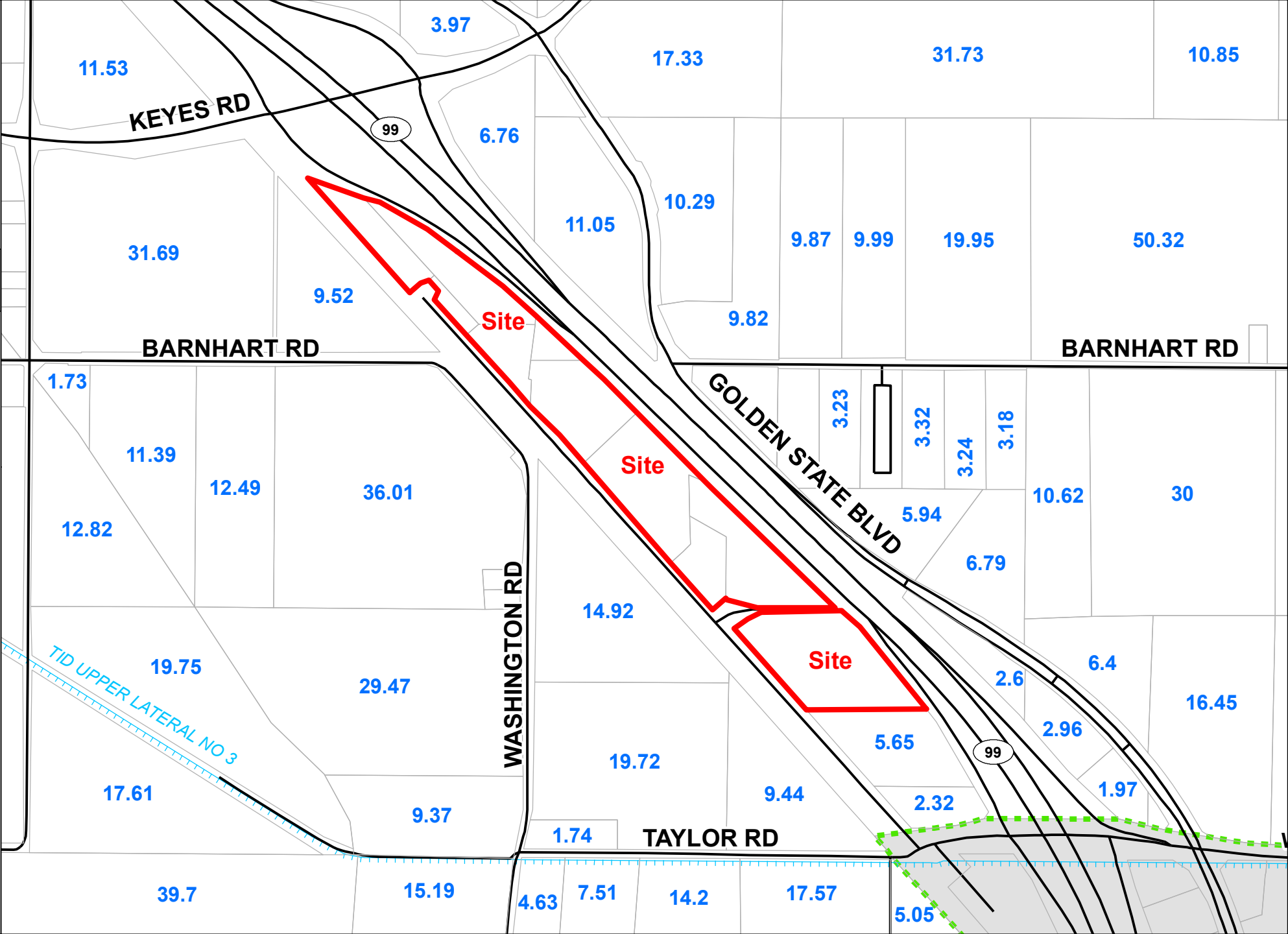
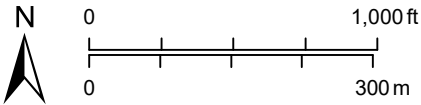
BEST RV CENTER

REZ APP
PLN2017-0098

ACREAGE MAP

LEGEND

-  Project Site
-  Sphere of Influence
-  City of Turlock
-  Parcel/Acres
-  Road
-  Canal







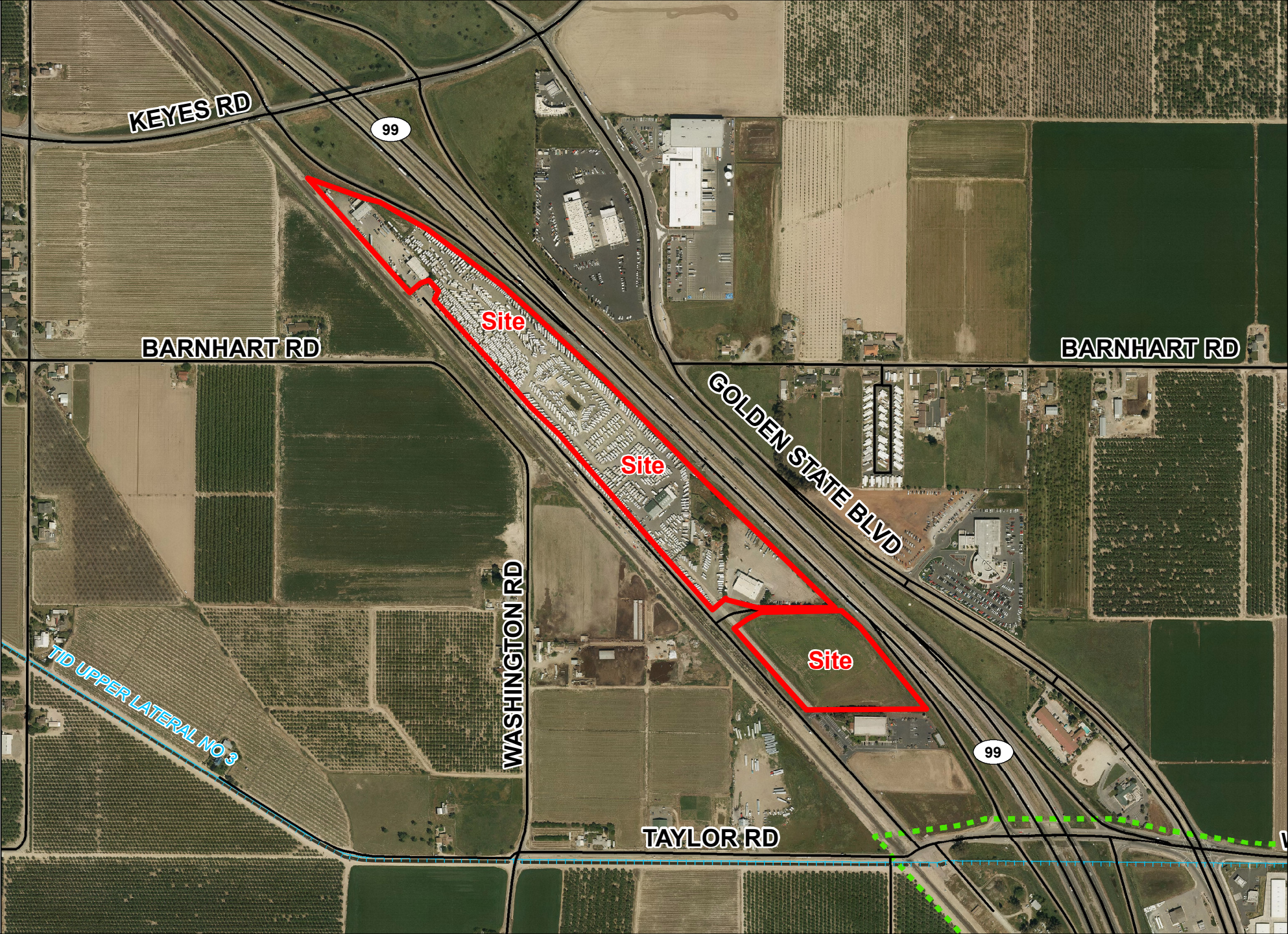
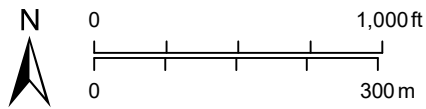
BEST RV CENTER

REZ APP
PLN2017-0098

2017 AERIAL AREA MAP

LEGEND

-  Project Site
-  Sphere of Influence
-  Road
-  Canal





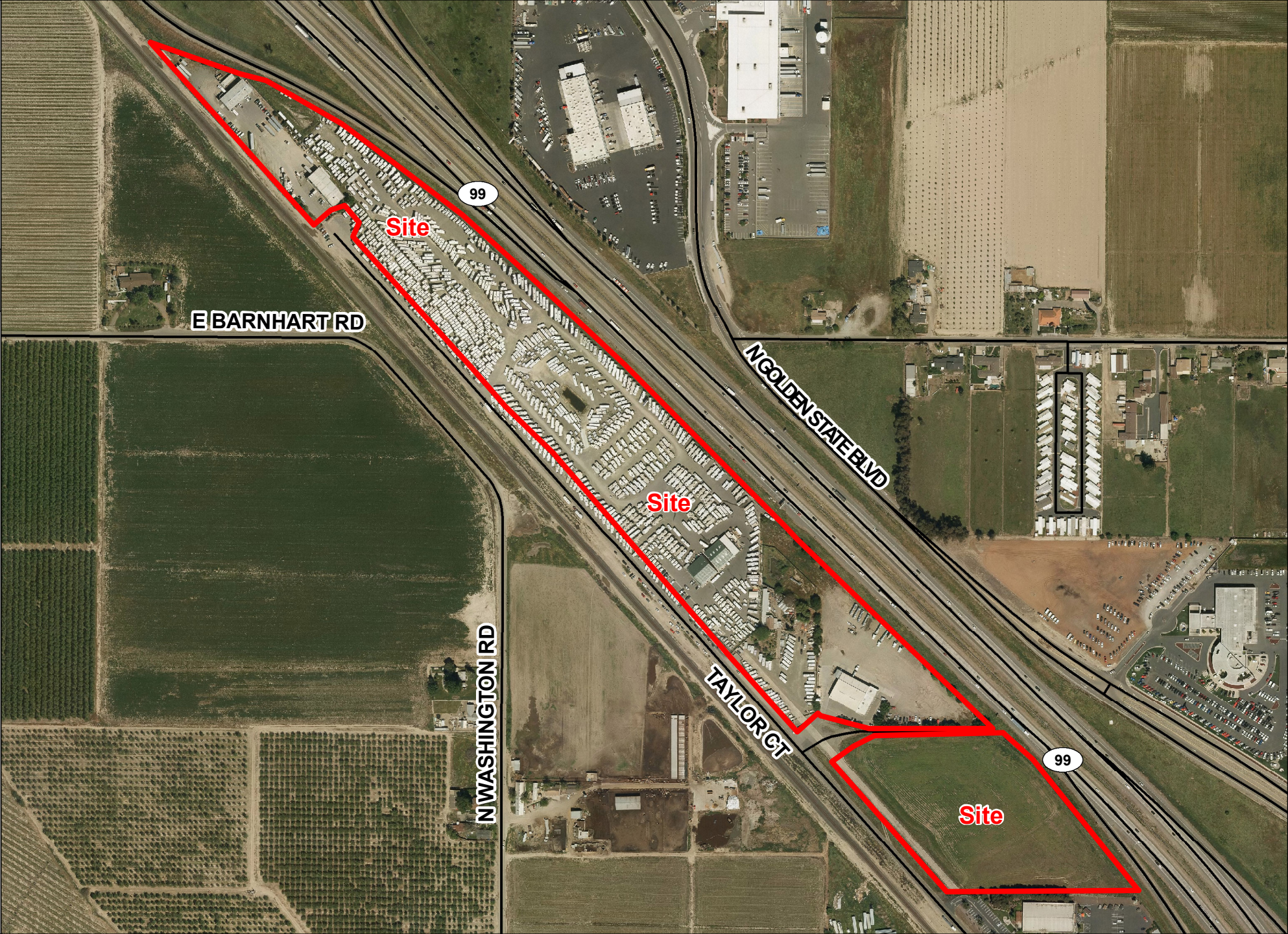
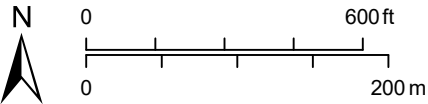
BEST RV CENTER

REZ APP
PLN2017-0098

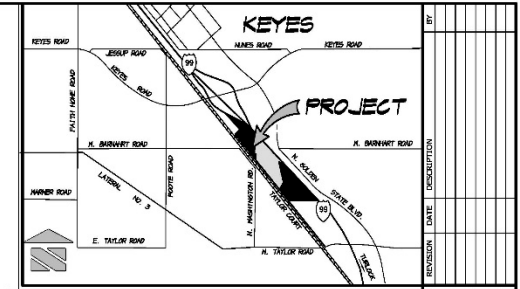
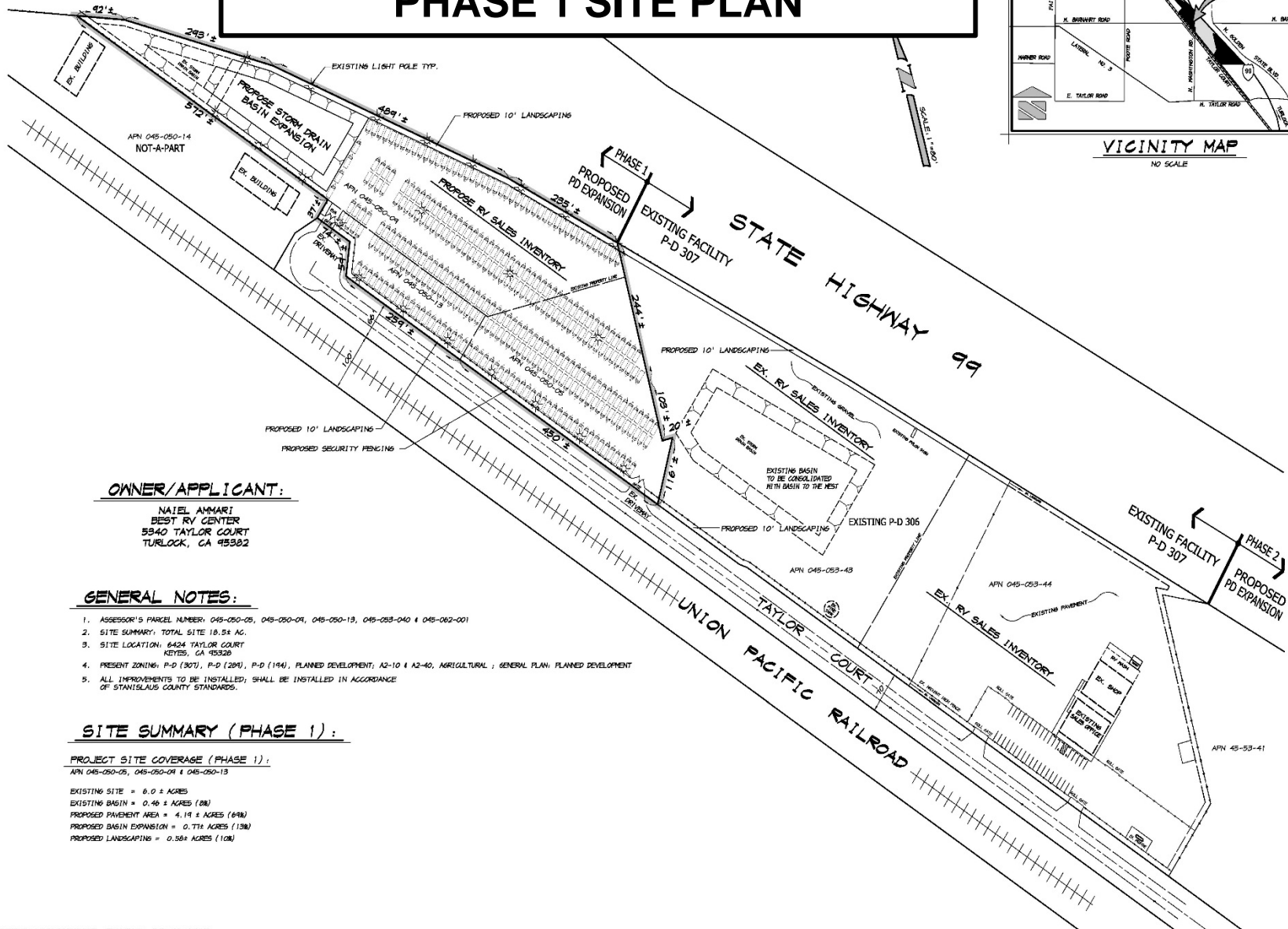
2017 AERIAL SITE MAP

LEGEND

-  Project Site
-  Road



REZ PLN2017-0098 BEST RV CENTER PHASE 1 SITE PLAN



OWNER/APPLICANT:

NAIEL AMHARI
BEST RV CENTER
5340 TAYLOR COURT
TURLOCK, CA 95382

GENERAL NOTES:

1. ASSESSOR'S PARCEL NUMBER: 045-050-05, 045-050-01, 045-050-13, 045-053-040 & 045-062-001
2. SITE SUMMARY: TOTAL SITE 18.5+ AC.
3. SITE LOCATION: 6424 TAYLOR COURT
KEYES, CA 95382
4. PRESENT ZONING: P-D (307), P-D (289), P-D (194), PLANNED DEVELOPMENT; A2-10, A2-40, AGRICULTURAL; GENERAL PLAN: PLANNED DEVELOPMENT
5. ALL IMPROVEMENTS TO BE INSTALLED; SHALL BE INSTALLED IN ACCORDANCE OF STANISLAUS COUNTY STANDARDS.

SITE SUMMARY (PHASE 1):

PROJECT SITE COVERAGE (PHASE 1):

APN 045-050-05, 045-050-01 & 045-050-13

EXISTING SITE = 8.0 ± ACRES
EXISTING BASIN = 0.46 ± ACRES (08)
PROPOSED PAVEMENT AREA = 4.19 ± ACRES (698)
PROPOSED BASIN EXPANSION = 0.77 ± ACRES (138)
PROPOSED LANDSCAPING = 0.56 ± ACRES (108)

NOTE:

THE PROPERTY LINE DISTANCES, BEARINGS, AND ALL OTHER DIMENSIONS SHOWN ON THIS MAP ARE TAKEN FROM RECORD MAPS, ASSESSOR'S MAPS, OR BOTH, AND PRELIMINARY FIELD OBSERVATIONS BY OFFICE PERSONNEL AND DO NOT REFLECT AN ACTUAL FIELD SURVEY.

ASSOCIATED
ENGINEERING
GROUP



4508 TECHNOLOGY DRIVE, SUITE 4, MONROVIE, CA 95766
PHONE (925) 542-3340 FAX (925) 542-3875 www.aegengr.com

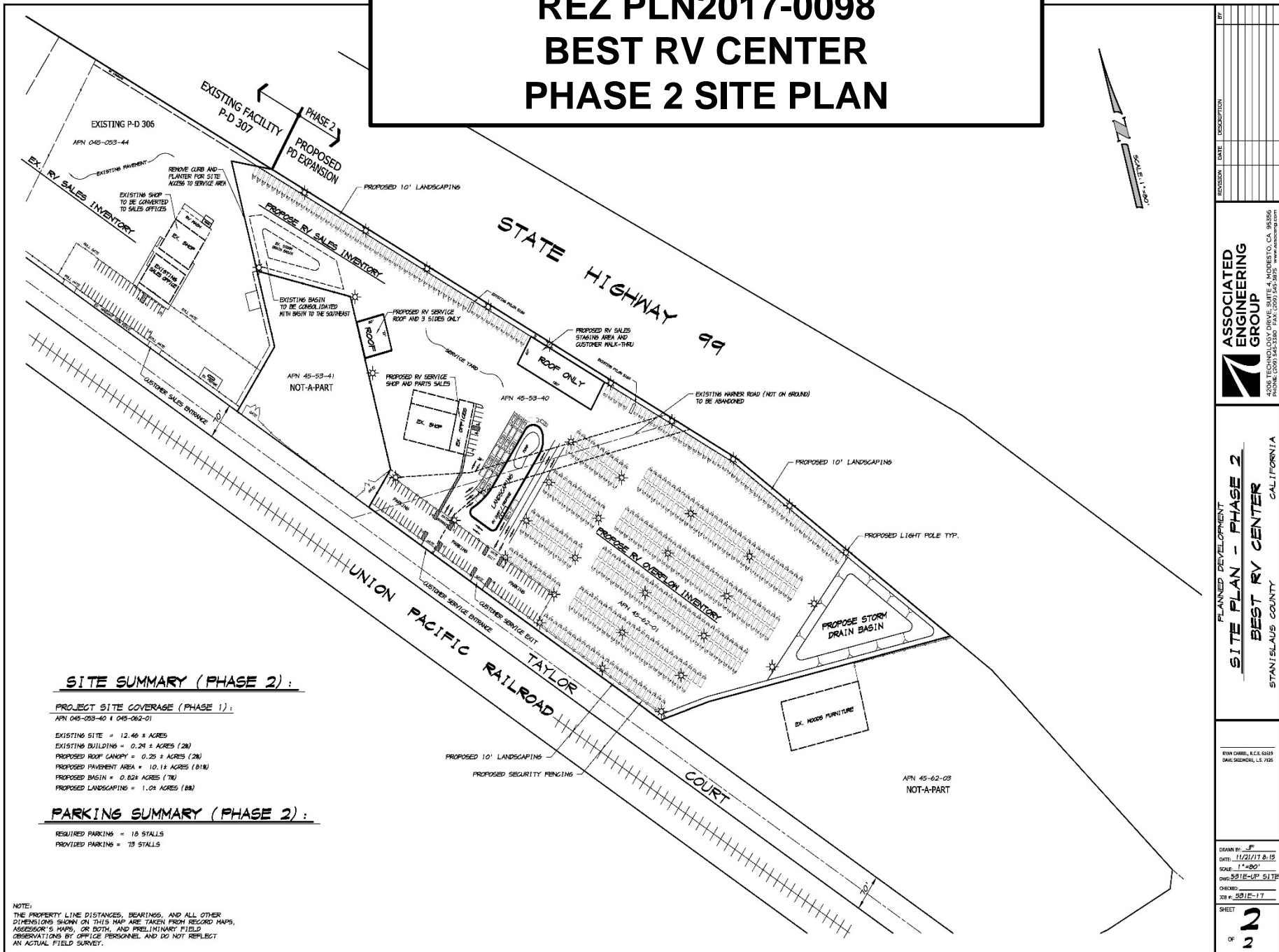
PLANNED DEVELOPMENT
SITE PLAN - PHASE 1
BEST RV CENTER
STANISLAUS COUNTY CALIFORNIA

RYAN GIBBS, E.C.E. 0355
DANA DEGENHARDT, L.S. 706

DRAWN BY: JEP
DATE: 11/21/17 8:10
SCALE: 1"=80'
DWG: 581E-UP SITE
CHECKED:
JOB #: 581E-17

SHEET
1
OF
2

**REZ PLN2017-0098
BEST RV CENTER
PHASE 2 SITE PLAN**

[illegible]

**ASSOCIATED
ENGINEERING
GROUP**

4206 TECHNOLOGY DRIVE, SUITE 4, MODESTO, CA 95358
 PHONE: (209) 545-3390 FAX: (209) 545-3875 WWW.AEG-ONLINE.COM

SITE PLAN - PHASE 2
BEST RV CENTER
STANISLAUS COUNTY CALIFORNIA
PLANNED DEVELOPMENT

RYAN CHASE, R.C.E. 63619
DAVE SKIDMORE, L.S. 7826

DRAWN BY: JF
DATE: 11/21/17 8:15
SCALE: 1"=80'
DWG: 531E-UP SITE
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JOB #: 531E-17
SHEET _____

2
OF 2

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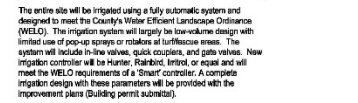
KLA
LANDSCAPE
ARCHITECTURE
PLANNING

 Date
Modifications

about the system's current state, which includes:

2017

LC





Revisions
By
Date

Drawn by: [Name], Checked by: [Name], Date: 10/1/2017
Scale: 1" = 30' 0"

**Best RV Center
Expansion**
Taylor Ct.
Turlock, CA

Phase 2

Best RV
6340 Taylor Ct.
Turlock, CA 95352
209-216-9200

20% of the total area of the site is to be dedicated to the expansion of the site.

**Preliminary
Landscape
Plan**

Scale:
1" = 30' 0"

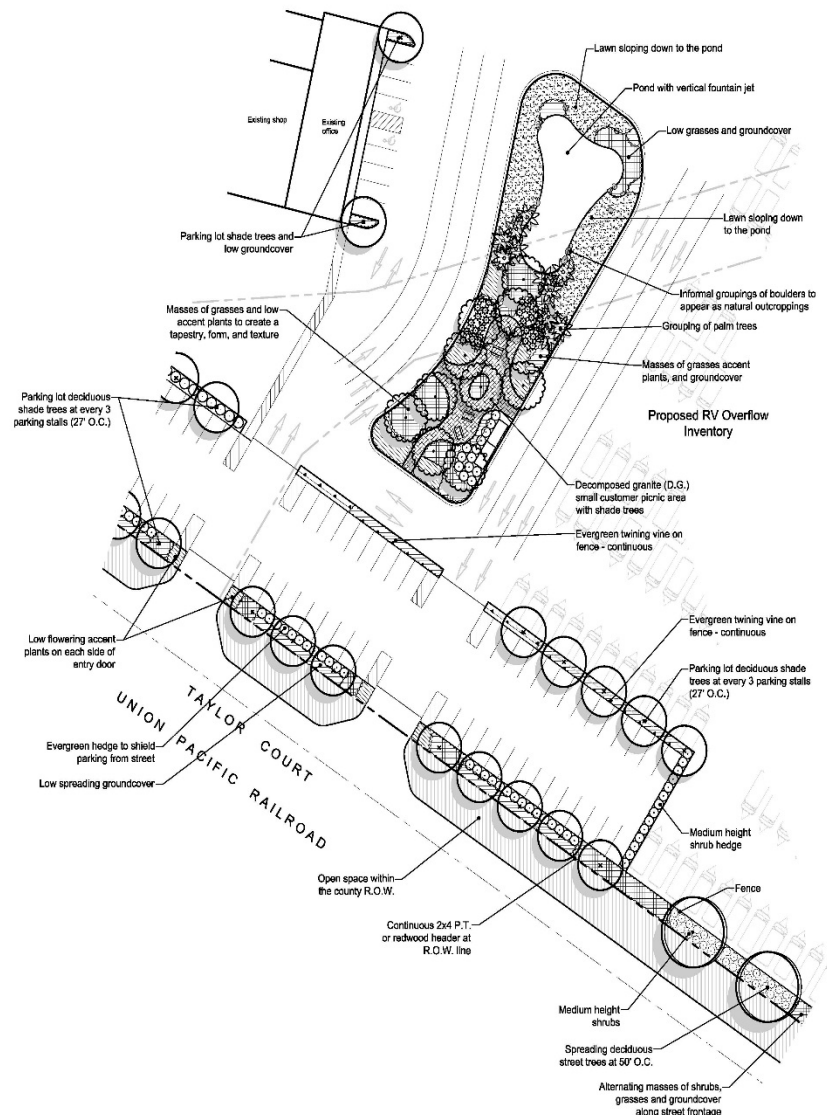
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November 20, 2017

Drawn/Checked:
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Project No.:
10-354

Sheet Number:

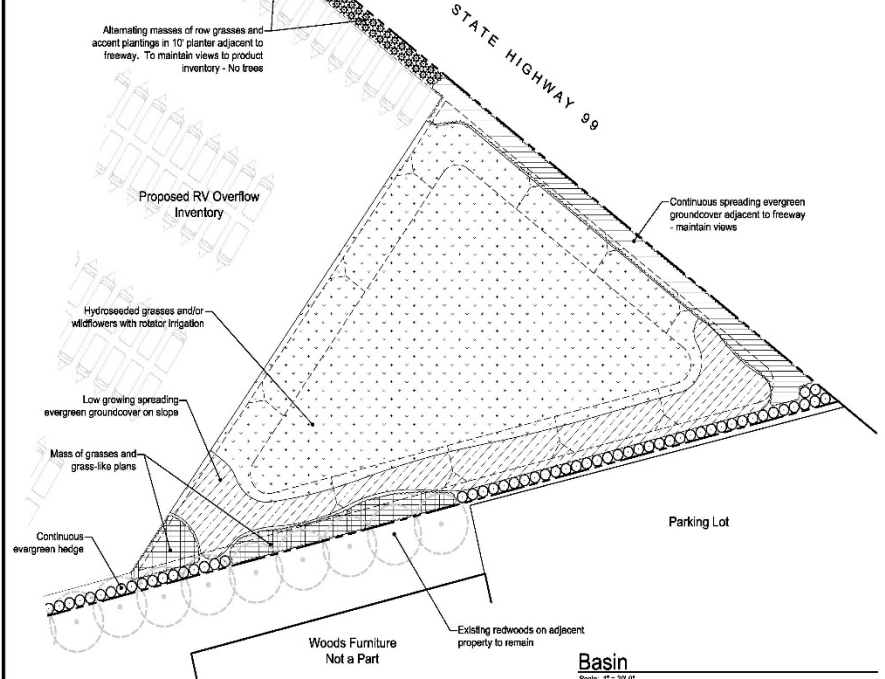
L0.3



Parking Lot and Central Customer Zone

Scale: 1" = 30' 0"

**REZ PLN2017-0098
BEST RV CENTER
PHASE 2 LANDSCAPE PLAN**



Preliminary Plant Palette

Trees		Vines	
Street Trees - 15 gal. Large spreading deciduous shade trees at approximately 50' spacing <i>Pinus canescens</i> <i>Platanus acerifolia</i> "Bloodgood" <i>Quercus emoryi</i> <i>Ulmus parvifolia</i>	Canary Island Pine London Plane Tree Scarlet Oak Evergreen Elm	Twining Vines - 1 gal. <i>Trochodendron japonicum</i>	Star Jasmine
Parking Lot Trees - 15 gal. Spreading deciduous shade trees to create shade for the customer parking <i>Koeleria laetissima</i> <i>Platanus chinensis</i> "Kath Dwyer" <i>Ulmus parvifolia</i>	Chinese Flame Tree Chinese Pistache Evergreen Elm	Grasses and Grass-like Plants - 5 gal. <i>Calamagrostis x acutiflora</i> "Vart Forster" <i>Chloropogon tenax</i> <i>Dianella monstrosa</i> <i>Dietes vegeta</i>	Festiver Reed Grass Cape Rush Fest. Lily Forsythia Lily
Shade Trees - 15 gal. Shriller trees in groups around the picnic table area <i>Acer rubrum</i> "October Glory" <i>Bryceon populus</i> <i>Gelera perfoliata</i> <i>Liquidambar styraciflua</i> "Rotundifolia" <i>Schinus molle</i>	October Glory Maple Bottle Tree Australian Willow American Sweetgum California Pepper Tree	Groundcover - 1 gal. <i>Colostephus cernuus</i> "Lowest" <i>Juncus confertus</i> <i>Juncus salina</i> <i>Lantana hybrid</i> <i>Rosmarinus officinalis</i> "Huntington Carpet" <i>Trochodendron japonicum</i>	Beachberry Juniper Juniper Lantana Trailing Rosemary Asian Jasmine
Palm Trees - 10-14 BTH Informal placement of palms in groupings around the pond <i>Washingtonia robusta</i>	Queen Palm Mexican Fan Palm	Low Flowering Accent Planting - 5 and 1 gal. <i>Buzinia pedunculata</i> "Hymenocallis" <i>Hemerocallis</i> species <i>Trochodendron japonicum</i> <i>Trochodendron japonicum</i>	Bibbire Daylily Trailing Clematis Society Garlic
Shrubs		Groundcovers	
Hedges - 5 gal. <i>Ligustrum japonicum</i> "Tasmanian" <i>Olea europaea</i> "Little Olive" <i>Rhephilepis indica</i> <i>Rosmarinus officinalis</i> "Majora Pink" <i>Xylocarpus congestus</i> "Compact"	Tease Privet Little Olive India Hawthorne Rosemary Shiny Yucca	Hydroseed - Basin Sodded Lawns Open Space within the Taylor Court R.O.W.	Acacia Dwarf Coyote Bush
Medium to Low Shrubs - 5 gal. <i>Arctostaphylos densa</i> "Howard McKinn" <i>Callistemon viminalis</i> "Little John" <i>Cassia purpurea</i> <i>Rhephilepis indica</i>	Mandarin Dwarf Bottle Brush Orchid Rosebush India Hawthorne	Existing trees to remain	
Accent Plants - 5 gal. <i>Calamagrostis acutiflora</i> "Vart Forster" <i>Chloropogon tenax</i> <i>Rosa fortunata</i> <i>Salvia greggii</i>	Festiver Reed Grass Cape Rush Cape Rose Sage		
Medium Height Shrubs - 5 gal. <i>Nerium oleander</i> "Little Red" <i>Olea europaea</i> "Little Olive" <i>Rhephilepis indica</i>	Dwarf Oleander Little Olive India Hawthorne		



BEST RV CENTER PROJECT

(PLN2017-0098)

- Stanislaus County -

“TRAFFIC IMPACT ANALYSIS”

Prepared for:

ASSOCIATED ENGINEERING GROUP, INC.

4206 Technology Drive, Suite 4

Modesto, CA 95356



Larry D. Hail, CE, TE, PTOE
PINNACLE TRAFFIC ENGINEERING

831 C Street
Hollister, California 95023
(831) 638-9260 • PinnacleTE.com

December 31, 2018

EXECUTIVE SUMMARY

The Traffic Impact Analysis (TIA) presents an evaluation of the potential impacts associated with the proposed Best RV Center Project (PLN2017-0098). The existing Best RV Center is located at 5340 Taylor Court in the unincorporated area northwest of Turlock. The Best RV Center currently includes a sales office, service department, parts counter, and RV wash facility. The project includes an expansion in two (2) phases. Phase 1 will provide additional storage area for RV sales inventory and does not propose an increase in the number of employees. Phase 2 will relocate the existing service department and parts counter to the adjacent parcels (formally Peterbilt Truck Sales & Service Center). The County's "rezoning" approval in 2006 was for up to 8 employees which is the "permitted" number of employees for the existing operations. The existing Best RV Center currently has 65 employees (over 8 times permitted level). The total number of employees will increase to 90 with the completion the Phase 2 (82 employees above permitted level).

The project TIA scope was developed in consultation with staff at Stanislaus County and the City of Turlock. The County and City of Turlock (Capital Facilities Fee Nexus Study) have identified a need for improvements at the State Route (SR) 99 / Taylor Road interchange. The County will be providing partial funding for the improvements. Therefore, the project will be required to provide a fair-share contribution towards the improvements. The TIA presents an evaluation of the potential project impacts on weekday operations at the selected study intersections on Taylor Road (N. Golden State Boulevard, SR 99 Northbound and Southbound Ramps, and Taylor Court).

The Preliminary Trip Generation Analysis prepared for the project indicates that operations at the existing Best RV Center (65 employees) generate approximately 512 daily trips (two-way trip ends), with 50 vehicle trips during the AM peak hour and 48 trips during the PM peak hour. The completion of Phase 2 will generate a "net" increase over the 2006 level of 646 daily trips, with 64 trips during the AM peak hour and 61 trips during the PM peak hour. The Saturday mid-day (MD) peak hour trip generation is 70-75% higher than the average week day peak hour. Daily volumes on Taylor Court are significant lower on a typical Saturday (-16%) and Sunday (-35%). The weekday trips associated with the 2006 permitted, 2018 existing, and proposed Phase 2 operations were assigned to the study street system based on a review of existing travel patterns.

The evaluation of existing conditions (2018) was based on new traffic count data collected at the study intersections. The average daily traffic (ADT) volumes for the Taylor Road street segments were estimated by assuming the weekday PM peak hour comprises about 9-10% of the daily total. Existing ADT volumes along Taylor Road and N. Golden State Boulevard are within acceptable limits as defined by the County (LOS D or better), except Taylor Road east of N. Golden State Boulevard. Based on the City's LOS threshold for a 2-lane arterial the existing ADT are within the LOS C range. The evaluation of peak hour operations indicates that average vehicle delays at the N. Golden State Boulevard and Taylor Court intersections are within acceptable limits during both peak hours. However, delays are currently in the LOS E-F range at the SR 99 / Taylor Road interchange intersections during one or both peak hours. Observations of actual traffic operations

verified the existing congestion, especially during the PM peak hour. The existing peak hour volumes at the Taylor Road / SR 99 Southbound Ramps intersection exceed the minimum 70% signal warrant criteria during both peak hours (PM peak hour volumes also exceed 100% criteria).

An analysis of existing plus project conditions was conducted by adjusting the 2018 volumes to reflect conditions with the 2006 permitted level of operations. The existing volumes were again adjusted to reflect the existing conditions with the Phase 2 level of operations. The identification of potentially significant impacts was evaluated using “level of significance” criterion defined by the County and CEQA. Existing plus project ADT volumes on Taylor Road and N. Golden State Boulevard will remain within acceptable limits, except on Taylor Road east of N. Golden State Boulevard (all project scenarios). As previously stated, based on the City’s 2-lane arterial LOS threshold the existing plus project ADT volumes will remain in the LOS C range (all project scenarios).

Average delays at the N. Golden State Boulevard and Taylor Court intersections will remain within acceptable limits. However, delays will remain at unacceptable levels at the SR 99 / Taylor Road interchange intersections during one or both peak hours (LOS E-F). Based on the County’s LOS thresholds the project will have a potentially significant impact on peak hour operations at the SR 99 / Taylor Road interchange (current 2018 and Phase 2 operations). The existing volumes with the 2006 permitted and Phase 2 operations exceed the minimum 70% signal warrant criteria during both peak hours (even without any traffic generated by the Best RV Center site). The existing plus project volumes (2006 permitted or proposed Phase 2) also exceed the 100% signal warrant criteria during the PM peak hour. An evaluation of access concluded there is sufficient stopping and corner sight distance for vehicles traveling through the Taylor Road / Taylor Court intersection.

The evaluation of future conditions was based on the most current General Plan ADT projections obtained from the City of Turlock. The General Plan material also included the future roadway classifications needed to provide acceptable LOS. Taylor Road west of SR 99 will have a 4-lane expressway section, while the section between SR 99 and N. Golden State Boulevard will have a 6-lane expressway section. Taylor Road east of N. Golden State Boulevard will continue to be classified as a 2-lane collector street. N. Golden State Boulevard south of Taylor Road will also have a 6-lane expressway section.

The County and City have indicated that there is no specific improvement project for the SR 99 / Taylor Road interchange at this time. Caltrans also does not have a current improvement project for the SR 99 / Taylor Road interchange. Since the General Plan traffic projections didn’t include intersection peak hour turning movements, an evaluation of the General Plan scenario was limited to the analysis roadway segment LOS. It’s noted that the development of future improvements for the SR 99 / Taylor Road interchange will require that a detailed Project Study Report (PSR) be prepared for Caltrans approval. The preparation of an Intersection Control Evaluation (ICE) for the ramp intersections will also more than likely be required to identify the best design for each side of the SR 99 freeway.

The General Plan ADT projections provided by the City are considered representative of base-line conditions. The evaluation of potential project impacts presents an analysis of the “net” increase in employee trips between 2006 and through the completion of Phase 2 (+82 employees). Since the General Plan ADT traffic projection data was obtained from the City of Turlock, the City’s LOS thresholds for roadway segments was used for the General Plan analysis. The General Plan ADT base-line projections on Taylor Road and N. Golden State Boulevard will be within acceptable limits. Traffic generated by the Best RV Center site development (between the 2006 permitted operations and through Phase 2) will not significantly impact future daily operations.

As previously stated, the project will be required to provide a fair-share contribution towards the future improvements at the SR 99 / Taylor Road interchange. The City’s Capital Facilities Fee (CFF) Nexus Study provides an estimate for the future improvements at the SR 99 / Taylor Road interchange (\$10,363,703). Based on the City’s General Plan ADT projections the Best RV Center site development (2006 through the completion of Phase 2) comprises 2.11% of the General Plan plus project volumes on the west side of SR 99 and 0.50% of the General Plan plus project volumes on the east side of SR 99. It’s estimated that a combined 290 ADT of the project trips would use SR 99 north and south of Taylor Road, which would comprise 1.13% of the General Plan plus project volumes using the interchange ramps. The project will also be subject to the County’s Public Facilities Fee, which is estimated at \$48,656. It’s noted that the Best RV Center project may be eligible for some fee credits since Phase 2 will be developed on the former Peterbilt Truck Sales & Service Center site.

As documented in the existing conditions analysis, existing ADT volumes on Taylor Road east of N. Golden State Boulevard are within the LOS E range (based on County’s LOS thresholds). However, based on the City’s LOS thresholds for a 2-lane arterial the existing ADT volume are within the LOS C range. The City’s General Plan ADT projections for this segment of Taylor Road indicate that future daily volumes would be lower than existing ADT volumes. The General Plan plus project ADT projections will be within the LOS B range, and therefore, no mitigation measures are proposed for this segment of Taylor Road.

The analysis of existing peak hour operations documented delays within the LOS E-F range at the SR 99 Southbound Ramps intersection, on Taylor Road, and on the SR 99 northbound off ramp during one or both peak hour periods. The existing peak hour volumes at the SR 99 Southbound Ramps intersection exceed the minimum 70% signal warrant criteria (PM peak hour volumes also exceed 100% warrant criteria). The installation of “all-way” stop control at the SR 99 Southbound Ramps intersection as a possible “interim” solution would create significant vehicle queues on the southbound off ramp. The installation of signal control would result in average delays within the LOS B range but would create significant queues on the southbound off ramp, possibly extending up to the SR 99 freeway section. Providing 2 lanes for the free-flowing left turn movement on the on-ramp may reduce congestion and delays but would not reduce the significant delays on Taylor Road. There are no feasible mitigation measures that will reduce congestion and delays at the SR 99 / Taylor Road interchange without significant improvements to the interchange.

The analysis of existing plus project operations identified potentially significant project impacts at the SR 99 Northbound and Southbound Ramps intersections (current 2018 and proposed Phase 2 operations). Therefore, the project's mitigation measures include payment of the County's Public Facilities Fee and the negotiation of a reasonable fair-share contribution towards the future improvements at the SR 99 / Taylor Road interchange. The project applicant should also consider developing Transportation Demand Management strategies to reduce employee vehicle peak hour trips (e.g. provide incentives to employees to carpool / rideshare, provide shuttle service for employees, provide bicycle storage facilities, etc). The mitigation measures section also includes a number of recommendations for the local roadway network, which are provided for the County's and City's consideration only.

TABLE OF CONTENTS

Report Section	Page
1.0 INTRODUCTION	1
2.0 EXISTING CONDITIONS	3
- Network Description	3
- Traffic Volumes	4
- Level of Service Analysis	4
- Observations of Peak Period Operations	9
- Signal Warrant Analysis	10
3.0 PROJECT CONDITIONS	11
- Description	11
- Project Trip Generation Estimates	11
- Project Weekday Traffic Volumes	15
- Existing Plus Project Traffic Volumes	15
- Level of Significance Criterion	19
- Level of Service Analysis	19
- Signal Warrant Analysis	21
- Project Access	21
4.0 GENERAL PLAN CONDITIONS	23
- Project Traffic Volumes for General Plan Analysis	23
- Level of Service Analysis	26
- Project's Fair-Share Contribution (SR 99 / Taylor Road Interchange)	26
- County's Public Facilities Fee	27
5.0 Mitigation Measures and Recommendations	28
- Local Roadway Recommendations	29

LIST OF TABLES

Table 1 - Existing Roadway Segment LOS Analysis	7
Table 2 - LOS and Vehicle Delay Criterion	8
Table 3 - Existing Intersection LOS Analysis	9
Table 4A - Best RV Center "Weekday" Trip Generation Rates and Trips	14
Table 4B - Best RV Center "Weekend Day" Trip Generation Rates and Trips	15
Table 5 - Existing Plus Project Roadway Segment (ADT) LOS Analysis	19
Table 6 - Existing Plus Project Intersection LOS Analysis	20
Table 7 - GP and GP Plus Project Roadway Segment (ADT) LOS Analysis	26

LIST OF FIGURES

Figure 1 -	Project Location Map	2
Figure 2A -	Existing Geometry	5
Figure 2B -	Existing Traffic Volumes	6
Figure 3A -	Project Site Plan (Phase 1)	12
Figure 3B -	Project Site Plan (Phase 2)	13
Figure 4A -	Project Traffic Volumes (2006 Operations)	16
Figure 4B -	Project Traffic Volumes (2018 Operations)	17
Figure 4C -	Project Traffic Volumes (Phase 2 Operations)	18
Figure 5 -	General Plan Traffic Volumes	24
Figure 6 -	Project Volumes - Net Increase - (Phase 2 - 2006)	25

APPENDIX MATERIAL

- Existing Weekday Peak Hour Count Summary
- Weekday AM and PM Peak Period Traffic Count Data (Tuesday - Sept. 25, 2018)
- Saturday and Sunday Traffic Count Data (Sept. 22 & 23, 2018)
- Level of Service (LOS) LOS Descriptions
- Stanislaus County Roadway Segment Level of Service (LOS) Criteria
- City of Turlock Average Daily Traffic (ADT) Thresholds
- Synchro 9 Software LOS Worksheets
- Best RV Center Weekday and Weekend Data Trip Generation Calculation Data
- Existing Plus Project Volumes (2006 and Phase 2 Operations)
- 2014 California MUCTD Traffic Signal Warrant Graphs
- Vehicle Speed Data on Taylor Road at Taylor Court
- Best RV Center Preliminary Trip Generation Analysis (PTE; May 21, 2018)

1.0 INTRODUCTION

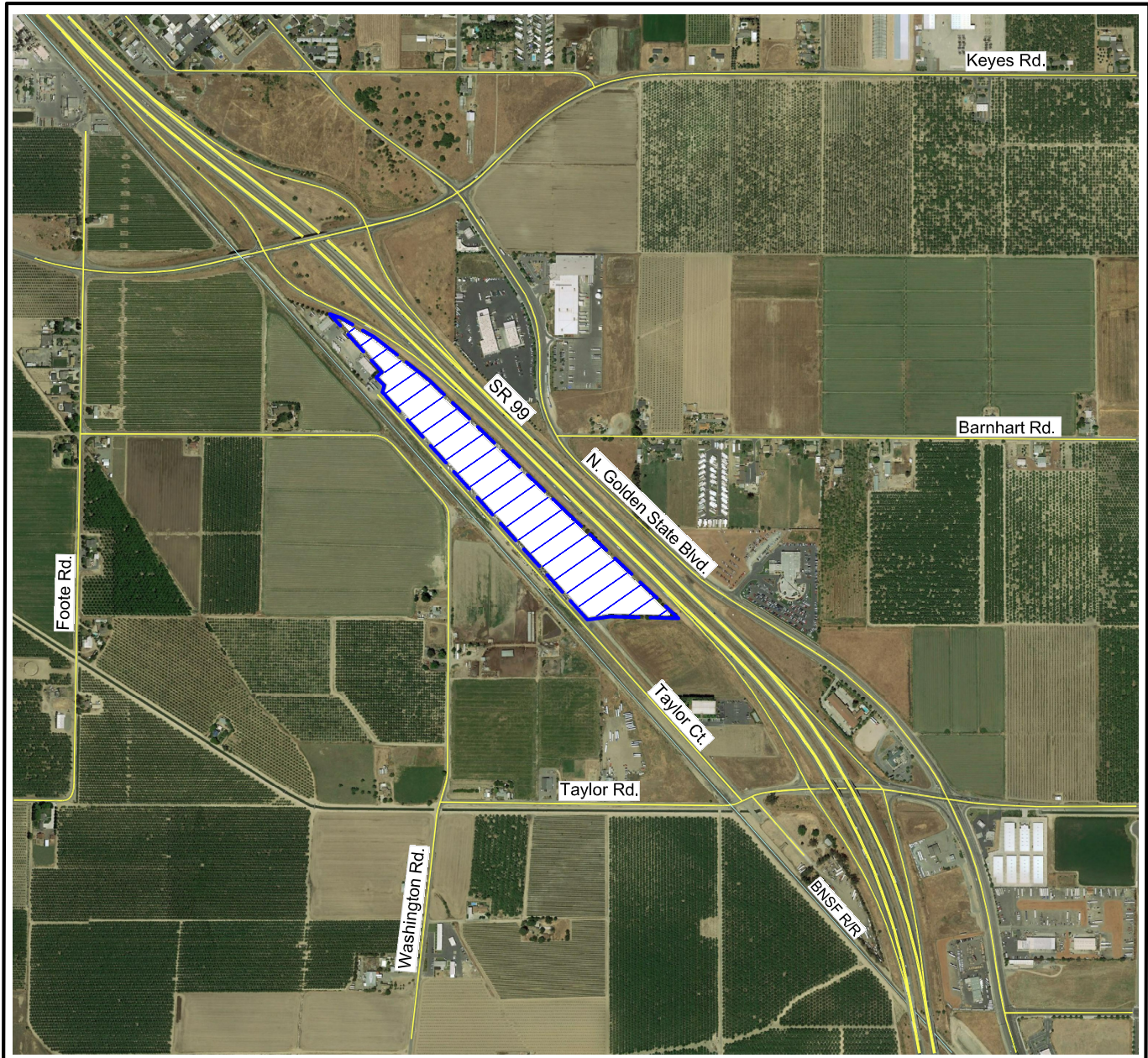
The Traffic Impact Analysis (TIA) presents an evaluation of the potential impacts associated with the proposed Best RV Center Project (PLN2017-0098). The existing Best RV Center is located at 5340 Taylor Court in the unincorporated area northwest of the City of Turlock. The project includes an expansion in two (2) phases. Phase 1 will provide additional storage area for RV sales inventory which will be located on the adjacent parcels to the northwest. Phase 2 will relocate the existing service department and parts counter to the adjacent parcels to the southeast. The project will remodel the existing facility and include various new infrastructure improvements to facilitate the expansion. The existing Best RV Center currently has 65 employees. No new employees will be needed for Phase 1. The total number of employees will increase to 90 with the completion the Phase 2 improvements. Access to the existing site is currently provided via two (2) driveways on Taylor Court. There will be an additional driveway for Phase 1 and two (2) new driveways for with Phase 2. The general location of the project site is shown on Figure 1.

County staff requested a traffic analysis to evaluate the potential project impacts on local traffic operations. A Preliminary Trip Generation Analysis was prepared as part of the initial analysis (May 21, 2018; a copy is included with the Appendix Material). The Preliminary Trip Generation Analysis quantified the “net” increase in vehicle trips associated with the proposed project. The City of Turlock has identified a need for improvements at the existing State Route (SR) 99 / Taylor Road interchange, as documented in the City’s Capital Facilities Fee (CFF) Nexus Study (Final Report; Nov. 12, 2013). Stanislaus County will be providing partial funding for the future interchange improvements and needs to determine the proposed project’s fair-share percentage towards the improvements. The TIA scope was developed in consultation with staff at Stanislaus County and the City of Turlock. The TIA presents an evaluation of the potential project impacts on weekday traffic operations at the following study intersections:


Study Intersections

1. Taylor Road / N. Golden State Boulevard (Signalized)
2. Taylor Road / SR 99 Northbound Ramps (NB Stop Control)
3. Taylor Road / SR 99 Southbound Ramps (EB and WB Stop Control)
4. Taylor Road / Taylor Court (SB and NB Stop Control)

The TIA also provides an evaluation of access on Taylor Road at Taylor Court and an evaluation of future General Plan traffic operations. The TIA has been prepared according to the requirements in the County’s General Plan Circulation Element and guidelines published by Caltrans (Guide for the Preparation of Traffic Impact Studies, 2002).



LEGEND

 = Project Site



2.0 EXISTING CONDITIONS

The local roadway network serving the project site includes SR 99, Taylor Road, N. Golden State Boulevard, and Taylor Court. The following is a brief description of the local network and an evaluation of existing traffic operations.

Network Description

SR 99 is a north-south freeway in Stanislaus County that provides regional access through the Central Valley between northern and southern California. SR 99 in the vicinity of Taylor Road has three (3) travel lanes in each direction. Access to and from Taylor Road is provided via a grade-separated interchange. The SR 99 southbound off ramp is free-flowing at Taylor Road, with east-west stop sign control on Taylor Road. The SR 99 northbound off ramp is stop sign controlled at Taylor Road. The SR 99 / Taylor Road interchange is a “diamond” interchange with about 500-feet between the southbound and northbound ramp intersections. There are also SR 99 grade-separated interchanges at Keyes Road to the north and Monte Vista Avenue to the south.

Taylor Road is a designated a Principal Arterial (Other Principal Arterial) in the County’s General Plan Circulation Element (Figure II-1, Road Circulation Diagram). The City of Turlock’s CFF Nexus Study classifies Taylor Road as an existing collector street. Taylor Road extends east from Washington Road through the unincorporated area of Stanislaus County and along the northern City limits of Turlock. Taylor Road between Washington Road and SR 99 and east of N. Golden State Boulevard has a single travel lane in each direction. There are exclusive left turn lanes on Taylor Road for traffic entering the SR 99 southbound and northbound on ramps. Taylor Road is signalized at the N. Golden State Boulevard intersection, which is approximately 400-feet east of the SR 99 Northbound Ramps intersection. Between SR 99 and N. Golden State Boulevard Taylor Road has two (2) westbound lanes (shared through-right turn and free-flowing right turn). Though the eastbound section between SR 99 and N. Golden State Boulevard is only striped with a single lane the existing width (24-25’) is sufficient to accommodate two (2) eastbound lanes. During peak demand periods the eastbound section functions as having two (2) lanes adjacent to the SR 99 northbound off ramp.

N. Golden State Boulevard north of Taylor Road is a designated a Minor Arterial in the County’s General Plan Circulation Element (Figure II-1, Road Circulation Diagram). The City of Turlock’s CFF Nexus Study classifies N. Golden State Boulevard as an existing expressway south of Taylor Road. North and south of Taylor Road, N. Golden State Boulevard has two (2) travel lanes in each direction. As previously stated, N. Golden State Boulevard is signalized at Taylor Road. The signal operations include north-south split phasing and east-west left turn phasing. This major intersection provides primary access to and from SR 99 in the northwestern portion of the City of Turlock.

Taylor Court is a local collector street that serves the Best RV Center, Thermo King, and Wood Furniture Gallery. Taylor Court has a single travel lane in each direction with a 24-foot width and no paved shoulders. Taylor Court is stop sign controlled at Taylor Road, opposite a commercial driveway (storage for pre-fabricated homes and large trucks).

The existing lane geometry at the study intersections and the number of travel lanes on the local street system are graphically illustrated on Figure 2A.

Stanislaus Regional Transit (StaRT) and Turlock Transit provide bus service through Turlock but do not currently have any bus stops along Taylor Road or near the project site. Currently, there are no formal bike lane facilities along Taylor Road (near the SR 99 interchange), N. Golden State Boulevard (near Taylor Road), or Washington Road (south of Taylor Road). However, the City's General Plan (Figure 5-3) does show proposed Class II bike lane routes for these roadways.

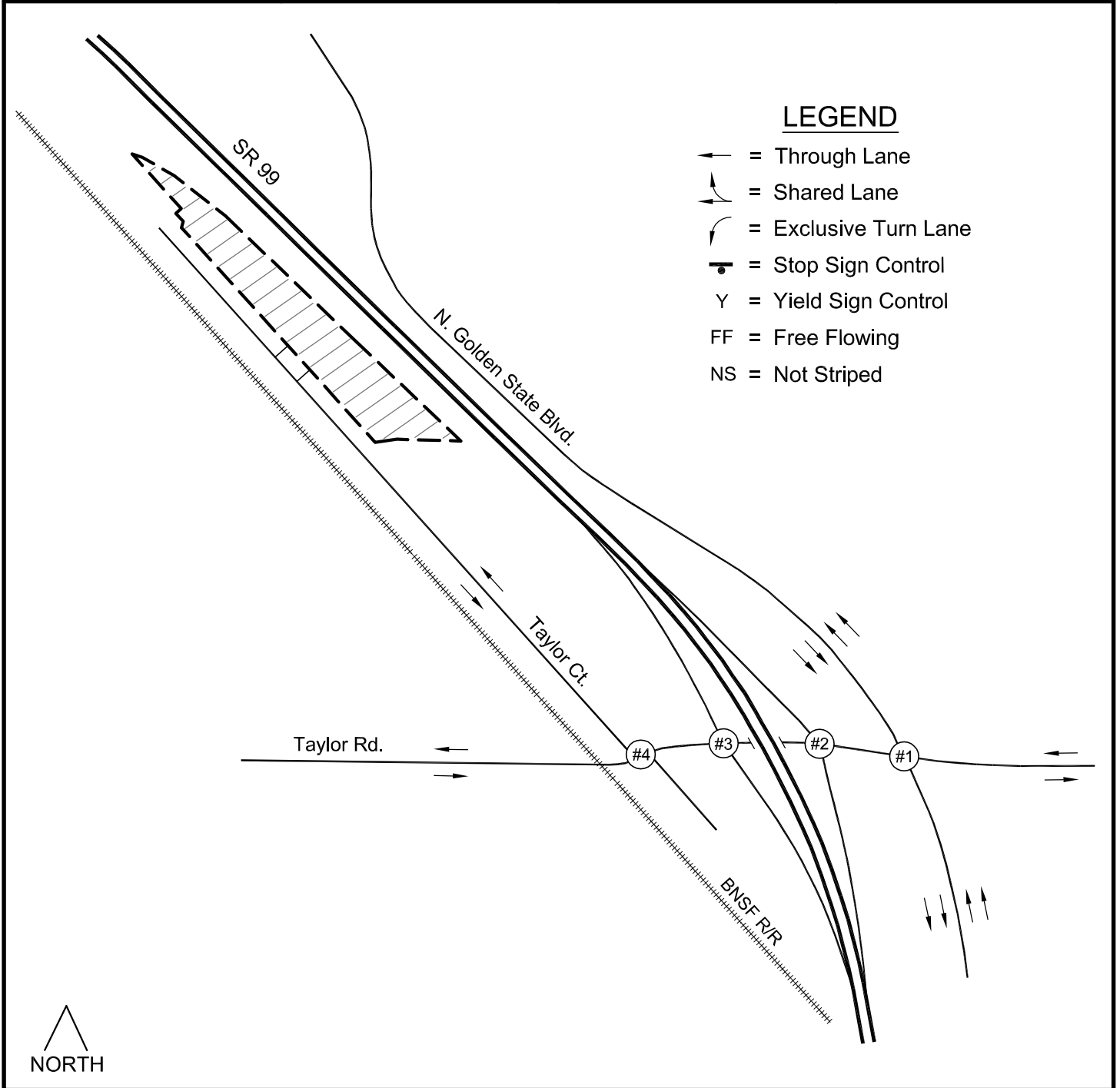
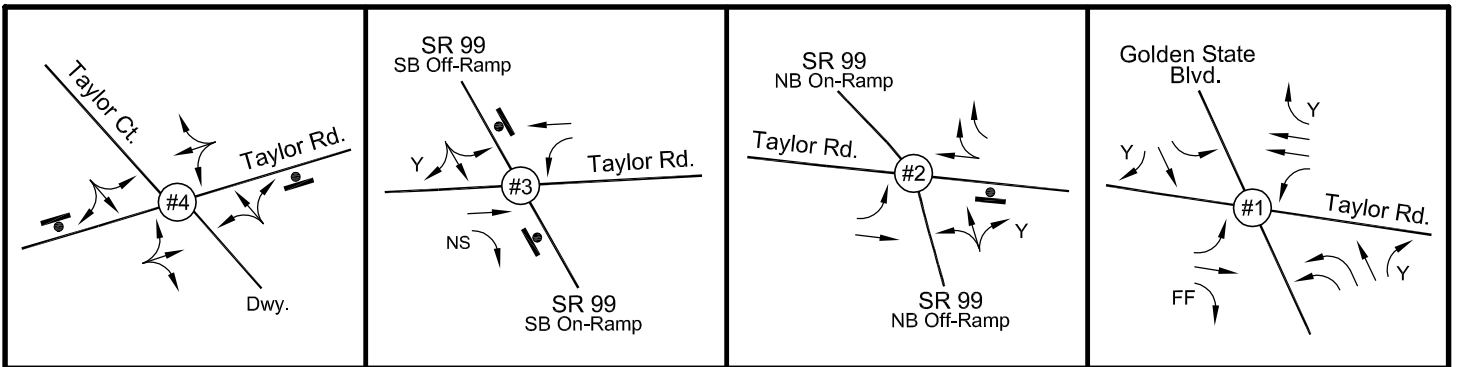
Traffic Volumes

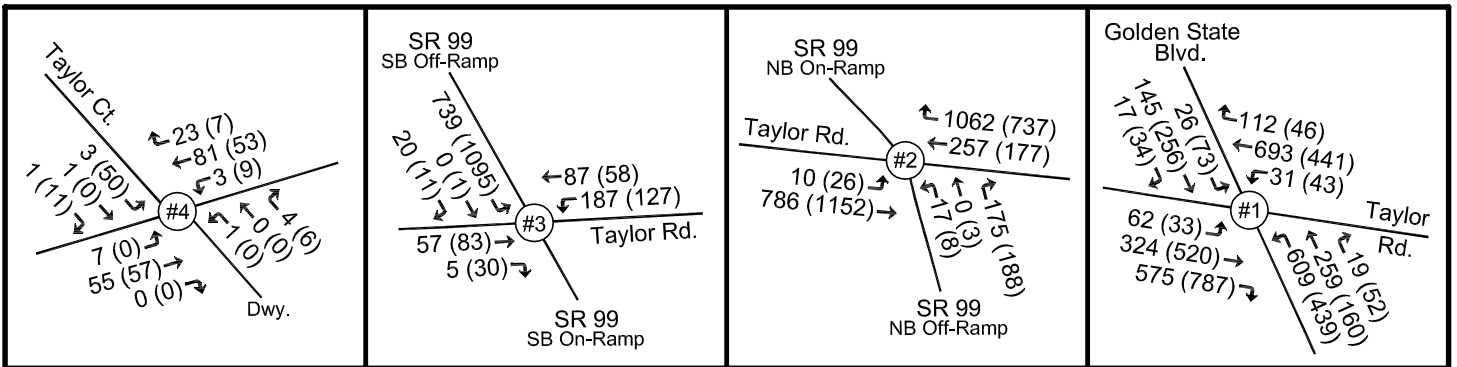
To document existing conditions new traffic count data was collected at the study intersections. The data was collected on an average weekday (Sept. 25, 2018) during the morning (7:00 - 9:00 AM) and afternoon (4:00 - 6:00 PM) commuter peak periods. The traffic count data was evaluated to determine the highest 60-minute volume (4 consecutive 15-minute periods) within each period for all the study intersections. This balances the volumes between each study intersection and represents a single peak hour for the four (4) closely spaced study intersections along Taylor Road. The morning peak hour was recorded between 7:00 & 8:00 AM and the afternoon peak hour was documented between 4:45 & 5:45 PM.

The average daily traffic (ADT) volume data for the selected street segments were estimated by assuming the weekday PM peak hour comprises about 9-10% of the daily total. Historic traffic count data provided by the City of Turlock was also referenced. The weekday ADT volumes for Taylor Court (near the Best RV Center) were also referenced from the data collected for the Preliminary Trip Generation Analysis (May 2018). The existing weekday peak hour and ADT volumes are illustrated on Figure 2B. The TIA scope also included collecting new traffic count data on a Saturday and Sunday (Sept. 22 & 23, 2018) to document existing weekend day trip generation characteristics associated with the Best RV Center current operations. The Saturday and Sunday traffic count data is evaluated under the project trip generation sub-section. Copies of the weekday peak hour traffic count summary calculations and new traffic count data are included with the Appendix Material.

Level of Service Analysis

Recent State legislative changes have moved away from using vehicle delay or "level of service" (LOS) as a metric to define significant impacts under CEQA law, and have shifted emphasis of

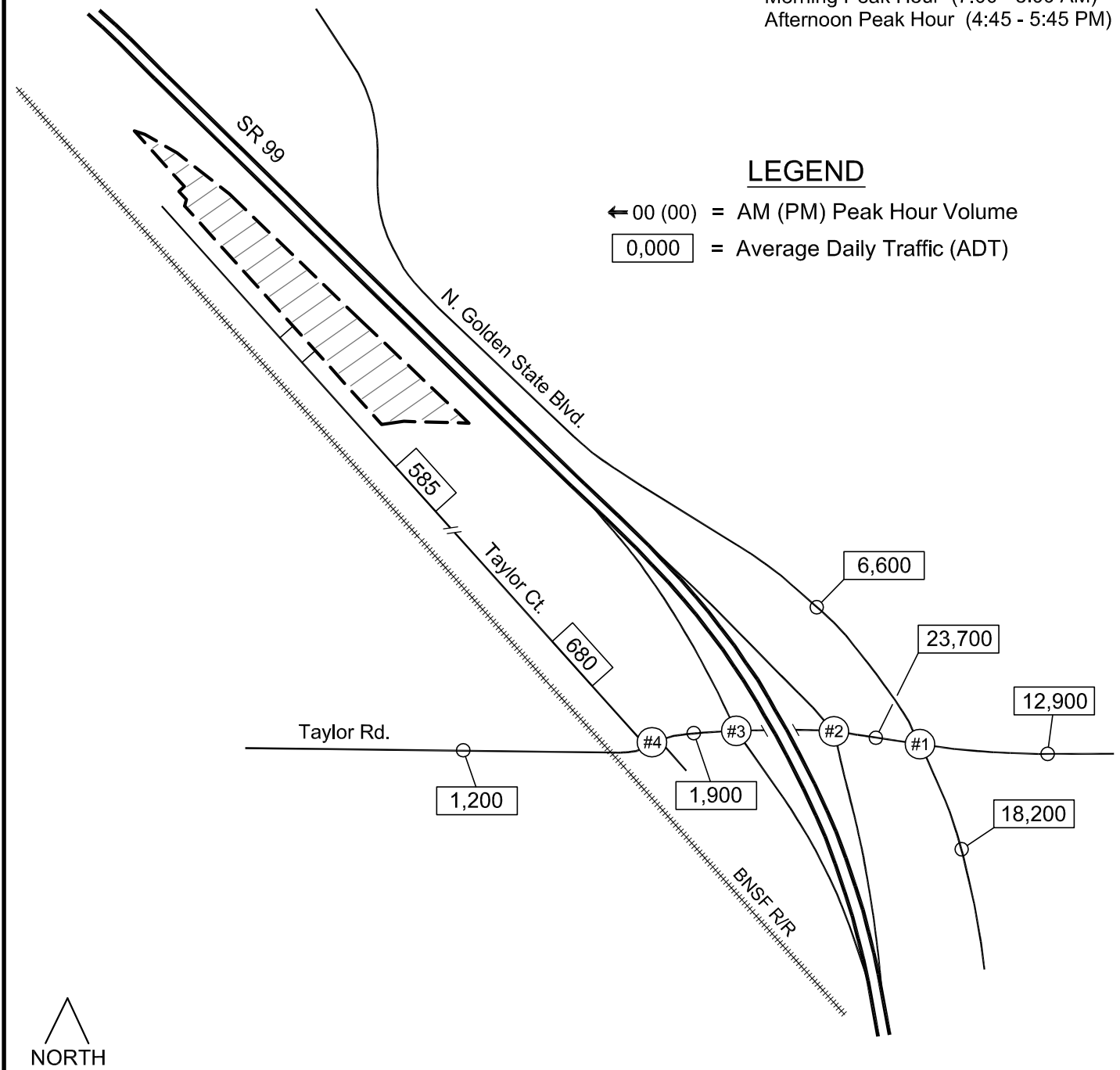




Morning Peak Hour (7:00 - 8:00 AM)
Afternoon Peak Hour (4:45 - 5:45 PM)

LEGEND

← 00 (00) = AM (PM) Peak Hour Volume
 [0,000] = Average Daily Traffic (ADT)



transportation analysis to transit-oriented design, the reduction of vehicle trips, and safety. However, as stated in the County's General Plan Circulation Element methodologies in the Highway Capacity Manual (HCM) can still be used to determine LOS to evaluate impacts of new development. Based on consultation with County staff, the analysis of impacts associated with the Best RV Center project is limited to the evaluation of roadway and intersection LOS.

Various LOS methodologies are used to evaluate traffic operations. Operating conditions range from LOS "A" (free-flowing) to LOS "F" (forced-flow). The County strives to maintain LOS D (or better) operations on roadway segments and LOS C (or better) operations at intersections. The Caltrans traffic study guidelines (Guide for the Preparation of Traffic Impact Studies, Dec. 2002) state, Caltrans endeavors to maintain a target LOS at the transition between LOS C and D on State highway facilities. A brief description of the LOS values is included in the Appendix.

Roadway segment LOS can be estimated by comparing the ADT volumes with standard threshold criteria. The County's Circulation Element provides "Roadway Segment LOS Criteria" to evaluated daily volumes (vehicles / day / lane). The City of Turlock also has LOS thresholds for roadway segments based on ADT volume. The roadway segment classifications, number of lanes, existing ADT volumes, and existing LOS values are provided in Table 1. It's noted that though Taylor Road is a designated a Principal Arterial in the County's Circulation Element the evaluation of existing conditions was performed using the thresholds for a "major" collector street since there isn't threshold criteria for a 2-lane arterial. A copy of the Stanislaus County and City of Turlock ADT volume thresholds are included with the Appendix Material.

Table 1 - Existing Roadway Segment LOS Analysis

Roadway Segment	Classification	No. of Lanes	ADT – LOS
Taylor Rd. w/o Taylor Ct. (a)	Major Collector	2	1,200 – B
Taylor Rd., Taylor Ct. - SR 99 (a)	Major Collector	2	1,900 – B
Taylor Rd., SR 99 - N. Golden State Blvd. (b)	Minor Arterial	4	23,700 – C
Taylor Rd., e/o N. Golden State Blvd. (c)	Major Collector	2	12,900 – E
N. Golden State Blvd., n/o Taylor Rd. (d)	Minor Arterial	4	6,600 – B
N. Golden State Blvd., s/o Taylor Rd. (e)	Expressway	4	18,200 – A

- (a) LOS based on the County's threshold for a "major collector" (rural)
- (b) LOS based on the County's threshold for a "minor arterial"
- (c) LOS based on the County's threshold for a "major collector" (urban)
- (d) LOS based on the County's threshold for a "minor arterial"
- (e) LOS based on the City's threshold for an "expressway"

The data in Table 1 indicates that the existing ADT volumes on Taylor Road west of N. Golden State Boulevard and on N. Golden State Boulevard north of Taylor Road are within acceptable limits as defined by Stanislaus County (LOS D or better). Existing ADT volumes on Taylor Road east of N. Golden State Boulevard are within the LOS E range. However, it's noted that existing ADT volumes on Taylor Road east of N. Golden State Boulevard are within the LOS C range based on the City's LOS threshold for a 2-lane arterial. Existing ADT volumes on N. Golden State Boulevard south of Taylor Road are within the LOS A range based on the City's LOS thresholds.

The evaluation of "peak hour" traffic operations at intersections is based on various methodologies outlined in the 2010 Highway Capacity Manual (HCM). The methodologies analyze operations based on vehicle "control" delay. Control delay includes the delay associated with vehicles slowing in advance of an intersection, time spent stopped, time spent as vehicles move up in the queue, and time needed for vehicles to accelerate to their desired speed. Delays at signalized and all-way stop controlled intersections are evaluated for the overall peak hour as an "average" delay. The methodologies for un-signalized intersections also evaluates the delays for the "critical" movement (e.g. stop sign controlled approaches and main line left turn). Table 2 presents the LOS and vehicle delay criterion for signalized and un-signalized intersections.

Table 2 - LOS and Vehicle Delay Criterion

LOS Value	Intersection Control Type	
	Signalized Control	Two-Way & All-Way Stop Sign Control
	Control Delay per Vehicle (seconds / vehicle)	
A	< or = 10	0 - 10
B	> 10 - 20	> 10 - 15
C	> 20 - 35	> 15 - 25
D	> 35 - 55	> 25 - 35
E	> 55 - 80	> 35 - 50
F	> 80	> 50

The Synchro 9 software was used to perform the LOS analysis at the study intersections. The existing "peak hour factors" (PHF) were used to represent operations during the "peak" 15-minute period within the peak hour. The results of the existing intersection LOS analysis are presented in Table 3. Copies of the Synchro 9 LOS worksheets are included with the Appendix Material.

The data in Table 3 indicates that average delays at the N. Golden State Boulevard and Taylor Court intersections are within acceptable limits during both peak hours (LOS C or better). Average delays are also within acceptable limits at the SR 99 Northbound Ramps intersection, but delays on the SR 99 northbound off ramp are within the LOS F range during the PM peak hour. Average delays at the SR 99 Southbound Ramps intersection and delays on Taylor Road (both approaches) are within the LOS E-F range during both peak hours. The LOS analysis also reported a 95th

percentile queue of 7-8 vehicles on the SR 99 northbound off ramp during the PM peak hour. Significant queues were also reported on Taylor Road at the SR 99 Southbound Ramps intersection.

Table 3 - Existing Intersection LOS Analysis

Study Intersection on Taylor Road	Traffic Control	Average Delay - LOS	
		AM Pk. Hr.	PM Pk. Hr.
N. Golden State Blvd.	Signal	24.3 – C	27.5 – C
SR 99 - NB Ramps (a)	NB Stop	3.7 – A (23.4 – C)	10.7 – B (>50 – F)
SR 99 - SB Ramps (a)	EB-WB Stop	>50 – F (>50 – F)	46.8 – E (>50 – F)
Taylor Ct. (a)	SB-NB Stop	0.9 – A (9.6 – A)	3.7 – A (9.6 – A)

(a) Highest delay on stop sign controlled approaches

Observations of Peak Period Operations

Observations of existing operations were conducted during the morning (7:00 - 9:00 AM) and afternoon (4:00 - 6:00 PM) commuter periods (Sept. 25, 2018). As previously stated, the morning peak hour was 7:00 - 8:00 AM and the afternoon peak hour was 4:45 - 5:45 PM. It's noted that the total intersection volumes during the AM peak hour (7:00-8:00 AM) at the N. Golden State Boulevard and SR 99 NB Ramps intersections were about 35-40% higher than the total intersection volumes between 8:00 and 9:00 AM. During the AM peak hour the directional demands were higher in the northbound direction on N. Golden State Boulevard and SR 99, and the westbound direction on Taylor Road. The directional demands during the PM peak hour were higher in the southbound (N. Golden State Boulevard and SR 99) and eastbound (Taylor Road) directions.

No significant queuing was observed during the AM peak hour, except on Taylor Road at the SR 99 Southbound Ramps intersection. The majority of vehicle queues cleared during each signal cycle at the Taylor Road / N. Golden State Boulevard intersection. During the afternoon commuter period the intersection volumes were more consistent throughout the 2 hour period. There was a steady stream of vehicles exiting SR 99 on the southbound off ramp during the PM peak period. Significant delays and queuing on Taylor Road at the SR 99 Southbound Ramps intersection and on the SR 99 northbound off ramp were observed, and directly related to the steady stream of vehicles exiting SR 99. Eastbound vehicles on Taylor Road were occasionally observed backing up from N. Golden State Boulevard to the SR 99 Southbound Ramps intersection but did not extend on the SR 99 southbound off ramp. As previously mentioned, during peak demand periods the eastbound section of Taylor Road near the SR 99 northbound off ramp functions as having two (2) lanes. Though this section is only striped with a single eastbound lane the existing width is sufficient to accommodate two (2) lanes. Delays and queuing on the SR 99 northbound off ramp were also related to vehicles not being able to easily access the eastbound left turn lane at the N.

Golden State Boulevard intersection. Notwithstanding the congestion on Taylor Road during the PM peak hour, the majority of vehicle queues cleared during most signal cycles at the Taylor Road / N. Golden State Boulevard intersection. Much of the congestion during the PM peak period was related to the close spacing of intersections on Taylor Road at the SR 99 interchange.

Signal Warrant Analysis

The analysis of existing conditions documented significant delays on Taylor Road at the SR 99 Southbound Ramps intersection during the AM and PM peak hours. Typically, the installation of traffic signal control will potentially reduce delays on the stop sign controlled approaches but will increase delays on the free-flowing approaches. The potential benefits associated with traffic signal control also include various safety factors.

The existing peak hour traffic volumes at the Taylor Road / SR 99 Southbound Ramps intersection were reviewed to determine if the minimum “peak hour volume” signal warrant criteria is satisfied (2014 California Manual on Uniform Traffic Control Devices, MUTCD). The existing volumes exceed the minimum 70% signal warrant criteria during the AM and PM peak hours. The existing PM peak hour volumes also exceed the 100% signal warrant criteria. However, a review of the traffic count data indicates that existing conditions may not satisfy either the four (4) or eight (8) hour volume signal warrant criteria. The existing volumes (Figure 2B) on the SR 99 northbound off ramp (left and through movements) are well below the minimum side street approach volume that would warrant the consideration of installing signal control (75 vehicles per hour, vph). A copy of the MUTCD “peak hour volume” signal warrant graph is included with the Appendix Material.

3.0 PROJECT CONDITIONS

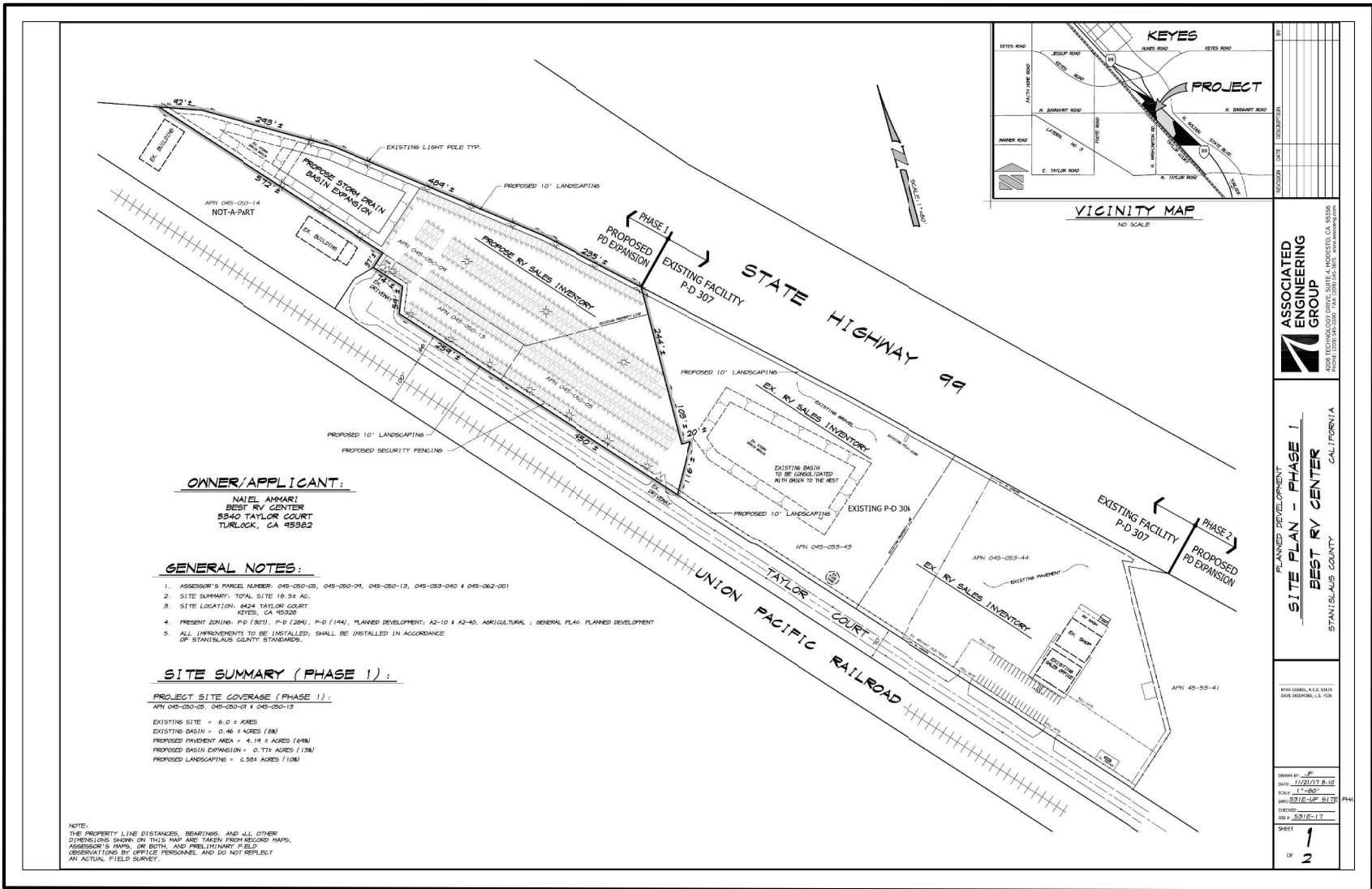
The following is a description of the proposed project, an estimate of the trip generation quantities, an assignment of the project trips to the local street system, and an evaluation of the potential project impacts on existing traffic operations. A review of the project access on Taylor Road is also provided.

Description

The Best RV Center currently includes a sales office, service department, parts counter, and RV wash facility. The sales office, parts counter and RV wash facility are open daily from 9:00 AM to 6:00 PM (7 days a week). The service department is open Monday through Friday between 9:00 AM and 5:00 PM. As previously stated, the Best RV Center project includes an expansion in two (2) phases. Phase 1 will provide additional storage area for RV sales inventory and does not propose an increase in the number of employees. Phase 2 will relocate the existing service department and parts counter to the adjacent parcels to the southeast (formally Peterbilt Truck Sales & Service Center). The project will also remodel the existing facility and include various new infrastructure improvements to facilitate the expansion (e.g. RV staging area, storm drain basins, landscaping & fencing, etc). The existing Best RV Center currently has 65 employees. It's noted that the project description in the County's "rezoning" application in 2006 only included an estimate of up to 8 employees. Therefore, this is considered the "permitted" number of employees for the operations at the existing Best RV Center. The total number of employees will increase to 90 upon the completion the Phase 2 improvements. Access will continue to be provided via multiple driveways on the east side Taylor Court. A copy of the Phase 1 and Phase 2 site plans are provided on Figures 3A and 3B, respectively.

Project Trip Generation Estimates

Weekday - As discussed in the Introduction (Section 1.0), the initial project analysis included the preparation of a Preliminary Trip Generation Analysis (May 21, 2018). The preliminary analysis documented the number of weekday peak hour trips associated with the existing operations and quantified the "net" increase in trips associated with the proposed project (Phase 1 and 2). The trip generation associated with the existing weekday operations was based on new traffic count data collected along Taylor Court. Detailed descriptions of the Taylor Court traffic count data and derivation of the trip generation rates are included in the Preliminary Trip Generation Analysis (included with the Appendix Material). The "average" weekday peak hour trip generation rates for the 2006 (permitted), 2018 (current), and proposed (upon completion of Phase 2) operations are presented in Table 4A. A copy of the weekday trip rate calculations is included with the Appendix Material. It's noted that the number of weekday daily trips is based on data in the Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition), Land Use (LU) Code 842 (Recreational Vehicle Sales).



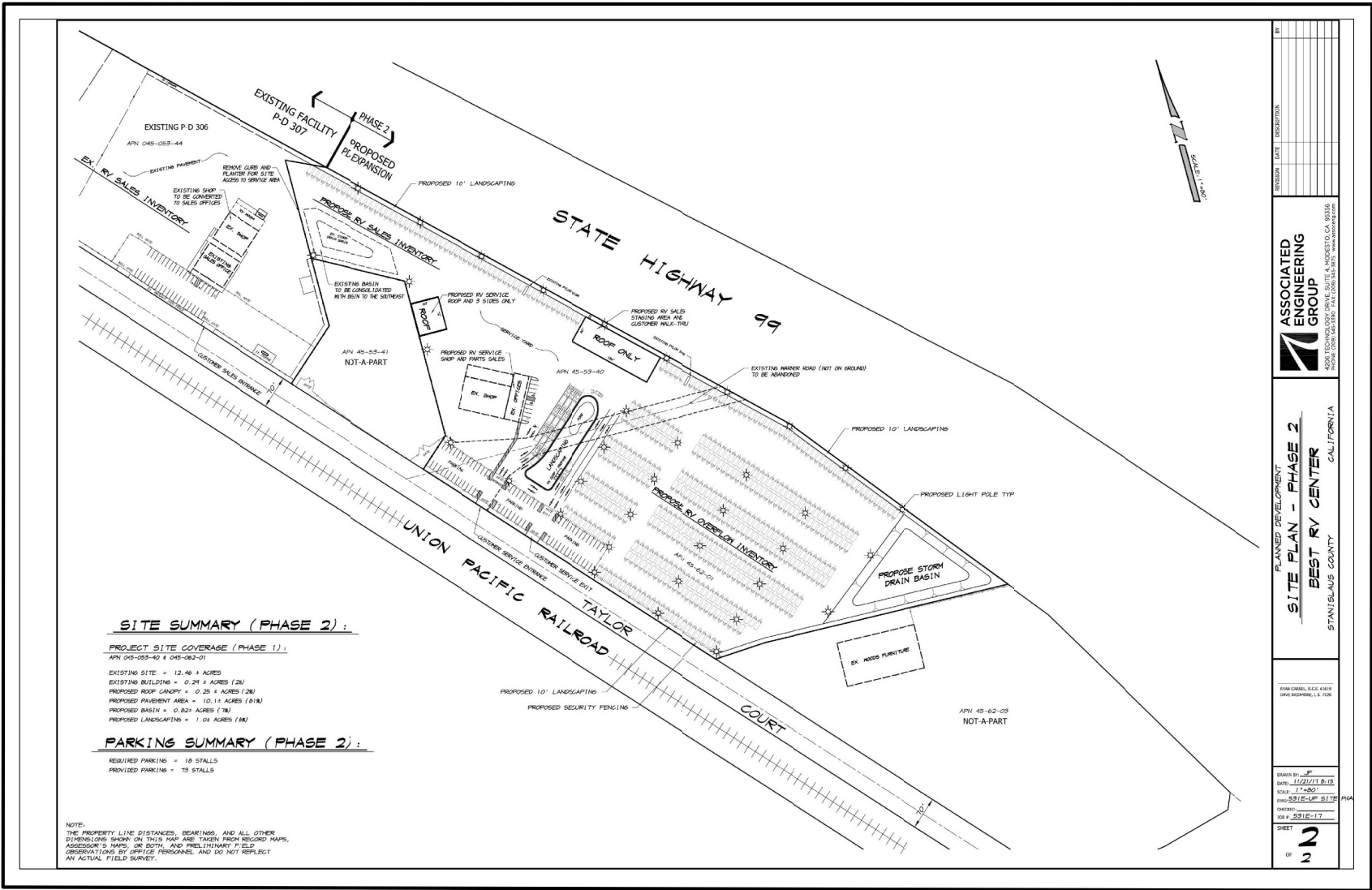


Table 4A - Best RV Center “Weekday” Trip Generation Rates and Trips

Project Component	Number of Vehicle Trips				
	AM Peak Hour		PM Peak Hour		Daily
	In	Out	In	Out	
<u>Trip Generation Rate per Employee:</u>					
- Best RV Center Existing Operations	0.663	0.106	0.219	0.525	7.88 (a)
2006 Permitted Operations (8 Employees) -	5	1	2	4	64
Current 2018 Operations (65 Employees) -	43	7	14	34	512
Completion of Phase 2 (90 Employees) -	60	10	20	47	710
“Net” Change (2018 - 2006):	+38	+6	+12	+30	+448
“Net” Change (Phase 2 - 2006):	+55	+9	+18	+43	+646

(a) Rate based on data in ITE Trip Generation Manual (10th Ed.), LU Code 842

The data in Table 4A indicates that the existing Best RV Center operations generate approximately 0.769 trips per employee during the AM peak hour and 0.744 trips per employee during the PM peak hour. The existing trip generation rates are considered reasonable as these actual rates are very close to the average rates in the ITE Trip Generation Manual. The existing 2018 operations generate about 8 times more traffic as compared to the permitted number of employees in 2006. The completion of Phase 2 will generate a “net” increase over the 2006 trip generation of 646 daily trips, 64 trips during the AM peak hour (55 in & 9 out) and 61 trips during the PM peak hour (18 in & 43 out).

As described under the Existing Conditions (Section 2.0), the morning peak hour for all the study intersections along Taylor Road was between 7:00 and 8:00 AM. A review the traffic count data demonstrates that the morning peak hour on Taylor Court was between 8:00 and 9:00 AM, which is reflective of the Best RV Center opening at 9:00 AM. Traffic on Taylor Court was about 51% higher between 8:00 and 9:00 AM, but the total volumes at the Taylor Road / Taylor Court intersection were about 9% lower during the same period. The weekday trip generation presented in the Table 4A represents the morning peak hour for the existing operations at the Best RV Center (8:00 - 9:00 AM). It’s noted that the traffic count data during the afternoon peak hour was more consistent throughout the period.

Weekend Day - Similar to the methodology for documenting the existing weekday peak hour trip generation, new traffic count data was collected along Taylor Court on a Saturday and Sunday (Sept. 22 & 23, 2018). The new data was used to identify the Saturday Mid-Day (MD) peak hour (highest 60-minute period between 1:00 and 3:00 PM) and the corresponding trip generation associated with the operations at the existing Best RV Center. The Saturday MD peak hour was between 1:00 and 2:00 PM (48 vph). Data provided by the project applicant indicates there were 36 employees at work on Saturday. The Saturday MD peak hour trip generation rates and number

of trips are presented in Table 4B. A copy of the weekend day trip rate calculations is included with the Appendix Material.

Table 4B - Best RV Center “Saturday” Trip Generation Rates and Trips

Project Component	Number of Vehicle Trips	
	Mid-Day Peak Hour	
	In	Out
<u>Trip Generation Rate per Employee:</u>		
- Best RV Center Existing Operations	0.694	0.611
2018 Current Operations (36 Employees) -	25	22

The data in Table 4B indicates that the existing Best RV Center operations generate approximately 1.305 trips per employee during a Saturday MD peak hour. The Saturday MD peak hour trip generation rates is 70-75% higher than the weekday peak hour trip generation, which is expected.

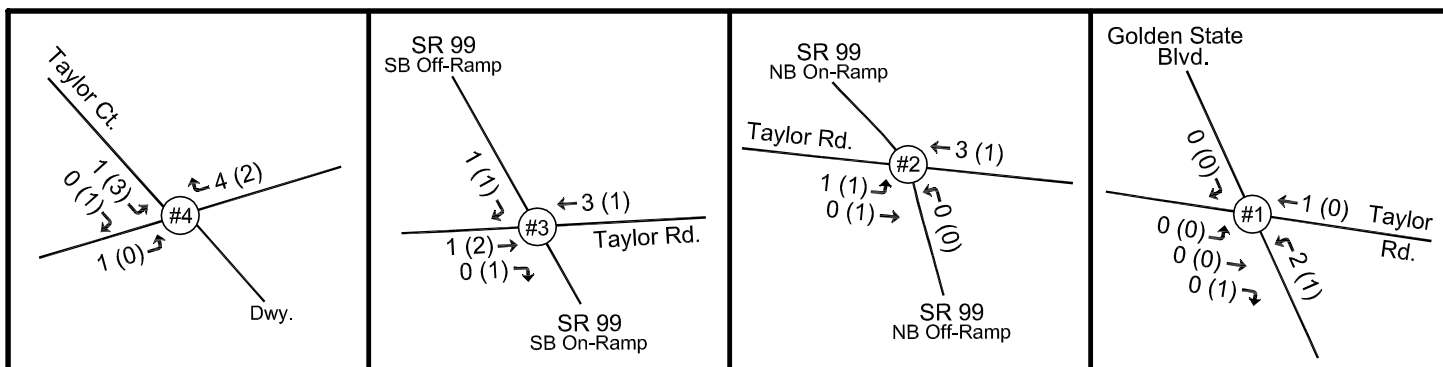
The ADT volumes on Taylor Court for both weekend days were compared to the average weekday volume documented in the Preliminary Trip Generation Analysis and illustrated on Figure 2B (between project site and Wood Furniture Gallery, 585 ADT). Daily traffic on Saturday was about 16% lower than the average weekday volume. Sunday traffic was approximately 35% lower than the average weekday volume.

Project Weekday Traffic Volumes

As stated in the Introduction (Section 1.0), the TIA presents an evaluation of the potential project impacts on weekday traffic operations. The trips associated with each project site scenario were assigned to the local street system based on a review of existing peak hour travel patterns at the SR 99 / Taylor Road and Taylor Road / N. Golden State Boulevard intersection. The trip assignment percentages and Project Traffic Volumes are illustrated on Figures 4A (2006 Operations), 4B (2018 current operations), and 4C (upon completion of Phase 2).

Existing Plus Project Traffic Volumes

As previously described, the existing traffic volumes on Figure 2B represent the existing plus project scenario for the current 2018 operations at the Best RV Center. The existing traffic volumes were adjusted to reflect the existing conditions with the 2006 permitted level of operations at the Best RV Center ((existing – 2018) + 2006), representing the existing plus project volumes with the 2006 permitted operations. The existing volumes were again adjusted to reflect the existing conditions with the proposed Phase 2 level of operations ((Phase 2 - 2018) + existing), representing the existing plus project volumes for the proposed operations associated with the completion of Phase 2. Exhibits illustrating the existing plus project scenario volumes for the 2006 permitted and proposed Phase 2 operations are included with the Appendix Material.



- 8 Employees -

AM Peak Hour: 5 (In) & 1 (out)

PM Peak Hour: 2 (In) & 4 (out)

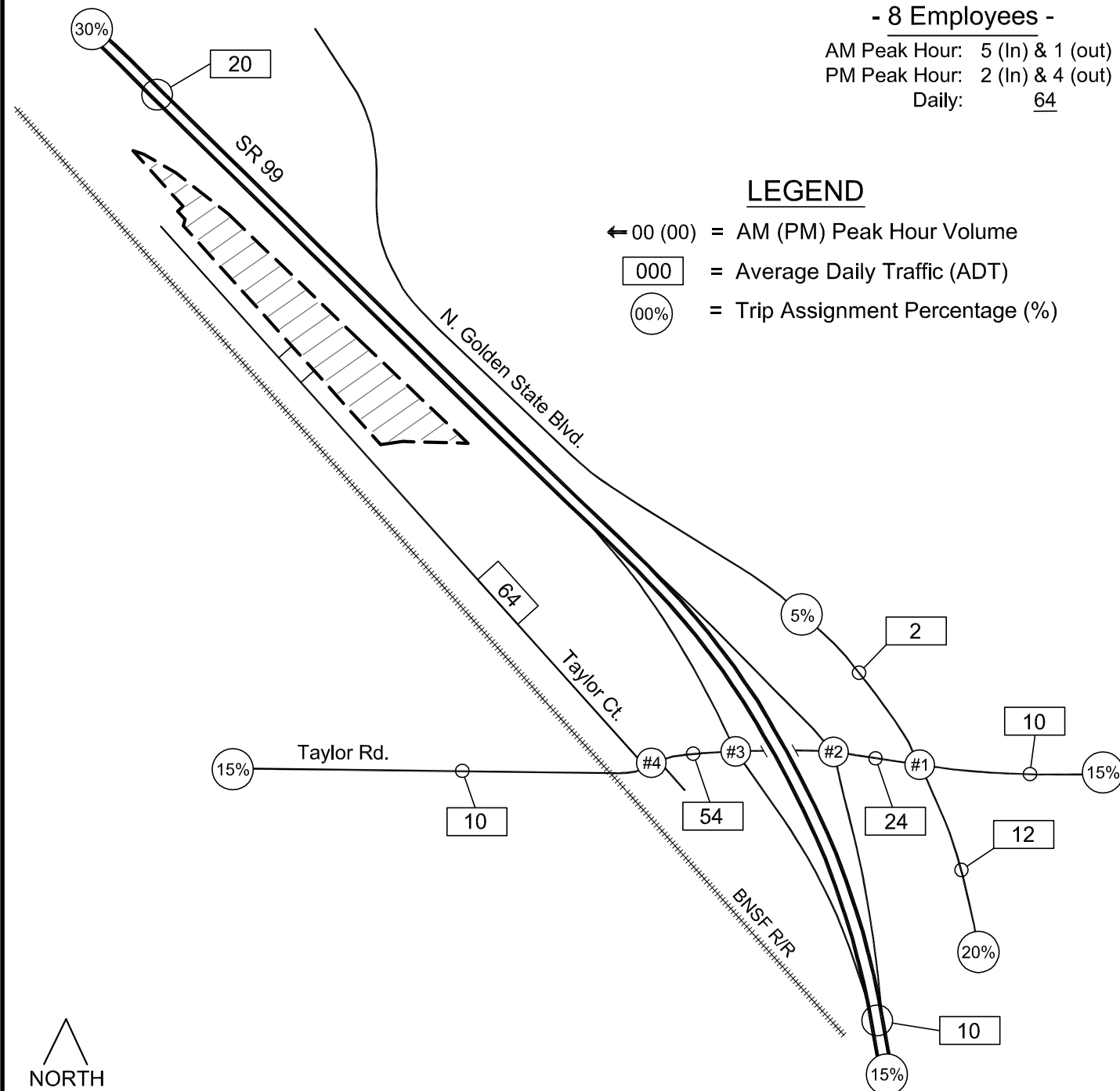
Daily: 64

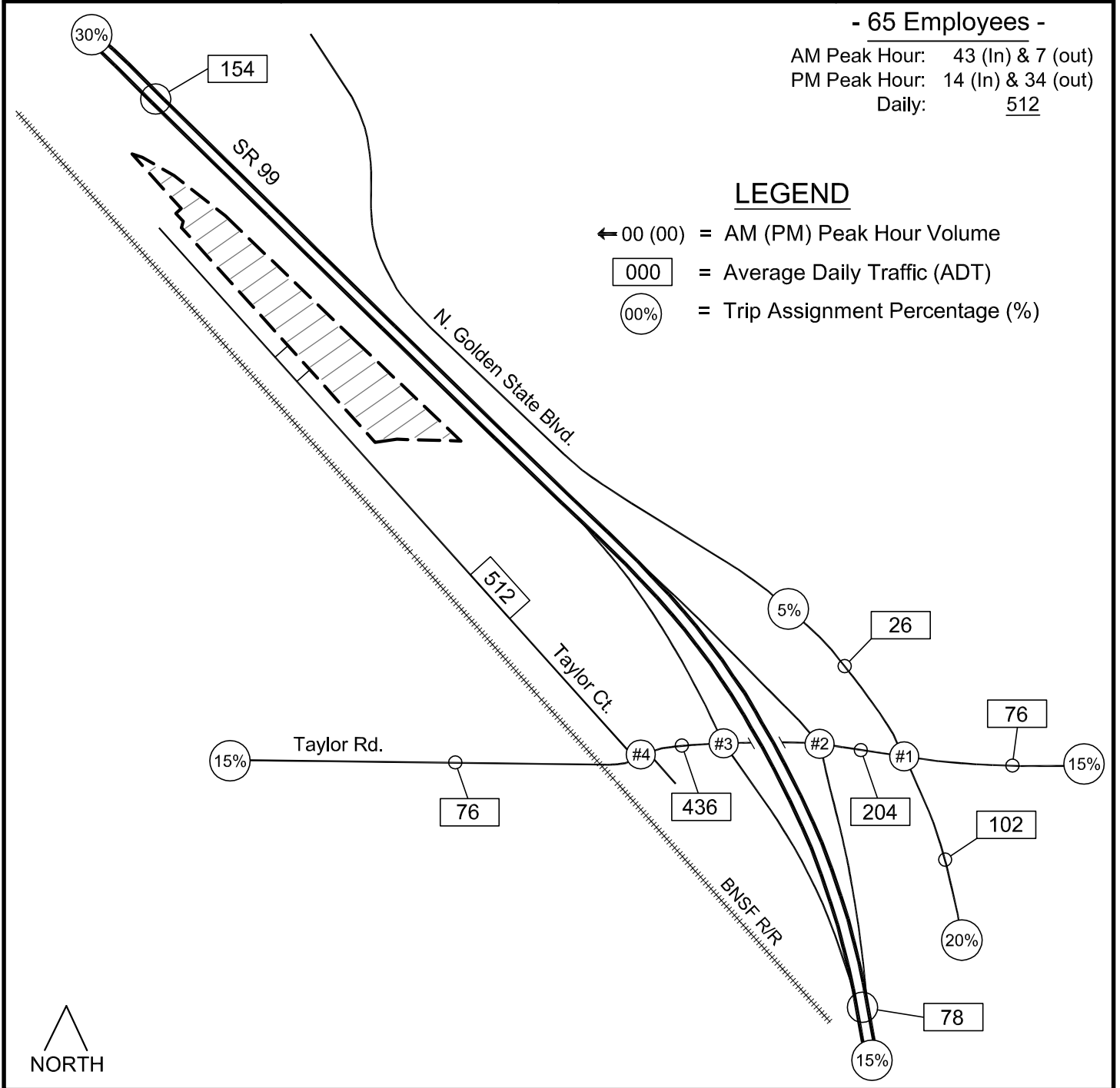
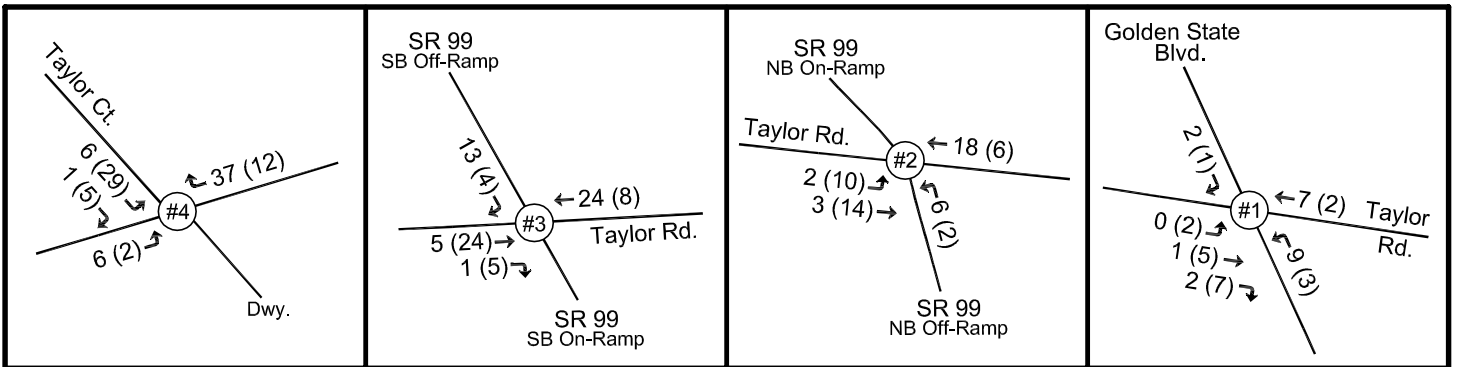
LEGEND

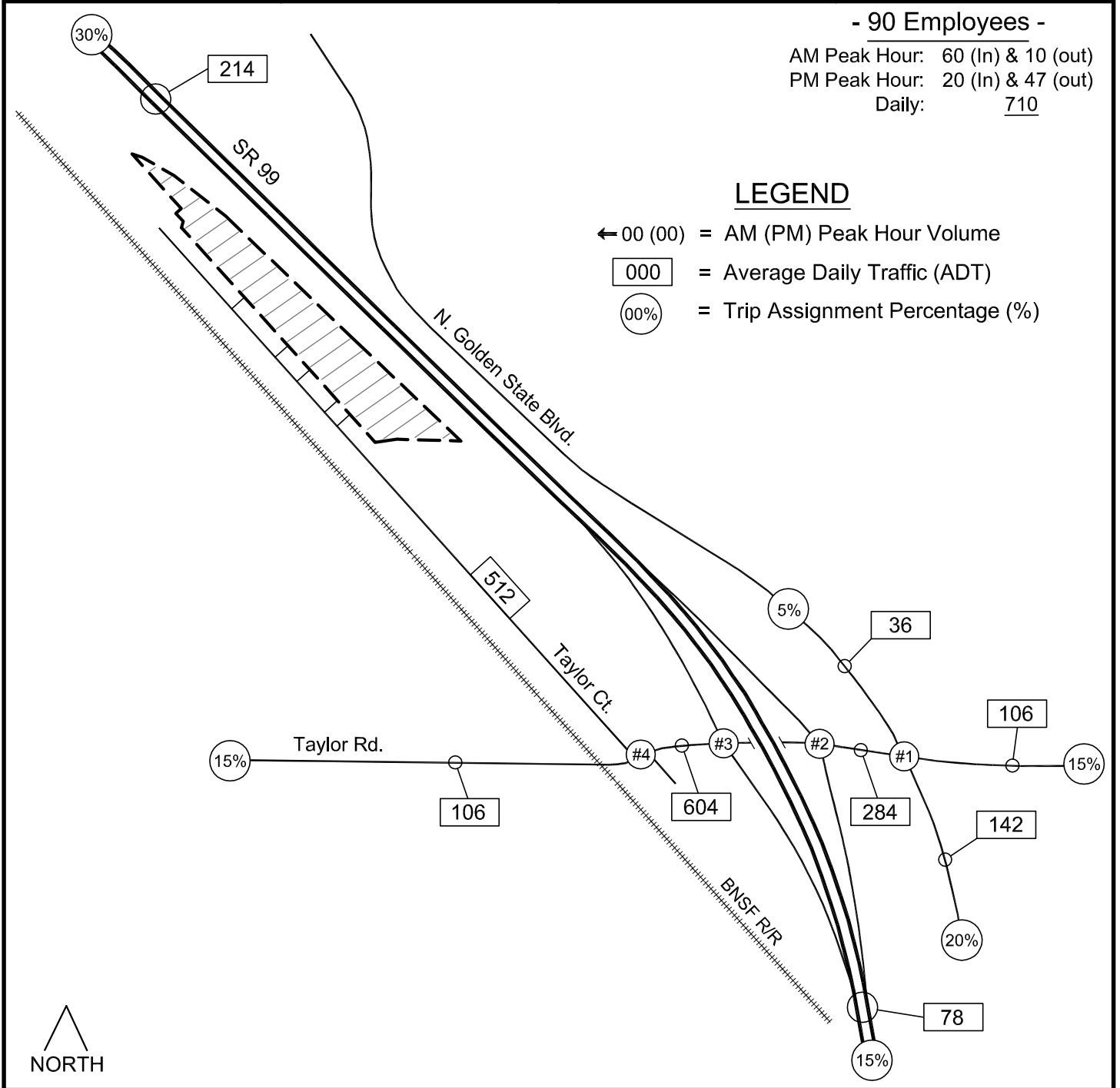
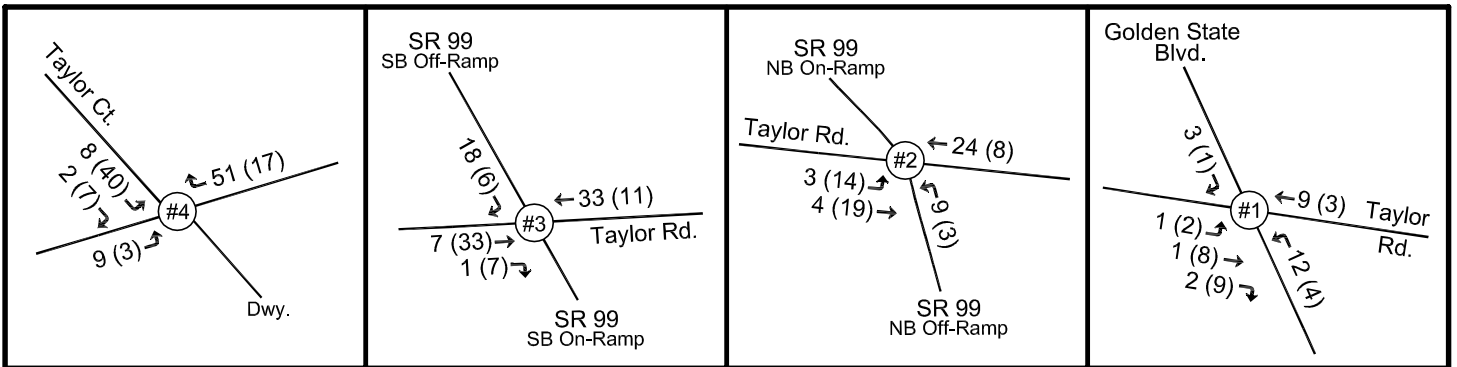
← 00 (00) = AM (PM) Peak Hour Volume

000 = Average Daily Traffic (ADT)

00% = Trip Assignment Percentage (%)







Level of Significance Criterion

The identification of potentially significant project-specific impacts was evaluated using “level of significance” criterion defined by the County and CEQA. The following general criterion were used to determine if any potentially significant impacts are attributable to the project:

- Project would substantially increase traffic relative to existing load and capacity
- Project traffic would result in operations below the acceptable thresholds:
 - Roadway, LOS D or better
 - Intersections, LOS C or better
- Project would add traffic to existing roadways / intersections that already exceed the acceptable thresholds
- Project would substantially increase hazards due to design feature or incompatible uses
- Project would result in inadequate emergency access

Level of Service Analysis

Similar to the existing conditions analysis, the existing plus project ADT volumes were compared to the standard County and City threshold criteria. The existing plus project ADT volumes and LOS values are provided in Table 5.

Table 5 - Existing Plus Project Roadway Segment (ADT) LOS Analysis

Roadway Segment	ADT – LOS		
	2006 Operations	2018 Ex. Operations	Completion of Phase 2
Taylor Rd. w/o Taylor Ct. (a)	1,134 – B	1,200 – B	1,230 – B
Taylor Rd., Taylor Ct. - SR 99 (a)	1,518 – B	1,900 – B	2,068 – C
Taylor Rd., SR 99 - N. Golden State Blvd. (b)	23,520 – C	23,700 – C	23,780 – C
Taylor Rd., e/o N. Golden State Blvd. (c)	12,834 – E	12,900 – E	12,930 – E
N. Golden State Blvd., n/o Taylor Rd. (d)	6,576 – B	6,600 – B	6,610 – B
N. Golden State Blvd., s/o Taylor Rd. (e)	18,110 – A	18,200 – A	18,240 – A

- (a) LOS based on the County’s threshold for 2-lane “major collector” (rural)
- (b) LOS based on the County’s threshold for 4-lane “minor arterial”
- (c) LOS based on the County’s threshold for 2-lane “major collector” (urban)
- (d) LOS based on the County’s threshold for 4-lane “minor arterial”
- (e) LOS based on the City’s threshold for 4-lane “expressway”

The data in Table 5 indicates that existing plus project ADT volumes on Taylor Road west of N. Golden State Boulevard and on N. Golden State Boulevard north of Taylor Road will remain

within acceptable limits as defined by Stanislaus County (LOS D or better). Existing plus project ADT volumes on Taylor Road east of N. Golden State Boulevard will continue in the LOS E range, without or with the project traffic (all scenarios). However, based on the City's 2-lane arterial LOS threshold the existing plus project ADT volumes will be in the LOS C range (all scenarios). Existing plus project ADT volumes on N. Golden State Boulevard south of Taylor Road will remain in the LOS A range based on the City's LOS thresholds. Based on the County's LOS thresholds the project will have a potentially significant impact on Taylor Road east of N. Golden State Boulevard (current 2018 and future Phase 2 operations).

To evaluate the potential project impacts on peak hour operations, the study intersections were again analyzed using the Synchro 9 software and existing PHF (representing operations during the peak 15-minute period within the peak hour). The results of the existing plus project intersection LOS analysis are presented in Table 6. Copies of the Synchro 9 LOS worksheets are included with the Appendix Material.

Table 6 - Existing Plus Project Intersection LOS Analysis

Study Intersection on Taylor Road	Traffic Control	Peak Hour	Average Delay - LOS		
			2006 Operations	Existing 2018 Operations	Proposed Phase 2 Operations
N. Golden State Blvd.	Signal	AM PM	24.2 – C 27.3 – C	24.3 – C 27.5 – C	24.4 – C 27.6 – C
SR 99 – NB Ramps (a)	NB Stop	AM PM	3.7 – A (23.4 – C) 10.0 – B (>50 – F)	3.7 – A (23.4 – C) 10.7 – B (>50 – F)	3.7 – A (23.4 – C) 11.3 – B (>50 – F)
SR 99 – SB Ramps (a)	EB-WB Stop	AM PM	>50 – F (>50 – F) 24.3 – C (>50 – F)	>50 – F (>50 – F) 46.8 – E (>50 – F)	>50 – F (>50 – F) >50 – F (>50 – F)
Taylor Ct. (a)	SB-NB Stop	AM PM	0.6 – A (9.6 – A) 2.6 – A (9.3 – A)	0.9 – A (9.6 – A) 3.7 – A (9.6 – A)	1.1 – A (9.6 – A) 4.0 – A (9.7 – A)

(a) Highest delay on stop sign controlled approaches

The data in Table 6 indicates that average delays at the N. Golden State Boulevard and Taylor Court intersections will remain within acceptable limits during both peak hours (LOS C or better). Average delays at the SR 99 Northbound Ramps intersection will also remain with acceptable limits, but delays on the SR 99 northbound off ramp will remain in the LOS F range during the PM peak hour. Average delays at the SR 99 Southbound Ramps intersection and delays on Taylor Road (both approaches) will be in the LOS E-F range during both peak hours. Based on the

County's LOS thresholds the project will have a potentially significant impact on peak hour operations at the SR 99 Northbound Ramps and SR 99 Southbound Ramps intersections (current 2018 and future Phase 2 operations).

Signal Warrant Analysis

The analysis of existing plus project conditions documented significant delays on Taylor Road at the SR 99 Southbound Ramps intersection during both peak hours. The existing plus project peak hour volumes at the Taylor Road / SR 99 Southbound Ramps intersection were again reviewed to determine if the minimum "peak hour volume" signal warrant criteria would be satisfied (2014 MUTCD). The existing traffic volumes with the 2006 permitted and proposed Phase 2 operations exceed the minimum 70% signal warrant criteria during the AM and PM peak hours. A review of the 70% signal warrant graph indicates that the minimum criteria would even be exceeded without any traffic generated by the Best RV Center site. The existing plus project volumes (2006 permitted or proposed Phase 2) also exceed the 100% signal warrant criteria during the PM peak hour. The existing plus project volumes (proposed Phase 2) on the SR 99 northbound off ramp (left and through movements) are well below the minimum side street approach volume that would warrant the consideration of installing signal control (75 vehicles per hour, vph). A copy of the MUTCD "peak hour volume" signal warrant graph is included with the Appendix Material.

Project Access

As previously stated, the TIA includes an evaluation of access on Taylor Road at Taylor Court. Taylor Road extends west of Taylor Court along a short horizontal curve to the north (R=250' & L=135') over the BNSF railroad tracks. Taylor Road extends east of Taylor Court along a short horizontal curve to the south (R=600' & L=220') towards the SR 99 interchange. There is also a small vertical curve on Taylor Road at the BNSF railroad crossing, which is gated.

The evaluation of sight distance was based on the Caltrans criterion. The criterion are described in the Highway Design Manual (HDM, Chapter 200 and Chapter 400). Stopping sight distance is the minimum distance required by a driver to bring a vehicle to a complete stop after an object on the roadway has become visible. Corner sight distance is the minimum time required for a waiting vehicle (e.g. on a side street or driveway) to either cross all lanes of through traffic, or cross the near lanes of through traffic and turn left or right, without requiring the through traffic to radically alter their speed.

Taylor Road has a single travel lane in each direction adjacent to Taylor Court. Looking east along Taylor Road from Taylor Court the line of sight is relatively unobstructed. Westbound vehicles on Taylor Road and southbound vehicles on the SR 99 Southbound off ramp can be seen at the SR 99 Southbound Ramps intersection (450-500'). The westbound vehicles on Taylor Court are stop controlled, and therefore, are not traveling at a high speed when approaching Taylor Court. Vehicles on the SR 99 Southbound off-ramp are yield controlled and were also not observed

traveling at a high speed as they make the right turn on to Taylor Road. The line of sight looking west along Taylor Road from Taylor Court is somewhat obstructed by existing vegetation (on north side of Taylor Road west of Taylor Court) and multiple commercial signs within the public right-of-way (Best RV Center and Thermo King).

The evaluation of sight distance at Taylor Court included collecting a random sampling of vehicle speeds on Taylor Road (copy included with Appendix Material). As previously described, Taylor Road extends west of Taylor Court along a short horizontal curve and there is a small vertical curve over the BNSF railroad tracks. Eastbound vehicles on Taylor Road were observed slowing down on the approach to Taylor Court to go through the horizontal curve and over the railroad tracks. The average speed of eastbound vehicles was recorded at 30 MPH and the 85th percentile speed was calculated at 33 MPH.

Sight distance for eastbound vehicles was measured by placing a portable delineator on the north side of Taylor Road (near stop limit line on Taylor Court) and at a 15' setback (Caltrans criteria). Eastbound stopping sight distance was measured at 435' (adequate for 50 MPH). The corner sight distance was measured at 415', which is adequate for 35 MPH. The sight distance measurements demonstrate that there is sufficient stopping and corner sight distance at the Taylor Road / Taylor Court intersection. It's noted that sight distance on Taylor Road could be improved by trimming the existing vegetation and relocating the commercial signs outside the public right-of-way.

4.0 GENERAL PLAN CONDITIONS

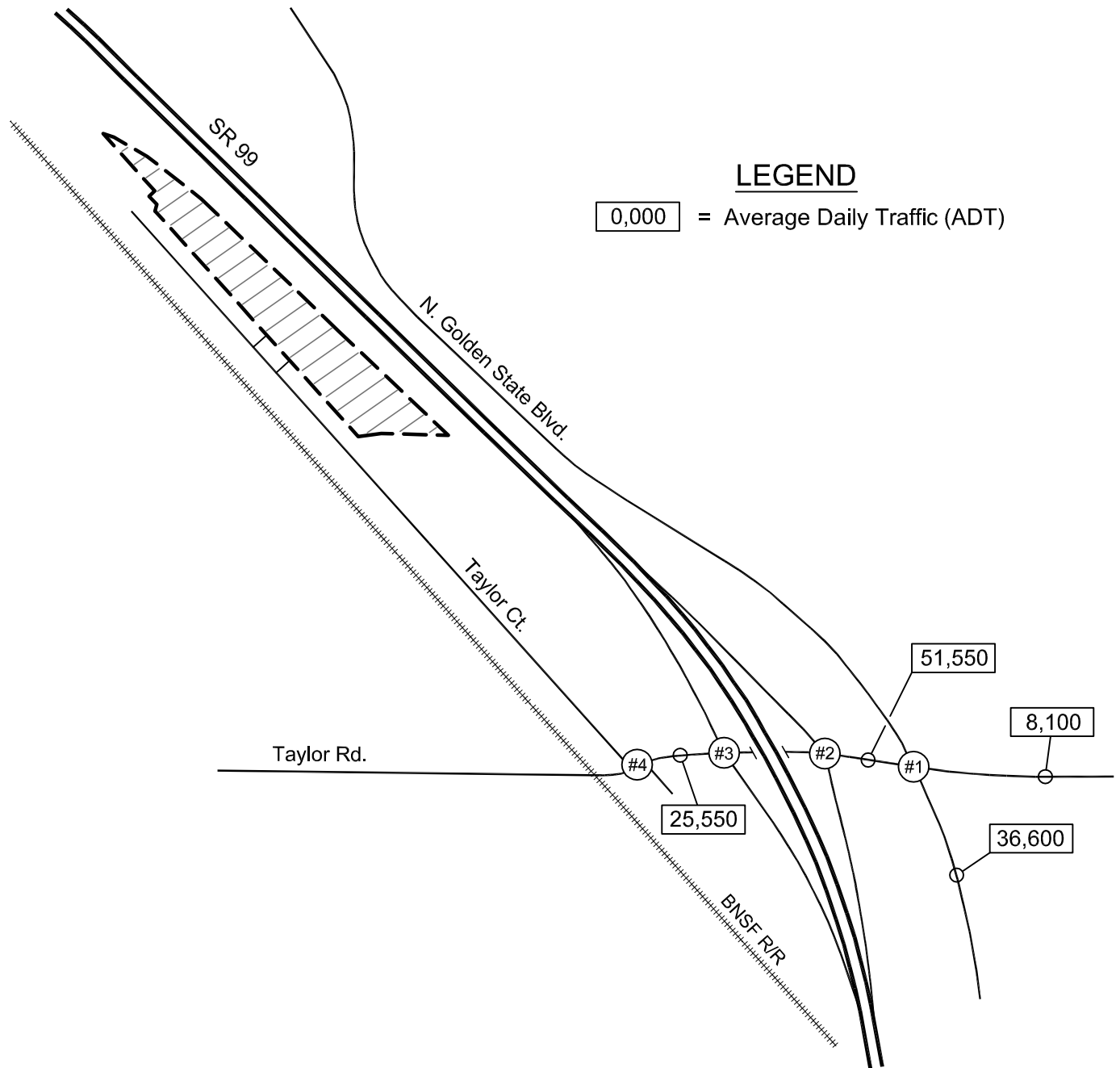
The TIA scope defined for the Best RV Center project included an evaluation of General Plan traffic conditions. As stated in the Introduction (Section 1.0), the City of Turlock's CFF Nexus Study has identified a need for improvements at the State Route (SR) 99 / Taylor Road interchange. The evaluation of existing operations (Section 2.0) confirms that vehicle delays are currently in the LOS E-F range at the SR 99 / Taylor Road interchange intersections during one or both peak hours. Stanislaus County will be participating in the funding of the interchange improvements and will be requiring new projects in this portion of the County to pay their fair-share towards the future interchange improvements. Therefore, County staff has requested that the Best RV Center TIA include a determination of the project's fair-share percentage towards the future SR 99 / Taylor Road interchange improvements.

The most current General Plan information for Taylor Road and N. Golden State Boulevard was obtained from the City of Turlock. The information includes the General Plan ADT projections and future roadway classifications needed to provide acceptable LOS. The General Plan traffic data does not include any peak hour direction turning movement projections, but it's assumed that the weekday PM peak hour would continue comprises about 9-10% of the daily total. The City's General Plan ADT projections for Taylor Road and N. Golden State Boulevard are illustrated on Figure 5.

The City's General Plan information indicates that Taylor Road west of SR 99 will have a 4-lane expressway section, while the section between SR 99 and N. Golden State Boulevard will have a 6-lane expressway section. Taylor Road east of N. Golden State Boulevard will continue to be classified as a 2-lane collector street. N. Golden State Boulevard south of Taylor Road will also have a 6-lane expressway section. The County and City of Turlock have indicated that there is no specific project for the needed SR 99 / Taylor Road interchange improvements at this time. Though Caltrans currently has a project for improvements at the SR 99 / Fulkerth Road interchange (completion scheduled for December 2019), there is no improvement project for the SR 99 / Taylor Road interchange at this time.

Project Traffic Volumes for General Plan Analysis

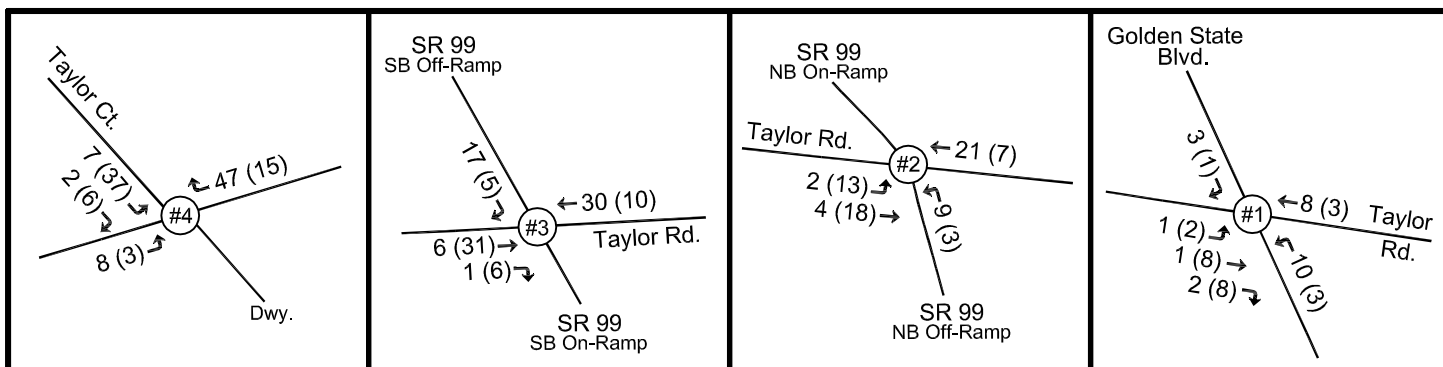
The General Plan ADT traffic projections illustrated on Figure 5 are considered representative of base-line conditions for this scenario. As described under the Project Conditions (Section 3.0), the existing Best RV Center currently has 65 employees. Upon completion of the proposed Phase 2 project, the Best RV Center will have a total of 90 employees. However, the County's "rezoning" approval in 2006 only included an estimate of up to 8 employees. Therefore, the evaluation of potential project impacts presents an analysis of the "net" increase in employee trips between 2006 and through the completion of Phase 2 (+82 employees). The "net" increase in trips associated with the Best RV Center site development (between 2006 and through Phase 2) are illustrated in Figure 6 (project volumes on Figure 4C - project volumes on Figure 4A).



LEGEND

0,000 = Average Daily Traffic (ADT)

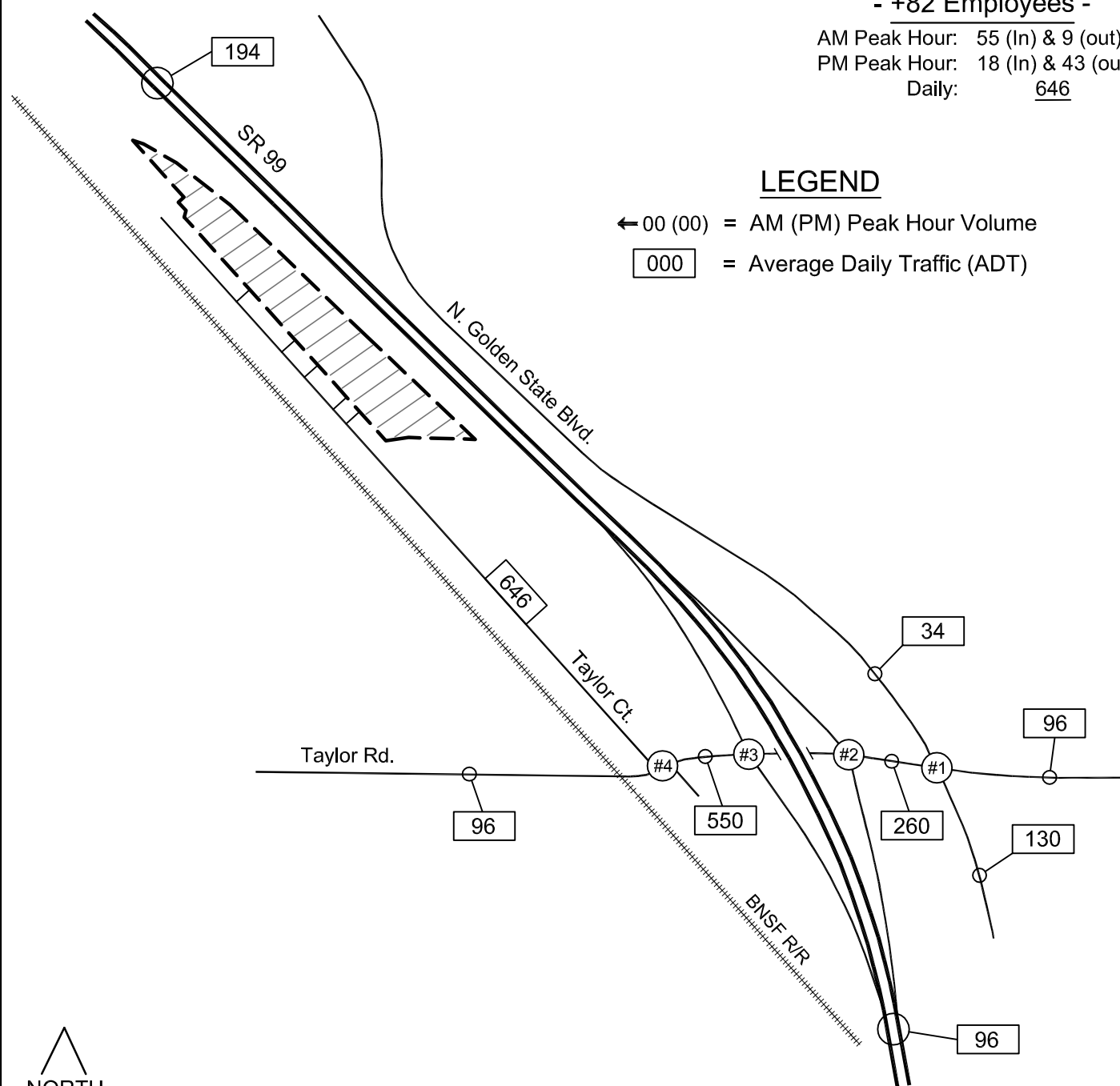




- +82 Employees -
 AM Peak Hour: 55 (In) & 9 (out)
 PM Peak Hour: 18 (In) & 43 (out)
 Daily: 646

LEGEND

← 00 (00) = AM (PM) Peak Hour Volume
 [000] = Average Daily Traffic (ADT)



Level of Service Analysis

Similar to the analysis conducted for the existing and project conditions, the General Plan base-line ADT projections (Figure 5) and General Plan plus project ADT volumes (Figure 5 plus Figure 6) were compared to the standard threshold criteria. Since the General Plan ADT traffic projection data was obtained from the City of Turlock, the City's LOS thresholds for roadway segments was used for the General Plan analysis. The General Plan roadway segments, General Plan base-line ADT projections (Figure 5), General Plan plus project ADT volumes, and LOS values are provided in Table 7.

Table 7 - General Plan and General Plan Plus Project
Roadway Segment (ADT) LOS Analysis

Roadway Segment	ADT – LOS	
	GP Base-Line	GP Plus Project “Net” Increase (Phase 2 - 2006)
Taylor Rd. w/o SR 99 (a)	25,550 – B	26,100 – B
Taylor Rd., SR 99 - N. Golden State Blvd. (b)	51,550 – D	51,810 – D
Taylor Rd., e/o N. Golden State Blvd. (c)	8,100 – B	8,196 – B
N. Golden State Blvd., s/o Taylor Rd. (b)	36,600 – B	36,730 – B

(a) LOS based on the City's threshold for 4-lane “expressway”

(b) LOS based on the City's threshold for a 6-lane “expressway”

(c) LOS based on the City's threshold for a 2-lane “collector”

The data in Table 7 indicates that the General Plan ADT base-line projections on Taylor Road and N. Golden State Boulevard will be within acceptable limits as defined by Stanislaus County (LOS D or better). In addition, the traffic generated by the Best RV Center site development (between the 2006 permitted operations and through Phase 2) will not significantly impact future daily operations. Since there is no specific improvement project for the SR 99 / Taylor Road interchange at this time and the General Plan traffic projections didn't include any peak hour direction turning movements, the analysis of intersection peak hour operations was beyond the scope for the Best RV Center TIA. It's noted that the development of future geometric improvements for the SR 99 / Taylor Road interchange will require that a detailed Project Study Report (PSR) be prepared for Caltrans approval. The preparation of an Intersection Control Evaluation (ICE) for the SR 99 / Taylor Road ramp intersections will also more than likely be required to identify the best design for each side of the SR 99 freeway.

Project's Fair-Share Contribution (SR 99 / Taylor Road Interchange)

Information in the City of Turlock's CFF Nexus Study outlines the fees associated with the various land uses for the CFF Benefit Zones (Downtown Pedestrian Priority Area, Master Plan Area, and

City Infill Area). However, the Best RV Center site is not located within either of the CFF Benefit Zones. The City's CFF Nexus Study does provide an estimate for the future improvements at the SR 99 / Taylor Road interchange (CFF Update Table - \$10,363,703). Based on the City's General Plan ADT projections the Best RV Center site development (2006 through the completion of Phase 2) comprises approximately 2.11% of the General Plan plus project volumes on the west side of SR 99 (550 / 26,100) and about 0.50% of the General Plan plus project volumes on the east side of SR 99 (260 / 51,810). The project volumes on Figure 6 indicate that 194 ADT would use SR 99 to the north and 96 ADT would use SR 99 to the south (a total of 290 ADT on SR 99), with the remaining trips using Taylor Road east or west of SR 99. Therefore, the Best RV Center site development would comprise approximately 1.13% of the General Plan plus project volumes using the SR 99 interchange ramps (290 / (51,810 - 26,100)). The project applicant shall negotiate the fair-share contribution towards the future SR 99 / Taylor Road interchange improvements with the County and City of Turlock. As discussed with County and City staff, further development of the Best RV Center site may be eligible for some fee credits since Phase 2 will be developed on the former site of the Peterbilt Truck Sales & Service Center.

County's Public Facilities Fee

The Best RV Center project will also be subject to the County's Public Facilities Fee, which is outlined in the Comprehensive Public Facilities Impact Fee Update Study. The public facilities fee also includes the County's Regional Traffic Impact Fee (RTIF). The County's 2018 fee schedule does not include a specific category for a RV sales or service facility. The land use category that best matches the Best RV site development is the "small retail" commercial category (<50,000 SF). Phase 1 of the Best RV Center project does not include any additional building space. Phase 2 includes two (2) new small buildings (3 sides with roof only). The proposed RV sales staging area is 10,800 SF (60' x 180') and the proposed RV service area is 4,320 SF (60' x 72'). The total area associated with Phase 2 is 15,120 SF (10,800 + 4,320). The County's Public Facilities Fee for a small retail use in the unincorporated areas is \$3,218 / 1,000 SF. Therefore, the County's Public Facilities Fee is estimated at \$48,656 (15.12 x \$3,218). Again, it's noted that the project applicant shall negotiate the Public Facilities Fee with County staff as the further development of the Best RV Center site may be eligible for some fee credits (Phase 2 will be developed on the former Peterbilt Truck Sales & Service Center site).

5.0 MITIGATION MEASURES AND RECOMMENDATIONS

As documented in the existing conditions analysis, existing ADT volumes on Taylor Road east of N. Golden State Boulevard are within the LOS E range based on the County's LOS thresholds. However, based on the City's LOS thresholds for a 2-lane arterial the existing ADT volume are within the LOS C range. The City's General Plan projections for this segment of Taylor Road indicate that future daily volumes would be lower than existing volumes. The General Plan plus project ADT projections will be within the LOS B range, and therefore, no mitigation measures are proposed for this segment of Taylor Road.

The analysis of existing peak hour operations documented delays within the LOS E-F range at the SR 99 Southbound Ramps intersection, on Taylor Road, and on the SR 99 northbound off ramp during one or both peak hour periods. Observations conducted during the morning and afternoon commuter peak periods verified the existing congestion, especially during the PM peak hour. The existing AM and PM peak hour volumes at the SR 99 Southbound Ramps intersection exceed the minimum 70% signal warrant criteria (PM peak hour volumes also exceed 100% warrant criteria).

The installation of "all-way" stop control at the SR 99 Southbound Ramps intersection as a possible "interim" solution would create significant vehicle queues on the southbound off ramp. The installation of signal control at the SR 99 Southbound Ramps intersection would result in average delays within the LOS B range but would create significant queues on the southbound off ramp, possibly extending up to the SR 99 freeway section. It was also thought that widening the SR 99 southbound office ramp to provide 2 lanes for the free-flowing left turn movement may reduce congestion and delays. However, when modeled (Synchro 9 software) this improvement did not reduce the significant delays on Taylor Road. The Synchro 9 LOS worksheets are included with the Appendix Material. There are no feasible mitigation measures that will reduce congestion and delays at the SR 99 / Taylor Road interchange. Significant improvements to the SR 99 / Taylor Road interchange will be required to provide acceptable LOS.

The analysis of existing plus project operations identified potentially significant project impacts at the SR 99 Northbound and Southbound Ramps intersections (current 2018 and proposed Phase 2 operations). As stated under the Existing Conditions (Section 2.0), much of the congestion during the PM peak period was related to the close spacing of intersections on Taylor Road at the SR 99 interchange. Again, there are no feasible mitigation measures that will reduce congestion and delays at the SR 99 / Taylor Road interchange without significant improvements. Therefore, the project's proposed mitigation measures include payment of the County's Public Facilities Fee and negotiation of a reasonable fair-share contribution towards the future improvements at the SR 99 / Taylor Road interchange.

The project applicant should consider developing Transportation Demand Management (TDM) strategies to reduce employee vehicle peak hour trips (e.g. provide incentives to employees to carpool / rideshare, provide shuttle service for employees, provide bicycle storage facilities, etc).

Local Roadway Recommendations

The following recommendations are based on the project area site visit and analysis of existing conditions, and are provided for the County's and City's consideration only:

- Restripe stop limit line and STOP pavement markings on Taylor Court at Taylor Road
- Trim existing vegetation on north side of Taylor Road, west of Taylor Court to improve sight distance at the Taylor Road / Taylor Court intersection
- Relocate existing commercial signs within the public right-of-way (northwest corner) to improve sight distance at the Taylor Road / Taylor Court intersection
- Install KEEP CLEAR pavement markings on Taylor Road for eastbound traffic at the SR 99 northbound off ramp
- Work with Stanislaus Regional Transit (StaRT) and Turlock Transit to develop local bus stops on Taylor Road
- Develop bike lane facility improvements along Taylor Road
- Consider restriping the existing eastbound lane between the SR 99 Southbound Ramps and N. Golden State Boulevard intersections to provide two (2) through eastbound lanes

END

APPENDIX MATERIAL

- Existing Weekday Peak Hour Count Summary
- Weekday AM and PM Peak Period Traffic Count Data (Tuesday - Sept. 25, 2018)
- Saturday and Sunday Traffic Count Data (Sept. 22 & 23, 2018)
- Level of Service (LOS) LOS Descriptions
- Stanislaus County Roadway Segment Level of Service (LOS) Criteria
- City of Turlock Average Daily Traffic (ADT) Thresholds
- Synchro 9 Software LOS Worksheets
- Best RV Center Weekday and Weekend Data Trip Generation Calculation Data
- Existing Plus Project Volumes (2006 and Phase 2 Operations)
- 2014 California MUCTD Traffic Signal Warrant Graphs
- Vehicle Speed Data on Taylor Road at Taylor Court
- Best RV Center Preliminary Trip Generation Analysis (PTE; May 21, 2018)

PINNACLE TRAFFIC ENGINEERING

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Best RV Center Project; Stanislaus County, CA

- Existing Weekday Peak Hour Count Summary (Tuesday - Sept. 25, 2018) -

- Taylor Road Study Intersection Totals -						
<u>Period</u>	<u>Taylor Court</u>	<u>SB 99 SB Ramps</u>	<u>SB 99 NB Ramps</u>	<u>Golden State</u>	<u>15-Min. Totals</u>	<u>60-Min. Totals</u>
7:00 - 7:15 AM:	43	198	514	593	1,348	
7:15 - 7:30 AM:	47	295	641	749	1,732	
7:30 - 7:45 AM:	44	278	568	747	1,637	
7:45 - 8:00 AM:	44	330	584	779	1,737	6,454
8:00 - 8:15 AM:	39	222	441	593	1,295	6,401
8:15 - 8:30 AM:	41	204	368	470	1,083	5,752
8:30 - 8:45 AM:	35	247	418	515	1,215	5,330
8:45 - 9:00 AM:	48	273	444	536	1,301	4,894
AM Peak Hour: 7:00 - 8:00				PHF = 6,454 / 4 x 1,737 = 0.929		

7:00 - 8:00 AM:	178	1,101	2,307	2,868
8:00 - 9:00 AM:	163	946	1,671	2,114
% Difference:	109%	116%	138%	136%

- Taylor Road Study Intersection Totals -						
<u>Period</u>	<u>Taylor Court</u>	<u>SB 99 SB Ramps</u>	<u>SB 99 NB Ramps</u>	<u>Golden State</u>	<u>15-Min. Totals</u>	<u>60-Min. Totals</u>
4:00 - 4:15 PM:	29	284	497	605	1,415	
4:15 - 4:30 PM:	35	315	486	622	1,458	
4:30 - 4:45 PM:	46	323	537	626	1,532	
4:45 - 5:00 PM:	30	352	557	684	1,623	6,028
5:00 - 5:15 PM:	72	360	598	746	1,776	6,389
5:15 - 5:30 PM:	49	348	577	749	1,723	6,654
5:30 - 5:45 PM:	43	354	556	700	1,653	6,775
5:45 - 6:00 PM:	34	310	458	594	1,396	6,548
PM Peak Hour: 4:45 - 5:45 PM				PHF = 6,775 / 4 x 1,776 = 0.954		

4:45 - 5:45 PM:	194	1,414	2,288	2,879
4:00 - 5:00 PM:	140	1,274	2,077	2,537
% Difference:	139%	111%	110%	113%

National Data & Surveying Services

Intersection Turning Movement Count

Location: N Golden State Blvd & W Taylor Rd
City: Turlock
Control: Signalized

Project ID: 18-07334-005
Date: 9/25/2018

Total

NS/EW Streets:	N Golden State Blvd				N Golden State Blvd				W Taylor Rd				W Taylor Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	2 NL	1 NT	1 NR	0 NU	1 SL	1 ST	1 SR	0 SU	1 EL	1 ET	1 ER	0 EU	1 WL	1.5 WT	0.5 WR	0 WU	
7:00 AM	143	37	2	0	4	14	5	0	9	64	90	0	5	207	13	0	593
7:15 AM	157	48	2	0	9	38	6	0	10	101	144	0	4	205	25	0	749
7:30 AM	151	62	7	0	7	62	3	0	22	70	156	0	11	154	42	0	747
7:45 AM	158	112	8	0	6	31	3	0	21	87	183	0	11	127	32	0	779
8:00 AM	98	52	4	0	12	41	6	0	4	89	110	0	21	133	23	0	593
8:15 AM	80	47	8	0	5	25	5	0	6	72	81	0	8	114	19	0	470
8:30 AM	57	27	3	0	7	41	3	0	10	95	105	0	11	137	19	0	515
8:45 AM	81	29	3	0	19	28	4	0	11	102	124	0	7	110	18	0	536
TOTAL VOLUMES :	NL 925	NT 414	NR 37	NU 0	SL 69	ST 280	SR 35	SU 0	EL 93	ET 680	ER 993	EU 0	WL 78	WT 1187	WR 191	WU 0	TOTAL 4982
APPROACH %'s :	67.22%	30.09%	2.69%	0.00%	17.97%	72.92%	9.11%	0.00%	5.27%	38.51%	56.23%	0.00%	5.36%	81.52%	13.12%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	609	259	19	0	26	145	17	0	62	322	573	0	31	693	112	0	2868
PEAK HR FACTOR :	0.964	0.578	0.594	0.000	0.722	0.585	0.708	0.000	0.705	0.797	0.783	0.000	0.705	0.837	0.667	0.000	0.920
	0.798				0.653				0.822				0.893				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	2 NL	1 NT	1 NR	0 NU	1 SL	1 ST	1 SR	0 SU	1 EL	1 ET	1 ER	0 EU	1 WL	1.5 WT	0.5 WR	0 WU	
4:00 PM	103	31	3	0	11	43	7	0	11	138	146	0	8	89	15	0	605
4:15 PM	86	45	6	0	20	46	5	0	5	122	170	0	11	96	10	0	622
4:30 PM	98	28	4	0	12	36	4	0	9	130	177	0	13	105	10	0	626
4:45 PM	115	45	12	0	14	45	12	0	12	134	170	0	12	101	12	0	684
5:00 PM	131	40	10	0	17	69	4	0	9	132	204	1	6	110	13	0	746
5:15 PM	115	36	12	0	19	77	14	0	6	113	208	0	18	119	12	0	749
5:30 PM	78	39	18	0	23	65	4	0	5	139	202	0	7	111	9	0	700
5:45 PM	66	39	8	0	16	62	7	0	3	127	164	0	14	79	9	0	594
TOTAL VOLUMES :	NL 792	NT 303	NR 73	NU 0	SL 132	ST 443	SR 57	SU 0	EL 60	ET 1035	ER 1441	EU 1	WL 89	WT 810	WR 90	WU 0	TOTAL 5326
APPROACH %'s :	67.81%	25.94%	6.25%	0.00%	20.89%	70.09%	9.02%	0.00%	2.36%	40.80%	56.80%	0.04%	9.00%	81.90%	9.10%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	439	160	52	0	73	256	34	0	32	518	784	1	43	441	46	0	2879
PEAK HR FACTOR :	0.838	0.889	0.722	0.000	0.793	0.831	0.607	0.000	0.667	0.932	0.942	0.250	0.597	0.926	0.885	0.000	0.961
	0.899				0.825				0.965				0.889				

National Data & Surveying Services

Intersection Turning Movement Count

Location: SR 99 NB ramps & W Taylor Rd
City: Turlock
Control: 1-Way Stop (NB)

Project ID: 18-07334-004
Date: 9/25/2018

Total

NS/EW Streets:	SR 99 NB ramps				SR 99 NB ramps				W Taylor Rd				W Taylor Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	1 NR	0 NU	0 SL	0 ST	0 SR	0 SU	1 EL	1 ET	0 ER	0 EU	0 WL	0.5 WT	1.5 WR	0 WU	
7:00 AM	1	0	37	0	0	0	0	0	4	119	0	0	0	70	283	0	514
7:15 AM	4	0	44	0	0	0	0	0	4	215	0	0	0	71	303	0	641
7:30 AM	6	0	47	0	0	0	0	0	1	204	0	0	0	54	255	1	568
7:45 AM	6	0	47	0	0	0	0	0	1	248	0	0	0	61	221	0	584
8:00 AM	3	1	37	0	0	0	0	0	3	159	0	0	0	48	190	0	441
8:15 AM	1	0	28	0	0	0	0	0	8	133	0	0	0	46	152	0	368
8:30 AM	4	0	28	0	0	0	0	0	3	185	0	0	0	46	152	0	418
8:45 AM	6	1	39	0	0	0	0	0	3	199	0	0	0	53	143	0	444
TOTAL VOLUMES :	NL 31	NT 2	NR 307	NU 0	SL 0	ST 0	SR 0	SU 0	EL 27	ET 1462	ER 0	EU 0	WL 0	WT 449	WR 1699	WU 1	TOTAL 3978
APPROACH %'s :	9.12%	0.59%	90.29%	0.00%					1.81%	98.19%	0.00%	0.00%	0.00%	20.89%	79.06%	0.05%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	17	0	175	0	0	0	0	0	10	786	0	0	0	256	1062	1	2307
PEAK HR FACTOR :	0.708	0.000	0.931	0.000	0.000	0.000	0.000	0.000	0.625	0.792	0.000	0.000	0.000	0.901	0.876	0.250	0.900
	0.906								0.799				0.882				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	1 NR	0 NU	0 SL	0 ST	0 SR	0 SU	1 EL	1 ET	0 ER	0 EU	0 WL	0.5 WT	1.5 WR	0 WU	
4:00 PM	0	0	57	0	0	0	0	0	3	238	0	0	0	39	160	0	497
4:15 PM	1	1	31	0	0	0	0	0	5	268	0	0	0	31	149	0	486
4:30 PM	0	0	46	0	0	0	0	0	10	269	0	0	0	30	182	0	537
4:45 PM	1	1	43	0	0	0	0	0	4	280	0	0	0	47	181	0	557
5:00 PM	4	1	53	0	0	0	0	0	11	289	0	0	0	51	189	0	598
5:15 PM	2	0	48	0	0	0	0	0	7	276	0	0	0	47	197	0	577
5:30 PM	1	1	44	0	0	0	0	0	4	307	0	0	0	31	168	0	556
5:45 PM	1	0	31	0	0	0	0	0	5	259	0	0	0	35	127	0	458
TOTAL VOLUMES :	NL 10	NT 4	NR 353	NU 0	SL 0	ST 0	SR 0	SU 0	EL 49	ET 2186	ER 0	EU 0	WL 0	WT 311	WR 1353	WU 0	TOTAL 4266
APPROACH %'s :	2.72%	1.09%	96.19%	0.00%					2.19%	97.81%	0.00%	0.00%	0.00%	18.69%	81.31%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	8	3	188	0	0	0	0	0	26	1152	0	0	0	176	735	0	2288
PEAK HR FACTOR :	0.500	0.750	0.887	0.000	0.000	0.000	0.000	0.000	0.591	0.938	0.000	0.000	0.000	0.863	0.933	0.000	0.957
	0.858								0.947				0.933				

National Data & Surveying Services

Intersection Turning Movement Count

Location: SR 99 SB ramps & W Taylor Rd
City: Turlock
Control: 2-Way Stop (EB/WB)

Project ID: 18-07334-003
Date: 9/25/2018

Total

NS/EW Streets:	SR 99 SB ramps				SR 99 SB ramps				W Taylor Rd				W Taylor Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	0 NT	0 NR	0 NU	0 SL	1 ST	1 SR	0 SU	0 EL	0.5 ET	0.5 ER	0 EU	1 WL	1 WT	0 WR	0 WU	
7:00 AM	0	0	0	0	113	2	2	0	0	13	1	0	43	24	0	0	198
7:15 AM	0	0	0	0	205	0	3	0	0	17	0	0	50	20	0	0	295
7:30 AM	0	0	0	0	181	0	8	0	0	20	1	0	51	17	0	0	278
7:45 AM	0	0	0	0	240	0	7	0	0	10	3	0	44	26	0	0	330
8:00 AM	0	0	0	0	146	0	9	0	0	10	3	0	39	15	0	0	222
8:15 AM	0	0	0	0	127	1	10	0	0	18	1	0	38	9	0	0	204
8:30 AM	0	0	0	0	172	2	7	0	0	14	2	0	39	11	0	0	247
8:45 AM	0	0	0	0	189	1	13	0	0	13	1	0	33	23	0	0	273
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	1373	6	59	0	0	115	12	0	337	145	0	0	2047
					95.48%	0.42%	4.10%	0.00%	0.00%	90.55%	9.45%	0.00%	69.92%	30.08%	0.00%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	0	0	0	772	0	27	0	0	57	7	0	184	78	0	0	1125
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.804	0.000	0.750	0.000	0.000	0.713	0.583	0.000	0.902	0.750	0.000	0.000	0.852
							0.809				0.762				0.936		

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	0 NT	0 NR	0 NU	0 SL	1 ST	1 SR	0 SU	0 EL	0.5 ET	0.5 ER	0 EU	1 WL	1 WT	0 WR	0 WU	
4:00 PM	0	0	0	0	225	1	5	0	0	16	2	0	31	4	0	0	284
4:15 PM	0	0	0	0	246	2	8	0	0	23	1	0	30	5	0	0	315
4:30 PM	0	0	0	0	258	1	4	0	0	24	7	0	23	6	0	0	323
4:45 PM	0	0	0	0	282	0	3	0	0	10	5	0	41	11	0	0	352
5:00 PM	0	0	0	0	262	1	4	0	0	26	14	0	32	21	0	0	360
5:15 PM	0	0	0	0	263	0	1	0	0	27	8	0	32	17	0	0	348
5:30 PM	0	0	0	0	288	0	3	0	0	24	5	0	24	10	0	0	354
5:45 PM	0	0	0	0	248	2	6	0	0	13	6	0	26	9	0	0	310
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	2072	7	34	0	0	163	48	0	239	83	0	0	2646
					98.06%	0.33%	1.61%	0.00%	0.00%	77.25%	22.75%	0.00%	74.22%	25.78%	0.00%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	0	0	0	0	1095	1	11	0	0	87	32	0	129	59	0	0	1414
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.951	0.250	0.688	0.000	0.000	0.806	0.571	0.000	0.787	0.702	0.000	0.000	0.982
							0.951				0.744				0.887		

National Data & Surveying Services

Intersection Turning Movement Count

Location: Taylor Ct & W Taylor Rd
City: Turlock
Control: 1-Way Stop (SB)

Project ID: 18-07334-002
Date: 9/25/2018

Total

NS/EW Streets:	Taylor Ct				Taylor Ct				W Taylor Rd				W Taylor Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	1 WT	0 WR	0 WU	
7:00 AM	0	0	4	0	0	0	1	0	0	12	0	0	1	23	2	0	43
7:15 AM	0	0	0	0	0	1	0	0	3	18	0	0	1	20	3	1	47
7:30 AM	1	0	0	0	2	0	0	0	1	16	0	0	1	17	6	0	44
7:45 AM	0	0	0	0	1	0	0	0	3	9	0	0	0	18	12	1	44
8:00 AM	0	0	1	0	2	0	0	0	2	11	0	0	0	18	4	1	39
8:15 AM	0	0	0	0	5	0	0	0	1	12	0	0	5	13	5	0	41
8:30 AM	0	0	1	0	1	0	0	0	2	14	0	0	2	5	8	2	35
8:45 AM	0	0	1	0	2	0	0	0	1	9	0	0	1	14	20	0	48
TOTAL VOLUMES :	NL 1	NT 0	NR 7	NU 0	SL 13	ST 1	SR 1	SU 0	EL 13	ET 101	ER 0	EU 0	WL 11	WT 128	WR 60	WU 5	TOTAL 341
APPROACH %'s :	12.50%	0.00%	87.50%	0.00%	86.67%	6.67%	6.67%	0.00%	11.40%	88.60%	0.00%	0.00%	5.39%	62.75%	29.41%	2.45%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	1	0	4	0	3	1	1	0	7	55	0	0	3	78	23	2	178
PEAK HR FACTOR :	0.250	0.000	0.250	0.000	0.375	0.250	0.250	0.000	0.583	0.764	0.000	0.000	0.750	0.848	0.479	0.500	0.947
	0.313				0.625				0.738				0.855				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	1 WT	0 WR	0 WU	
4:00 PM	0	0	0	0	6	0	1	0	0	13	1	0	0	4	3	1	29
4:15 PM	0	0	0	0	5	0	0	0	0	16	0	0	0	10	3	1	35
4:30 PM	0	0	4	0	7	0	0	0	2	23	0	0	2	6	2	0	46
4:45 PM	0	0	1	0	7	0	0	0	0	8	0	0	0	11	3	0	30
5:00 PM	0	0	1	0	22	0	7	0	0	14	0	0	8	16	3	1	72
5:15 PM	0	0	3	0	11	0	3	0	0	17	0	0	0	13	0	2	49
5:30 PM	0	0	1	0	10	0	1	0	0	20	0	0	1	8	1	1	43
5:45 PM	1	0	0	0	7	0	1	0	0	7	1	0	2	10	4	1	34
TOTAL VOLUMES :	NL 1	NT 0	NR 10	NU 0	SL 75	ST 0	SR 13	SU 0	EL 2	ET 118	ER 2	EU 0	WL 13	WT 78	WR 19	WU 7	TOTAL 338
APPROACH %'s :	9.09%	0.00%	90.91%	0.00%	85.23%	0.00%	14.77%	0.00%	1.64%	96.72%	1.64%	0.00%	11.11%	66.67%	16.24%	5.98%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	1	0	5	0	50	0	12	0	0	58	1	0	11	47	8	5	198
PEAK HR FACTOR :	0.250	0.000	0.417	0.000	0.568	0.000	0.429	0.000	0.000	0.725	0.250	0.000	0.344	0.734	0.500	0.625	0.688
	0.500				0.534				0.738				0.634				

VOLUME

Taylor Ct Bet. Dwy 1 & Wood Furniture Gallery

Day: Saturday
Date: 9/22/2018City: Turlock
Project #: CA18_7333_001

DAILY TOTALS					NB	SB					Total
					246	248					494
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	0	0			0	12:00	6	7			13
00:15	0	0			0	12:15	6	8			14
00:30	0	0			0	12:30	2	3			5
00:45	0	0			0	12:45	5	19	11	29	16
01:00	0	0			0	13:00	5	7			12
01:15	0	0			0	13:15	5	4			9
01:30	1	1			2	13:30	5	8			13
01:45	0	1	0	1	0	13:45	10	25	4	23	14
02:00	0	0			0	14:00	6	5			11
02:15	1	1			2	14:15	5	4			9
02:30	1	1			2	14:30	4	10			14
02:45	0	2	0	2	0	14:45	1	16	4	23	5
03:00	1	1			2	15:00	8	9			17
03:15	0	0			0	15:15	3	5			8
03:30	1	1			2	15:30	6	2			8
03:45	0	2	0	2	0	15:45	8	25	7	23	15
04:00	0	1			1	16:00	3	4			7
04:15	1	1			2	16:15	1	3			4
04:30	0	0			0	16:30	4	4			8
04:45	0	1	1	3	1	16:45	5	13	7	18	12
05:00	1	1			2	17:00	3	8			11
05:15	0	0			0	17:15	4	5			9
05:30	1	1			2	17:30	2	5			7
05:45	0	2	0	2	0	17:45	0	9	7	25	7
06:00	0	0			0	18:00	1	14			15
06:15	0	0			0	18:15	1	8			9
06:30	4	0			4	18:30	1	8			9
06:45	1	5	0		1	18:45	0	3	1	31	1
07:00	2	0			2	19:00	1	4			5
07:15	0	0			0	19:15	1	2			3
07:30	2	0			2	19:30	1	0			1
07:45	2	6	0		2	19:45	1	4	0	6	1
08:00	5	0			5	20:00	0	1			1
08:15	5	4			9	20:15	1	0			1
08:30	12	2			14	20:30	0	0			0
08:45	10	32	0	6	10	20:45	1	2	0	1	1
09:00	8	6			14	21:00	0	0			0
09:15	2	0			2	21:15	0	0			0
09:30	7	2			9	21:30	1	1			2
09:45	3	20	1	9	4	21:45	0	1	0	1	0
10:00	4	3			7	22:00	0	0			0
10:15	7	2			9	22:15	0	0			0
10:30	10	2			12	22:30	0	0			0
10:45	13	34	7	14	20	22:45	2	2	2	2	4
11:00	7	6			13	23:00	0	0			0
11:15	4	3			7	23:15	0	0			0
11:30	6	3			9	23:30	1	1			2
11:45	4	21	14	26	18	23:45	0	1	0	1	0
TOTALS	126	65			191	TOTALS	120	183			303
SPLIT %	66.0%	34.0%			38.7%	SPLIT %	39.6%	60.4%			61.3%

DAILY TOTALS					NB	SB					Total
					246	248					494
AM Peak Hour	10:15	11:30			10:15	PM Peak Hour	13:15	17:45			12:45
AM Pk Volume	37	32			54	PM Pk Volume	26	37			50
Pk Hr Factor	0.712	0.571			0.675	Pk Hr Factor	0.650	0.661			0.781
7 - 9 Volume	38	6	0	0	44	4 - 6 Volume	22	43	0	0	65
7 - 9 Peak Hour	08:00	07:45			08:00	4 - 6 Peak Hour	16:30	16:45			16:30
7 - 9 Pk Volume	32	6	0	0	38	4 - 6 Pk Volume	16	25	0	0	40
Pk Hr Factor	0.667	0.375	0.000	0.000	0.679	Pk Hr Factor	0.800	0.781	0.000	0.000	0.833

VOLUME

Taylor Ct Bet. Dwy 1 & Wood Furniture Gallery

Day: Sunday
Date: 9/23/2018City: Turlock
Project #: CA18_7333_001

DAILY TOTALS					NB	SB	EBWB					Total
					193	189						0
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL	
00:00	0	0			0	12:00	7	5			12	
00:15	1	1			2	12:15	6	5			11	
00:30	1	0			1	12:30	6	0			6	
00:45	0	2	1	2	1	12:45	6	25	4	14	10	
01:00	0	0			0	13:00	6	7			13	
01:15	0	1			1	13:15	3	8			11	
01:30	1	1			2	13:30	9	11			20	
01:45	0	1	0	2	0	13:45	7	25	5	31	12	
02:00	0	0			0	14:00	8	7			15	
02:15	1	0			1	14:15	8	7			15	
02:30	1	1			2	14:30	5	8			13	
02:45	0	2	0	1	0	14:45	2	23	1	23	3	
03:00	0	1			1	15:00	4	9			13	
03:15	0	0			0	15:15	5	5			10	
03:30	0	0			0	15:30	0	2			2	
03:45	0	0	1		0	15:45	2	11	4	20	6	
04:00	0	0			0	16:00	2	0			2	
04:15	0	0			0	16:15	8	3			11	
04:30	0	0			0	16:30	2	7			9	
04:45	0	0			0	16:45	3	15	8	18	11	
05:00	0	0			0	17:00	4	6			10	
05:15	0	0			0	17:15	1	9			10	
05:30	0	0			0	17:30	2	3			5	
05:45	0	0			0	17:45	1	8	6	24	7	
06:00	0	0			0	18:00	1	14			15	
06:15	0	0			0	18:15	0	6			6	
06:30	0	0			0	18:30	1	2			3	
06:45	0	0			0	18:45	1	3	1	23	2	
07:00	1	0			1	19:00	1	1			2	
07:15	1	0			1	19:15	0	0			0	
07:30	2	0			2	19:30	0	0			0	
07:45	1	5	0		1	19:45	2	3	2	3	4	
08:00	1	1			2	20:00	0	0			0	
08:15	5	2			7	20:15	0	0			0	
08:30	8	1			9	20:30	0	0			0	
08:45	11	25	1	5	12	20:45	0	0			0	
09:00	4	0			4	21:00	0	0			0	
09:15	4	2			6	21:15	1	1			2	
09:30	5	1			6	21:30	0	0			0	
09:45	4	17	1	4	5	21:45	1	2	1	2	2	
10:00	2	2			4	22:00	0	0			0	
10:15	2	2			4	22:15	1	0			1	
10:30	2	0			2	22:30	0	0			0	
10:45	6	12	0	4	6	22:45	0	1	0		0	
11:00	1	5			6	23:00	0	0			0	
11:15	3	3			6	23:15	0	0			0	
11:30	4	1			5	23:30	0	0			0	
11:45	5	13	3	12	8	23:45	0	0			0	
TOTALS	77	31			108	TOTALS	116	158			274	
SPLIT %	71.3%	28.7%			28.3%	SPLIT %	42.3%	57.7%			71.7%	

DAILY TOTALS					NB	SB	EB	WB	Total
					193	189	0	0	382
AM Peak Hour	08:15	11:30		11:45	PM Peak Hour	13:30	17:15		13:30
AM Pk Volume	28	14		37	PM Pk Volume	32	32		62
Pk Hr Factor	0.636	0.700		0.771	Pk Hr Factor	0.889	0.571		0.775
7 - 9 Volume	30	5	0	0	4 - 6 Volume	23	42	0	0
7 - 9 Peak Hour	08:00	08:00		08:00	4 - 6 Peak Hour	16:15	16:30		16:15
7 - 9 Pk Volume	25	5	0	0	4 - 6 Pk Volume	17	30	0	0
Pk Hr Factor	0.568	0.625	0.000	0.000	Pk Hr Factor	0.531	0.833	0.000	0.000

Driveway In & Out

Location: Driveway #4 north of the end of Taylor Ct
City: Turlock

Date: 09/22/2018
Day: Saturday

TIME	Vehicle		TOTAL
	In	Out	
1:00 PM	0	1	1
1:15 PM	0	0	0
1:30 PM	0	0	0
1:45 PM	0	0	0
2:00 PM	1	1	2
2:15 PM	0	0	0
2:30 PM	0	0	0
2:45 PM	0	0	0
Totals	1	2	3

The ability of a highway system to carry traffic is expressed in terms of its "Service Level" at critical locations, usually intersections. Service levels are defined as follows:

- "LOS A" Conditions primarily describe free-flowing operations. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delay at the boundary intersections is minimal. The travel speed exceeds 85% of the base free-flow speed.
- "LOS B" Conditions describe reasonably unimpeded operations. The ability to maneuver within the traffic stream is only slightly restricted and control delay at the boundary intersections is not significant. The travel speed is between 67% and 85% of the base free-flow speed.
- "LOS C" Conditions describe stable operations. The ability to maneuver and change lanes at mid-segment locations may be more restricted than at LOS B. Longer queues at the boundary intersections may contribute to lower travel speeds. The travel speed is between 50% and 67% of the base free-flow speed.
- "LOS D" Conditions describe less stable operations in which small increases in flow may cause substantial increases in delay and decreases in travel speed. This operation may be due to adverse signal progression, high volume, or inappropriate signal timing at the boundary intersections. The travel speed is between 40% and 50% of the base free-flow speed.
- "LOS E" Conditions describe unstable operations and significant delay. Such operations may be due to some combination of adverse progression, high volume, and inappropriate signal timing at the boundary intersections. The travel speed is between 30% and 40% of the base free-flow speed.
- "LOS F" Conditions describe flow at extreme low speed. Congestion is likely occurring at the boundary intersections, as indicated by high delay and extensive queuing. The travel speed is 30% or less of the base free-flow speed. Also, LOS F is assigned to the subject direction of travel if the through movement at one or more boundary intersections has a volume-to-capacity (V/C) ratio greater than 1.0.

Where a conflict between the roadway classifications of the Circulation Element and the most current Public Works Plans and Specifications may exist, the Director of Public Works shall determine the appropriate street section to be used for roadway design and construction. Zoning Ordinance standards will continue to be enforced using the previously adopted roadway classifications until a zoning ordinance amendment, reflecting the roadway classifications above, is completed.

**TABLE II-1
ROADWAY SEGMENT LEVELS OF SERVICE (LOS) CRITERIA**

























	Street Classification	Total Lanes	Level of Service Thresholds (vehicles / per day / per lane)				
			A	B	C	D	E
Urban	50 Ft Local (Urban)	2	350	950	1,700	2,950	5,000
	60 Ft Minor Collector	2	350	950	1,700	2,950	5,000
	80 Ft Major Collector	2	700	1,900	3,400	5,900	10,000
	80 Ft Major Collector	4	2,520	4,230	5,940	7,110	9,000
	110 Ft Minor Arterial	4	3,000	5,000	7,000	8,400	10,000
	110 Ft Minor Arterial	6	3,400	5,625	7,875	9,450	11,250
	135 Ft Principal Arterial	4	3,750	6,250	8,750	10,500	12,500
	135 Ft Principal Arterial	6	4,500	7,500	10,500	12,600	15,000
Industrial	70 Ft Minor Collector	2	350	950	1,700	2,950	5,000
	110 Ft Major Collector	2	700	1,900	3,400	5,900	10,000
Rural	60 Ft Local	2	350	950	1,700	2,950	5,000
	60 Ft Minor Collector	2	350	950	1,700	2,950	5,000
	80 Ft Major Collector	2	350	950	1,700	2,950	5,000
	80 Ft Major Collector	4	1,400	2,350	3,300	3,950	5,000
	110 Ft Minor Arterial	4	3,000	5,000	7,000	8,400	10,000
	135 Ft Principal Arterial	4	3,750	6,250	8,750	10,500	12,500
	135 Ft Principal Arterial	6	4,500	7,500	10,500	12,600	15,000

TABLE C-2: LOS THRESHOLDS

	LOS "A"	LOS "B"	LOS "C"	LOS "D"	LOS "E"
All Facilities	<0.6	0.6-0.7	0.7-0.8	0.8-0.9	0.9-1.0
(Volume-to-Capacity Ratio (V/C))					
ROADWAY TYPE	AVERAGE DAILY TRAFFIC (ADT) – TOTAL OF BOTH DIRECTIONS				
	A	B	C	D	E
Eight-Lane Freeway	96,000	112,000	128,000	144,000	160,000
Six-Lane Freeway	72,000	84,000	96,000	108,000	120,000
Four-Lane Freeway	48,000	56,000	64,000	72,000	80,000
Six-Lane Expressway	35,000	40,000	46,000	52,000	57,000
Four-Lane Expressway	23,000	27,000	31,000	35,000	38,000
Six-Lane Arterial	29,000	34,000	39,000	44,000	48,000
Four-Lane Arterial	20,000	23,000	26,000	29,000	32,000
Two-Lane Arterial	10,000	12,000	13,000	15,000	16,000
Four-Lane Collector	15,000	17,000	20,000	22,000	24,000
Two-Lane Collector	8,000	9,000	10,000	11,000	12,000

























HCM 2010 Signalized Intersection Summary
1: Golden State Blvd & Taylor Rd







Pinnacle Traffic Engineering
12/31/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	324	575	31	693	112	609	259	19	26	145	17
Future Volume (veh/h)	62	324	575	31	693	112	609	259	19	26	145	17
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1937	1937	1900	1863	1976	1863	1900	1976	1900	1900	1976
Adj Flow Rate, veh/h	67	348	0	33	745	0	655	278	0	28	156	0
Adj No. of Lanes	1	1	1	1	2	1	2	1	1	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	2	0	2	0	2	0	0	0	0	0
Cap, veh/h	94	653	555	61	1129	536	902	498	440	205	215	190
Arrive On Green	0.05	0.34	0.00	0.03	0.32	0.00	0.26	0.26	0.00	0.11	0.11	0.00
Sat Flow, veh/h	1810	1937	1647	1810	3539	1680	3442	1900	1680	1810	1900	1680
Grp Volume(v), veh/h	67	348	0	33	745	0	655	278	0	28	156	0
Grp Sat Flow(s),veh/h/ln	1810	1937	1647	1810	1770	1680	1721	1900	1680	1810	1900	1680
Q Serve(g_s), s	2.6	10.3	0.0	1.3	12.9	0.0	12.3	9.0	0.0	1.0	5.6	0.0
Cycle Q Clear(g_c), s	2.6	10.3	0.0	1.3	12.9	0.0	12.3	9.0	0.0	1.0	5.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	94	653	555	61	1129	536	902	498	440	205	215	190
V/C Ratio(X)	0.72	0.53	0.00	0.54	0.66	0.00	0.73	0.56	0.00	0.14	0.73	0.00
Avail Cap(c_a), veh/h	268	1107	941	166	1823	865	1773	979	865	472	496	439
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	33.1	19.0	0.0	33.7	20.8	0.0	23.8	22.6	0.0	28.3	30.4	0.0
Incr Delay (d2), s/veh	9.8	0.7	0.0	7.3	0.7	0.0	1.1	1.0	0.0	0.3	4.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	5.6	0.0	0.8	6.3	0.0	6.0	4.8	0.0	0.5	3.2	0.0
LnGrp Delay(d),s/veh	42.8	19.7	0.0	41.0	21.5	0.0	25.0	23.6	0.0	28.6	35.0	0.0
LnGrp LOS	D	B		D	C		C	C		C	C	
Approach Vol, veh/h	415				778		933				184	
Approach Delay, s/veh	23.4				22.3		24.5				34.0	
Approach LOS	C				C		C				C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2		3	4			6	7	8			
Phs Duration (G+Y+Rc), s	12.5		6.9	28.4			23.1	8.2	27.1			
Change Period (Y+Rc), s	4.5		4.5	4.5			4.5	4.5	4.5			
Max Green Setting (Gmax), s	18.5		6.5	40.5			36.5	10.5	36.5			
Max Q Clear Time (g_c+l1), s	7.6		3.3	12.3			14.3	4.6	14.9			
Green Ext Time (p_c), s	0.6		0.0	8.5			4.3	0.1	7.7			
Intersection Summary												
HCM 2010 Ctrl Delay			24.3									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
1: Golden State Blvd & Taylor Rd

Pinnacle Traffic Engineering
12/31/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	520	787	43	441	46	439	160	52	73	256	34
Future Volume (veh/h)	33	520	787	43	441	46	439	160	52	73	256	34
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1937	1937	1900	1863	1976	1863	1900	1976	1900	1900	1976
Adj Flow Rate, veh/h	35	547	0	45	464	0	462	168	0	77	269	0
Adj No. of Lanes	1	1	1	1	2	1	2	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	0	2	0	2	0	0	0	0	0
Cap, veh/h	61	721	613	72	1337	635	629	347	307	327	343	303
Arrive On Green	0.03	0.37	0.00	0.04	0.38	0.00	0.18	0.18	0.00	0.18	0.18	0.00
Sat Flow, veh/h	1810	1937	1647	1810	3539	1680	3442	1900	1680	1810	1900	1680
Grp Volume(v), veh/h	35	547	0	45	464	0	462	168	0	77	269	0
Grp Sat Flow(s),veh/h/ln	1810	1937	1647	1810	1770	1680	1721	1900	1680	1810	1900	1680
Q Serve(g_s), s	1.5	19.8	0.0	2.0	7.5	0.0	10.1	6.3	0.0	2.9	10.8	0.0
Cycle Q Clear(g_c), s	1.5	19.8	0.0	2.0	7.5	0.0	10.1	6.3	0.0	2.9	10.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	61	721	613	72	1337	635	629	347	307	327	343	303
V/C Ratio(X)	0.57	0.76	0.00	0.63	0.35	0.00	0.73	0.48	0.00	0.24	0.78	0.00
Avail Cap(c_a), veh/h	156	1296	1102	204	2461	1168	1248	689	609	690	725	641
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	38.1	22.0	0.0	37.8	17.8	0.0	30.8	29.3	0.0	28.0	31.3	0.0
Incr Delay (d2), s/veh	8.2	1.7	0.0	8.8	0.2	0.0	1.7	1.0	0.0	0.4	4.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	10.8	0.0	1.1	3.7	0.0	5.0	3.4	0.0	1.5	6.1	0.0
LnGrp Delay(d),s/veh	46.2	23.6	0.0	46.6	18.0	0.0	32.5	30.3	0.0	28.4	35.3	0.0
LnGrp LOS	D	C		D	B		C	C		C	D	
Approach Vol, veh/h	582				509				630			
Approach Delay, s/veh	25.0				20.5				31.9			
Approach LOS	C				C				C			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		18.9	7.7	34.3		19.1	7.2	34.7				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		30.5	9.0	53.5		29.0	6.9	55.6				
Max Q Clear Time (g_c+I1), s		12.8	4.0	21.8		12.1	3.5	9.5				
Green Ext Time (p_c), s		1.6	0.0	8.0		2.5	0.0	8.5				
Intersection Summary												
HCM 2010 Ctrl Delay	27.5											
HCM 2010 LOS	C											

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	786	0	0	257	1062	17	0	175	0	0	0
Future Vol, veh/h	10	786	0	0	257	1062	17	0	175	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	Free	-	-	Yield	-	-	None
Storage Length	145	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	2	0	0	2	2	0	0	2	0	0	0
Mvmt Flow	11	845	0	0	276	1142	18	0	188	0	0	0

Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	276	0	-	-	0	1143	1143 845
Stage 1	-	-	-	-	-	867	867 -
Stage 2	-	-	-	-	-	276	276 -
Critical Hdwy	4.1	-	-	-	-	6.4	6.5 6.22
Critical Hdwy Stg 1	-	-	-	-	-	5.4	5.5 -
Critical Hdwy Stg 2	-	-	-	-	-	5.4	5.5 -
Follow-up Hdwy	2.2	-	-	-	-	3.5	4 3.318
Pot Cap-1 Maneuver	1299	-	0	0	-	0	223 202 363
Stage 1	-	-	0	0	-	0	415 373 -
Stage 2	-	-	0	0	-	0	775 685 -
Platoon blocked, %	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1299	-	-	-	-	-	221 0 363
Mov Cap-2 Maneuver	-	-	-	-	-	-	221 0 -
Stage 1	-	-	-	-	-	-	412 0 -
Stage 2	-	-	-	-	-	-	775 0 -

Approach	EB	WB	NB
HCM Control Delay, s	0.1	0	23.4
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT
Capacity (veh/h)	398	1299	-	-
HCM Lane V/C Ratio	0.519	0.008	-	-
HCM Control Delay (s)	23.4	7.8	-	-
HCM Lane LOS	C	A	-	-
HCM 95th %tile Q(veh)	2.9	0	-	-

Intersection												
Int Delay, s/veh	10.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑			↱	↱		↕				
Traffic Vol, veh/h	26	1152	0	0	177	737	8	3	188	0	0	0
Future Vol, veh/h	26	1152	0	0	177	737	8	3	188	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	Free	-	-	Yield	-	-	None
Storage Length	145	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	2	0	0	2	2	0	0	2	0	0	0
Mvmt Flow	27	1213	0	0	186	776	8	3	198	0	0	0

Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	186	0	-	-	-	0	1453 1453 1213
Stage 1	-	-	-	-	-	-	1267 1267 -
Stage 2	-	-	-	-	-	-	186 186 -
Critical Hdwy	4.1	-	-	-	-	-	6.4 6.5 6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.4 5.5 -
Critical Hdwy Stg 2	-	-	-	-	-	-	5.4 5.5 -
Follow-up Hdwy	2.2	-	-	-	-	-	3.5 4 3.318
Pot Cap-1 Maneuver	1401	-	0	0	-	0	145 132 222
Stage 1	-	-	0	0	-	0	267 242 -
Stage 2	-	-	0	0	-	0	851 750 -
Platoon blocked, %	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1401	-	-	-	-	-	142 0 222
Mov Cap-2 Maneuver	-	-	-	-	-	-	142 0 -
Stage 1	-	-	-	-	-	-	262 0 -
Stage 2	-	-	-	-	-	-	851 0 -

Approach	EB	WB	NB
HCM Control Delay, s	0.2	0	82.1
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT
Capacity (veh/h)	231	1401	-	-
HCM Lane V/C Ratio	0.907	0.02	-	-
HCM Control Delay (s)	82.1	7.6	-	-
HCM Lane LOS	F	A	-	-
HCM 95th %tile Q(veh)	7.6	0.1	-	-

Intersection												
Int Delay, s/veh	311.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↑	↑	↑						↕	
Traffic Vol, veh/h	0	57	5	187	87	0	0	0	0	739	0	20
Future Vol, veh/h	0	57	5	187	87	0	0	0	0	739	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	Yield
Storage Length	-	-	50	135	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	2	0	0	0	0	0	2	0	0
Mvmt Flow	0	61	5	201	94	0	0	0	0	795	0	22

Major/Minor	Minor2		Minor1		Major2	
Conflicting Flow All	-	1601	11	1621	1590	-
Stage 1	-	1601	-	0	0	-
Stage 2	-	0	-	1621	1590	-
Critical Hdwy	-	6.5	6.2	7.12	6.5	-
Critical Hdwy Stg 1	-	5.5	-	-	-	-
Critical Hdwy Stg 2	-	-	-	6.12	5.5	-
Follow-up Hdwy	-	4	3.3	3.518	4	-
Pot Cap-1 Maneuver	0	107	1076	~ 83	109	0
Stage 1	0	167	-	-	-	0
Stage 2	0	-	-	~ 130	169	0
Platoon blocked, %						-
Mov Cap-1 Maneuver	-	107	1076	~ 45	109	-
Mov Cap-2 Maneuver	-	107	-	~ 45	109	-
Stage 1	-	167	-	-	-	-
Stage 2	-	-	-	~ 82	169	-

Approach	EB	WB	SB
HCM Control Delay, s	70.9	\$ 1228.6	
HCM LOS	F	F	

Minor Lane/Major Mvmt	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	107	1076	45	109	-	-	-
HCM Lane V/C Ratio	0.573	0.005	4.468	0.858	-	-	-
HCM Control Delay (s)	76.4	8.4	1742.8	123.5	-	-	-
HCM Lane LOS	F	A	F	F	-	-	-
HCM 95th %tile Q(veh)	2.7	0	22.8	5	-	-	-


















Notes			
~: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

HCM 2010 Signalized Intersection Summary

3: Taylor Rd & SR 99 SB Ramps

Pinnacle Traffic Engineering

01/02/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	57	5	187	87	0	0	0	0	739	0	20
Future Volume (veh/h)	0	57	5	187	87	0	0	0	0	739	0	20
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1976	1976	1863	1976	0				1900	1938	1976
Adj Flow Rate, veh/h	0	61	0	201	94	0				795	0	0
Adj No. of Lanes	0	1	1	1	1	0				0	1	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93				0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	2	0	0				0	0	0
Cap, veh/h	0	465	395	461	465	0				997	0	0
Arrive On Green	0.00	0.24	0.00	0.24	0.24	0.00				0.54	0.00	0.00
Sat Flow, veh/h	0	1976	1680	1336	1976	0				1846	0	0
Grp Volume(v), veh/h	0	61	0	201	94	0				795	0	0
Grp Sat Flow(s),veh/h/ln	0	1976	1680	1336	1976	0				1846	0	0
Q Serve(g_s), s	0.0	1.0	0.0	5.6	1.5	0.0				13.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	1.0	0.0	6.6	1.5	0.0				13.9	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	465	395	461	465	0				997	0	0
V/C Ratio(X)	0.00	0.13	0.00	0.44	0.20	0.00				0.80	0.00	0.00
Avail Cap(c_a), veh/h	0	889	756	748	889	0				1522	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	12.1	0.0	14.7	12.3	0.0				7.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.6	0.2	0.0				1.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.5	0.0	2.1	0.9	0.0				7.3	0.0	0.0
LnGrp Delay(d),s/veh	0.0	12.2	0.0	15.3	12.5	0.0				9.2	0.0	0.0
LnGrp LOS		B		B	B					A		
Approach Vol, veh/h		61			295						795	
Approach Delay, s/veh		12.2			14.4						9.2	
Approach LOS		B			B						A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				13.9		26.1		13.9				
Change Period (Y+Rc), s				4.5		4.5		4.5				
Max Green Setting (Gmax), s				18.0		33.0		18.0				
Max Q Clear Time (g_c+I1), s				3.0		15.9		8.6				
Green Ext Time (p_c), s				1.3		5.7		1.0				
Intersection Summary												
HCM 2010 Ctrl Delay				10.7								
HCM 2010 LOS				B								

Queues
3: Taylor Rd & SR 99 SB Ramps

Pinnacle Traffic Engineering
01/02/2019

	→	↘	↙	←	↓
Lane Group	EBT	EBR	WBL	WBT	SBT
Lane Group Flow (vph)	61	5	201	94	817
v/c Ratio	0.13	0.01	0.66	0.19	5.96
Control Delay	16.6	0.0	30.1	17.2	2250.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	16.6	0.0	30.1	17.2	2250.0
Queue Length 50th (ft)	16	0	59	25	~508
Queue Length 95th (ft)	39	1	116	54	#757
Internal Link Dist (ft)	391			442	499
Turn Bay Length (ft)		50	135		
Base Capacity (vph)	628	553	414	667	137
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.10	0.01	0.49	0.14	5.96

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection												
Int Delay, s/veh	48.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↑	↑	↑						↕	
Traffic Vol, veh/h	0	83	30	127	58	0	0	0	0	1095	1	11
Future Vol, veh/h	0	83	30	127	58	0	0	0	0	1095	1	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	Yield
Storage Length	-	-	50	135	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	2	0	0	0	0	0	2	0	0
Mvmt Flow	0	87	32	134	61	0	0	0	0	1153	1	12

Major/Minor	Minor2		Minor1		Major2	
Conflicting Flow All	-	2313	7	2351	2307	-
Stage 1	-	2313	-	0	0	-
Stage 2	-	0	-	2351	2307	-
Critical Hdwy	-	6.5	6.2	7.12	6.5	-
Critical Hdwy Stg 1	-	5.5	-	-	-	-
Critical Hdwy Stg 2	-	-	-	6.12	5.5	-
Follow-up Hdwy	-	4	3.3	3.518	4	-
Pot Cap-1 Maneuver	0	~38	1081	~25	~39	0
Stage 1	0	~73	-	-	-	0
Stage 2	0	-	-	~48	74	0
Platoon blocked, %						-
Mov Cap-1 Maneuver	-	~38	1081	-	~39	-
Mov Cap-2 Maneuver	-	~38	-	-	~39	-
Stage 1	-	~73	-	-	-	-
Stage 2	-	-	-	-	74	-

Approach	EB	WB	SB
HCM Control Delay, s\$	604.8		
HCM LOS	F	-	

Minor Lane/Major Mvmt	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	38	1081	-	39	-	-	-
HCM Lane V/C Ratio	2.299	0.029	-	1.565	-	-	-
HCM Control Delay (s)	\$ 820.4	8.4	-	\$ 509.5	-	-	-
HCM Lane LOS	F	A	-	F	-	-	-
HCM 95th %tile Q(veh)	9.6	0.1	-	6.4	-	-	-

Notes			
~: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection												
Int Delay, s/veh	48.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↑	↑	↑					↑	↑	
Traffic Vol, veh/h	0	83	30	127	58	0	0	0	0	1095	1	11
Future Vol, veh/h	0	83	30	127	58	0	0	0	0	1095	1	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	Yield
Storage Length	-	-	50	135	-	-	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	2	0	0	0	0	0	2	0	0
Mvmt Flow	0	87	32	134	61	0	0	0	0	1153	1	12

Major/Minor	Minor2		Minor1		Major2	
Conflicting Flow All	-	2313	7	2351	2307	-
Stage 1	-	2313	-	0	0	-
Stage 2	-	0	-	2351	2307	-
Critical Hdwy	-	6.5	6.2	7.12	6.5	-
Critical Hdwy Stg 1	-	5.5	-	-	-	-
Critical Hdwy Stg 2	-	-	-	6.12	5.5	-
Follow-up Hdwy	-	4	3.3	3.518	4	-
Pot Cap-1 Maneuver	0	~38	1081	~25	~39	0
Stage 1	0	~73	-	-	-	0
Stage 2	0	-	-	~48	74	0
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	~38	1081	-	~39	-
Mov Cap-2 Maneuver	-	~38	-	-	~39	-
Stage 1	-	~73	-	-	-	-
Stage 2	-	-	-	-	74	-

Approach	EB	WB	SB
HCM Control Delay, s\$	604.8		
HCM LOS	F	-	-

Minor Lane/Major Mvmt	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	38	1081	-	39	-	-	-
HCM Lane V/C Ratio	2.299	0.029	-	1.565	-	-	-
HCM Control Delay (s)	\$ 820.4	8.4	-	\$ 509.5	-	-	-
HCM Lane LOS	F	A	-	F	-	-	-
HCM 95th %tile Q(veh)	9.6	0.1	-	6.4	-	-	-













Notes			
~: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

HCM 2010 Signalized Intersection Summary

3: Taylor Rd & SR 99 SB Ramps

Pinnacle Traffic Engineering

01/02/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↑	↑	↑						↕	
Traffic Volume (veh/h)	0	83	30	127	58	0	0	0	0	1095	1	11
Future Volume (veh/h)	0	83	30	127	58	0	0	0	0	1095	1	11
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1976	1976	1863	1976	0				1900	1938	1976
Adj Flow Rate, veh/h	0	87	0	134	61	0				1153	1	0
Adj No. of Lanes	0	1	1	1	1	0				0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	2	0	0				0	0	0
Cap, veh/h	0	342	291	277	342	0				1293	1	0
Arrive On Green	0.00	0.17	0.00	0.17	0.17	0.00				0.70	0.70	0.00
Sat Flow, veh/h	0	1976	1680	1305	1976	0				1844	2	0
Grp Volume(v), veh/h	0	87	0	134	61	0				1154	0	0
Grp Sat Flow(s),veh/h/ln	0	1976	1680	1305	1976	0				1845	0	0
Q Serve(g_s), s	0.0	2.7	0.0	7.1	1.9	0.0				35.7	0.0	0.0
Cycle Q Clear(g_c), s	0.0	2.7	0.0	9.8	1.9	0.0				35.7	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	342	291	277	342	0				1294	0	0
V/C Ratio(X)	0.00	0.25	0.00	0.48	0.18	0.00				0.89	0.00	0.00
Avail Cap(c_a), veh/h	0	497	423	379	497	0				1626	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	25.6	0.0	29.8	25.2	0.0				8.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	1.3	0.2	0.0				5.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.5	0.0	2.6	1.1	0.0				19.6	0.0	0.0
LnGrp Delay(d),s/veh	0.0	26.0	0.0	31.1	25.5	0.0				14.1	0.0	0.0
LnGrp LOS		C		C	C					B		
Approach Vol, veh/h		87			195						1154	
Approach Delay, s/veh		26.0			29.4						14.1	
Approach LOS		C			C						B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				16.9		54.6		16.9				
Change Period (Y+Rc), s				4.5		4.5		4.5				
Max Green Setting (Gmax), s				18.0		63.0		18.0				
Max Q Clear Time (g_c+I1), s				4.7		37.7		11.8				
Green Ext Time (p_c), s				1.0		12.5		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay				16.9								
HCM 2010 LOS				B								

Queues

3: Taylor Rd & SR 99 SB Ramps

Pinnacle Traffic Engineering
01/02/2019

	→	↘	↙	←	↓
Lane Group	EBT	EBR	WBL	WBT	SBT
Lane Group Flow (vph)	87	32	134	61	1166
v/c Ratio	0.28	0.11	0.67	0.18	7.47
Control Delay	33.9	11.8	50.7	32.0	2929.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	33.9	11.8	50.7	32.0	2929.6
Queue Length 50th (ft)	42	0	68	29	~1182
Queue Length 95th (ft)	83	24	127	62	#1495
Internal Link Dist (ft)	391			442	499
Turn Bay Length (ft)		50	135		
Base Capacity (vph)	410	374	264	435	156
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.21	0.09	0.51	0.14	7.47

Intersection Summary

























- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	7	55	0	3	81	23	1	0	4	3	1	1
Future Vol, veh/h	7	55	0	3	81	23	1	0	4	3	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	8	59	0	3	87	25	1	0	4	3	1	1
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	112	0	0	59	0	0	182	193	59	183	181	100
Stage 1	-	-	-	-	-	-	75	75	-	106	106	-
Stage 2	-	-	-	-	-	-	107	118	-	77	75	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1490	-	-	1558	-	-	784	706	1012	783	717	961
Stage 1	-	-	-	-	-	-	939	836	-	905	811	-
Stage 2	-	-	-	-	-	-	903	802	-	937	836	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1490	-	-	1558	-	-	778	700	1012	775	711	961
Mov Cap-2 Maneuver	-	-	-	-	-	-	778	700	-	775	711	-
Stage 1	-	-	-	-	-	-	933	831	-	900	809	-
Stage 2	-	-	-	-	-	-	899	800	-	927	831	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.8			0.2			8.8			9.6		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	955	1490	-	-	1558	-	-	791				
HCM Lane V/C Ratio	0.006	0.005	-	-	0.002	-	-	0.007				
HCM Control Delay (s)	8.8	7.4	0	-	7.3	0	-	9.6				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0				

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	0	57	0	9	53	7	0	0	6	50	0	11
Future Vol, veh/h	0	57	0	9	53	7	0	0	6	50	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	60	0	9	56	7	0	0	6	53	0	12
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	63	0	0	60	0	0	144	141	60	141	138	60
Stage 1	-	-	-	-	-	-	60	60	-	78	78	-
Stage 2	-	-	-	-	-	-	84	81	-	63	60	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1553	-	-	1556	-	-	830	754	1011	833	757	1011
Stage 1	-	-	-	-	-	-	957	849	-	936	834	-
Stage 2	-	-	-	-	-	-	929	832	-	953	849	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1553	-	-	1556	-	-	817	749	1011	824	752	1011
Mov Cap-2 Maneuver	-	-	-	-	-	-	817	749	-	824	752	-
Stage 1	-	-	-	-	-	-	957	849	-	936	829	-
Stage 2	-	-	-	-	-	-	913	827	-	947	849	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			1			8.6			9.6		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	1011	1553	-	-	1556	-	-	852				
HCM Lane V/C Ratio	0.006	-	-	-	0.006	-	-	0.075				
HCM Control Delay (s)	8.6	0	-	-	7.3	0	-	9.6				
HCM Lane LOS	A	A	-	-	A	A	-	A				
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.2				

























HCM 2010 Signalized Intersection Summary
1: Golden State Blvd & Taylor Rd







Pinnacle Traffic Engineering
12/31/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	323	573	31	687	112	602	259	19	26	145	15
Future Volume (veh/h)	62	323	573	31	687	112	602	259	19	26	145	15
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1937	1937	1900	1863	1976	1863	1900	1976	1900	1900	1976
Adj Flow Rate, veh/h	67	347	0	33	739	0	647	278	0	28	156	0
Adj No. of Lanes	1	1	1	1	2	1	2	1	1	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	2	0	2	0	2	0	0	0	0	0
Cap, veh/h	94	652	554	61	1126	535	896	495	437	205	215	190
Arrive On Green	0.05	0.34	0.00	0.03	0.32	0.00	0.26	0.26	0.00	0.11	0.11	0.00
Sat Flow, veh/h	1810	1937	1647	1810	3539	1680	3442	1900	1680	1810	1900	1680
Grp Volume(v), veh/h	67	347	0	33	739	0	647	278	0	28	156	0
Grp Sat Flow(s),veh/h/ln	1810	1937	1647	1810	1770	1680	1721	1900	1680	1810	1900	1680
Q Serve(g_s), s	2.6	10.2	0.0	1.3	12.6	0.0	12.0	8.9	0.0	1.0	5.6	0.0
Cycle Q Clear(g_c), s	2.6	10.2	0.0	1.3	12.6	0.0	12.0	8.9	0.0	1.0	5.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	94	652	554	61	1126	535	896	495	437	205	215	190
V/C Ratio(X)	0.71	0.53	0.00	0.54	0.66	0.00	0.72	0.56	0.00	0.14	0.72	0.00
Avail Cap(c_a), veh/h	270	1117	949	167	1839	873	1788	987	873	477	500	442
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	32.8	18.8	0.0	33.4	20.6	0.0	23.7	22.5	0.0	28.1	30.1	0.0
Incr Delay (d2), s/veh	9.6	0.7	0.0	7.2	0.7	0.0	1.1	1.0	0.0	0.3	4.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	5.5	0.0	0.8	6.3	0.0	5.8	4.8	0.0	0.5	3.2	0.0
LnGrp Delay(d),s/veh	42.4	19.5	0.0	40.6	21.3	0.0	24.8	23.5	0.0	28.4	34.7	0.0
LnGrp LOS	D	B		D	C		C	C		C	C	
Approach Vol, veh/h	414				772				925			
Approach Delay, s/veh	23.2				22.1				24.4			
Approach LOS	C				C				C			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		12.5	6.9	28.1		22.8	8.1	26.9				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.5	6.5	40.5		36.5	10.5	36.5				
Max Q Clear Time (g_c+I1), s		7.6	3.3	12.2		14.0	4.6	14.6				
Green Ext Time (p_c), s		0.6	0.0	8.5		4.3	0.1	7.7				
Intersection Summary												
HCM 2010 Ctrl Delay	24.2											
HCM 2010 LOS	C											

HCM 2010 Signalized Intersection Summary
1: Golden State Blvd & Taylor Rd

Pinnacle Traffic Engineering
12/31/2018







												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	515	781	43	439	46	437	160	52	73	256	33
Future Volume (veh/h)	31	515	781	43	439	46	437	160	52	73	256	33
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1937	1937	1900	1863	1976	1863	1900	1976	1900	1900	1976
Adj Flow Rate, veh/h	33	542	0	45	462	0	460	168	0	77	269	0
Adj No. of Lanes	1	1	1	1	2	1	2	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	0	2	0	2	0	0	0	0	0
Cap, veh/h	59	717	609	72	1335	633	629	347	307	327	343	304
Arrive On Green	0.03	0.37	0.00	0.04	0.38	0.00	0.18	0.18	0.00	0.18	0.18	0.00
Sat Flow, veh/h	1810	1937	1647	1810	3539	1680	3442	1900	1680	1810	1900	1680
Grp Volume(v), veh/h	33	542	0	45	462	0	460	168	0	77	269	0
Grp Sat Flow(s),veh/h/ln	1810	1937	1647	1810	1770	1680	1721	1900	1680	1810	1900	1680
Q Serve(g_s), s	1.4	19.4	0.0	1.9	7.4	0.0	10.0	6.3	0.0	2.9	10.7	0.0
Cycle Q Clear(g_c), s	1.4	19.4	0.0	1.9	7.4	0.0	10.0	6.3	0.0	2.9	10.7	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	59	717	609	72	1335	633	629	347	307	327	343	304
V/C Ratio(X)	0.56	0.76	0.00	0.63	0.35	0.00	0.73	0.48	0.00	0.24	0.78	0.00
Avail Cap(c_a), veh/h	157	1306	1110	205	2480	1177	1258	694	614	696	730	646
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	37.8	21.9	0.0	37.5	17.7	0.0	30.6	29.1	0.0	27.8	31.0	0.0
Incr Delay (d2), s/veh	8.1	1.7	0.0	8.7	0.2	0.0	1.7	1.0	0.0	0.4	3.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	10.7	0.0	1.1	3.6	0.0	4.9	3.4	0.0	1.5	6.0	0.0
LnGrp Delay(d),s/veh	45.9	23.5	0.0	46.2	17.9	0.0	32.3	30.1	0.0	28.2	34.9	0.0
LnGrp LOS	D	C		D	B		C	C		C	C	
Approach Vol, veh/h	575				507				628			
Approach Delay, s/veh	24.8				20.4				31.7			
Approach LOS	C				C				C			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		18.8	7.6	33.9		19.0	7.1	34.4				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		30.5	9.0	53.5		29.0	6.9	55.6				
Max Q Clear Time (g_c+I1), s		12.7	3.9	21.4		12.0	3.4	9.4				
Green Ext Time (p_c), s		1.6	0.0	7.9		2.5	0.0	8.4				
Intersection Summary												
HCM 2010 Ctrl Delay	27.3											
HCM 2010 LOS	C											

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	783	0	0	242	1062	11	0	175	0	0	0
Future Vol, veh/h	9	783	0	0	242	1062	11	0	175	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	Free	-	-	Yield	-	-	None
Storage Length	145	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	2	0	0	2	2	0	0	2	0	0	0
Mvmt Flow	10	842	0	0	260	1142	12	0	188	0	0	0

Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	260	0	-	-	-	0	1122
Stage 1	-	-	-	-	-	-	862
Stage 2	-	-	-	-	-	-	260
Critical Hdwy	4.1	-	-	-	-	-	6.4
Critical Hdwy Stg 1	-	-	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	-	-	5.4
Follow-up Hdwy	2.2	-	-	-	-	-	3.5
Pot Cap-1 Maneuver	1316	-	0	0	-	0	230
Stage 1	-	-	0	0	-	0	417
Stage 2	-	-	0	0	-	0	788
Platoon blocked, %	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1316	-	-	-	-	-	228
Mov Cap-2 Maneuver	-	-	-	-	-	-	228
Stage 1	-	-	-	-	-	-	414
Stage 2	-	-	-	-	-	-	788

Approach	EB	WB	NB
HCM Control Delay, s	0.1	0	23.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT
Capacity (veh/h)	387	1316	-	-
HCM Lane V/C Ratio	0.517	0.007	-	-
HCM Control Delay (s)	23.8	7.8	-	-
HCM Lane LOS	C	A	-	-
HCM 95th %tile Q(veh)	2.9	0	-	-

Intersection												
Int Delay, s/veh	10											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	1139	0	0	172	737	6	3	188	0	0	0
Future Vol, veh/h	17	1139	0	0	172	737	6	3	188	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	Free	-	-	Yield	-	-	None
Storage Length	145	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	2	0	0	2	2	0	0	2	0	0	0
Mvmt Flow	18	1199	0	0	181	776	6	3	198	0	0	0

Major/Minor	Major1		Major2		Minor1					
Conflicting Flow All	181	0	-	-	-	0	1416	1416	1199	
Stage 1	-	-	-	-	-	-	1235	1235	-	
Stage 2	-	-	-	-	-	-	181	181	-	
Critical Hdwy	4.1	-	-	-	-	-	6.4	6.5	6.22	
Critical Hdwy Stg 1	-	-	-	-	-	-	5.4	5.5	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	5.4	5.5	-	
Follow-up Hdwy	2.2	-	-	-	-	-	3.5	4	3.318	
Pot Cap-1 Maneuver	1407	-	0	0	-	0	153	139	226	
Stage 1	-	-	0	0	-	0	277	251	-	
Stage 2	-	-	0	0	-	0	855	754	-	
Platoon blocked, %	-	-	-	-	-	-	-	-	-	
Mov Cap-1 Maneuver	1407	-	-	-	-	-	151	0	226	
Mov Cap-2 Maneuver	-	-	-	-	-	-	151	0	-	
Stage 1	-	-	-	-	-	-	273	0	-	
Stage 2	-	-	-	-	-	-	855	0	-	

Approach	EB	WB	NB
HCM Control Delay, s	0.1	0	77.2
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT
Capacity (veh/h)	234	1407	-	-
HCM Lane V/C Ratio	0.886	0.013	-	-
HCM Control Delay (s)	77.2	7.6	-	-
HCM Lane LOS	F	A	-	-
HCM 95th %tile Q(veh)	7.3	0	-	-

Intersection												
Int Delay, s/veh	293.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↑	↑	↑						↕	
Traffic Vol, veh/h	0	53	4	187	66	0	0	0	0	739	0	8
Future Vol, veh/h	0	53	4	187	66	0	0	0	0	739	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	Yield
Storage Length	-	-	50	135	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	2	0	0	0	0	0	2	0	0
Mvmt Flow	0	57	4	201	71	0	0	0	0	795	0	9

Major/Minor	Minor2		Minor1		Major2	
Conflicting Flow All	-	1595	5	1619	1590	-
Stage 1	-	1595	-	0	0	-
Stage 2	-	0	-	1619	1590	-
Critical Hdwy	-	6.5	6.2	7.12	6.5	-
Critical Hdwy Stg 1	-	5.5	-	-	-	-
Critical Hdwy Stg 2	-	-	-	6.12	5.5	-
Follow-up Hdwy	-	4	3.3	3.518	4	-
Pot Cap-1 Maneuver	0	108	1084	~ 83	109	0
Stage 1	0	168	-	-	-	0
Stage 2	0	-	-	~ 130	169	0
Platoon blocked, %						-
Mov Cap-1 Maneuver	-	108	1084	~ 48	109	-
Mov Cap-2 Maneuver	-	108	-	~ 48	109	-
Stage 1	-	168	-	-	-	-
Stage 2	-	-	-	~ 86	169	-

Approach	EB	WB	SB
HCM Control Delay, s	66.3	\$ 1210.5	
HCM LOS	F	F	

Minor Lane/Major Mvmt	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	108	1084	48	109	-	-	-
HCM Lane V/C Ratio	0.528	0.004	4.189	0.651	-	-	-
HCM Control Delay (s)	70.7	8.3	1607.6	85.4	-	-	-
HCM Lane LOS	F	A	F	F	-	-	-
HCM 95th %tile Q(veh)	2.4	0	22.5	3.3	-	-	-

Notes			
~: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection												
Int Delay, s/veh	24.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↑	↑	↑						↕	
Traffic Vol, veh/h	0	61	26	127	51	0	0	0	0	1095	1	8
Future Vol, veh/h	0	61	26	127	51	0	0	0	0	1095	1	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	Yield
Storage Length	-	-	50	135	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	2	0	0	0	0	0	2	0	0
Mvmt Flow	0	64	27	134	54	0	0	0	0	1153	1	8

Major/Minor	Minor2		Minor1		Major2	
Conflicting Flow All	-	2311	5	2339	2307	-
Stage 1	-	2311	-	0	0	-
Stage 2	-	0	-	2339	2307	-
Critical Hdwy	-	6.5	6.2	7.12	6.5	-
Critical Hdwy Stg 1	-	5.5	-	-	-	-
Critical Hdwy Stg 2	-	-	-	6.12	5.5	-
Follow-up Hdwy	-	4	3.3	3.518	4	-
Pot Cap-1 Maneuver	0	~ 39	1084	~ 26	~ 39	0
Stage 1	0	73	-	-	-	0
Stage 2	0	-	-	~ 49	74	0
Platoon blocked, %						-
Mov Cap-1 Maneuver	-	~ 39	1084	-	~ 39	-
Mov Cap-2 Maneuver	-	~ 39	-	-	~ 39	-
Stage 1	-	73	-	-	-	-
Stage 2	-	-	-	~ 6	74	-

Approach	EB	WB	SB
HCM Control Delay, s\$	382.5		
HCM LOS	F	-	

Minor Lane/Major Mvmt	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	39	1084	-	39	-	-	-
HCM Lane V/C Ratio	1.646	0.025	-	1.377	-	-	-
HCM Control Delay (s)	\$ 542	8.4	-	\$ 435.7	-	-	-
HCM Lane LOS	F	A	-	F	-	-	-
HCM 95th %tile Q(veh)	6.7	0.1	-	5.5	-	-	-

























Notes			
~: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	55	0	3	81	4	1	0	4	1	1	0
Future Vol, veh/h	1	55	0	3	81	4	1	0	4	1	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	59	0	3	87	4	1	0	4	1	1	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	91	0	0	59	0	0	157	158	59	158	156	89
Stage 1	-	-	-	-	-	-	61	61	-	95	95	-
Stage 2	-	-	-	-	-	-	96	97	-	63	61	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1517	-	-	1558	-	-	814	738	1012	813	740	975
Stage 1	-	-	-	-	-	-	955	848	-	917	820	-
Stage 2	-	-	-	-	-	-	916	819	-	953	848	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1517	-	-	1558	-	-	812	736	1012	807	738	975
Mov Cap-2 Maneuver	-	-	-	-	-	-	812	736	-	807	738	-
Stage 1	-	-	-	-	-	-	954	847	-	916	818	-
Stage 2	-	-	-	-	-	-	913	817	-	948	847	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.2			8.8			9.7		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	964	1517	-	-	1558	-	-	771				
HCM Lane V/C Ratio	0.006	0.001	-	-	0.002	-	-	0.003				
HCM Control Delay (s)	8.8	7.4	0	-	7.3	0	-	9.7				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0				

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	57	0	9	53	2	0	0	6	24	0	7
Future Vol, veh/h	0	57	0	9	53	2	0	0	6	24	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	60	0	9	56	2	0	0	6	25	0	7
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	58	0	0	60	0	0	139	136	60	138	135	57
Stage 1	-	-	-	-	-	-	60	60	-	75	75	-
Stage 2	-	-	-	-	-	-	79	76	-	63	60	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1559	-	-	1556	-	-	836	759	1011	837	760	1015
Stage 1	-	-	-	-	-	-	957	849	-	939	836	-
Stage 2	-	-	-	-	-	-	935	836	-	953	849	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1559	-	-	1556	-	-	826	754	1011	828	755	1015
Mov Cap-2 Maneuver	-	-	-	-	-	-	826	754	-	828	755	-
Stage 1	-	-	-	-	-	-	957	849	-	939	831	-
Stage 2	-	-	-	-	-	-	923	831	-	947	849	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			1			8.6			9.3		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	1011	1559	-	-	1556	-	-	864				
HCM Lane V/C Ratio	0.006	-	-	-	0.006	-	-	0.038				
HCM Control Delay (s)	8.6	0	-	-	7.3	0	-	9.3				
HCM Lane LOS	A	A	-	-	A	A	-	A				
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1				

























HCM 2010 Signalized Intersection Summary
1: Golden State Blvd & Taylor Rd







Pinnacle Traffic Engineering
12/31/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	324	575	31	695	112	612	259	19	26	145	18
Future Volume (veh/h)	63	324	575	31	695	112	612	259	19	26	145	18
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1937	1937	1900	1863	1976	1863	1900	1976	1900	1900	1976
Adj Flow Rate, veh/h	68	348	0	33	747	0	658	278	0	28	156	0
Adj No. of Lanes	1	1	1	1	2	1	2	1	1	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	2	0	2	0	2	0	0	0	0	0
Cap, veh/h	94	654	556	61	1130	536	904	499	441	204	215	190
Arrive On Green	0.05	0.34	0.00	0.03	0.32	0.00	0.26	0.26	0.00	0.11	0.11	0.00
Sat Flow, veh/h	1810	1937	1647	1810	3539	1680	3442	1900	1680	1810	1900	1680
Grp Volume(v), veh/h	68	348	0	33	747	0	658	278	0	28	156	0
Grp Sat Flow(s),veh/h/ln	1810	1937	1647	1810	1770	1680	1721	1900	1680	1810	1900	1680
Q Serve(g_s), s	2.6	10.3	0.0	1.3	13.0	0.0	12.4	9.0	0.0	1.0	5.6	0.0
Cycle Q Clear(g_c), s	2.6	10.3	0.0	1.3	13.0	0.0	12.4	9.0	0.0	1.0	5.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	94	654	556	61	1130	536	904	499	441	204	215	190
V/C Ratio(X)	0.72	0.53	0.00	0.54	0.66	0.00	0.73	0.56	0.00	0.14	0.73	0.00
Avail Cap(c_a), veh/h	267	1103	938	165	1816	862	1766	975	862	471	494	437
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	33.2	19.0	0.0	33.8	20.9	0.0	23.9	22.6	0.0	28.4	30.5	0.0
Incr Delay (d2), s/veh	10.0	0.7	0.0	7.3	0.7	0.0	1.1	1.0	0.0	0.3	4.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	5.6	0.0	0.8	6.4	0.0	6.0	4.8	0.0	0.5	3.2	0.0
LnGrp Delay(d),s/veh	43.2	19.7	0.0	41.1	21.6	0.0	25.0	23.6	0.0	28.7	35.1	0.0
LnGrp LOS	D	B		D	C		C	C		C	D	
Approach Vol, veh/h	416				780				936		184	
Approach Delay, s/veh	23.5				22.4				24.6		34.2	
Approach LOS	C				C				C		C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2		3	4			6	7	8			
Phs Duration (G+Y+Rc), s	12.5		6.9	28.5			23.2	8.2	27.2			
Change Period (Y+Rc), s	4.5		4.5	4.5			4.5	4.5	4.5			
Max Green Setting (Gmax), s	18.5		6.5	40.5			36.5	10.5	36.5			
Max Q Clear Time (g_c+I1), s	7.6		3.3	12.3			14.4	4.6	15.0			
Green Ext Time (p_c), s	0.6		0.0	8.6			4.3	0.1	7.8			
Intersection Summary												
HCM 2010 Ctrl Delay			24.4									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
1: Golden State Blvd & Taylor Rd

Pinnacle Traffic Engineering
12/31/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	523	789	43	442	46	440	160	52	73	256	34
Future Volume (veh/h)	33	523	789	43	442	46	440	160	52	73	256	34
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1937	1937	1900	1863	1976	1863	1900	1976	1900	1900	1976
Adj Flow Rate, veh/h	35	551	0	45	465	0	463	168	0	77	269	0
Adj No. of Lanes	1	1	1	1	2	1	2	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	0	2	0	2	0	0	0	0	0
Cap, veh/h	61	724	615	71	1343	637	629	347	307	326	342	303
Arrive On Green	0.03	0.37	0.00	0.04	0.38	0.00	0.18	0.18	0.00	0.18	0.18	0.00
Sat Flow, veh/h	1810	1937	1647	1810	3539	1680	3442	1900	1680	1810	1900	1680
Grp Volume(v), veh/h	35	551	0	45	465	0	463	168	0	77	269	0
Grp Sat Flow(s),veh/h/ln	1810	1937	1647	1810	1770	1680	1721	1900	1680	1810	1900	1680
Q Serve(g_s), s	1.5	20.0	0.0	2.0	7.5	0.0	10.2	6.4	0.0	2.9	10.9	0.0
Cycle Q Clear(g_c), s	1.5	20.0	0.0	2.0	7.5	0.0	10.2	6.4	0.0	2.9	10.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	61	724	615	71	1343	637	629	347	307	326	342	303
V/C Ratio(X)	0.57	0.76	0.00	0.63	0.35	0.00	0.74	0.48	0.00	0.24	0.79	0.00
Avail Cap(c_a), veh/h	155	1289	1095	202	2447	1161	1241	685	606	686	721	637
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	38.3	22.0	0.0	38.1	17.8	0.0	31.0	29.5	0.0	28.2	31.5	0.0
Incr Delay (d2), s/veh	8.2	1.7	0.0	8.8	0.2	0.0	1.7	1.0	0.0	0.4	4.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	11.1	0.0	1.2	3.7	0.0	5.0	3.5	0.0	1.5	6.1	0.0
LnGrp Delay(d),s/veh	46.5	23.7	0.0	46.9	18.0	0.0	32.7	30.5	0.0	28.6	35.5	0.0
LnGrp LOS	D	C		D	B		C	C		C	D	
Approach Vol, veh/h	586			510			631			346		
Approach Delay, s/veh	25.1			20.5			32.1			33.9		
Approach LOS	C			C			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		19.0	7.7	34.6		19.2	7.2	35.0				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		30.5	9.0	53.5		29.0	6.9	55.6				
Max Q Clear Time (g_c+I1), s		12.9	4.0	22.0		12.2	3.5	9.5				
Green Ext Time (p_c), s		1.6	0.0	8.0		2.5	0.0	8.6				
Intersection Summary												
HCM 2010 Ctrl Delay	27.6											
HCM 2010 LOS	C											

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	787	0	0	263	1062	20	0	175	0	0	0
Future Vol, veh/h	11	787	0	0	263	1062	20	0	175	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	Free	-	-	Yield	-	-	None
Storage Length	145	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	2	0	0	2	2	0	0	2	0	0	0
Mvmt Flow	12	846	0	0	283	1142	22	0	188	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	283	0	- - - 0 1153 1153 846
Stage 1	-	-	- - - 870 870 -
Stage 2	-	-	- - - 283 283 -
Critical Hdwy	4.1	-	- - - 6.4 6.5 6.22
Critical Hdwy Stg 1	-	-	- - - 5.4 5.5 -
Critical Hdwy Stg 2	-	-	- - - 5.4 5.5 -
Follow-up Hdwy	2.2	-	- - - 3.5 4 3.318
Pot Cap-1 Maneuver	1291	- 0 0	- 0 220 199 362
Stage 1	-	- 0 0	- 0 413 372 -
Stage 2	-	- 0 0	- 0 770 681 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1291	- - -	- - 218 0 362
Mov Cap-2 Maneuver	-	- - -	- - 218 0 -
Stage 1	-	- - -	- - 409 0 -
Stage 2	-	- - -	- - 770 0 -

Approach	EB	WB	NB
HCM Control Delay, s	0.1	0	23.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT
Capacity (veh/h)	403	1291	-	-
HCM Lane V/C Ratio	0.52	0.009	-	-
HCM Control Delay (s)	23.2	7.8	-	-
HCM Lane LOS	C	A	-	-
HCM 95th %tile Q(veh)	2.9	0	-	-

Intersection												
Int Delay, s/veh	11.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑			↱	↱		↕				
Traffic Vol, veh/h	30	1157	0	0	179	737	9	3	188	0	0	0
Future Vol, veh/h	30	1157	0	0	179	737	9	3	188	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	Free	-	-	Yield	-	-	None
Storage Length	145	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	2	0	0	2	2	0	0	2	0	0	0
Mvmt Flow	32	1218	0	0	188	776	9	3	198	0	0	0

Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	188	0	-	-	-	0	1470 1470 1218
Stage 1	-	-	-	-	-	-	1282 1282 -
Stage 2	-	-	-	-	-	-	188 188 -
Critical Hdwy	4.1	-	-	-	-	-	6.4 6.5 6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.4 5.5 -
Critical Hdwy Stg 2	-	-	-	-	-	-	5.4 5.5 -
Follow-up Hdwy	2.2	-	-	-	-	-	3.5 4 3.318
Pot Cap-1 Maneuver	1398	-	0	0	-	0	142 129 220
Stage 1	-	-	0	0	-	0	263 238 -
Stage 2	-	-	0	0	-	0	849 748 -
Platoon blocked, %	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1398	-	-	-	-	-	139 0 220
Mov Cap-2 Maneuver	-	-	-	-	-	-	139 0 -
Stage 1	-	-	-	-	-	-	257 0 -
Stage 2	-	-	-	-	-	-	849 0 -

Approach	EB	WB	NB
HCM Control Delay, s	0.2	0	87.5
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT
Capacity (veh/h)	227	1398	-	-
HCM Lane V/C Ratio	0.927	0.023	-	-
HCM Control Delay (s)	87.5	7.6	-	-
HCM Lane LOS	F	A	-	-
HCM 95th %tile Q(veh)	7.9	0.1	-	-

Intersection												
Int Delay, s/veh	327.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↑	↑	↑						↕	
Traffic Vol, veh/h	0	59	5	187	96	0	0	0	0	739	0	25
Future Vol, veh/h	0	59	5	187	96	0	0	0	0	739	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	Yield
Storage Length	-	-	50	135	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	2	0	0	0	0	0	2	0	0
Mvmt Flow	0	63	5	201	103	0	0	0	0	795	0	27

Major/Minor	Minor2		Minor1				Major2		
Conflicting Flow All	-	1604	14	1622	1590	-	0	0	0
Stage 1	-	1604	-	0	0	-	-	-	-
Stage 2	-	0	-	1622	1590	-	-	-	-
Critical Hdwy	-	6.5	6.2	7.12	6.5	-	4.12	-	-
Critical Hdwy Stg 1	-	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	6.12	5.5	-	-	-	-
Follow-up Hdwy	-	4	3.3	3.518	4	-	2.218	-	-
Pot Cap-1 Maneuver	0	107	1072	~ 82	109	0	-	-	-
Stage 1	0	166	-	-	-	0	-	-	-
Stage 2	0	-	-	~ 129	169	0	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	-	107	1072	~ 43	109	-	-	-	-
Mov Cap-2 Maneuver	-	107	-	~ 43	109	-	-	-	-
Stage 1	-	166	-	-	-	-	-	-	-
Stage 2	-	-	-	~ 79	169	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	73.3	\$ 1267.4	
HCM LOS	F	F	

Minor Lane/Major Mvmt	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	107	1072	43	109	-	-	-
HCM Lane V/C Ratio	0.593	0.005	4.676	0.947	-	-	-
HCM Control Delay (s)	78.8	8.4	1843.4	145.3	-	-	-
HCM Lane LOS	F	A	F	F	-	-	-
HCM 95th %tile Q(veh)	2.9	0	23	5.9	-	-	-

Notes			
~: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection												
Int Delay, s/veh	60.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↑	↑	↑						↕	
Traffic Vol, veh/h	0	92	32	127	61	0	0	0	0	1095	1	13
Future Vol, veh/h	0	92	32	127	61	0	0	0	0	1095	1	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	Yield
Storage Length	-	-	50	135	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	2	0	0	0	0	0	2	0	0
Mvmt Flow	0	97	34	134	64	0	0	0	0	1153	1	14

Major/Minor	Minor2		Minor1		Major2	
Conflicting Flow All	-	2314	8	2356	2307	-
Stage 1	-	2314	-	0	0	-
Stage 2	-	0	-	2356	2307	-
Critical Hdwy	-	6.5	6.2	7.12	6.5	-
Critical Hdwy Stg 1	-	5.5	-	-	-	-
Critical Hdwy Stg 2	-	-	-	6.12	5.5	-
Follow-up Hdwy	-	4	3.3	3.518	4	-
Pot Cap-1 Maneuver	0	~38	1080	~25	~39	0
Stage 1	0	~73	-	-	-	0
Stage 2	0	-	-	~48	74	0
Platoon blocked, %						-
Mov Cap-1 Maneuver	-	~38	1080	-	~39	-
Mov Cap-2 Maneuver	-	~38	-	-	~39	-
Stage 1	-	~73	-	-	-	-
Stage 2	-	-	-	-	74	-

Approach	EB	WB	SB
HCM Control Delay, s\$	690.5		
HCM LOS	F	-	

Minor Lane/Major Mvmt	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	38	1080	-	39	-	-	-
HCM Lane V/C Ratio	2.548	0.031	-	1.646	-	-	-
HCM Control Delay (s)	\$ 927.8	8.4	-	\$ 542	-	-	-
HCM Lane LOS	F	A	-	F	-	-	-
HCM 95th %tile Q(veh)	10.7	0.1	-	6.7	-	-	-

Notes			
~: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	55	0	3	81	37	1	0	4	5	1	2
Future Vol, veh/h	10	55	0	3	81	37	1	0	4	5	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	11	59	0	3	87	40	1	0	4	5	1	2
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	127	0	0	59	0	0	196	214	59	196	194	107
Stage 1	-	-	-	-	-	-	81	81	-	113	113	-
Stage 2	-	-	-	-	-	-	115	133	-	83	81	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1472	-	-	1558	-	-	767	687	1012	767	705	953
Stage 1	-	-	-	-	-	-	932	832	-	897	806	-
Stage 2	-	-	-	-	-	-	895	790	-	930	832	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1472	-	-	1558	-	-	759	680	1012	758	698	953
Mov Cap-2 Maneuver	-	-	-	-	-	-	759	680	-	758	698	-
Stage 1	-	-	-	-	-	-	925	825	-	890	804	-
Stage 2	-	-	-	-	-	-	890	788	-	919	825	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.1			0.2			8.8			9.6		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	949	1472	-	-	1558	-	-	790				
HCM Lane V/C Ratio	0.006	0.007	-	-	0.002	-	-	0.011				
HCM Control Delay (s)	8.8	7.5	0	-	7.3	0	-	9.6				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0				

Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔			↔			↔			↔		
Traffic Vol, veh/h	1	57	0	9	53	12	0	0	6	61	0	13
Future Vol, veh/h	1	57	0	9	53	12	0	0	6	61	0	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	60	0	9	56	13	0	0	6	64	0	14
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	69	0	0	60	0	0	150	149	60	146	143	63
Stage 1	-	-	-	-	-	-	62	62	-	81	81	-
Stage 2	-	-	-	-	-	-	88	87	-	65	62	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1545	-	-	1556	-	-	822	746	1011	827	752	1007
Stage 1	-	-	-	-	-	-	954	847	-	932	832	-
Stage 2	-	-	-	-	-	-	925	827	-	951	847	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1545	-	-	1556	-	-	806	741	1011	817	747	1007
Mov Cap-2 Maneuver	-	-	-	-	-	-	806	741	-	817	747	-
Stage 1	-	-	-	-	-	-	953	846	-	931	827	-
Stage 2	-	-	-	-	-	-	907	822	-	944	846	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.9			8.6			9.7		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	1011	1545	-	-	1556	-	-	845				
HCM Lane V/C Ratio	0.006	0.001	-	-	0.006	-	-	0.092				
HCM Control Delay (s)	8.6	7.3	0	-	7.3	0	-	9.7				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.3				

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Best RV Center Project; Stanislaus County, CA - Project Weekday Trip Generation Analysis (May 20, 2018) -

- Taylor Court Traffic Count Data (S/O Southerly Driveway) -				
	<u>Tue.</u> May 1st	<u>Wed.</u> May 2nd	<u>Thur.</u> 3-May	3-Day <u>Average</u>
<u>AM Peak Hour:</u>	63	53	56	57
NB -	52	38	42	44
SB -	11	15	14	13
<u>PM Peak Hour:</u>	56	54	56	55
NB -	13	13	14	13
SB -	43	41	42	42

- Taylor Court Traffic Count Data (N/O Northerly Driveway) -				
<u>AM Peak Hour:</u>	17	15	17	16
NB -	11	6	9	9
SB -	6	9	8	8
<u>PM Peak Hour:</u>	17	12	18	16
NB -	2	1	2	2
SB -	15	11	16	14

- Best RV Center (Volumes S/O Southerly Dwy. - N/O Northerly Dwy) -				
<u>AM Peak Hour:</u>	46	38	39	41
NB -	41	32	33	35
SB -	5	6	6	6
<u>PM Peak Hour:</u>	39	42	38	40
NB -	11	12	12	12
SB -	28	30	26	28

No. of Employees:	53	53	54	
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- Best RV Center Trip Generation Rates (No. of Trips per Employee) -					
<u>AM Peak Hour:</u>	IN -	0.774	0.604	0.611	0.663 - IN
	OUT -	0.094	0.113	0.111	0.106 - OUT
<u>PM Peak Hour:</u>	IN -	0.208	0.226	0.222	0.219 - IN
	OUT -	0.528	0.566	0.481	0.525 - OUT

	AM Peak Hour		PM Peak Hour	
	<u>Inbound</u>	<u>Outbound</u>	<u>Inbound</u>	<u>Outbound</u>
Org. Permit (8 Employees)	5	1	2	4
Existing (65 Employees):	43	7	14	34
<u>Prop. (90 Employees):</u>	<u>60</u>	<u>10</u>	<u>20</u>	<u>47</u>
Increase (Prop. - Org.):	+55	+9	+18	+43
Increase (Prop. - Ex.):	+17	+3	+6	+13

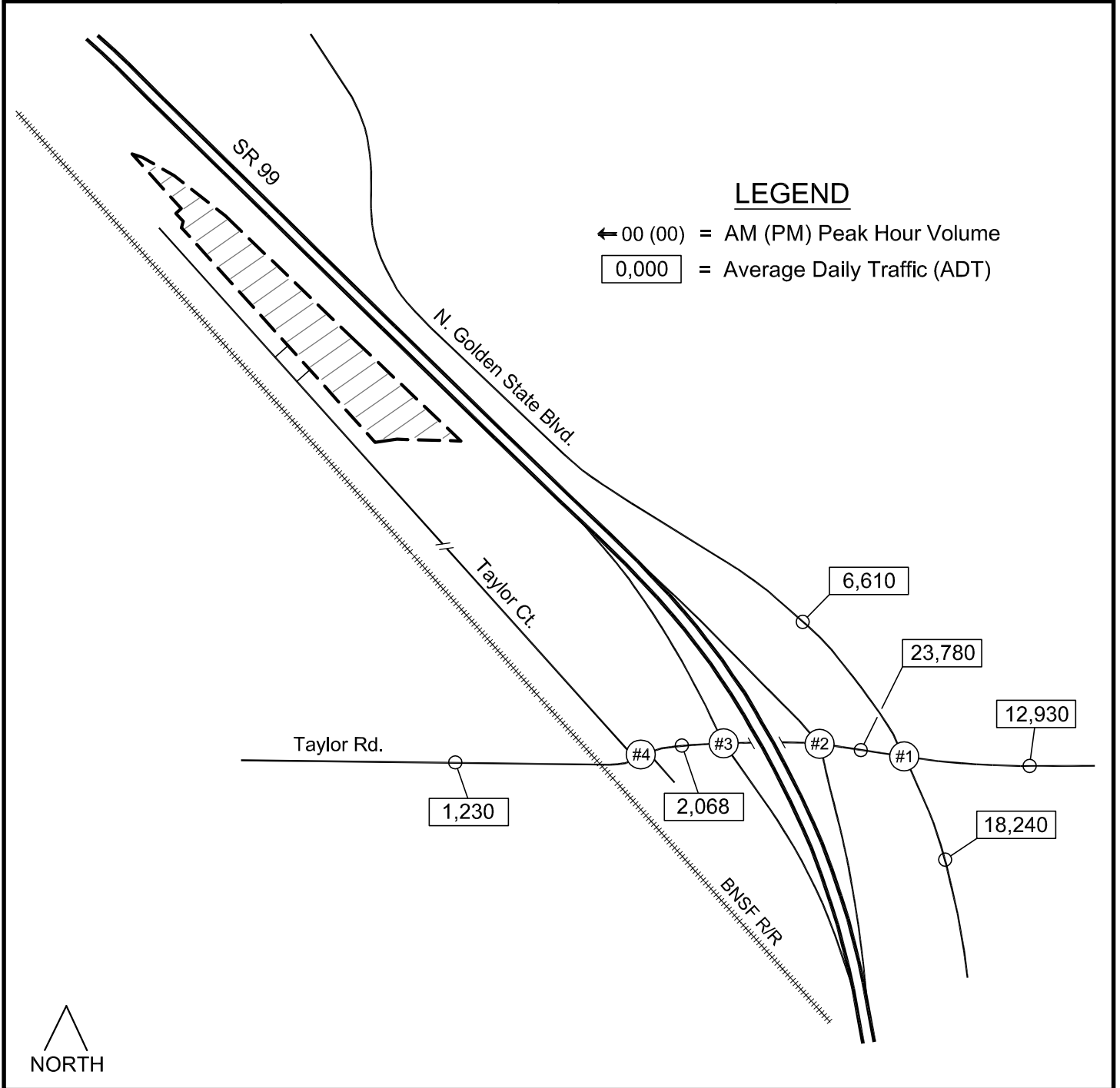
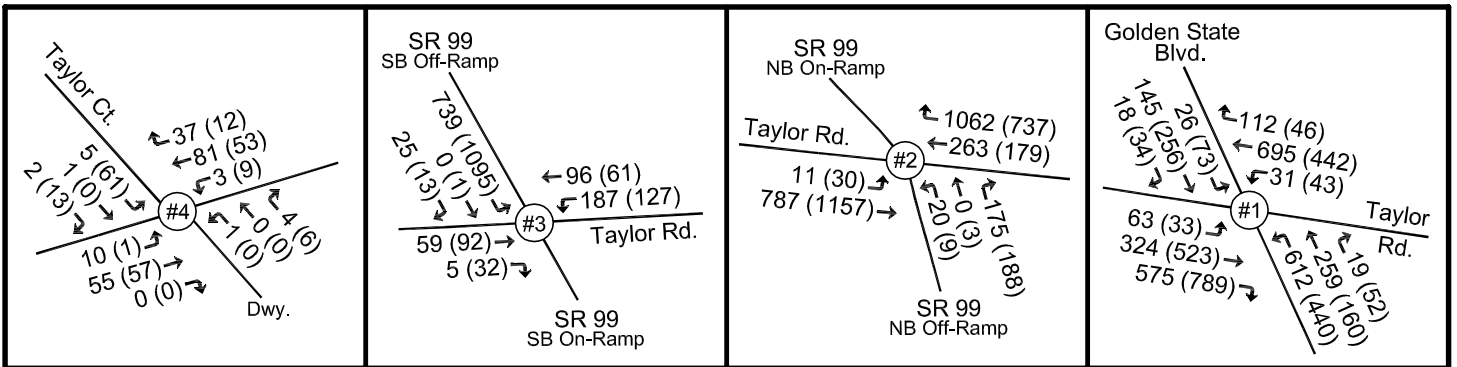
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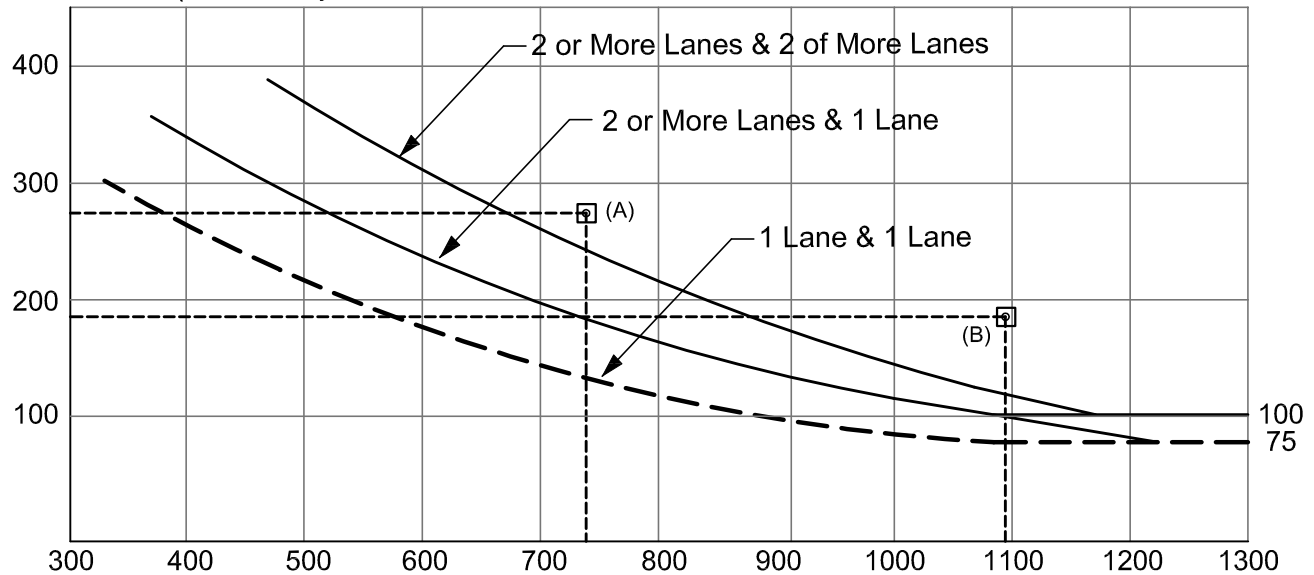
Best RV Center Project; Stanislaus County, CA - Project Weekend Day Data Analysis (Sept. 22 & 23, 2018) -

<u>- Taylor Court Traffic Count Data (S/O Southerly Driveway) -</u>			
Saturday			
<u>Sept. 22, 2018</u>			
<u>Mid-Day Peak Hour:</u>		48	
NB -		25	
SB -		23	
<u>- Taylor Court Traffic Count Data (N/O Northerly Driveway) -</u>			
<u>Mid-Day Peak Hour:</u>		1	
NB -		0	
SB -		1	
<u>- Best RV Center Vol. (between Southerly Dwy. & N/O Northerly Dwy) -</u>			
<u>Mid-Day Peak Hour:</u>		47	
NB -		25	
SB -		22	
No. of Employees:		36	
<u>- Best RV Center Trip Generation Rates (No. of Trips per Employee) -</u>			
<u>Mid-Day Peak Hour:</u>		IN -	0.694
		OUT -	0.611
<u>ADT</u>			
May 2018 (Fig. 2B):	585	Weekday ADT	
Saturday (9/22/18):	494	84%	(16% Lower Than Weekday)
Sunday (9/26/18):	382	65%	(35% Lower Than Weekday)



Warrant #3 - Peak Hour Volume (70%)

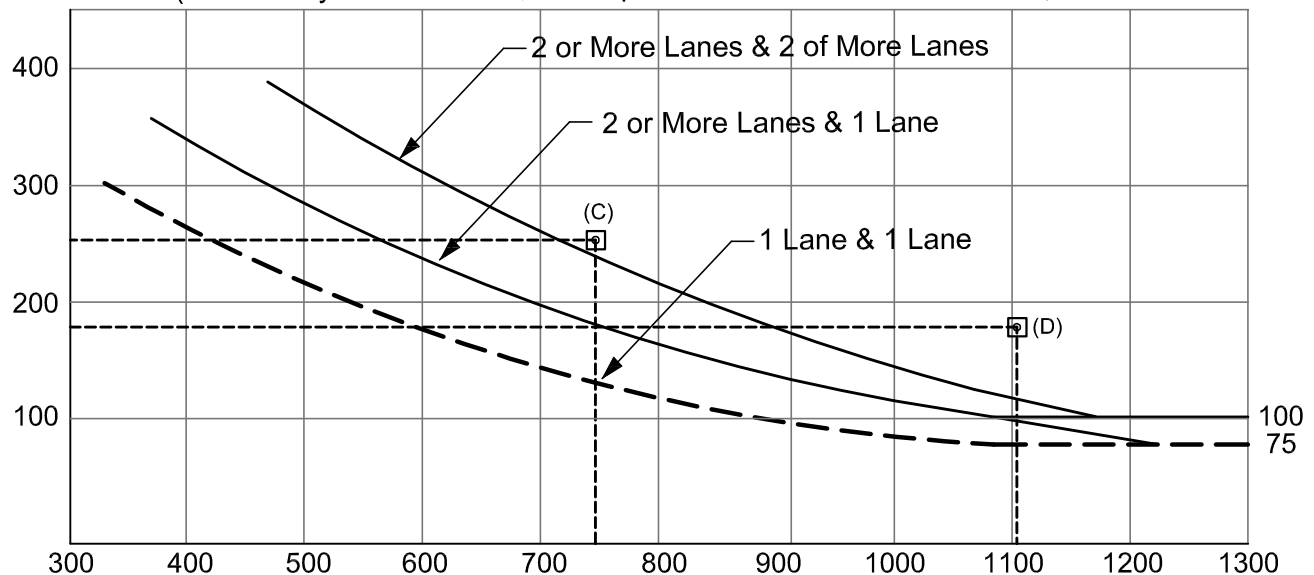
(Community Less Than 10,000 Population or Above 40 MPH on Major Road)



	<u>SR 99 SB Off Ramp</u>	<u>Taylor Road</u>	<u>Met</u>
(A) Existing AM Peak Hour:	739	274 (WB) - One Lane	YES
(B) Existing PM Peak Hour:	1096	185 (WB) - One Lane	YES

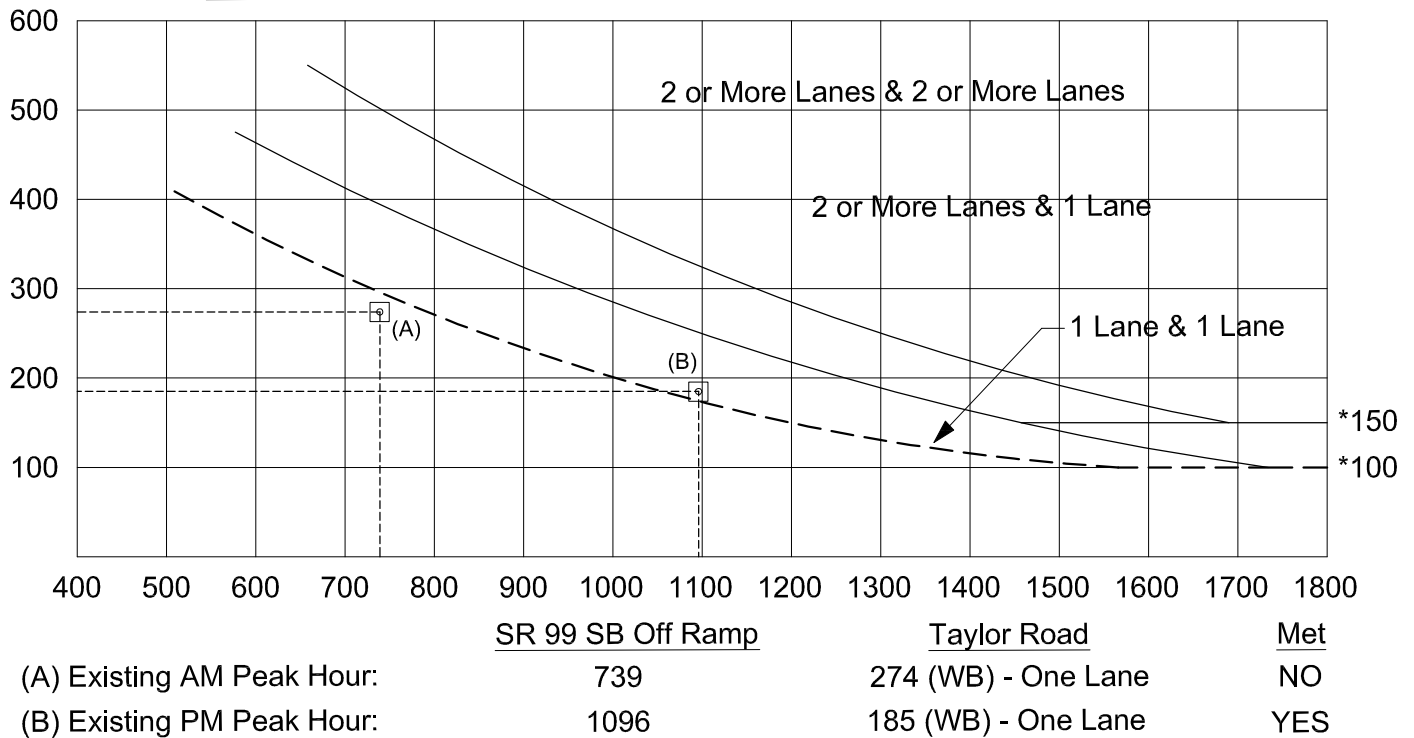
Warrant #3 - Peak Hour Volume (70%)

(Community Less Than 10,000 Population or Above 40 MPH on Major Road)

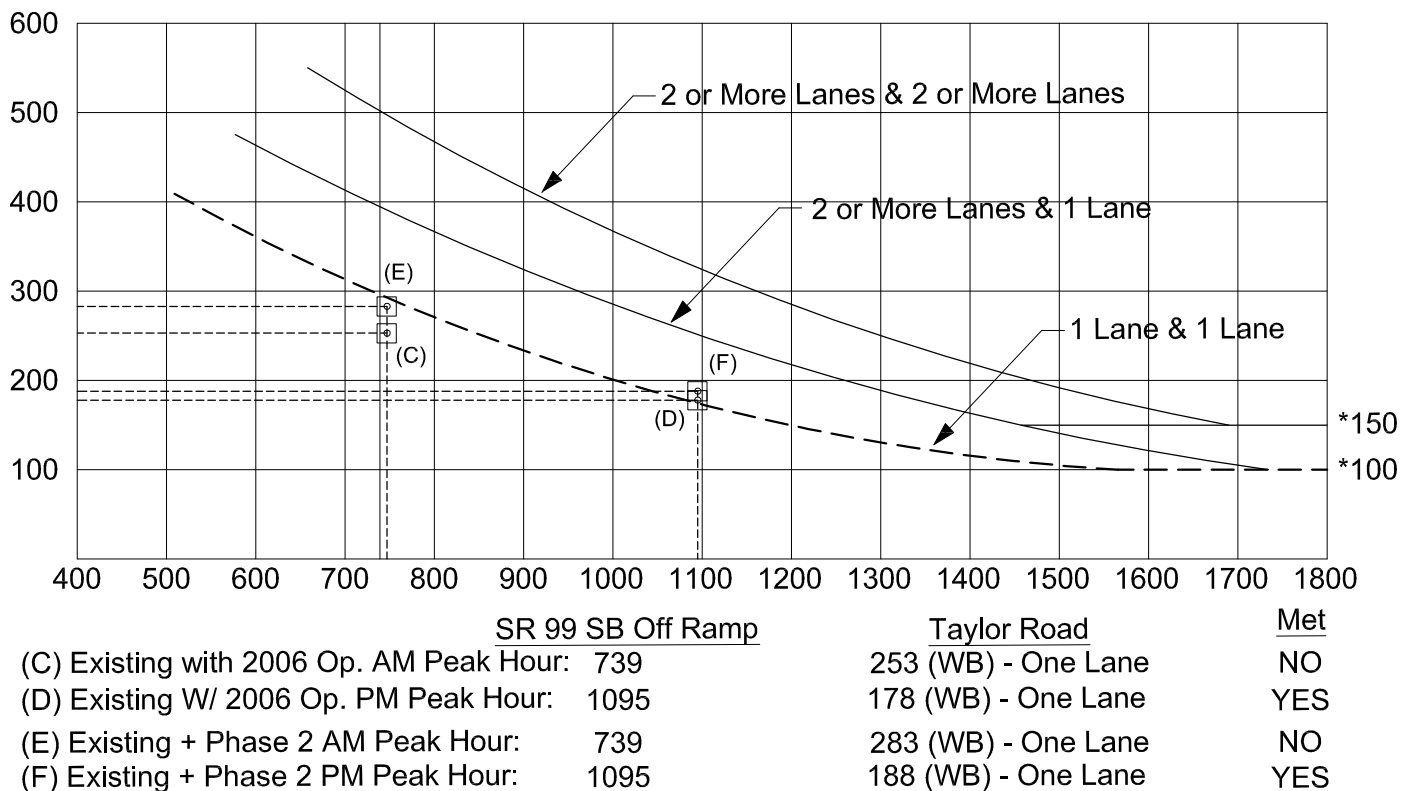


	<u>SR 99 SB Off Ramp</u>	<u>Taylor Road</u>	<u>Met</u>
(C) Existing with 2006 Op. AM Peak Hour:	747	253 (WB) - One Lane	YES
(D) Existing W/ 2006 Op. PM Peak Hour:	1104	178 (WB) - One Lane	YES

Warrant #3 - Peak Hour Volume (100%)



Warrant #3 - Peak Hour Volume (100%)



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Best RV Center Project; Stanislaus County, CA

Traffic Impact Analysis (TIA) - PTE #314-A

Speed Data - Taylor Road @ Taylor Court (LDH; 9 AM - 4 PM - 9/25/18)

Data #	Eastbound (EB) - MPH		
1.	27		
2.	30		
3.	30		
4.	28		
5.	30		
6.	24		
7.	37		
8.	21		
9.	32		
10.	33		
11.	39		
12.	33		
13.	30		
14.	30		
15.	26		
16.	27		
17.	31		
18.			
19.			
20.			
Totals:	508	-	
Total:		508	

Dry & Clear

EB Average Travel Speed :

Eastbound (EB) : $508 / 17 =$

85th Percentile Speed (EB):

WB Average Travel Speed :

Westbound (WB) : $26 / 1 =$

Data #	Westbound (WB) - MPH		
1.	26		
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
Totals:	26	-	
Total:		26	

Dry & Clear

29.9 MPH

33 MPH

26.0 MPH

PINNACLE TRAFFIC ENGINEERING

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Hollister, California 95023
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May 21, 2018

Mr. Jim P. Freitas
Associated Engineering Group, Inc.
4206 Technology Drive, Suite 4
Modesto, CA 95356

RE: Best RV Center Project (PLN2017-0098); Stanislaus County, CA
PRELIMINARY Trip Generation Analysis

Dear Mr. Freitas,

Pinnacle Traffic Engineering (PTE) is pleased to submit the trip generation analysis for the Best RV Center project. The Best RV Center is currently located at 5340 Taylor Court in the unincorporated area north of Turlock. The project includes an expansion in two (2) phases. Phase 1 will provide additional area for RV sales inventory located on the adjacent parcels to the northwest. Phase 2 will relocate the existing facilities service center and parts sales office to the adjacent parcels to the southeast (formally Peterbilt Truck Sales & Service Center). The project will remodel the existing facility and include various infrastructure improvements to facilitate the expansion (e.g. paving, storm drain basins, landscaping & fencing, etc). The existing operations have approximately 65 employees, which is anticipated to increase to 90 employees with the completion Phase 2. Access to the existing site and adjacent parcels is currently provided via three (3) driveways on the east side of Taylor Court. Access to the expanded facility will continue to be provided via multiple driveways.

Stanislaus County has requested that a traffic study be prepared to evaluate the project trip generation (existing and proposed), levels of service, vehicle miles traveled, and impacts to local intersection operations (e.g. SR 99 / Taylor interchange). The initial phase of the traffic study provides a trip generation analysis to quantify the “net” increase vehicle trips associated with the proposed project. The City of Turlock is currently designing improvements at the SR 99 / Taylor Road interchange. The County is participating in the project fund and would like to determine the project’s fair-share percentage towards the future interchange improvements. Data provided in the trip generation analysis will be used to estimate the project’s fair-share funding.

Project Trip Generation Estimates

The project site trip generation associated with the existing operations was documented using new traffic count data (May 1, 2, and 3). Traffic count data was collected on Taylor Court just south of the southerly project site driveway and north of the existing driveways for the Woods Furniture Gallery. The new count data was reviewed to identify the morning (highest 60-minute period from 7:00 and 9:00 AM) and afternoon (highest 60-minute period from 4:00 and 6:00 PM) peak hour volumes. The existing Thermo King business is located at the northerly terminus of Taylor Court (6400 Taylor Court). New traffic count data was also collected at the Thermo King driveway to quantify the existing trip generation during the AM and PM peak hours on Taylor Court.

The trip generation associated with the existing Best RV Center operations was derived by subtracting the peak hour trips for the Thermo King business from the total peak hour volumes on Taylor Court (south of project site). The trip generation characteristics associated with the Best RV Center include a variety of trip types (employees, sales, service, RV deliveries, etc). Based on the unique operational characteristics, it was deemed reasonable to use the number of employees as the independent variable for trip generation purposes. The number of employees during the data collection period was provided by the Best RV Center. The “average” weekday peak hour trip generation rates per employee for the existing operations are presented in Table 1. The project site trip generation estimates associated with the number employees covered in 2006 Use Permit (8), average number of current daily employees (65), and number of employees associated with the Phase 2 (90) are also provided in Table 1. Copies of the project site trip generation rate calculation and new traffic count data are attached.

Table 1 - Project Site Trip Generation Rates and Estimates

Project Component	Number of Vehicle Trips			
	AM Peak Hour		PM Peak Hour	
	In	Out	In	Out
<u>Trip Generation Rate per Employee:</u> - Best RV Center Existing Operations	0.663	0.106	0.219	0.525
2006 Use Permit (8 Employees) -	5	1	2	4
2018 Current Operations (65 Employees) -	43	7	14	34
Phase 2 Completion (90 Employees) -	60	10	20	47
“Net” Change (2018 - 2006):	+38	+6	+12	+30
“Net” Change (Phase 2 - 2006):	+55	+9	+18	+43

The data in Table 1 indicates that the existing Best RV Center operations generate approximately 0.77 trips per employee during the AM peak hour and 0.74 trips per employee during the PM peak hour. The existing trip generation rates are considered reasonable since the average rates in the Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition) are relative close (Land Use

Mr. Jim P. Freitas
May 21, 2018
Page 3 of 3

**Best RV Center Project
Trip Generation Analysis**

Code #842, Recreational Vehicle Sales). The Best RV Center project (Phase 2) will generate a “net” increase (Phase 2 - 2006 Use Permit) of 64 vehicle trips during the AM peak hour (55 inbound & 9 outbound) and 61 vehicle trips during the PM peak hour (18 inbound & 43 outbound).

The project’s fair-share funding towards the SR 99 / Taylor Road interchange improvements will be determined upon receipt of the future traffic projection data from the City of Turlock. Additional requirements for a formal traffic study will be defined by County staff.

Please contact my office with any questions regarding the Preliminary trip generation analysis.

Pinnacle Traffic Engineering



Larry D. Hail, CE, TE, PTOE
President



ldh:msw

attachments: Project Site Trip Generation Rate Calculation
New Taylor Court Traffic Count Data (May 1, 2 and 3; 2018)

PINNACLE TRAFFIC ENGINEERING

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PinnacleTE.com

Best RV Center Project; Stanislaus County, CA

- Project Trip Generation Analysis (May 20, 2018) -

- Taylor Court Traffic Count Data (S/O Southerly Driveway) -				
	<u>Tue.</u> May 1st	<u>Wed.</u> May 2nd	<u>Thur.</u> 3-May	3-Day <u>Average</u>
<u>AM Peak Hour:</u>	63	53	56	57
NB -	52	38	42	44
SB -	11	15	14	13
<u>PM Peak Hour:</u>	56	54	56	55
NB -	13	13	14	13
SB -	43	41	42	42

- Taylor Court Traffic Count Data (N/O Northerly Driveway) -				
<u>AM Peak Hour:</u>	17	15	17	16
NB -	11	6	9	9
SB -	6	9	8	8
<u>PM Peak Hour:</u>	17	12	18	16
NB -	2	1	2	2
SB -	15	11	16	14

- Best RV Center (Volumes S/O Southerly Dwy. - N/O Northerly Dwy) -				
<u>AM Peak Hour:</u>	46	38	39	41
NB -	41	32	33	35
SB -	5	6	6	6
<u>PM Peak Hour:</u>	39	42	38	40
NB -	11	12	12	12
SB -	28	30	26	28

No. of Employees:	53	53	54
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- Best RV Center Trip Generation Rates (No. of Trips per Employee) -					
<u>AM Peak Hour:</u>	IN -	0.774	0.604	0.611	0.663 - IN
	OUT -	0.094	0.113	0.111	0.106 - OUT
<u>PM Peak Hour:</u>	IN -	0.208	0.226	0.222	0.219 - IN
	OUT -	0.528	0.566	0.481	0.525 - OUT

	AM Peak Hour		PM Peak Hour	
	<u>Inbound</u>	<u>Outbound</u>	<u>Inbound</u>	<u>Outbound</u>
Org. Permit (8 Employees)	5	1	2	4
Existing (65 Employees):	43	7	14	34
<u>Prop. (90 Employees):</u>	<u>60</u>	<u>10</u>	<u>20</u>	<u>47</u>
Increase (Prop. - Org.):	+55	+9	+18	+43
Increase (Prop. - Ex.):	+17	+3	+6	+13

VOLUME

Taylor Ct S/O Dwy 1 & N/O Wood Furniture Gallery

Day: Tuesday
Date: 5/1/2018City: Turlock
Project #: CA18_7156_001

DAILY TOTALS					NB	SB					EB	WB	Total
					303	307					0	0	610
AM Period	NB	SB	EB	WB	TOTAL		PM Period	NB	SB	EB	WB	TOTAL	
00:00	0	0			0		12:00	9	8			17	
00:15	0	0			0		12:15	8	8			16	
00:30	0	0			0		12:30	9	8			17	
00:45	0	0			0		12:45	10	36	9	33	19	69
01:00	1	0			1		13:00	12		13		25	
01:15	0	0			0		13:15	10		8		18	
01:30	1	1			2		13:30	7		8		15	
01:45	0	2	0	1	0	3	13:45	6	35	6	35	12	70
02:00	0	0			0		14:00	7		6		13	
02:15	1	1			2		14:15	2		2		4	
02:30	0	0			0		14:30	3		9		12	
02:45	1	2	1	2	2	4	14:45	1	13	6	23	7	36
03:00	0	0			0		15:00	3		5		8	
03:15	1	1			2		15:15	8		2		10	
03:30	0	0			0		15:30	10		8		18	
03:45	1	2	1	2	2	4	15:45	6	27	7	22	13	49
04:00	0	1			1		16:00	3		3		6	
04:15	0	1			1		16:15	1		1		2	
04:30	0	1			1		16:30	5		3		8	
04:45	0	0		3	0	3	16:45	3	12	3	10	6	22
05:00	1	1			2		17:00	1		16		17	
05:15	0	0			0		17:15	3		14		17	
05:30	0	0			0		17:30	6		10		16	
05:45	1	2	1	2	2	4	17:45	1	11	3	43	4	54
06:00	0	0			0		18:00	1		13		14	
06:15	0	0			0		18:15	2		22		24	
06:30	0	0			0		18:30	1		5		6	
06:45	1	1	0		1	1	18:45	5	9	5	45	10	54
07:00	0	0			0		19:00	0		2		2	
07:15	2	0			2		19:15	0		0		0	
07:30	9	0			9		19:30	0		0		0	
07:45	12	23	2	2	14	25	19:45	0		0	2	0	2
08:00	8	2			10		20:00	0		0		0	
08:15	9	3			12		20:15	2		2		4	
08:30	15	4			19		20:30	0		0		0	
08:45	20	52	2	11	22	63	20:45	1	3	0	2	1	5
09:00	7	6			13		21:00	0		0		0	
09:15	9	4			13		21:15	0		1		1	
09:30	5	5			10		21:30	0		0		0	
09:45	4	25	7	22	11	47	21:45	0		0	1	0	1
10:00	5	3			8		22:00	0		0		0	
10:15	4	7			11		22:15	0		0		0	
10:30	5	5			10		22:30	1		1		2	
10:45	8	22	3	18	11	40	22:45	0	1	0	1	0	2
11:00	2	6			8		23:00	0		0		0	
11:15	7	5			12		23:15	0		0		0	
11:30	8	9			17		23:30	1		1		2	
11:45	7	24	6	26	13	50	23:45	0	1	0	1	0	2
TOTALS	155	89			244		TOTALS	148	218			366	
SPLIT %	63.5%	36.5%			40.0%		SPLIT %	40.4%	59.6%			60.0%	

DAILY TOTALS					NB	SB					EB	WB	Total
					303	307					0	0	610

AM Peak Hour	08:00	11:30			08:30		PM Peak Hour	12:30	17:30			12:30	
AM Pk Volume	52	31			67		PM Pk Volume	41	48			79	
Pk Hr Factor	0.650	0.861			0.761		Pk Hr Factor	0.854	0.545			0.790	
7 - 9 Volume	75	13	0	0	88		4 - 6 Volume	23	53	0	0	76	
7 - 9 Peak Hour	08:00	07:45			08:00		4 - 6 Peak Hour	16:45	16:45			16:45	
7 - 9 Pk Volume	52	11	0	0	63		4 - 6 Pk Volume	13	43	0	0	56	
Pk Hr Factor	0.650	0.688	0.000	0.000	0.716		Pk Hr Factor	0.542	0.672	0.000	0.000	0.824	

VOLUME

Taylor Ct S/O Dwy 1 & N/O Wood Furniture Gallery

Day: Wednesday

City: Turlock

Date: 5/2/2018

Project #: CA18_7156_001

DAILY TOTALS					NB	SB	EB					WB	Total	
					294	296	0					0	590	
AM Period	NB	SB	EB	WB	TOTAL		PM Period	NB	SB	EB	WB	TOTAL		
00:00	0	0			0		12:00	7	13			20		
00:15	0	0			0		12:15	5	8			13		
00:30	0	0			0		12:30	5	9			14		
00:45	0	0			0		12:45	6	23	4	34	10	57	
01:00	0	0			0		13:00	8	6			14		
01:15	1	1			2		13:15	9	5			14		
01:30	0	0			0		13:30	6	7			13		
01:45	0	1	0	1	0	2	13:45	10	33	5	23	15	56	
02:00	0	1			1		14:00	10	9			19		
02:15	1	0			1		14:15	8	9			17		
02:30	0	0			0		14:30	7	6			13		
02:45	1	2	1	2	2	4	14:45	5	30	2	26	7	56	
03:00	0	0			0		15:00	6	8			14		
03:15	1	1			2		15:15	4	5			9		
03:30	0	0			0		15:30	6	5			11		
03:45	1	2	1	2	2	4	15:45	5	21	5	23	10	44	
04:00	0	2			2		16:00	4	9			13		
04:15	1	1			2		16:15	3	2			5		
04:30	0	0			0		16:30	5	3			8		
04:45	1	2	1	4	2	6	16:45	0	12	4	18	4	30	
05:00	0	0			0		17:00	1	19			20		
05:15	0	0			0		17:15	7	14			21		
05:30	1	1			2		17:30	0	4			4		
05:45	0	1	0	1	0	2	17:45	1	9	3	40	4	49	
06:00	1	0			1		18:00	2	25			27		
06:15	2	1			3		18:15	1	2			3		
06:30	0	0			0		18:30	0	0			0		
06:45	0	3	0	1	0	4	18:45	3	6	4	31	7	37	
07:00	1	0			1		19:00	0	1			1		
07:15	4	0			4		19:15	1	0			1		
07:30	10	0			10		19:30	0	0			0		
07:45	13	28	0		13	28	19:45	0	1	1	2	1	3	
08:00	7	5			12		20:00	0	0			0		
08:15	8	4			12		20:15	0	0			0		
08:30	10	3			13		20:30	0	0			0		
08:45	13	38	3	15	16	53	20:45	1	1	2	2	3	3	
09:00	8	8			16		21:00	2	2			4		
09:15	3	3			6		21:15	1	1			2		
09:30	10	3			13		21:30	1	0			1		
09:45	5	26	3	17	8	43	21:45	0	4	1	4	1	8	
10:00	3	4			7		22:00	0	0			0		
10:15	14	5			19		22:15	0	0			0		
10:30	7	10			17		22:30	0	0			0		
10:45	5	29	6	25	11	54	22:45	0	0			0		
11:00	7	7			14		23:00	1	1			2		
11:15	5	9			14		23:15	0	0			0		
11:30	3	4			7		23:30	0	0			0		
11:45	6	21	4	24	10	45	23:45	0	1	0	1	0	2	
TOTALS	153	92			245		TOTALS	141	204			345		
SPLIT %	62.4%	37.6%			41.5%		SPLIT %	40.9%	59.1%			58.5%		

DAILY TOTALS					NB	SB						EB	WB	Total
					294	296						0	0	590
AM Peak Hour	08:15	11:45			10:15		PM Peak Hour	13:15	17:15			13:30		
AM Pk Volume	39	34			61		PM Pk Volume	35	46			64		
Pk Hr Factor	0.750	0.654			0.803		Pk Hr Factor	0.875	0.460			0.842		
7 - 9 Volume	66	15	0	0	81		4 - 6 Volume	21	58	0	0	79		
7 - 9 Peak Hour	07:30	08:00			08:00		4 - 6 Peak Hour	16:30	16:45			16:30		
7 - 9 Pk Volume	38	15	0	0	53		4 - 6 Pk Volume	13	41	0	0	53		
Pk Hr Factor	0.731	0.750	0.000	0.000	0.828		Pk Hr Factor	0.464	0.539	0.000	0.000	0.631		

VOLUME

Taylor Ct S/O Dwy 1 & N/O Wood Furniture Gallery

Day: Thursday
Date: 5/3/2018City: Turlock
Project #: CA18_7156_001

DAILY TOTALS					NB	SB					EB	WB	Total
					276	279					0	0	555
AM Period	NB	SB	EB	WB	TOTAL		PM Period	NB	SB	EB	WB	TOTAL	
00:00	0	0			0		12:00	2	7			9	
00:15	0	0			0		12:15	8	9			17	
00:30	0	0			0		12:30	6	9			15	
00:45	0	0			0		12:45	10	26	7	32	17	58
01:00	0	0			0		13:00	9	5			14	
01:15	0	0			0		13:15	5	6			11	
01:30	1	1			2		13:30	4	6			10	
01:45	0	1	0	1	0	2	13:45	5	23	4	21	9	44
02:00	0	0			0		14:00	12	8			20	
02:15	1	1			2		14:15	9	8			17	
02:30	0	0			0		14:30	6	7			13	
02:45	1	2	1	2	2	4	14:45	3	30	6	29	9	59
03:00	0	0			0		15:00	1	3			4	
03:15	1	1			2		15:15	5	5			10	
03:30	0	0			0		15:30	4	4			8	
03:45	1	2	1	2	2	4	15:45	4	14	8	20	12	34
04:00	0	1			1		16:00	5	5			10	
04:15	0	0			0		16:15	5	3			8	
04:30	1	1			2		16:30	1	10			11	
04:45	0	1	0	2	0	3	16:45	3	14	1	19	4	33
05:00	0	1			1		17:00	4	21			25	
05:15	1	1			2		17:15	1	20			21	
05:30	0	0			0		17:30	3	4			7	
05:45	0	1	0	2	0	3	17:45	0	8	5	50	5	58
06:00	0	0			0		18:00	0	10			10	
06:15	1	1			2		18:15	1	5			6	
06:30	2	0			2		18:30	1	3			4	
06:45	1	4	1	2	2	6	18:45	2	4	2	20	4	24
07:00	2	0			2		19:00	2	0			2	
07:15	5	2			7		19:15	1	0			1	
07:30	9	1			10		19:30	0	2			2	
07:45	14	30	1	4	15	34	19:45	0	3	0	2	0	5
08:00	6	3			9		20:00	0	1			1	
08:15	7	4			11		20:15	2	3			5	
08:30	15	5			20		20:30	0	0			0	
08:45	10	38	2	14	12	52	20:45	0	2	0	4	0	6
09:00	12	5			17		21:00	0	2			2	
09:15	7	4			11		21:15	0	0			0	
09:30	10	9			19		21:30	0	0			0	
09:45	7	36	4	22	11	58	21:45	0	0	0	2	0	2
10:00	4	1			5		22:00	0	0			0	
10:15	2	1			3		22:15	0	0			0	
10:30	8	4			12		22:30	0	0			0	
10:45	6	20	6	12	12	32	22:45	0	0			0	
11:00	4	8			12		23:00	0	0			0	
11:15	1	2			3		23:15	0	0			0	
11:30	5	1			6		23:30	1	1			2	
11:45	6	16	5	16	11	32	23:45	0	1	0	1	0	2
TOTALS	151	79			230		TOTALS	125	200			325	
SPLIT %	65.7%	34.3%			41.4%		SPLIT %	38.5%	61.5%			58.6%	

DAILY TOTALS					NB	SB					EB	WB	Total
					276	279					0	0	555
AM Peak Hour	08:15	11:45			08:15		PM Peak Hour	12:15	16:30			12:15	
AM Pk Volume	44	30			60		PM Pk Volume	33	52			63	
Pk Hr Factor	0.733	0.833			0.750		Pk Hr Factor	0.825	0.619			0.926	
7 - 9 Volume	68	18	0	0	86		4 - 6 Volume	22	69	0	0	91	
7 - 9 Peak Hour	07:45	08:00			07:45		4 - 6 Peak Hour	16:00	16:30			16:30	
7 - 9 Pk Volume	42	14	0	0	55		4 - 6 Pk Volume	14	52	0	0	61	
Pk Hr Factor	0.700	0.700	0.000	0.000	0.688		Pk Hr Factor	0.700	0.619	0.000	0.000	0.610	

In & Out**Thermo King Business****Location:** Dwy 4 N/O End of Taylor Ct**Date:** 05/01/2018**City:** Turlock**Day:** Tuesday

TIME			
	In	Out	TOTAL
7:00 AM	0	0	0
7:15 AM	0	0	0
7:30 AM	5	0	5
7:45 AM	6	1	7
8:00 AM	6	1	7
8:15 AM	1	3	4
8:30 AM	1	1	2
8:45 AM	3	1	4
Totals	22	7	29
4:00 PM	1	0	1
4:15 PM	2	1	3
4:30 PM	0	4	4
4:45 PM	1	1	2
5:00 PM	1	9	10
5:15 PM	0	3	3
5:30 PM	0	2	2
5:45 PM	0	0	0
Totals	5	20	25

	<u>Northbound</u>	<u>Southbound</u>
8:00-9:00 AM	11	6
4:45-5:45 PM	2	15

In & Out**Thermo King Business****Location:** Dwy 4 N/O End of Taylor Ct**Date:** 05/02/2018**City:** Turlock**Day:** Wednesday

TIME			
	In	Out	TOTAL
7:00 AM	0	0	0
7:15 AM	2	0	2
7:30 AM	5	0	5
7:45 AM	8	0	8
8:00 AM	3	2	5
8:15 AM	1	4	5
8:30 AM	0	2	2
8:45 AM	2	1	3
Totals	21	9	30
4:00 PM	1	1	2
4:15 PM	2	0	2
4:30 PM	1	2	3
4:45 PM	0	1	1
5:00 PM	0	6	6
5:15 PM	0	2	2
5:30 PM	0	0	0
5:45 PM	0	2	2
Totals	4	14	18

	<u>Northbound</u>	<u>Southbound</u>
8:00-9:00 AM	6	9
4:30-5:30 PM	1	11

In & Out**Thermo King Business****Location:** Dwy 4 N/O End of Taylor Ct**Date:** 05/03/2018**City:** Turlock**Day:** Thursday

TIME			
	In	Out	TOTAL
7:00 AM	1	0	1
7:15 AM	3	1	4
7:30 AM	6	0	6
7:45 AM	4	0	4
8:00 AM	4	3	7
8:15 AM	1	2	3
8:30 AM	0	3	3
8:45 AM	1	1	2
Totals	20	10	30
4:00 PM	2	0	2
4:15 PM	4	1	5
4:30 PM	0	6	6
4:45 PM	1	1	2
5:00 PM	1	7	8
5:15 PM	0	2	2
5:30 PM	0	0	0
5:45 PM	0	2	2
Totals	8	19	27

	<u>Northbound</u>	<u>Southbound</u>
7:45-8:45 AM	9	8
4:30-5:30 PM	2	16