FEHR PEERS

September 3, 2019

Mr. Mark Niskanen, Vice President
J.B. Anderson Land Use Planning
139 S. Stockton Avenue
Ripon, California 95366

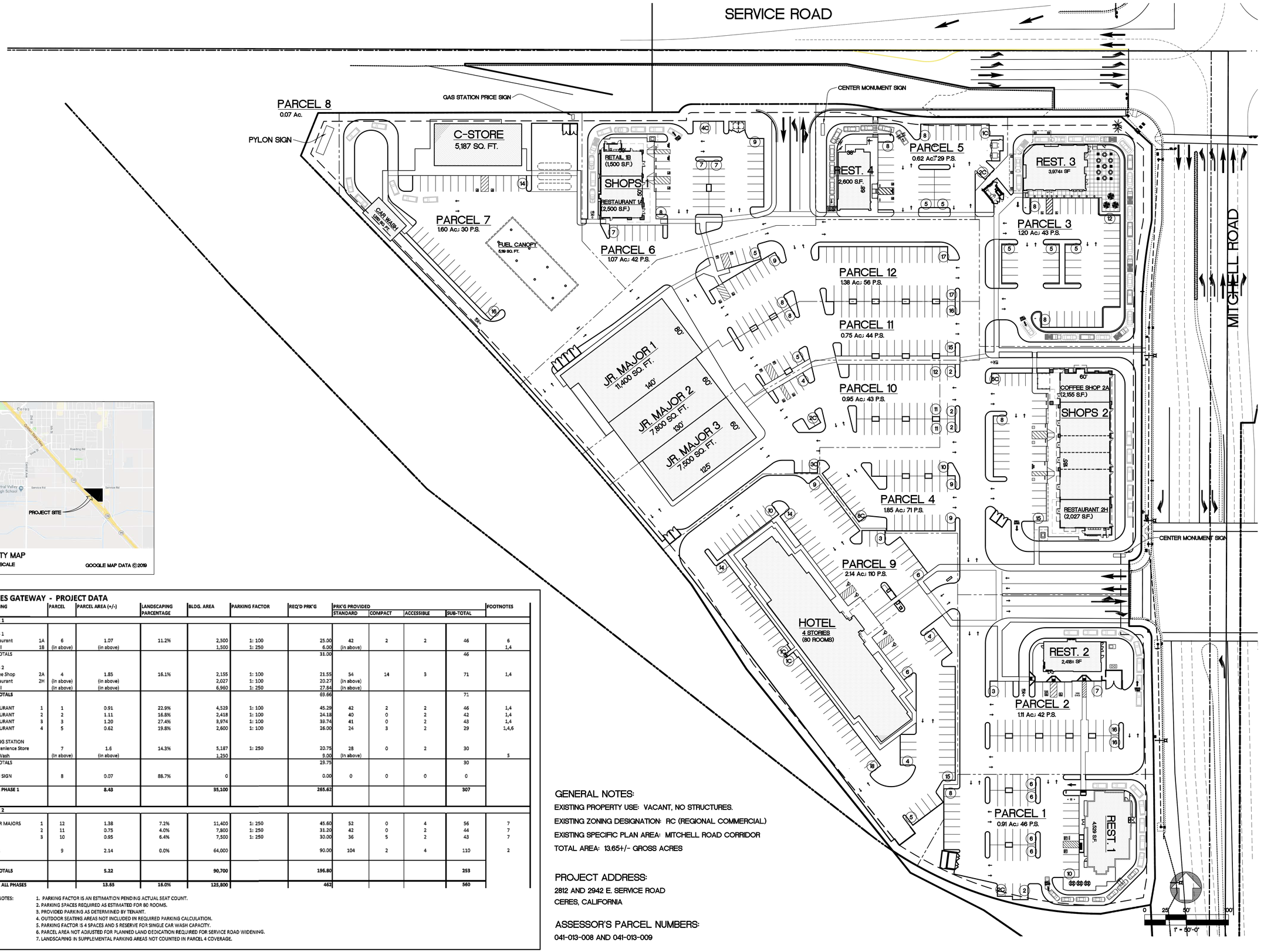
Cc: Mr. Daniel Ogden
Mr. David Zylstra

RE: Ceres Gateway Project
Trip Generation and Multi-Modal Site Access and Circulation
Technical Memorandum

Dear Mr. Niskanen:

This Technical Memorandum presents the results of the trip generation and traffic analysis completed by Fehr & Peers for the Ceres Gateway Project located in Ceres, CA. The project site is located directly east of State Route 99 (SR 99) and is bounded by Service Road to the north and Mitchell Road to the east. The Ceres Gateway Project would build a total of 125,800 square feet of freeway commercial / retail space that includes the following land uses from the August 23, 2019 Site Plan presented on Page 2:

- Parcel 1 – 4,259 square feet of restaurant space with drive thru window;
- Parcel 2 – 2,418 square feet of restaurant space with drive thru window;
- Parcel 3 – 3,974 square feet of restaurant space with drive thru window;
- Parcel 4 – 2,155 square feet of coffee shop space with drive thru window;
  - 2,027 square feet of restaurant space; and
  - 6,960 square feet of retail space;
- Parcel 5 –2,600 square feet of restaurant space with drive thru window;
- Parcel 6 –2,500 square feet of restaurant space with drive thru window;
  - 1,500 square feet of retail space;
- Parcel 7 –5,187 square feet of Fuel Center (16 pumps) with Convenience Store
  - 1,250 square feet of Automated Car Wash;
- Parcel 9 –80 Room Business Hotel;
- Parcel 10 –7,500 Square Feet of retail space;
- Parcel 11 –7,800 Square Feet of retail space; and
- Parcel 12 –11,400 Square Feet of retail space.



VICINITY MAP
NOT TO SCALE

GOOGLE MAP DATA ©2019

CERES GATEWAY - PROJECT DATA

BUILDING		PARCEL	PARCEL AREA (+/-)	LANDSCAPING PARCENTAGE	BLDG. AREA	PARKING FACTOR	REQ'D PRK'G	PRK'G PROVIDED STANDARD	COMPACT	ACCESSIBLE	SUB-TOTAL	FOOTNOTES
PHASE 1												
SHOPS 1												
Restaurant	1A	6	1.07	11.2%	2,500	1: 100	25.00	42	2	2	46	6
Retail	1B	(in above)	(in above)		1,500	1: 250	6.00	(in above)				1,4
SUB-TOTALS							31.00				46	
SHOPS 2												
Coffee Shop	2A	4	1.85	16.1%	2,155	1: 100	21.55	54	14	3	71	1,4
Restaurant	2H	(in above)	(in above)		2,027	1: 100	20.27	(in above)				
Retail		(in above)	(in above)		6,960	1: 250	27.84	(in above)				
SUB-TOTALS							69.66				71	
RESTAURANT	1	1	0.91	22.9%	4,529	1: 100	45.29	42	2	2	46	1,4
RESTAURANT	2	2	1.11	16.8%	2,418	1: 100	24.18	40	0	2	42	1,4
RESTAURANT	3	3	1.20	27.4%	3,974	1: 100	39.74	41	0	2	43	1,4
RESTAURANT	4	5	0.62	19.8%	2,600	1: 100	26.00	24	3	2	29	1,4,6
FUELING STATION												
Convenience Store		7	1.6	14.3%	5,187	1: 250	20.75	28	0	2	30	
Car Wash		(in above)	(in above)		1,250		9.00	(in above)				5
SUB-TOTALS							29.75				30	
PYLON SIGN		8	0.07	88.7%	0		0.00	0	0	0	0	
TOTAL PHASE 1			**8.43**		**35,100**		**265.62**				**307**	
PHASE 2												
JUNIOR MAJORS	1	12	1.38	7.2%	11,400	1: 250	45.60	52	0	4	56	7
	2	11	0.75	4.0%	7,800	1: 250	31.20	42	0	2	44	7
	3	10	0.95	6.4%	7,500	1: 250	30.00	36	5	2	43	7
HOTEL		9	2.14	0.0%	64,000		90.00	104	2	4	110	2
SUB-TOTALS			**5.22**		**90,700**		**196.80**				**253**	
TOTAL ALL PHASES			**13.65**	**16.0%**	**125,800**		**462**				**560**	

FOOTNOTES:
1. PARKING FACTOR IS AN ESTIMATION PENDING ACTUAL SEAT COUNT.
2. PARKING SPACES REQUIRED AS ESTIMATED FOR 80 ROOMS.
3. PROVIDED PARKING AS DETERMINED BY TENANT.
4. OUTDOOR SEATING AREAS NOT INCLUDED IN REQUIRED PARKING CALCULATION.
5. PARKING FACTOR IS 4 SPACES AND 5 RESERVE FOR SINGLE CAR WASH CAPACITY.
6. PARCEL AREA NOT ADJUSTED FOR PLANNED LAND DEDICATION REQUIRED FOR SERVICE ROAD WIDENING.
7. LANDSCAPING IN SUPPLEMENTAL PARKING AREAS NOT COUNTED IN PARCEL 4 COVERAGE.

GENERAL NOTES:

EXISTING PROPERTY USE: VACANT, NO STRUCTURES.

EXISTING ZONING DESIGNATION: RC (REGIONAL COMMERCIAL)

EXISTING SPECIFIC PLAN AREA: MITCHELL ROAD CORRIDOR

TOTAL AREA: 13.65+/- GROSS ACRES

PROJECT ADDRESS:

2812 AND 2942 E. SERVICE ROAD
CERES, CALIFORNIA

ASSESSOR'S PARCEL NUMBERS:

041-013-008 AND 041-013-009

GEORGE MEU ASSOCIATES
ARCHITECTURE PLANNING
499 EMBARCADERO
OAKLAND
CALIFORNIA
94606
PHONE 510 434 9888

19 AUGUST 2019
26 JULY 2019

issue	date	description

PROPOSED NEW COMMERCIAL CENTER

CERES GATEWAY

FOR CERES GATEWAY CENTER, LLC

MITCHELL ROAD AT SERVICE ROAD
CERES, CALIFORNIA

GMA	LGM	000.XXX
drawn by	checked by	job number

ALL PHASES PRELIMINARY SITE PLAN

AS101

GEORGE MEU ASSOCIATES

Total and Net New Trip Generation Analysis

It should be noted that the project's total (gross) trip generation described above is different than the total (net new) trips that the proposed Ceres Gateway Project would add to the local and regional transportation system in the City of Ceres and on Caltrans facilities.

Table 1 presents the estimated trips generated by the proposed Ceres Gateway Project for weekday daily, AM and PM peak hour conditions. As shown in Table 1, the project would generate approximately 17,056 daily vehicle trips, 1,486 AM peak hour trips (with 758 inbound and 728 outbound), and 1,280 PM peak hour trips (with 649 inbound and 631 outbound). The trips generated by the proposed project are based on trip rates from the *Trip Generation Manual 10th Edition* (Institute of Transportation Engineers, 2017).

Table 2 presents the results of the detailed net new trip generation analysis. The first step was to determine the number of linked trips that would occur between the 125,800 square feet of restaurant, retail, hotel, coffee shop and retail land uses. Based on the mix of land uses, a conservative five (5) percent reduction was applied in which customers would visit two of the land uses on site. For example, a customer gets gas and also gets either food or coffee at one of the restaurants with drive thru. Another example is a guest at the hotel goes shopping or eats at one of the restaurants. Subtracting these trips (Row B) results in the total vehicle trips (Row B) entering and exiting the project driveway on Service Road or Mitchell Road.

The next step in the net new trip generation analysis was to apply the pass-by and diverted trip reduction factors from the *Trip Generation Handbook 3rd Edition* (Institute of Transportation Engineers, 2017) for Fast Food, Coffee and Gas Station Land Uses located on major arterials and adjacent to a freeway.

In Row D, a pass by trip reduction factor of 25% was applied for drivers already traveling on either Service Road or Mitchell Road and decide to stop at the Ceres Gateway Project on their way to their final destination. These vehicle trips would not be new trips on either Service Road or Mitchell Road, but would only be new turning movements into and out of the project site at either the signalized Mitchell Road / Rohde Road intersection or the right-turn in / right-turn out Service Road / Project Driveway.

Table 1: Ceres Gateway Project Total Trip Generation Analysis															
Land Use (ITE Code)	**Quantity (KSF)**	**Vehicle Trip Rate[1]**							**Vehicle Trips**						
		Daily	**AM**			**PM**			**Daily**	**AM**			**PM**		
		Total	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Parcel 1 Restaurant With Drive Thru (934)	4.529	470.95	20.50	19.69	40.19	16.99	15.68	32.67	2,133	93	89	182	77	71	148
Parcel 2 Restaurant With Drive Thru (934)	2.418	470.95	20.50	19.69	40.19	16.99	15.68	32.67	1,139	50	47	97	41	38	79
Parcel 3 Restaurant With Drive Thru (934)	3.974	470.95	20.50	19.69	40.19	16.99	15.68	32.67	1,872	81	79	160	68	63	130
Parcel 4A Coffee Shop With Drive Thru (937)	2.155	820.38	45.38	43.61	88.99	21.69	21.69	43.38	1,768	98	94	192	47	47	94
Parcel 4A Restaurant Without Drive Thru (933)	2.027	346.23	15.06	10.04	25.10	14.17	14.17	28.34	702	31	20	51	29	29	58
Parcel 4B Retail (820)	6.960	37.75	0.58	0.36	0.94	1.83	1.98	3.81	263	4	3	7	13	14	27
Parcel 5 Restaurant With Drive Thru (934)	2.600	470.95	20.50	19.69	40.19	16.99	15.68	32.67	1,224	53	51	104	44	41	85
Parcel 6A Restaurant With Drive Thru (934)	2.500	470.95	20.50	19.69	40.19	16.99	15.68	32.67	1,177	51	49	100	42	40	82
Parcel 6B Retail (820)	1.500	37.75	0.58	0.36	0.94	1.83	1.98	3.81	57	1	1	2	3	3	6
Parcel 7 Gas Station With Convenience Store and Car Wash (820)	5.187 1.250	837.58	41.57	41.57	83.14	34.64	34.64	69.28	5,391	267	267	534	221	221	442
Parcel 9 Hotel (312)	64.000 (80 Rooms)	4.09	0.16	0.23	0.39	0.18	0.14	0.32	322	13	18	31	14	12	26
Parcel 10 Retail (820)	7.500	37.75	0.58	0.36	0.94	1.83	1.98	3.81	283	4	3	7	14	15	29
Parcel 11 Retail (820)	7.800	37.75	0.58	0.36	0.94	1.83	1.98	3.81	294	5	3	8	14	16	30
Parcel 12 Retail (820)	11.400	37.75	0.58	0.36	0.94	1.83	1.98	3.81	430	7	4	11	21	23	44
								Total Trip Generation	17,056	758	728	1,486	649	631	1,280

Notes:

[1] Trip rates are based on the *Trip Generation Manual 10th Edition* (Institute of Transportation Engineers 2017).

Source: Fehr & Peers, 2019

In Row E, a diverted trip reduction factor of 30% was applied for drivers already traveling on State Route 99 and decide to exit the freeway to stop at the Ceres Gateway Project on their way to their final destination. These vehicle trips would not be new trips to State Route 99. But they would be new vehicles trips on either Service Road or Mitchell Road and new turning movements into and out of the project site at either the signalized Mitchell Road / Rohde Road intersection or the right-turn in / right-turn out Service Road / Project Driveway.

Table 2 (Row F) shows that the final results of the Net New Vehicle Trips generated by the proposed Ceres Gateway Project for weekday daily, AM and PM peak hour conditions. As shown in Table 2, the project would generate approximately 7,729 net new daily vehicle trips, 630 net new AM peak hour trips (with 321 inbound and 309 outbound), and 600 net new PM peak hour trips (with 303 inbound and 297 outbound).

Table 2: Ceres Gateway Project Net New Trip Generation Analysis

Ceres Gateway Project	Vehicle Trips						
	Daily	AM			PM		
	Total	In	Out	Total	In	Out	Total
A) Total Trip Generation	17,056	758	728	1,486	649	631	1,280
B) Linked Trips – Customers visit more than one (1) land use (5% Reduction)	-853	-38	-36	-74	-32	-32	-64
C) Total Vehicle Trips Entering and Exiting Project Driveways	16,203	720	692	1,412	617	599	1,216
D) Pass By Trip Reduction for Fast Food, Coffee and Gas Station Land Uses (Traffic on Service Road and Mitchell Road – 25% Reduction)	-3,852	-181	-174	-355	-143	-137	-280
E) Diverted Trip Reduction for Fast Food, Coffee and Gas Station Land Uses (Traffic on State Route 99 – 30% Reduction)	-4,622	-218	-209	-427	-171	-165	-336
F) Total Net New Trips	7,729	321	309	630	303	297	600

Notes:
[1] Trip reduction (internal, pass-by and diverted) rates are based on the *Trip Generation Manual 10th Edition* (Institute of Transportation Engineers 2017).
Source: Fehr & Peers, 2019

Project Site Access Analysis

The Ceres Gateway Project would have two (2) primary access points to serve traffic entering and exiting the project site. The primary access point will be the signalized intersection of Mitchell Road / Rohde Road located just north of the existing SR 99 / Mitchell Road interchange. The new traffic signal will be constructed to provide pedestrian crossings on all four legs of the intersection to provide mutli-modal access to and from the project site for pedestrians and bicyclists.

The signalized intersection will provide the following intersection geometrics for vehicles entering the project site:

- A dedicated northbound left-turn lane with protected (green arrow) left-turn movements:
- A dedicated southbound right-turn lane with permitted right-turn movements;
- And two inbound travel lanes, with one left and one right at the internal intersection.

The following intersection geometrics for vehicles leaving the project site:

- A shared left-turn / through lane with protected / permitted turn movements; and
- A dedicated right-turn lane with permitted turn movements and an overlap phase that will operate with the northbound left-turn movement.

It should be noted that the City of Ceres contacted the project applicant and Fehr & Peers regarding moving the driveway on Service Road to provide additional separation between the future SR 99 / Service Road DDI and the combined Ceres Gateway and Mitchell Ranch driveways. The project applicant worked with Fehr & Peers and George Meu Associates to move the new driveway east to provide the required Caltrans spacing from the future Northbound SR 99 / Service Road off-ramp. In addition, the Service Road driveway for the Ceres Gateway Project would be located directly across for the relocated Mitchell Ranch driveway. Therefore, by moving the Ceres Gateway driveway and moving / consolidating the Mitchell Ranch driveways would provide the opportunity for the City to install a new traffic signal and allow northbound left-turn movements out of the Ceres Gateway Project.

Based on the August 23, 2019 site plan, the second access point to the project site would have the potential to be either:

a) Option A - A right-turn in / right-turn out driveway; or
b) Option B - A signalized intersection.

Under Option A – The right-turn in / right-turn out driveway will allow vehicles from eastbound Service Road and the future SR 99 / Service Road Diverging Diamond Interchange (DDI) to enter the project site between Parcel 6 (Restaurant With Drive Thru and Retail) and Parcel 5 (Restaurant With Drive Thru). Outbound vehicles would be required to make a right-turn movement and make a u-turn at the signalized Service Road / Mitchell Road intersection in order to travel back westbound on Service Road or access the future SR 99 / Service Road DDI. A secondary option for customers leaving the Ceres Gateway project site would be to use the signalized Mitchell Road / Rohde Road and signalized Service Road / Mitchell Road intersections to return to travel back westbound on Service Road or access the future SR 99 / Service Road DDI.

Under Option B – The full access driveway will allow vehicles from eastbound Service Road and the future SR 99 / Service Road Diverging Diamond Interchange (DDI) to enter the project site between Parcel 6 (Restaurant With Drive Thru and Retail) and Parcel 5 (Restaurant With Drive Thru). Outbound vehicles would be required to make a left-turn movement to travel back westbound on Service Road or access the future SR 99 / Service Road DDI.

Multi-Modal Site Circulation Analysis

The Ceres Gateway Site Plan was reviewed for vehicle, pedestrian and truck delivery circulation for each of the eleven parcels. Note that there is Parcel 8 was reserved for the Pylon Sign located on the north-west corner of the project site, adjacent to the future SR 99 / Service Road Diverging Diamond Interchange (DDI).

Parcel 1 – The 4,529 square foot restaurant provides stacking space for 15 vehicles using the drive thru window. In addition, a total of 46 parking spaces, which includes two (2) handicap placard and two (2) compact spaces, are provided for customers. Pedestrians would be able to travel to and from Parcel 1 via the internal pedestrian connecting Parcel 2, the rest of the Ceres Gateway Project site, and Mitchell Road. The trash enclosure is located on the west end of Parcel 1 and adequate width of drive aisles is provided for both garbage disposal and truck deliveries.

Parcel 2 – The 2,418 square foot restaurant provides stacking space for eight (8) vehicles using the drive thru window. In addition, a total of 42 parking spaces, which includes three (3) handicap placard, are provided for customers. Pedestrians would be able to travel to and from Parcel 2 via the internal pedestrian connecting to the rest of the Ceres Gateway Project site and Mitchell Road. The trash enclosure is located on the east end of Parcel 2 and adequate width of drive aisles is provided for both garbage disposal and truck deliveries.

Parcel 3 – The 3,974 square foot restaurant provides stacking space for 25 vehicles using the drive thru window. In addition, a total of 43 parking spaces, which includes two (2) handicap placard, are provided for customers. Pedestrians would be able to travel to and from Parcel 3 via the internal pedestrian connecting to the rest of the Ceres Gateway Project site and Service Road. The trash enclosure is located on the west end of Parcel 3 and adequate width of drive aisles is provided for both garbage disposal and truck deliveries.

Parcel 4 – The 2,155 square foot coffee shop provides stacking space for 21 vehicles using the drive thru window. Parcel 4 also includes 2,027 square feet of restaurant (without drive thru window) and 4,182 square feet of retail space. A total of 71 parking spaces, which includes four (4) handicap placard and fourteen (14) compact, are provided for customers of Parcel 4. Pedestrians would be able to travel to and from Parcel 4 via the internal pedestrian connecting to the rest of the Ceres Gateway Project site and Mitchell Road. The trash enclosure is located on the west end of Parcel 4 and adequate width of drive aisles is provided for both garbage disposal and truck deliveries.

Parcel 5 – The 2,600 square foot restaurant provides stacking space for nine (9) vehicles using the drive thru window. In addition, a total of 29 parking spaces, which includes two (2) handicap placard and three (3) compact, are provided for customers. Pedestrians would be able to travel to and from Parcel 4 via the internal pedestrian connecting to the rest of the Ceres Gateway Project site and Service Road. The trash enclosure is located on the east end of Parcel 5 and adequate width of drive aisles is provided for both garbage disposal and truck deliveries.

Parcel 6 – The 2,500 square foot restaurant provides stacking space for nine (9) vehicles using the drive thru window. In addition, a total of 42 parking spaces, which includes four (4) handicap placard and four (4) compact, are provided for customers of the 2,500 restaurant with drive thru window and 1,500 square feet of retail space. Pedestrians would be able to travel to and from Parcel 6 via the internal pedestrian connecting to the rest of the Ceres Gateway Project site and Service Road. The trash enclosure is located on the east end of Parcel 6 and adequate width of drive aisles is provided for both garbage disposal and truck deliveries.

Parcel 7 –A total of 30 parking spaces, which includes two (2) handicap placard are provided for customers of the gas station with 5,187 square foot convenience store and 1,250 square foot automated car wash. Pedestrians that would walk to the convenience store would be able to travel to and from Parcel 7 via the internal pedestrian connecting to the rest of the Ceres Gateway Project site and Service Road. The trash enclosure is located on the east end of Parcel 7 and adequate width of drive aisles is provided for both garbage disposal and fuel truck deliveries to the underground tanks and truck deliveries to the convenience store.

Parcel 9 – The 80 room business hotel provides a total of 110 parking spaces, which includes four (4) handicap placard and two (2) compact. Pedestrians / hotel guests would be able to travel to and from Parcel 9 via the internal pedestrian connecting to the rest of the Ceres Gateway Project restaurant, coffee shop and retail land uses. The location of the trash enclosure for Parcel 9 is located on the south-west corner. Parcel 9 provides adequate width of drive aisles for hotel guests, employees and truck deliveries.

Parcel 10 – The 7,500 square feet of retail space provides a total of 43 parking spaces, which includes two (2) handicap placard and five (25) compact. Pedestrians would be able to travel to and from Parcel 10 via the internal pedestrian connecting to the rest of the Ceres Gateway Project restaurant, coffee shop, retail and hotel land uses. The location of the shared trash enclosure for Parcel 10 is located at the south-west corner of Parcel 10. Parcel 10 provides adequate width of drive aisles for truck deliveries at the loading docks located at the rear of Parcel 10.

Parcel 11 – The 7,800 square feet of retail space provides a total of 44 parking spaces, which includes two (2) handicap placard. Pedestrians would be able to travel to and from Parcel 11 via the internal pedestrian connecting to the rest of the Ceres Gateway Project restaurant, coffee shop, retail and hotel land uses. The location of the shared trash enclosure between Parcels 11 and 12 is located at the north-west corner of Parcel 12. Parcel 11 provides adequate width of drive aisles for truck deliveries at the loading docks located at the rear of Parcel 11.

Parcel 12 – The 11,400 square feet of retail space provides a total of 59 parking spaces, which includes four (4) handicap placard. Pedestrians would be able to travel to and from Parcel 12 via the internal pedestrian connecting to the rest of the Ceres Gateway Project restaurant, coffee shop, retail and hotel land uses. The location of the shared trash enclosure between Parcels 11 and 12 is located at the north-west corner of Parcel 12. Parcel 12 provides adequate width of drive aisles for truck deliveries at the loading docks located at the rear of Parcel 12.

Required Versus Provided Parking Supply

The City of Ceres requires a total of 462 parking spaces for the proposed 125,800 square feet of development at the Ceres Gateway Project site. In addition, each of the parcels are required to provide sufficient parking for their employees and customers. The results of the site access and circulation analysis for each of the eleven (11) parcels show that the total on-site parking provided by the Ceres Gateway Project is 560 parking spaces. This is 98 parking spaces and 21% greater than the 462 required parking spaces. This additional safety factor included in the on-site parking layout and design will provide a safety factor for busy weekends and potential businesses that would be attracted to this ideal location on State Route 99.