PLANNING COMMISSION AGENDA

CHAIRPERSON:
Brett Taylor

VICE CHAIRPERSON:
Liz Wynn

COMMISSIONERS: Brett Taylor, Liz Wynn, Chris Gomez, Marvin Hansen, Sarrah Peariso

MONDAY, DECEMBER 10, 2018; 7:00 P.M., COUNCIL CHAMBERS, 707 W. ACEQUIA, VISALIA CA

1. THE PLEDGE OF ALLEGIANCE –
2. CITIZEN'S COMMENTS – This is the time for citizens to comment on subject matters that are not on the agenda but are within the jurisdiction of the Visalia Planning Commission. The Commission requests that a 5-minute time limit be observed for comments. Please begin your comments by stating and spelling your name and city. Please note that issues raised under Citizen's Comments are informational only and the Commission will not take action at this time.
3. CHANGES OR COMMENTS TO THE AGENDA–
4. CONSENT CALENDAR - All items under the consent calendar are to be considered routine and will be enacted by one motion. For any discussion of an item on the consent calendar, it will be removed at the request of the Commission and made a part of the regular agenda.

    - Finding of Consistency 2018-001: A request by Swift Homes for a modification to Tentative Subdivision Map No. 5562 and Conditional Use Permit No. 2017-15 (the "Grove at K Avenue" development), adding a 3.01 acre regional ponding basin, and reducing the number of units/lots proposed from 97 units on 60 lots to 77 units on 37 lots. The project is located on the southwest corner of E. K Avenue and S. Ben Maddox Way (APN: 126-120-065, 066).
    - Finding of Consistency 2018-002: A request by Kaweah Delta Health Care District to allow a temporary parking lot at the southeast corner of Acequia Avenue and West Street. (APN: 094-311-019, 012)

5. PUBLIC HEARING – Paul Bernal
   Request to Continue Public Hearing Item No. 5 for Conditional Use Permit No. 2018-21 to a Date Specific.
6. PUBLIC HEARING – Cristobal Carrillo
   Conditional Use Permit No. 2018-26: A request by Central California Blood Center to establish a blood bank within an existing 4,660 sq. ft. building in the C-R (Regional Commercial) Zone. The project site is located at 2245 W. Caldwell Avenue (APN: 012-041-040). The project is Categorically Exempt from the California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines Section 15301, Categorical Exemption No. 2018-69.
7. PUBLIC HEARING – Paul Bernal
   Conditional Use Permit No. 2018-19: A request by Starbucks to allow a drive-thru lane associated with a 2,633 sq. ft. commercial tenant space within a 5.96-acre parcel in the C-MU (Commercial Mixed Use) zone. The project site is located on the northeast corner of N.

Mooney Blvd. and W. Riggin Ave. (APN: 078-120-034)The project is Categorically Exempt from the California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines Section 15332, Categorical Exemption No. 2018-70.

8. DIRECTOR'S REPORT/ PLANNING COMMISSION DISCUSSION-
    - January 14, 2019 Planning Commission meeting

The Planning Commission meeting may end no later than 11:00 P.M. Any unfinished business may be continued to a future date and time to be determined by the Commission at this meeting. The Planning Commission routinely visits the project sites listed on the agenda.

For Hearing Impaired – Call (559) 713-4900 (TTY) 48-hours in advance of the scheduled meeting time to request signing services.

Any written materials relating to an item on this agenda submitted to the Planning Commission after distribution of the agenda packet are available for public inspection in the City Office, 315 E. Acequia Visalia, CA 93291, during normal business hours.

APPEAL PROCEDURE

THE LAST DAY TO FILE AN APPEAL IS MONDAY, DECEMBER 20, 2018 BEFORE 5 PM

According to the City of Visalia Zoning Ordinance Section 17.02.145 and Subdivision Ordinance Section 16.04.040, an appeal to the City Council may be submitted within ten days following the date of a decision by the Planning Commission. An appeal form with applicable fees shall be filed with the City Clerk at 220 N. Santa Fe, Visalia, CA 93292. The appeal shall specify errors or abuses of discretion by the Planning Commission, or decisions not supported by the evidence in the record. The appeal form can be found on the city's website www.visalia.city or from the City Clerk.

THE NEXT REGULAR MEETING WILL BE HELD ON MONDAY, JANUARY 14, 2018

REPORT TO CITY OF VISALIA PLANNING COMMISSION

HEARING DATE: December 10, 2018

PROJECT PLANNER: Paul Bernál, City Planner
Phone: (559) 713-4025;
E-mail: paul.bernal@visalia.city

SUBJECT: **Conditional Use Permit No. 2018-19**: A request by Starbucks to allow a drive-thru lane associated with a 2,633 sq. ft. commercial tenant space within a 5.96-acre parcel in the C-MU (Commercial Mixed Use) zone. The project site is located on the northeast corner of N. Mooney Blvd. and W. Riggin Ave. (APN: 078-120-034)

STAFF RECOMMENDATION

Staff recommends approval of Conditional Use Permit No. 2018-19 is based upon the findings and conditions in Resolution No. 2018-46. Staff's recommendation is based on the conclusion that the request is consistent with the General Plan and Zoning Ordinance.

RECOMMENDED MOTION

I move to approve Conditional Use Permit No. 2018-19 is based on the findings and conditions in Resolution No. 2018-46.

PROJECT DESCRIPTION

The applicant is requesting approval of a drive-thru lane associated with a new Starbucks coffeehouse that does not meet the City's drive-thru lane performance standards specified in Visalia Municipal Code Section 17.32.162. In the C-MU (Commercial Mixed Use) zone, drive-thru lanes meeting all performance standards are a permitted use, whereas drive-thru lanes not meeting all performance standards require a conditional use permit. In the case of the proposed project, the drive-thru lane as depicted in Exhibit "A" is less than 250-feet away from residential zoned property and the menu board is visible from N. Mooney Blvd. (Zoning Ordinance Sections 17.32.162.B.1 and 17.32.162.B.6).

As shown in the site plan attached as Exhibit "A", the project involves development of a 5,500 sq. ft. building, 27 parking stalls, drive-thru lane, trash enclosure, and vehicle and pedestrian access on approximately 1.22-acres of an overall 5.96-acre site.

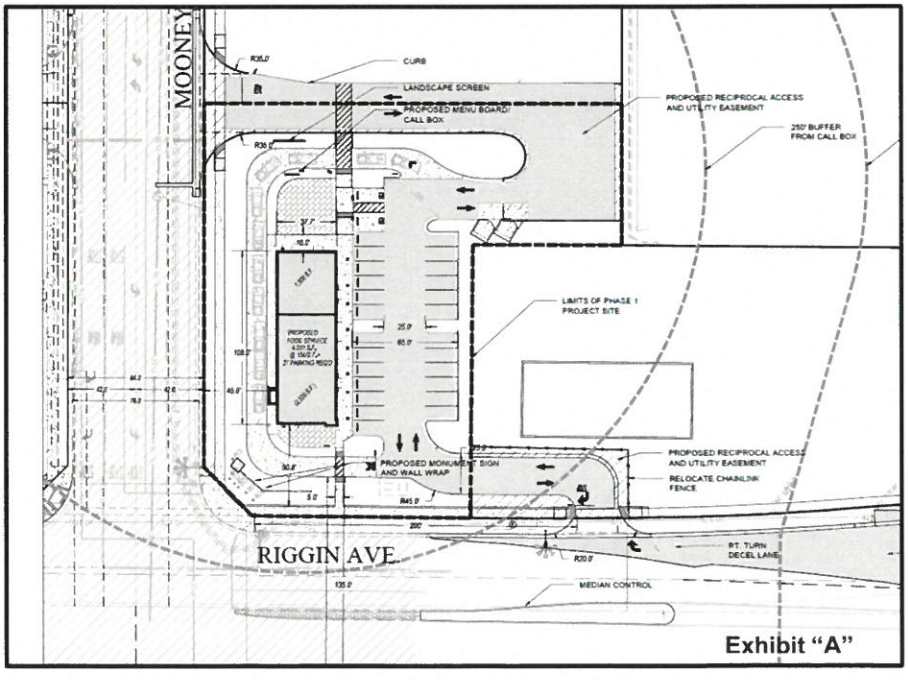


Exhibit "A"

The Starbucks coffeehouse will occupy approximately 2,633 sq. ft. of the overall 5,500 sq. ft. commercial building. The applicant has indicated 1,500 sq. ft. will be occupied by Deli Delicious with the remaining commercial space unoccupied at this time.

The drive-thru lane wraps around the north and west side of the proposed building. Access into the drive-thru lane is located on the north side of the building. Access onto the site will be provided via a drive approach on W. Riggin Ave. that is restricted to right-in and right-out turning movements and a full access drive approach on N. Mooney Blvd.

The applicant has also provided a conceptual master site plan for the entire 5.96-acre site referred to as the Shannon Village East Commercial Center as shown in Exhibit "B". This conceptual site plan depicts how the site could develop with internal on-site vehicle circulation and future building pads. No development plans have been filed for the remaining balance of the commercial site and the layout may change based on future uses.

A common architectural theme, as illustrated in Exhibit "C", will be used throughout the site which is a continuation of elements currently incorporated into the design of the Valero gas station Shannon Village Market development located on the northwest corner of N. Mooney Blvd. and W. Riggin Ave.

The site is located on a parcel that is partially developed with the CRS Farming operations, which includes their administrative offices, storage barn and open equipment/vehicle storage yard. CRS Farming has indicated that their offices and open storage yard will be relocated in the future but the barn structure would be retained and incorporated into the overall commercial development. However, no plans on converting the barn have been submitted at this time. Furthermore, the site is adjacent to a Southern California Edison substation to the east.

The Operational Statement provided in Exhibit "D" states that the Starbucks drive-thru lane will operate 24-hours and that the store operating hours are from 4:30 a.m. to 12:00 a.m. The Starbucks coffee shop will typically have four to six employees during peak business hours.

BACKGROUND INFORMATION

General Plan Land Use Designation:	Commercial Mixed Use
Zoning:	C-MU (Commercial Mixed Use)
Surrounding Land Uses and Zoning:	North: C-MU / Vacant property South: Riggin Ave. four lane arterial roadway East: C-MU / Southern California Edison Sub-distribution facility West: Mooney Blvd. four lane arterial roadway
Environmental Review:	Categorical Exemption No. 2018-70
Special Districts:	None
Site Plan:	2018-038

RELATED PLANS & POLICIES

Please see attached summary of related plans and policies. The proposed project is consistent with applicable plans and policies except for the drive-thru lane performance standards as described below.

RELATED PROJECTS

Conditional Use Permit No. 2011-21 was approved by the Planning Commission on October 21, 2011 allowing the development of Shannon Village Market, consisting of a 1,755 square foot fast food restaurant with drive-thru, a 4,106 square foot convenience store with fuel islands, car wash, and a 1,723 square foot restaurant. The Shannon Village Market is located on the northwest corner of N. Mooney Blvd. and W. Riggin Ave.

PROJECT EVALUATION

Staff recommends approval of Conditional Use Permit No. 2018-19, as conditioned, based on the project's consistency with the General Plan and the Zoning Ordinance. Although the site does not meet all of the City's performance standards for drive-thru lanes, staff considers that the proposed project will not incur any significant land use compatibility issues, nor be detrimental to the safety of surrounding development.

Land Use Compatibility

Fast food, sandwich shops, and sit-down restaurants are a permitted use in the C-MU zone. The proposed 2,633 sq. ft. Starbucks with the drive-thru lane requires a conditional use permit. This proposal is consistent with similar facilities approved in the C-MU zone and other zones.

Staff concludes the proposed drive-thru lane is consistent with the existing and future commercial land uses in the area. Both Mooney Blvd. and Riggin Ave. are major arterial roadways and the future development of this commercial property will provide additional commercial shopping opportunities to the surrounding residential neighborhoods. With the development of this commercial node, and the installation of frontage improvements, including the signalization of the Mooney / Riggin intersection, the catalyst for the remaining balance of the site to be developed could be initiated by this new construction.

The applicant has informed staff that that Starbucks drive-thru will operates 24 hours a day. The primary hours for the store are Monday through Sunday from 4:30 a.m. to 12:00 a.m. There are residential subdivisions located to the north across Corvina Ave. and to the south across Riggin Avenue. The Starbucks site plan (see Exhibit "A") depicts the menu board and speaker box location north of the building with an orientation towards Corvina Avenue. The distance from the speaker box to the closest residential structure is approximately 300-ft. Given the distance of the speaker box to sensitive noise receptors, and the potential development of future buildings north of Starbucks, the anticipated noise levels will be less than significant. However, noise levels emitted from the speaker box of the drive-thru are still required to meet the community noise standards as set forth in Chapter 8.36 (Noise Ordinance) of the Municipal Code and pursuant to Section 17.32.162 of the Drive-thru Performance Standards. The requirement to comply with the City's Noise requirements is included as Condition No. 4 of the Conditions of Project of Approval.

The requirement to comply with community noise standards as set forth in Chapter 8.36 (Noise Ordinance) of the Municipal Code is also applicable to Starbucks request to operate their 24-hour a day drive-thru lane. Condition No. 4 informs Starbucks that the hours of operation for the drive-thru lane may be limited if the City receives noise complaints (i.e., loud vehicle idling, loud car stereos, etc.) as a result of operating the drive-thru lane during sensitive nighttime hours.

Drive-Thru Performance Standards

In the C-MU zone and in other zoning districts, drive-thru lanes require a conditional use permit unless they can meet the six performance standards specified in Visalia Municipal Code Section 17.32.162. In general, the performance standards pertain to the following:

1. Separation from residences;
2. Vehicle queue stacking;
3. Circulation;
4. Noise;
5. Screening;
6. Menu boards and signage.

****Refer to the Related Plans and Policies section for the full text of this code section.**

The proposed project meets or is able to comply with all of the standards with the exception of the separation from residences for the drive-thru lane (within 250-ft. of residential zoned property) and the visibility of the menu board / signage requirement (visible from Corvina Ave. and Mooney Blvd.).

The proposed site plan shows that the Starbucks pick-up window is oriented to the west and visible from N. Mooney Blvd. while the location of the menu ordering board is located north of the building (see Exhibit "A") with space to allow for vehicle queuing at both the drive-thru window and for vehicles waiting to order at the menu board.

Staff's analysis has determined that the placement of the drive-thru lane and menu order boards as shown in the site plan (see Exhibits "A" and "B") would not be inconsistent with similar arrangements on other approved out-pad buildings with drive-thru lanes. In particular, many drive-thru lanes with menu ordering boards facing public streets have been approved after the Zoning Ordinance's performance standards for drive-thru lanes were adopted in 2014. Staff further concludes that the drive-thru lane and menu board will not be a detriment to public health, safety, or welfare associated with the location of both the drive-thru lane and menu board with respect to traffic on both Mooney Blvd. and Riggin Ave. and the adjacent land uses, which consist of both commercial and residential development.

Condition No. 5 has been included which requires that the performance standard for screening is maintained along the Mooney Blvd. and Riggin Ave. frontages through the combination of berming, hedge and landscape materials, and solid walls.

Public Right-of-Way Improvements / On-site Access and Circulation

Frontage improvements for this project include construction of sidewalks and curb returns at the major and local intersections. The applicant has submitted a traffic study (see Exhibit "E") to support the Riggin Ave. deceleration lane design. The City's Traffic Engineer has reviewed the study and agrees to the deceleration lane design and drive approach location as depicted on Exhibits "F" and "G". With the future median island improvements in Riggin Ave. this drive approach is limited to right-in and right-out vehicle turning movements. The deceleration lane paving shall be installed with the development of the commercial building pad.

The Traffic Division is requesting the Planning Commission adopted Condition No. 6. Condition No. 6 requires the owner/operator of the commercial development to work with City staff in the event that vehicle queuing occurs in the through lane on Riggin Ave. The owner/operator of the site shall identify the vehicle queuing issue and shall resolve vehicle queuing issues acceptable to the City Engineer and Traffic Engineer. Adoption of this condition provides assurances, in the short term, that any vehicle queuing occurring in Riggin Ave. from the proposed drive approach is resolved in a timely manner. Upon the ultimate build-out of Riggin Ave. this condition will no longer be necessary.

Mooney Boulevard is not designed with a median island adjacent to the proposed project. This will allow for full access turning maneuvers from the project site onto Mooney Boulevard.

Although the conceptual site plan (Exhibit "B") depicts future vehicular access drive-approaches along Riggin Ave., any future drive approach on Riggin Ave., east of the proposed drive approach for the commercial development, will be subject to review by both the City Engineer and Traffic Engineer. This is included as Condition No. 7 for CUP No. 2018-19.

The conceptual site plan exhibit (see Exhibit "B") will provide for future shared internal access drives which will permit vehicles to circulate the site internally. The ultimate location of the drive aisles may change based on the future design of the commercial building pads.

In addition, the Mooney and Riggin intersection will be signalized as part of the City's Capitol Improvement Project (CIP). The intersection currently has a four way stop. Improvements at the intersection will include the reconstruction of pedestrian ramps with ADA compliant pedestrian ramps, restriping of the east bound travel lanes to provide two thru-lanes with a lane reduction east of the intersection due to existing pavement width conditions, and the construction of the permanent traffic signal. The permanent traffic signals will be responsive to the traffic volumes and the signal timing will be automatically adjusted based on the traffic volumes detected and the parameters programmed into the traffic signal equipment. The construction of these intersection improvements is anticipated to begin in early 2019.

Architectural Theme

The project is proposing a common architectural theme as shown in Exhibit "C", containing similar materials that were used for the commercial building located within the Shannon Village Market center to the west. The proposed building façade consists of a single story structure with long parapet sections broken by entrance pop-outs with hip or gabled roof sections and corrugated metal.

The exterior finish will be plaster with stone veneer used along the base with metal siding included around the drive-thru window. The average building height will be 19-ft. to the top of the parapet with roof peaks approximately 24-ft. in height. The proposed height is consistent with the standards for the surrounding commercial and residential areas which have a maximum building height of 35-ft. The overall character and finish of the proposed architectural theme will not conflict with the adjacent residential areas.

It is anticipated the proposed architectural theme will be included into the exterior elevations for the future commercial buildings. The future commercial area will be subject to the Site Plan Review process wherein the compatibility with the adjacent residential areas will be a priority.

Parking

The 27 parking spaces provided for the proposed uses meet the parking requirements for this development. Subsequent phases will be required to meet their parking demand as they are developed. The conceptual site layout (see Exhibit "B") provides a depiction of how parking is provided for the future commercial area.

Landscaping

The project is required to landscape their required areas including the parkway landscaping adjacent to the sidewalk. Staff has included a condition for the installation of the parkway and on-site tree landscaping as required by the Engineering Development Standards and the Zoning Ordinance. The landscaping will be installed to meet all City of Visalia standards including street trees and evergreen shrubs along the parking field and drive-thru lane adjacent to the public right-of-way.

Phasing

As previously indicated, Phase 1 of the development will begin at the corner of Mooney Blvd. and Riggin Ave. as shown in Exhibit "A". There is no sequence for the subsequent phasing on the site.

Site Plan Review

Development proposals on the future commercial and residential areas will require subsequent submittals through the Site Plan Review process. Through Site Plan Review, consistency with the requirements of this proposed use permit would be applied.

Environmental Review

The requested action is considered Categorically Exempt under Section 15332 of the Guidelines for the Implementation of the California Environmental Quality Act (CEQA), for the development of an in-fill project. (Categorical Exemption No. 2018-70)

RECOMMENDED FINDINGS

1. That the proposed project will not be detrimental to the public health, safety, or welfare, or materially injurious to properties or improvements in the vicinity.
2. That the proposed conditional use permit is consistent with the policies and intent of the General Plan and Zoning Ordinance. Specifically, the project is consistent with the required finding of the Zoning Ordinance Section 17.38.110:
   a) The proposed location of the conditional use permit is in accordance with the objectives of the Zoning Ordinance and the purposes of the zone in which the site is located.
   b) The proposed location of the conditional use and the conditions under which it would be operated or maintained will not be detrimental to the public health, safety, or welfare, nor materially injurious to properties or improvements in the vicinity.
3. That the project is considered Categorically Exempt under Section 15332 of the Guidelines for the Implementation of the California Environmental Quality Act (CEQA). (Categorical Exemption No. 2018-70).

RECOMMENDED CONDITIONS OF APPROVAL

1. That the use be operated in substantial compliance with the comments from the approved Site Plan Review No. 2018-038.
2. That the use be developed in substantial compliance with the site plan in Exhibit "A", and elevation plan in Exhibit "C".
3. That the Starbucks operate as stated in the Operational Statement identified in Exhibit "D".
4. That no component or aspect of the drive-thru lane or its operation, including the 24-hour use, shall generate noise levels in excess of 60 dB between the hours of 7:00 p.m. and 6:00 a.m. daily. Failure to meet community noise standards may result in ceasing and/or limiting the hours of operation for the drive-thru lane and window.
5. That screening along the Mooney Blvd. and Riggin Ave. frontages must be included at a height of three feet, consisting of one or more of the following devices: berming, hedge, landscape materials, and solid walls.
6. That the owner/operator of the commercial development work with City staff in the event that vehicle queuing occurs in the through lane on Riggin Ave. The owner/operator of the site shall identify the vehicle queuing issue and shall resolve vehicle queuing issues acceptable to the City Engineer and Traffic Engineer.
7. That any future drive approach along W. Riggin Ave., east of the drive approach utilized by the Starbucks development, shall be subject to review by both the City Engineer and Traffic Engineer. The City Engineer and Traffic Engineer during the review of the additional drive approach along W. Riggin Ave. may require additional traffic studies demonstrating that the additional drive-approaches will not impact traffic flow along the major street.
8. That there be no illuminated signage on the west and north sides of the buildings which could be visible from the adjacent residential areas.
9. That all signs shall require a separate building permit and shall be subject to the sign requirements of the Zoning Ordinance.
10. That all other Federal, State, Regional, and City codes and ordinances be met.

APPEAL INFORMATION

According to the City of Visalia Zoning Ordinance Section 17.02.145, an appeal to the City Council may be submitted within ten days following the date of a decision by the Planning Commission. An appeal with applicable fees shall be in writing and shall be filed with the City Clerk at 220 N. Santa Fe Street. The appeal shall specify errors or abuses of discretion by the Planning Commission, or decisions not supported by the evidence in the record. The appeal form can be found on the city's website www.visalia.city or from the City Clerk.

Attachments:

- Related Plans & Policies
- Resolution No. 2018-46
- Exhibit “A” – Site Plan
- Exhibit "B" – Conceptual Site Plan 5-acre site
- Exhibit “C” – Elevations
- Exhibit “D” – Operational Statement
- Exhibit “E” – Category 1 Traffic Impact Study dated October 18, 2018
- Exhibit “F” – Deceleration Lane Design Corner Site Distance Evaluation
- Exhibit “G” – Deceleration Lane Design Lane Length
- Site Plan Review Comments No. 2018-038
- General Plan Land Use Map
- Zoning Map
- Aerial Map
- Location Map

Related Plans & Policies

Zoning Ordinance, Title 17 of Visalia Municipal Code

Excerpt from Chapter 17.19: Mixed Use Zones

17.19.060 Development standards in the C-MU zones outside the downtown area.

The following development standards shall apply to property located in the C-MU zone and located outside the Downtown Area, which is defined as the area that is south of Murray Avenue, west of Ben Maddox Way, north of Mineral King Avenue, and east of Conyer Street:

A. Minimum site area: five (5) acres.

B. Maximum building height: fifty (50) feet.

C. Minimum required yards (building setbacks):

1. Front: fifteen (15) feet;
2. Rear: zero (0) feet;
3. Rear yards abutting an R-1 or R-M zone district: fifteen (15) feet;
4. Side: zero (0) feet;
5. Side yards abutting an R-1 or R-M zone district: fifteen (15) feet;
6. Street side yard on corner lot: ten (10) feet.

D. Minimum required landscaped yard (setback) areas:

1. Front: fifteen (15) feet;
2. Rear: five (5) feet;
3. Rear yards abutting an R-1 or R-M zone district: five (5) feet;
4. Side: five (5) feet (except where a building is located on side property line);
5. Side yards abutting an R-1 or R-M zone district: five (5) feet;
6. Street side on corner lot: ten (10) feet.

E. The provisions of Chapter 17.58 shall also be met, if applicable.

Excerpt from Chapter 17.25: Uses in the Commercial, Mixed Use, Office, and Industrial Zones

	Commercial, Mixed Use, Office, and Industrial Zones Use Matrix P = Use is Permitted by Right C = Use Requires Conditional Use Permit T = Use Requires Temporary Use Permit Blank = Use is Not Allowed											
		Commercial and Mixed Use Zones					Office Zones			Indus-trial Zones		Special Use Standards (See identified Chapter or Section)
	USE	C-N	C-R	C-S	C-MU	D-MU	O-PA	O-C	BRP	I-L	I	
D8	Drive-Thru Lanes Meeting All Standards in Sect. 17.32.162	P	P	P	P		P		P			17.32.162
D9	Drive-Thru Lanes Not Meeting All Standards in Sect. 17.32.162	C	C	C	C		C		P			17.32.162

Excerpt from Chapter 17.32: Special Provisions

17.32.162 Drive-thru lanes performance standards.

A. Purpose and Intent. It is the purpose of this section to specify performance standards applicable to uses that seek to incorporate a drive-thru lane in association with a specified use.

This section does not apply to carwashes and lube and oil changing stations.

B. Performance standards:

1. Separation from residences. The drive-thru lane shall be no less than two hundred fifty (250) feet from the nearest residence or residentially zoned property.

2. Stacking. The drive-thru lane shall contain no less than ten (10) vehicle stacking, measured from pickup window to the designated entrance to the drive-thru lane. There shall be no less than three vehicle spaces distance from the order menu/speaker (or like device) to the designated entrance to the order window.

3. Circulation. No portion of the drive-thru lane shall obstruct any drive aisles or required onsite parking. The drive-thru shall not take ingress or egress from a local residential road.

4. Noise. No component or aspect of the drive-thru lane or its operation shall generate noise levels in excess of 60 dB between the hours of 7:00 p.m. and 6:00 a.m. daily.

5. Screening. The entire drive-thru lane shall be screened from adjacent street and residential view to a height of three feet. Screening devices shall be a combination of berming, hedge and landscape materials, and solid walls as approved by the City Planner.

6. Menu boards and signage. Shall be oriented or screened to avoid direct visibility from adjacent public streets.

Excerpts from Chapter 17.38: Conditional Use Permits

17.38.010 Purposes and powers.

In certain zones conditional uses are permitted subject to the granting of a conditional use permit. Because of their unusual characteristics, conditional uses require special consideration so that they may be located properly with respect to the objectives of the zoning ordinance and with respect to their effects on surrounding properties. In order to achieve these purposes and thus give the zone use regulations the flexibility necessary to achieve the objectives of this title, the planning commission is empowered to grant or deny applications for conditional use permits and to impose reasonable conditions upon the granting of such permits. (Prior code § 7525)

17.38.030 Lapse of conditional use permit.

A conditional use permit shall lapse and shall become void twenty-four (24) months after the date on which it became effective, unless the conditions of the permit allowed a shorter or greater time limit, or unless prior to the expiration of twenty-four (24) months a building permit is issued by the city and construction is commenced and diligently pursued toward completion on the site which was the subject of the permit. A permit may be renewed for an additional period of one year; provided, that prior to the expiration of twenty-four (24) months from the date the permit originally became effective, an application for renewal is filed with the planning commission. The commission may grant or deny an application for renewal of a conditional use permit. In the case of a planned residential development, the recording of a final map and improvements thereto shall be deemed the same as a building permit in relation to this section. (Ord. 2001-13 § 4 (part), 2001: prior code § 7527)

17.38.040 Revocation.

Upon violation of any applicable provision of this title, or, if granted subject to a condition or conditions, upon failure to comply with the condition or conditions, a conditional use permit shall be suspended automatically. The planning commission shall hold a public hearing within sixty (60) days, in accordance with the procedure prescribed in Section 17.38.080, and if not satisfied that the regulation, general provision or condition is being complied with, may revoke the permit or take such action as may be necessary to insure compliance with the regulation, general provision or condition. Appeals of the decision of the planning commission may be made to the city council as provided in Section 17.38.120. (Prior code § 7528)

17.38.050 New application.

Following the denial of a conditional use permit application or the revocation of a conditional use permit, no application for a conditional use permit for the same or substantially the same conditional use on the same or substantially the same site shall be filed within one year from the date of denial or revocation of the permit unless such denial was a denial without prejudice by the planning commission or city council. (Prior code § 7530)

17.38.060 Conditional use permit to run with the land.

A conditional use permit granted pursuant to the provisions of this chapter shall run with the land and shall continue to be valid upon a change of ownership of the site or structure which was the subject of the permit application subject to the provisions of Section 17.38.065. (Prior code § 7531)

17.38.065 Abandonment of conditional use permit.

If the use for which a conditional use permit was approved is discontinued for a period of one hundred eighty (180) days, the use shall be considered abandoned and any future use of the site as a conditional use will require the approval of a new conditional use permit.

17.38.080 Public hearing--Notice.

A. The planning commission shall hold at least one public hearing on each application for a conditional use permit.

B. Notice of the public hearing shall be given not less than ten days nor more than thirty (30) days prior to the date of the hearing by mailing a notice of the time and place of the hearing to property owners within three hundred (300) feet of the boundaries of the area occupied or to be occupied by the use which is the subject of the hearing, and by publication in a newspaper of general circulation within the city. (Prior code § 7533)

17.38.090 Investigation and report.

The planning staff shall make an investigation of the application and shall prepare a report thereon which shall be submitted to the planning commission. (Prior code § 7534)

17.38.100 Public hearing--Procedure.

At the public hearing the planning commission shall review the application and the statement and drawing submitted therewith and shall receive pertinent evidence concerning the proposed use and the proposed conditions under which it would be operated or maintained, particularly with respect to the findings prescribed in Section 17.38.110. The planning commission may continue a public hearing from time to time as it deems necessary. (Prior code § 7535)

17.38.110 Action by planning commission.

A. The planning commission may grant an application for a conditional use permit as requested or in modified form, if, on the basis of the application and the evidence submitted, the commission makes the following findings:

1. That the proposed location of the conditional use is in accordance with the objectives of the zoning ordinance and the purposes of the zone in which the site is located;

2. That the proposed location of the conditional use and the conditions under which it would be operated or maintained will not be detrimental to the public health, safety or welfare, or materially injurious to properties or improvements in the vicinity.

B. A conditional use permit may be revocable, may be granted for a limited time period, or may be granted subject to such conditions as the commission may prescribe. The commission may grant conditional approval for a permit subject to the effective date of a change of zone or other ordinance amendment.

C. The commission may deny an application for a conditional use permit. (Prior code § 7536)\

17.38.120 Appeal to city council.

The decision of the City planning commission on a conditional use permit shall be subject to the appeal provisions of Section 17.02.145. (Prior code § 7537) (Ord. 2006-18 § 6, 2007)

17.38.130 Effective date of conditional use permit.

A conditional use permit shall become effective immediately when granted or affirmed by the council, or upon the sixth working day following the granting of the conditional use permit by the planning commission if no appeal has been filed. (Prior code § 7539)

RESOLUTION NO. 2018-46

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF VISALIA APPROVING CONDITIONAL USE PERMIT NO. 2018-19: A REQUEST BY STARBUCKS TO ALLOW A DRIVE-THRU LANE ASSOCIATED WITH A 2,633 SQ. FT. COMMERCIAL TENANT SPACE WITHIN A 5.96-ACRE PARCEL IN THE C-MU (COMMERCIAL MIXED USE) ZONE. THE PROJECT SITE IS LOCATED ON NORTHEAST CORNER OF N. MOONEY BLVD. AND W. RIGGIN AVE. (APN: 078-120-034)

WHEREAS, Conditional Use Permit No. 2018-11 is a request by Starbucks to allow a drive-thru lane associated with a 2,633 sq. ft. commercial tenant space within a 5.96-acre parcel in the C-MU (Commercial Mixed Use) zone. The project site is located on northeast corner of N. Mooney Blvd. and W. Riggin Ave. (APN: 078-120-034); and

WHEREAS, the Planning Commission of the City of Visalia, after duly published notice did hold a public hearing before said Commission on December 10, 2018; and

WHEREAS, the Planning Commission of the City of Visalia finds Conditional Use Permit No. 2018-19, as conditioned by staff, to be in accordance with Section 17.38.110 of the Zoning Ordinance of the City of Visalia based on the evidence contained in the staff report and testimony presented at the public hearing; and

WHEREAS, the project is considered Categorically Exempt under Section 15332 of the Guidelines for the Implementation of the California Environmental Quality Act (CEQA) (Categorical Exemption No. 2018-70).

NOW, THEREFORE, BE IT RESOLVED that the Planning Commission of the City of Visalia makes the following specific findings based on the evidence presented:

1. That the proposed project will not be detrimental to the public health, safety, or welfare, or materially injurious to properties or improvements in the vicinity.
2. That the proposed conditional use permit is consistent with the policies and intent of the General Plan and Zoning Ordinance. Specifically, the project is consistent with the required finding of the Zoning Ordinance Section 17.38.110:
    a) The proposed location of the conditional use permit is in accordance with the objectives of the Zoning Ordinance and the purposes of the zone in which the site is located. Staff concludes the proposed drive-thru lane is consistent with the existing and future commercial land uses in the area. Both Mooney Blvd. and Riggin Ave. are major arterial roadways and the future development of this commercial property will provide additional commercial shopping opportunities to the surrounding residential neighborhoods. With the development of this commercial node, and the installation of frontage improvements, including the signalization of the major street intersection, the catalyst for the remaining balance of the site to be developed could be initiated by this new construction.
    b) The proposed location of the conditional use and the conditions under which it would be operated or maintained will not be detrimental to the public health, safety, or welfare, nor materially injurious to properties or improvements in

b) The proposed location of the conditional use and the conditions under which it would be operated or maintained will not be detrimental to the public health, safety, or welfare, nor materially injurious to properties or improvements in the vicinity. Staff concludes the proposed drive-thru lane is consistent with the existing and future commercial land uses in the area. Both Mooney Blvd. and Riggin Ave. are major arterial roadways and the future development of this commercial property will provide additional commercial shopping opportunities to the surrounding residential neighborhoods. With the development of this commercial node, and the installation of frontage improvements, including the signalization of the major street intersection, the catalyst for the remaining balance of the site to be developed could be initiated by this new construction.

3. That the project is considered Categorically Exempt under Section 15332 of the Guidelines for the Implementation of the California Environmental Quality Act (CEQA). (Categorical Exemption No. 2018-26).

BE IT FURTHER RESOLVED that the Planning Commission hereby approves the Conditional Use Permit on the real property hereinabove described in accordance with the terms of this resolution under the provisions of Section 17.38.110 of the Ordinance Code of the City of Visalia, subject to the following conditions:

1. That the use be operated in substantial compliance with the comments from the approved Site Plan Review No. 2018-038.
2. That the use be developed in substantial compliance with the site plan in Exhibit "A", and elevation plan in Exhibit "C".
3. That the Starbucks operate as stated in the Operational Statement identified in Exhibit "D".
4. That no component or aspect of the drive-thru lane or its operation, including the 24-hour use, shall generate noise levels in excess of 60 dB between the hours of 7:00 p.m. and 6:00 a.m. daily. Failure to meet community noise standards may result in ceasing and/or limiting the hours of operation for the drive-thru lane and window.
5. That screening along the Mooney Blvd. and Riggin Ave. frontages must be included at a height of three feet, consisting of one or more of the following devices: berming, hedge, landscape materials, and solid walls.
6. That the owner/operator of the commercial development work with City staff in the event that vehicle queuing occurs in the through lane on Riggin Ave. The owner/operator of the site shall identify the vehicle queuing issue and shall resolve vehicle queuing issues acceptable to the City Engineer and Traffic Engineer.
7. That any future drive approach along W. Riggin Ave., east of the drive approach utilized by the Starbucks development, shall be subject to review by both the City Engineer and Traffic Engineer. The City Engineer and Traffic Engineer during the review of the additional drive approach along W. Riggin Ave. may require additional traffic studies demonstrating that the additional drive-approaches will not impact traffic flow along the major street.
8. That there be no illuminated signage on the west and north sides of the buildings which could be visible from the adjacent residential areas.

9. That all signs shall require a separate building permit and shall be subject to the sign requirements of the Zoning Ordinance.
10. That all other Federal, State, Regional, and City codes and ordinances be met.

NOVEMBER 2018

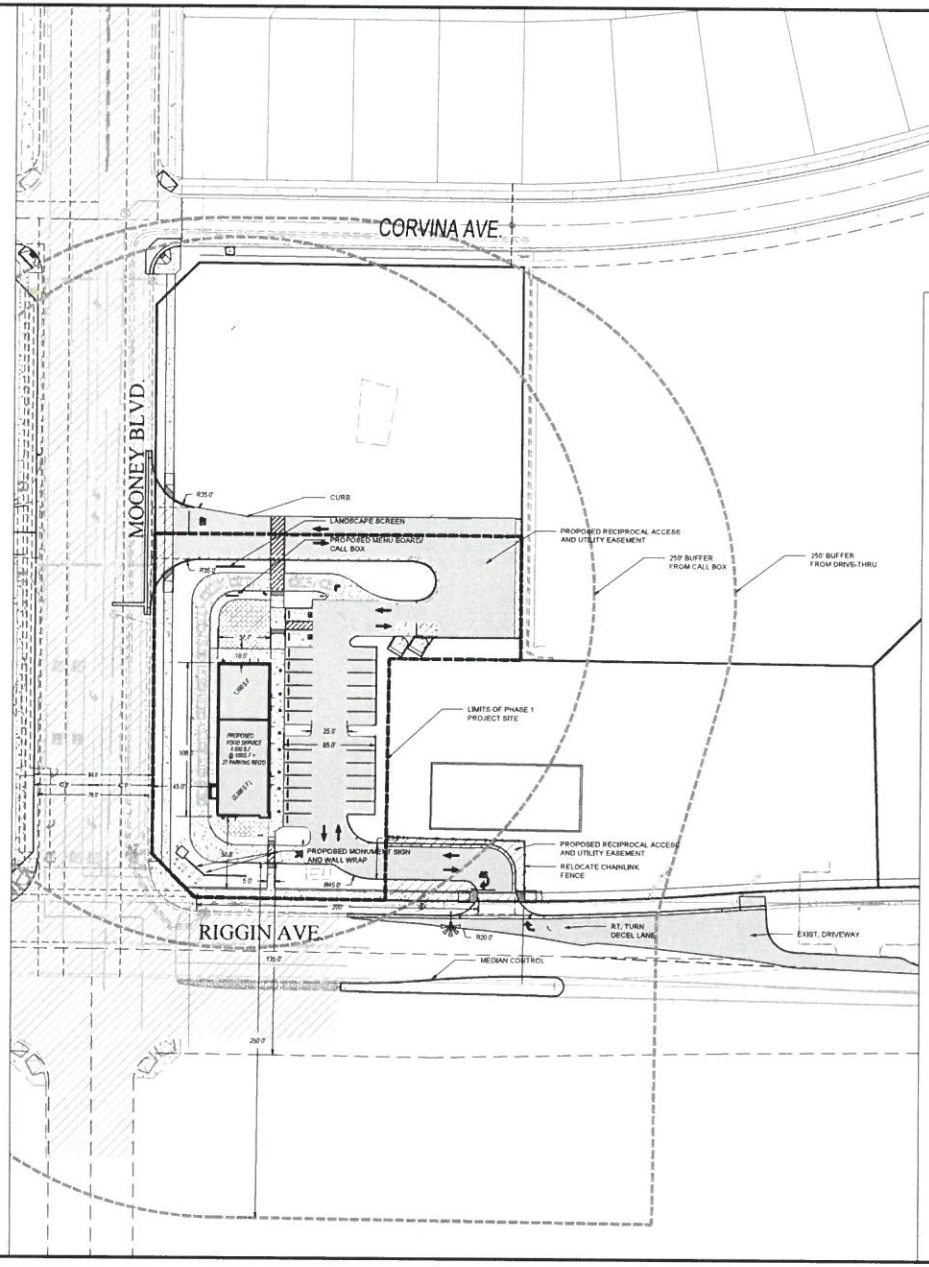
SHANNON VILLAGE EAST COMMERCIAL CENTER

(C.U.P.)

A PORTION OF LOT 2 OF SHANNON RANCH CENTRAL SUBDIVISION, RECORDED IN VOL. 40 OF MAPS, AT PAGE 99, TCR, LOCATED IN THE SE 1/4 OF SECTION 13, TOWNSHIP 18 SOUTH, 24 EAST, MDB&M, IN THE CITY OF VISALIA, COUNTY OF TULARE, STATE OF CALIFORNIA

PREPARED FOR: CRS FARMING
11878 AVENUE 328
VISALIA, CA 93291

PREPARED BY: 4 CREEKS, INC.
324 S. SANTA FE ST., SUITE A
VISALIA, CA 93292

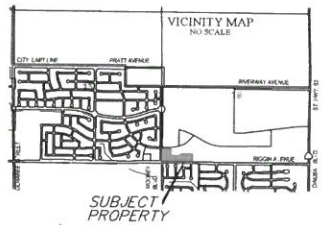


BUILDING AND PARKING:

TOTAL COMMERCIAL:	4,000 SF.
FOOD SERVICE:	6,547 SF.
SPACES REQUIRED: 1/150SF.(FOOD SERVICE)	27 STALLS
TOTAL REQUIRED:	27 STALLS
PROPOSED:	27 STALLS

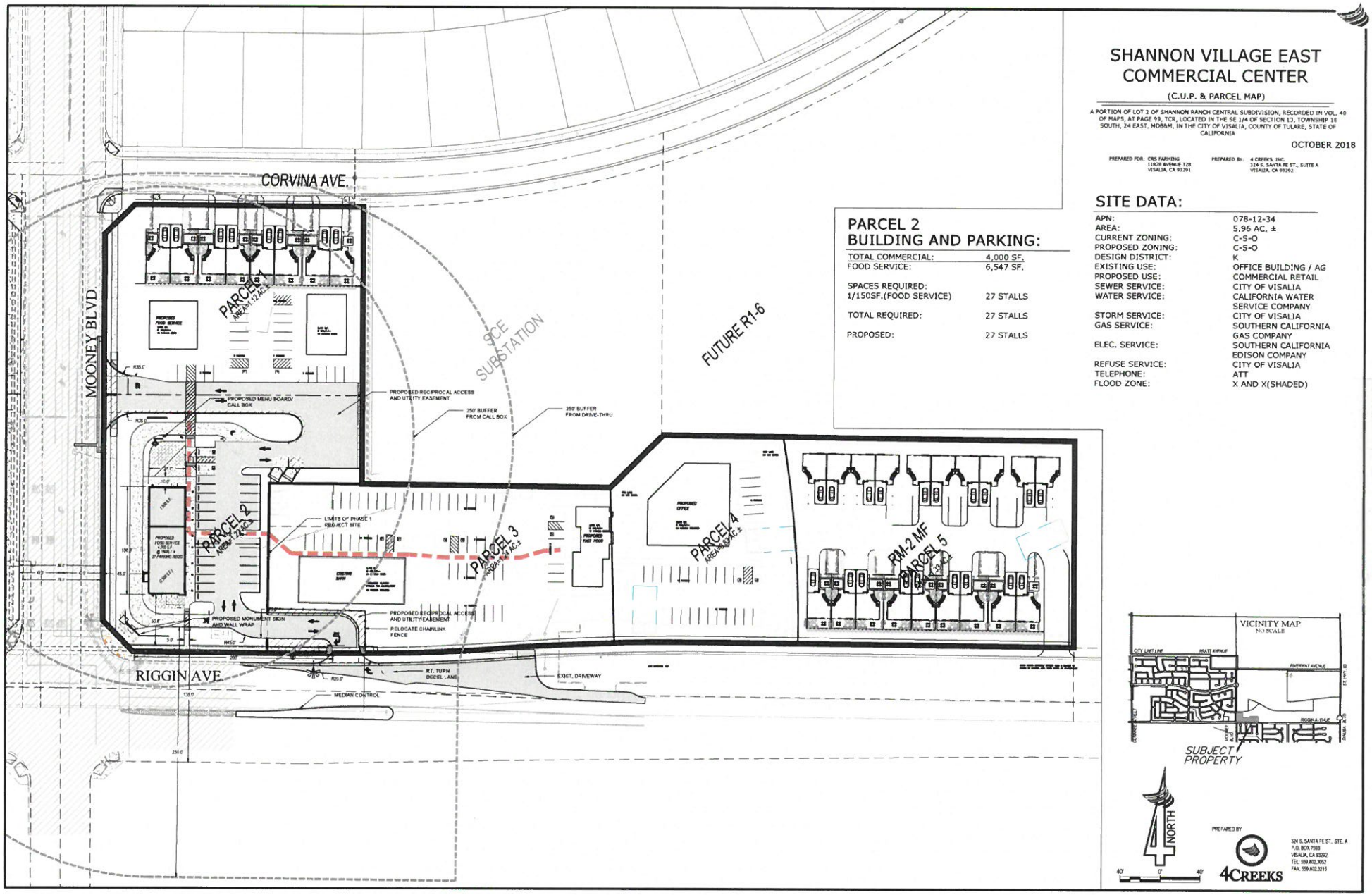
SITE DATA:

APN:	078-12-34
AREA:	5.96 AC. ±
CURRENT ZONING:	C-S-O
PROPOSED ZONING:	C-S-O
DESIGN DISTRICT:	K
EXISTING USE:	OFFICE BUILDING / AG
PROPOSED USE:	COMMERCIAL RETAIL
SEWER SERVICE:	CITY OF VISALIA
WATER SERVICE:	CALIFORNIA WATER SERVICE COMPANY
STORM SERVICE:	CITY OF VISALIA
GAS SERVICE:	SOUTHERN CALIFORNIA GAS COMPANY
ELEC. SERVICE:	SOUTHERN CALIFORNIA EDISON COMPANY
REFUSE SERVICE:	CITY OF VISALIA
TELEPHONE:	ATT
FLOOD ZONE:	X AND X(SHADED)



PREPARED BY
4CREEKS
324 S. SANTA FE ST., STE. A
P.O. BOX 7763
VISALIA, CA 93292
TEL: 559.802.3052
FAX: 559.802.3215

Exhibit "A"



SHANNON VILLAGE EAST COMMERCIAL CENTER

(C.U.P. & PARCEL MAP)

A PORTION OF LOT 2 OF SHANNON RANCH CENTRAL SUBDIVISION, RECORDED IN VOL. 40 OF MAPS, AT PAGE 99, TCR, LOCATED IN THE SE 1/4 OF SECTION 13, TOWNSHIP 18 SOUTH, 24 EAST, MDB&M, IN THE CITY OF VISALIA, COUNTY OF TULARE, STATE OF CALIFORNIA

OCTOBER 2018

PREPARED FOR: CRS FARMING
11870 AVENUE 328
VISALIA, CA 93291

PREPARED BY: 4 CREEKS, INC.
324 S. SANTA FE ST., SUITE A
VISALIA, CA 93292

PARCEL 2 BUILDING AND PARKING:

TOTAL COMMERCIAL:	4,000 SF.
FOOD SERVICE:	6,547 SF.
SPACES REQUIRED:	
1/150SF.(FOOD SERVICE)	27 STALLS
TOTAL REQUIRED:	27 STALLS
PROPOSED:	27 STALLS

SITE DATA:

APN:	078-12-34
AREA:	5.96 AC. ±
CURRENT ZONING:	C-S-O
PROPOSED ZONING:	C-S-O
DESIGN DISTRICT:	K
EXISTING USE:	OFFICE BUILDING / AG
PROPOSED USE:	COMMERCIAL RETAIL
SEWER SERVICE:	CITY OF VISALIA
WATER SERVICE:	CALIFORNIA WATER SERVICE COMPANY
STORM SERVICE:	CITY OF VISALIA
GAS SERVICE:	SOUTHERN CALIFORNIA GAS COMPANY
ELEC. SERVICE:	SOUTHERN CALIFORNIA EDISON COMPANY
REFUSE SERVICE:	CITY OF VISALIA
TELEPHONE:	ATT
FLOOD ZONE:	X AND X(SHADED)

PREPARED BY
4CREEKS
324 S. SANTA FE ST., STE. A
P.O. BOX 7583
VISALIA, CA 93292
TEL 559.802.3052
FAX 559.802.3215

Exhibit "B"

EXTERIOR MATERIALS

1-30-18

PL1	PL2	P1	P2	P3	MS1	MR1	AS1	SV1
PLASTER SW6147 PANDA WHITE	PLASTER SW6107 NOMADIC DESERT	PAINT SW 6741 DERBYSHIRE	PAINT SW 6710 MELANGE GREEN	PAINT SW 7034 STATUS BRONZE	M.L SIDING ACP SPAN VINTAGE	M.L ROOF ACP SPAN CHAMPAGNE	ANODIZED ALUMINUM STOREFRONT	STONE VENEER ELDORADO STONE (COLORADO)

SHANNON VILLAGE EAST DEVELOPMENT

ARCHITECT:
MARLETTE ASSOCIATES

Exhibit "C"

Exhibit "D"

4CREEKS

CUP 2018-19
Operational Statement: Commercial Mixed Use
City of Visalia Planning Division
Project Location: NEC Mooney Blvd & Riggin Ave (APN 078-120-034)

1. The subject property consists of approximately 1.5 acres of former agriculture land at the northeast corner of West Riggin Avenue and North Mooney Boulevard with commercial uses. The site will include a 2,633 square-foot Starbucks with drive-thru and a 1,501 square-foot Deli Delicious. The project is consistent with the City of Visalia 2030 General Plan (Commercial Mixed Use) and Zoning (Mixed Use Commercial).

2. Operating hours will be 24 hours per day for the drive-thru and 4:30 AM to 12:00 AM for store operations. The Starbucks coffee shop will typically have 4-6 employees during peak business hours, with 14-20 part-time employees throughout the day and 1 full-time manager.

3. The number of service and delivery vehicles will be commensurate with a typical restaurant with a drive-thru with deliveries limited to operating store hours.

4. Access to the site will be from a reciprocal access easement from driveways on Riggin Avenue and Mooney Boulevard.

324 S. Santa Fe St., Ste. A, Visalia, CA 93292
881 W. Morton Ave., Porterville, CA 93257
(559) 802-3052 www.4-creeks.com

Exhibit "E"

Category 1 Traffic Impact Study

Shannon Village East

(Northeast corner of N. Mooney Blvd. & W. Riggin Ave.)

Prepared for 4Creeks, Inc.

By

JBL Traffic Engineering, Inc.

Category I Traffic Impact Study

Shannon Village East

Located at the Northeast Corner of Mooney Boulevard and Riggin Avenue

In the City of Visalia, CA

Prepared For:

4Creeks, Inc.
324 S Santa Fe St
Visalia, CA 93292

October 18, 2018

Project No.: 013-006

JLB Traffic Engineering, Inc.

Traffic Engineering, Transportation Planning, & Parking Solutions

1300 E. Shaw Ave., Ste. 103
Fresno, CA 93710
Phone: (559) 570-8991
www.JLBtraffic.com

JLB Traffic Engineering, Inc.

Traffic Engineering, Transportation Planning, & Parking Solutions

Category I Traffic Impact Study

Shannon Village East Located at the Northeast Corner of Mooney Boulevard and Riggin Avenue

In the City of Visalia, CA

October 18, 2018

This Category I Traffic Impact Study Report has been prepared under the direction of a licensed Traffic Engineer. The licensed Traffic Engineer attests to the technical information contained therein and has judged the qualifications of any technical specialists providing engineering data from which recommendations, conclusions, and decisions are based.

Prepared By:

Jose Luis Benavides, P.E., T.E.

President

JLB Traffic Engineering, Inc.

Traffic Engineering, Transportation Planning, & Parking Solutions
1300 E. Shaw Ave., Ste. 103
Fresno, CA 93710
Phone: (559) 570-8991
www.JLBtraffic.com

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Introduction and Summary

Introduction

This report describes a Category I Traffic Impact Study (TIS) prepared by JLB Traffic Engineering, Inc. (JLB) for the Shannon Village East development (Project) located on the northeast corner of Riggin Avenue Mooney Boulevard in the City of Visalia. The Project proposes to develop the northeast corner of the intersection of Riggin Avenue and Mooney Boulevard with commercial land uses. The site will include a 2,633 square-foot Starbucks and a 1,501 square-foot Deli Delicious. The Project is consistent with the City of Visalia 2030 General Plan.

The purpose of this TIS is to evaluate the potential on-site and off-site traffic impacts, identify short-term and near term roadway and circulation needs, determine potential mitigation measures, and identify any critical traffic issues that should be addressed in the ongoing planning process. The study primarily focused on evaluating traffic conditions at study intersections that may potentially be impacted by the proposed Project. The scope of work was prepared via consultation with City of Visalia staff.

Summary

The potential impacts of the proposed Project were evaluated in accordance with the standards set forth by the level of service (LOS) policies of the City of Visalia.

Base Year 2017 Traffic Conditions

- Under this scenario, the intersection of Riggin Avenue and Mooney Boulevard exceeds its LOS threshold during both peak periods. To improve the LOS at this intersection, it is recommended that the intersection be signalized consistent with the City's signalization improvement plans.

Opening Year 2019 plus Project Traffic Conditions

- A review of the Project local access points to be constructed indicates that they are located at points that minimize traffic operational impacts to the existing roadway network; however, it is recommended that the width of the Riggin Avenue driveway be increased to 30 feet to improve circulation into the Project site.
- A Corner Sight Distance (CSD) Analysis was conducted by JLB pursuant to the guidelines within the Highway Design Manual (HDM). It is recommended that obstructions greater than two (2) feet above the street grade be avoided within the CSD triangle areas as illustrated in the CSD evaluation.
- A Deceleration Lane Analysis for the westbound right-turn lane onto the Riggin Avenue driveway was completed by 4Creeks, Inc. and reviewed by City of Visalia staff. This is currently being utilized to prepare street improvement plans for the Project.
- At build-out, the Project is estimated to generate a maximum of 2,680 daily trips, 272 AM peak hour trips and 157 PM peak hour trips.
- Under this scenario, the intersection of Riggin Avenue and Mooney Boulevard is projected to exceed its LOS threshold during both peak periods. To improve the LOS at this intersection, it is recommended that the intersection be signalized consistent with the City's signalization improvement plans.

Queuing Analysis

- It is recommended that the City consider left-turn and right-turn lane storage lengths as indicated in the Queuing Analysis.

Scope of Work

The study focused on evaluating traffic conditions at study intersections that may potentially be impacted by the proposed Project. The scope of work was based on comments provided by the City of Visalia on September 18, 2018. The City of Visalia comments are included in Appendix A.

Study Facilities

The study focused on evaluating traffic conditions at the existing study intersections that may potentially be impacted by the Project. Traffic counts were collected for the study intersections in August 2017. The traffic counts for the existing study facilities are contained in Appendix B. The existing intersection turning movement volumes, intersection geometrics and traffic controls are illustrated in Figure 2.

Study Intersections

1. Riggin Avenue / Mooney Boulevard
2. Proposed Driveway / Mooney Boulevard
3. Riggin Avenue / Proposed Driveway

Study Scenarios

Base Year 2017 Traffic Conditions

This scenario evaluates the Base Year 2017 Traffic Conditions based on traffic volumes and roadway conditions from traffic counts and field surveys conducted in the Base Year 2017.

Opening Year 2019 plus Project Traffic Conditions

This scenario evaluates total traffic volumes and roadway conditions based on the Opening Year 2019 plus Project Traffic Conditions. The Opening Year 2019 plus Project traffic volumes were obtained by first expanding the Base Year 2017 by an annual growth rate and then adding the Project Only Trips. Based on a review of the Tulare County Association of Governments (TCAG), traffic in the vicinity of the Project is projected to grow at an annual average rate of 1.90 percent. However, to be conservative JLB utilized a minimum three (3) percent annual growth rate to expand the Base Year 2017 counts for two (2) years and subsequently added the Project Only trips to obtain the Opening Year plus Project traffic volumes. The Project Only Trips to the study intersections were based on the existing roadway network, existing travel patterns, engineering judgment, and the City of Visalia 2030 General Plan Circulation Element. The TCAG models are contained in Appendix D.

Level of Service Analysis Methodology

Level of Service (LOS) is a qualitative index of the performance of an element of the transportation system. LOS is a rating scale running from "A" to "F" with "A" indicating no congestion of any kind and "F" indicating unacceptable congestion and delays. LOS in this study describes the operating conditions for signalized and unsignalized intersections.

The Highway Capacity Manual (HCM) is the standard reference published by the Transportation Research Board and contains the specific criteria and methods to be used in assessing LOS. Synchro software was used to define LOS in this study. Details regarding these calculations are contained in Appendix D.

Criteria of Significance

The City of Visalia 2030 General Plan Circulation Element has established LOS D as the acceptable level of traffic congestion on most major streets. Therefore, LOS D is used to evaluate the potential significance of LOS impacts to City of Visalia roadway facilities.

Operational Analysis Assumptions and Defaults

The following operational analysis values, assumptions and defaults were used in this study. These default values were used to ensure a consistent analysis of LOS among the various scenarios.

- Yellow time of 3.2 seconds for left-turn phases
- Yellow time consistent with the California Manual of Uniform Traffic Control Devices (CA MUTCD) based on approach speeds
- All-red clearance intervals of 1.0 second for all phases
- Walk intervals of 7.0 seconds
- Flashing Don't Walk based on 3.5 feet/second walking speed with yellow plus all-red clearance subtracted and 2.0 seconds added
- An average of 3 pedestrian calls per hour at signalized intersections
- All new or modified signals utilize protective left-turn phasing
- A 3 percent heavy vehicle factor
- At existing intersections, the observed approach Peak Hour Factor (PHF) is utilized in the Existing and Opening Year 2019 plus Project scenarios
- For driveways, a PHF of 0.92 was utilized during both the AM and PM peaks

Existing Traffic Conditions

Roadway Network

The Project site and surrounding study area are illustrated in Figure 1. Important roadways serving the Project site are discussed below.

Riggin Avenue is an east-west arterial adjacent to the proposed Project. Riggin Avenue connects the northwest region of the Visalia urban area to State Route 63 (Dinuba Boulevard) in the north central region. For the most part, Riggin Avenue exists as a four-lane arterial between State Route 99 and Road 80, a two-lane arterial between Road 80 and Demaree Avenue, a four-lane arterial between Demaree Avenue and Mooney Boulevard, a two-lane arterial between Mooney Boulevard and Dinuba Avenue, a four-lane arterial between Dinuba Avenue and Ben Maddox Way, and a two-lane arterial between Ben Maddox Way and Lovers Lane Boulevard. The City of Visalia 2030 General Plan Circulation Element designates Riggin Avenue as a four-lane arterial between State Route 99 and Ben Maddox Way and a two-lane arterial east of Ben Maddox Way.

Mooney Boulevard is an existing north-south two- to four-lane roadway adjacent to the proposed Project site. Mooney Boulevard exists as a four-lane arterial between Riverway Drive and Riggin Avenue and Ferguson Avenue and Houston Avenue, and a two-lane arterial between Riggin Avenue and Ferguson Avenue and Houston Avenue and Goshen Avenue. Mooney Boulevard extends south of Main Street through the City of Visalia SOI and is also known as State Route 63. The City of Visalia 2030 General Plan Circulation Element designates Mooney Boulevard as a two- to four-lane arterial between Avenue 320 and Goshen Avenue and south of Main Street through the City of Visalia SOI.

City of Visalia - Shannon Village East TIS
Vicinity Map

Figure 1

JLB Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions
1300 E. Shaw Ave., Ste. 103, Fresno, CA 93710
PHONE:(559) 570-8991, EMAIL: info@JLBtraffic.com, www.JLBtraffic.com

013-006 - 10/17/18 - JR/JA

Results of Base Year 2017 Level of Service Analysis

Figure 2 illustrates the Base Year 2017 turning movement volumes, intersection geometrics and traffic controls. LOS worksheets for the Base Year 2017 Traffic Conditions scenario are provided in Appendix E. Table I presents a summary of the Existing peak hour LOS at the study intersections.

Under this scenario, the intersection of Riggin Avenue and Mooney Boulevard exceeds its LOS threshold during both peak periods. Based on discussions with City of Visalia staff, the City has recently prepared construction plans to signalize the intersection of Riggin Avenue and Mooney Boulevard and is anticipating that the traffic signal will be operational by the summer of 2019. Therefore, to improve the LOS at this intersection, it is recommended that the following improvements, which are consistent with the City's signalization improvement plans, be implemented.

- Modify the eastbound through-right lane to a through lane;
- Add an eastbound right-turn lane;
- Modify the westbound through-right lane to a through lane;
- Add a westbound right-turn lane;
- Modify the northbound through-right lane to a through lane;
- Add a northbound right-turn lane;
- Add a southbound through lane;
- Modify the southbound trap right-turn lane to a standard right-turn lane; and
- Signalize the intersection with protective left-turn phasing.

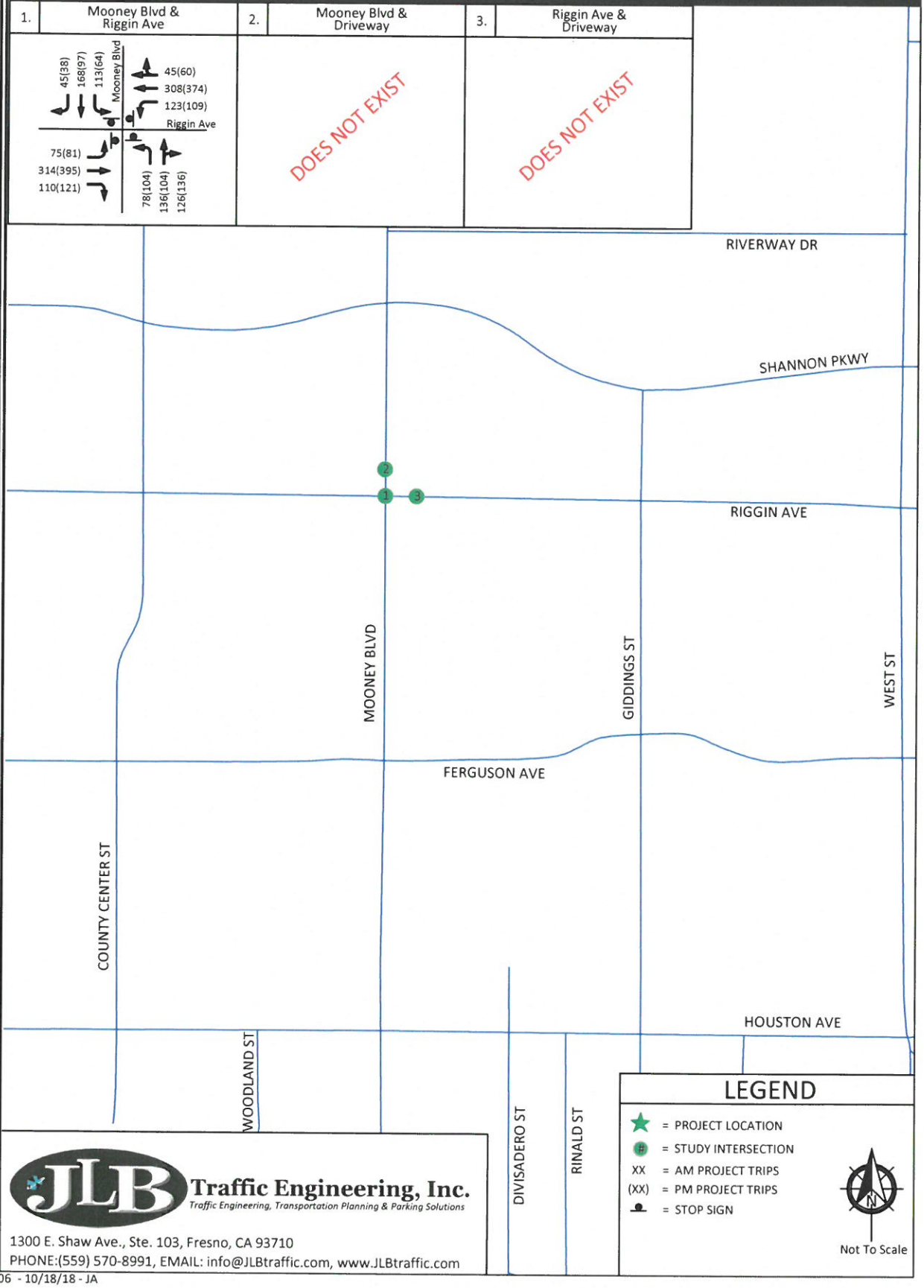
Table I: Base Year 2017 Intersection LOS Results

ID	*Intersection*	*Intersection Control*	*AM Peak Hour*		*PM Peak Hour*	
			Average Delay (sec/veh)	*LOS*	*Average Delay (sec/veh)*	*LOS*
1	Riggin Avenue / Mooney Boulevard	All-Way STOP	**45.9**	**E**	**40.0**	**E**
		Improved (Signalized)	18.4	B	16.8	B
2	Proposed Driveway / Mooney Boulevard	Does Not Exist	N/A	N/A	N/A	N/A
3	Riggin Avenue / Proposed Driveway	Does Not Exist	N/A	N/A	N/A	N/A

Note: LOS = Level of Service based on average delay on signalized intersections and All-Way STOP Controls
LOS for two-way and one-way STOP controlled intersections are based on the worst approach/movement of the minor street.

City of Visalia - Shannon Village East TIS
Base Year 2017 - Traffic Volumes, Geometrics and Controls

Figure 2



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013-006 - 10/18/18 - JA

Opening Year 2019 plus Project Traffic Conditions

Project Description

The Shannon Village East development (Project) is located on the northeast corner of Riggin Avenue Mooney Boulevard in the City of Visalia. The Project proposes to develop the northeast corner of the intersection of Riggin Avenue and Mooney Boulevard with commercial land uses. The site will include a 2,633 square-foot Starbucks and a 1,501 square-foot Deli Delicious consistent with the City of Visalia 2030 General Plan. Figure 3 illustrates the Project Site Plan.

Project Access

Access to the proposed Project site is proposed from two (2) points. The first access will be from a point located on the east side of Mooney Boulevard approximately 250 feet north of Riggin Avenue and is proposed to be a full access point. The second access point will be from the north side of Riggin Avenue at a point approximately 200 feet east of Mooney Boulevard and is proposed to be limited to right-in and right-out access only. Both access points are proposed to be "street type driveways" with the access to Mooney Boulevard aligned with the existing driveway to the west. The proposed throat widths at the opening of the driveways are approximately 36 feet and 27 feet for the Mooney Boulevard and Riggin Avenue access points respectively. JLB recommends that the width of the Riggin Avenue driveway be increased to 30 feet to improve circulation into the Project site. JLB analyzed the location of the proposed access points relative to the existing local roads and driveways in the Project's vicinity. A review of the Project local access points to be constructed indicates that they are located at points that minimize traffic operational impacts to the existing roadway network.

Corner Site Distance Analysis

A Corner Sight Distance (CSD) Analysis was conducted by JLB pursuant to the guidelines within the Highway Design Manual (HDM). Based on HDM, at private driveways *"the minimum Corner Sight Distance shall be equal to the stopping sight distance given in Table 201.1..."*. Therefore, the CSD for the Mooney Boulevard is 300 feet while that for Riggin Avenue is 360 feet. Appendix G includes the CSD evaluation which includes areas where obstructions greater than two (2) feet above the street grade should not be approved.

Deceleration Lane Analysis

A Deceleration Lane Analysis for the westbound right-turn lane onto the Riggin Avenue driveway was completed by 4Creeks, Inc. Based on the deceleration lane analysis and comments from the City of Visalia, 4Creeks has started to prepare street improvement plans. Appendix G includes the deceleration length analysis prepared by 4Creeks.

Trip Generation

Trip generation for the proposed Project is based on information provided by the developer and data from the Institute of Transportation Engineers (ITE) reference, *Trip Generation* 10th Edition. Table II presents the trip generation for the proposed Project. At build-out, the Project is estimated to generate a maximum of 2,680 daily trips, 272 AM peak hour trips and 157 PM peak hour trips.

Table II: Project Only Trip Generation

Land Use (ITE Code)	Size	Unit	Daily		7-9 AM Peak Hour						4-6 PM Peak Hour					
			Rate	Total	Trip Rate	In %	Out %	In	Out	Total	Trip Rate	In %	Out %	In	Out	Total
Fast Food Restaurant Without Drive-Through Window (933)	1.501	k.s.f.	346.23	520	25.10	60	40	23	15	38	28.34	50	50	22	21	43
Coffee Donut Shop with Drive-Through Window (937)	2.633	k.s.f.	820.38	2,160	88.99	51	49	119	115	234	43.38	50	50	57	57	114
Total Project Trips				**2,680**				**142**	**130**	**272**				**79**	**78**	**157**

Note: k.s.f. = Thousand Square Feet

Trip Distribution

The trip distribution assumptions were developed based on existing travel patterns, knowledge of the study area, engineering judgement, and knowledge of the City of Visalia and County of Tulare Circulation Elements. Figure 5 illustrates the Project Only Trips to the study intersections.

Results of Opening Year 2019 plus Project Level of Service Analysis

The Opening Year 2019 plus Project Traffic Conditions scenario assumes that the existing roadway geometrics and traffic controls will remain in place. Figure 5 illustrates the Existing plus Project turning movement volumes, intersection geometrics and traffic controls. LOS worksheets for the Opening Year 2019 plus Project Traffic Conditions scenario are provided in Appendix F. Table III presents a summary of the Opening Year 2019 plus Project peak hour LOS at the study intersections.

Under this scenario, the intersection of Riggin Avenue and Mooney Boulevard is projected to exceed its LOS threshold during both peak periods. Based on discussions with City of Visalia staff, the City has recently prepared construction plans to signalize the intersection of Riggin Avenue and Mooney Boulevard and is anticipating that the traffic signal will be operational by the summer of 2019. Therefore, to improve the LOS at this intersection, it is recommended that the following improvements, which are consistent with the City's signalization improvement plans, be implemented.

- Modify the eastbound through-right lane to a through lane;
- Add an eastbound right-turn lane;
- Modify the westbound through-right lane to a through lane;
- Add a westbound right-turn lane;
- Modify the northbound through-right lane to a through lane;
- Add a northbound right-turn lane;
- Add a southbound through lane;

- Modify the southbound trap right-turn lane to a standard right-turn lane; and
- Signalize the intersection with protective left-turn phasing.

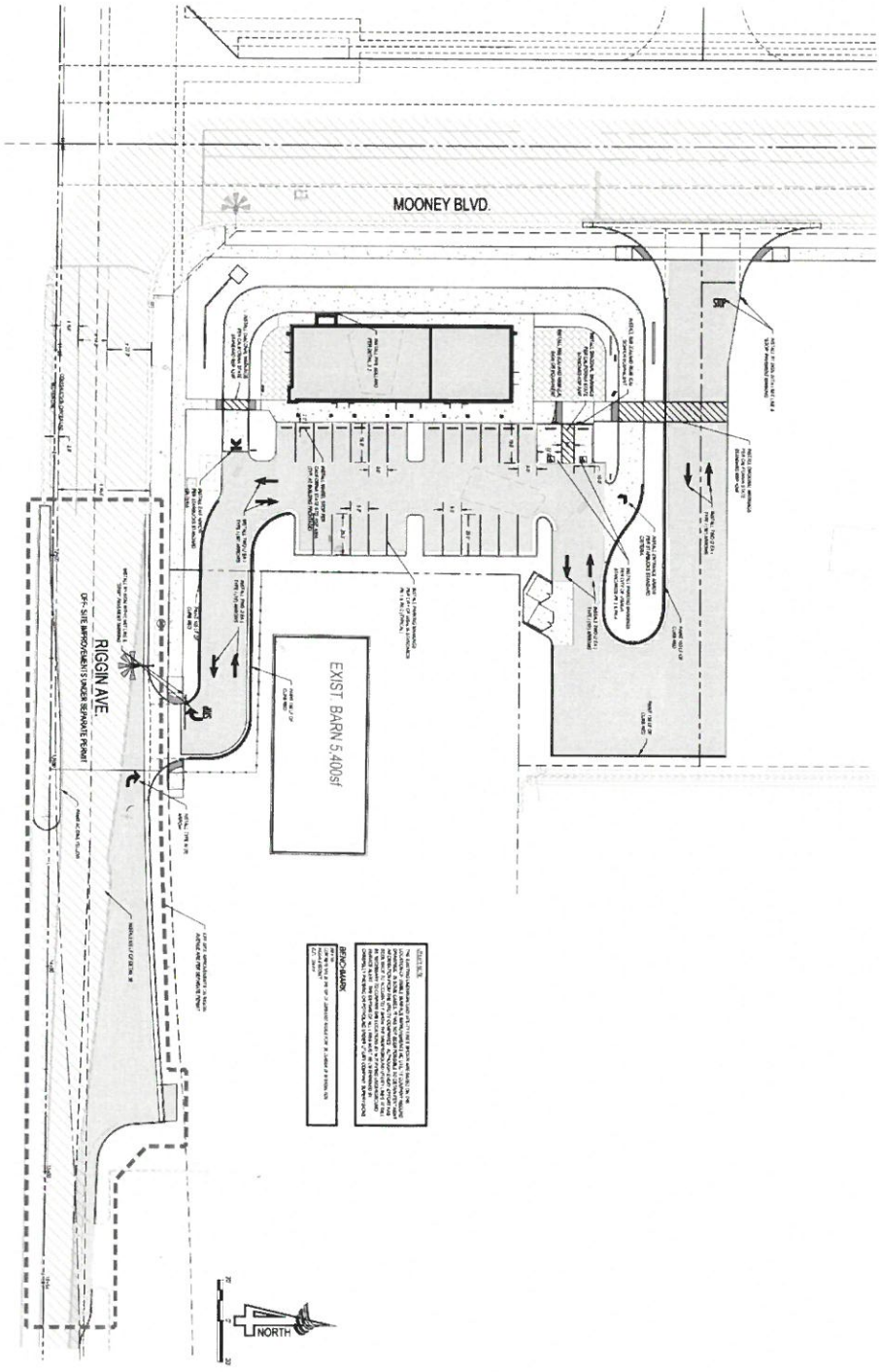
Table III: Opening Year 2019 plus Project Intersection LOS Results

ID	*Intersection*	*Intersection Control*	*AM Peak Hour*		*PM Peak Hour*	
			Average Delay (sec/veh)	*LOS*	*Average Delay (sec/veh)*	*LOS*
1	Riggin Avenue / Mooney Boulevard	All-Way STOP	**77.2**	**F**	**61.7**	**F**
		Mitigated (Signalized)	23.0	C	18.4	B
2	Proposed Driveway / Mooney Boulevard	Two Way STOP	19.9	C	14.4	B
3	Riggin Avenue / Proposed Driveway	One Way STOP	10.2	B	10.4	B

Note: LOS = Level of Service based on average delay on signalized intersections and All-Way STOP Controls
LOS for two-way and one-way STOP controlled intersections are based on the worst approach/movement of the minor street.

City of Visalia - Shannon Village East TIS
Project Site Plan

Figure 3



LEGEND

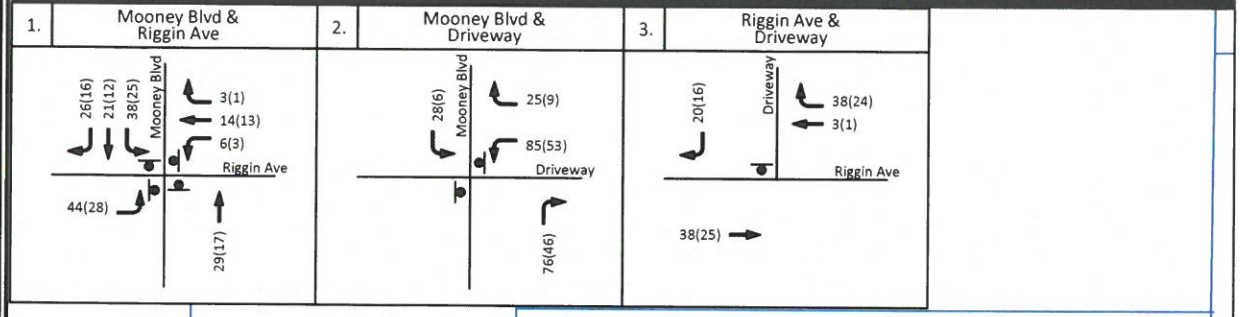
Not To Scale

JLB Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions
1300 E. Shaw Ave., Ste. 103, Fresno, CA 93710
PHONE:(559) 570-8991, EMAIL: info@JLBtraffic.com, www.JLBtraffic.com

013-006 - 10/17/18 - JA

City of Visalia - Shannon Village East TIS
Project Only Trips

Figure 4



LEGEND

- ★ = PROJECT LOCATION
- # = STUDY INTERSECTION
- XX = AM PROJECT TRIPS
- (XX) = PM PROJECT TRIPS
- = STOP SIGN

N

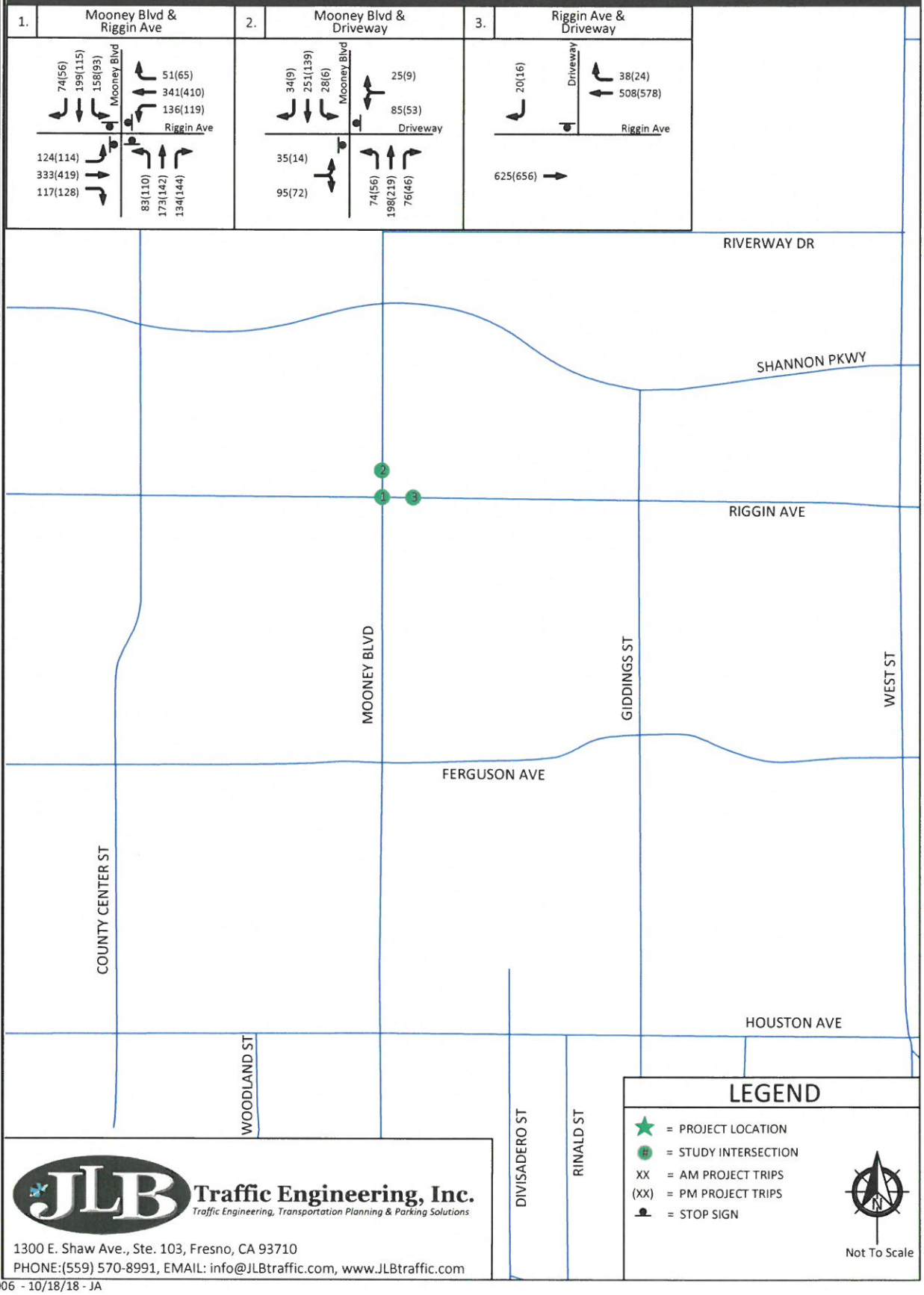
Not To Scale

JLB Traffic Engineering, Inc.
Traffic Engineering, Transportation Planning & Parking Solutions
1300 E. Shaw Ave., Ste. 103, Fresno, CA 93710
PHONE:(559) 570-8991, EMAIL: info@JLBtraffic.com, www.JLBtraffic.com

013-006 - 10/18/18 - JA

City of Visalia - Shannon Village East TIS
Opening Year 2019 plus Project - Traffic Volumes, Geometrics and Controls

Figure 5



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013-006 - 10/18/18 - JA

Queuing Analysis

Table IV provides a queue length summary for left-turn and right-turn lanes for all study scenarios. The queuing analyses for the study intersections are contained in the LOS worksheets for the respective scenarios. Appendix D contains the methodologies used to evaluate these intersections.

Queuing analyses were completed using Sim Traffic output information. Synchro provides both 50th and 95th percentile maximum queue lengths in feet. Per the Synchro manual, "the 50th percentile maximum queue is the maximum back of queue on a typical cycle and the 95th percentile queue is the maximum back of queue with 95th percentile volumes." The queues shown on Table IV are the 95th percentile queue lengths for the respective lane movements.

The Highway Design Manual (HDM) provides guidance for determining deceleration lengths for the left-turn and right-turn lanes based on design speeds. Per the HDM criteria, "tapers for right-turn lanes are usually unnecessary since the main line traffic need not be shifted laterally to provide space for the right-turn lane. If, in some rare instances, a lateral shift were needed, the approach taper would use the same formula as for a left-turn lane." Therefore, a bay taper length pursuant to the Caltrans HDM would need to be added, as necessary, to the recommended storage lengths presented below.

Table IV: Queuing Analysis

ID	*Intersection*	*Existing Queue Storage Length (ft.)*		*Base Year 2017*		*Opening Year 2019 plus Project*	
				AM	*PM*	*AM*	*PM*
1	Riggin Avenue / Mooney Boulevard	EB Left	300	97	73	177	88
		EB Right	*	41	67	48	44
		WB Left	120	111	112	139	159
		WB Right	*	50	68	47	27
		NB Left	150	100	106	84	89
		NB Right	*	48	60	57	47
		SB Left	150	118	92	155	144
		SB Right	100	22	29	33	21
2	Proposed Driveway / Mooney Boulevard	NB Left	TWLTL	*	*	43	0
		SB Left	TWLTL	*	*	28	0
3	Riggin Avenue / Proposed Driveway	SB Right	*	*	*	44	36
		WB Right	*	*	*	0	0

Note: * = Does not exist or is not projected to exist
TWLTL = Two-Way Left-Turn Lane

Based on the Synchro output files and traffic engineering judgement, it is recommended that the storage capacity for the following be considered for the Opening Year 2019 plus Project Traffic Conditions.

- Riggin Avenue and Mooney Boulevard
  - .
  - Consider increasing the storage capacity of the westbound left-turn lane to 150 feet.

At the remaining approaches to the study intersections, the existing or planned storage capacity will be sufficient to accommodate the maximum queue.

Conclusions and Recommendations

Conclusions and recommendations regarding the proposed Project are provided below.

Base Year 2017 Traffic Conditions

- Under this scenario, the intersection of Riggin Avenue and Mooney Boulevard exceeds its LOS threshold during both peak periods. To improve the LOS at this intersection, it is recommended that the following improvements, which are consistent with the City's signalization improvement plans, be implemented.
  - Modify the eastbound through-right lane to a through lane;
  - Add an eastbound right-turn lane;
  - Modify the westbound through-right lane to a through lane;
  - Add a westbound right-turn lane;
  - Modify the northbound through-right lane to a through lane;
  - Add a northbound right-turn lane;
  - Add a southbound through lane;
  - Modify the southbound trap right-turn lane to a standard right-turn lane; and
  - Signalize the intersection with protective left-turn phasing.

Opening Year 2019 plus Project Traffic Conditions

- A review of the Project local access points to be constructed indicates that they are located at points that minimize traffic operational impacts to the existing roadway network; however, it is recommended that the width of the Riggin Avenue driveway be increased to 30 feet to improve circulation into the Project site.
- A Corner Sight Distance (CSD) Analysis was conducted by JLB pursuant to the guidelines within the Highway Design Manual (HDM). It is recommended that obstructions greater than two (2) feet above the street grade be avoided within the CSD triangle areas as illustrated in the CSD evaluation.
- A Deceleration Lane Analysis for the westbound right-turn lane onto the Riggin Avenue driveway was completed by 4Creeks, Inc. and reviewed by City of Visalia staff. This is currently being utilized to prepare street improvement plans for the Project.
- At build-out, the Project is estimated to generate a maximum of 2,680 daily trips, 272 AM peak hour trips and 157 PM peak hour trips.
- Under this scenario, the intersection of Riggin Avenue and Mooney Boulevard is projected to exceed its LOS threshold during both peak periods. To improve the LOS at this intersection, it is recommended that the following improvements, which are consistent with the City's signalization improvement plans, be implemented.
  - Modify the eastbound through-right lane to a through lane;
  - Add an eastbound right-turn lane;
  - Modify the westbound through-right lane to a through lane;
  - Add a westbound right-turn lane;
  - Modify the northbound through-right lane to a through lane;
  - Add a northbound right-turn lane;

- Add a southbound through lane;
- Modify the southbound trap right-turn lane to a standard right-turn lane; and
- Signalize the intersection with protective left-turn phasing.

Queuing Analysis

- It is recommended that the City consider left-turn and right-turn lane storage lengths as indicated in the Queuing Analysis.

Study Participants

JLB Traffic Engineering, Inc. Personnel:

Jose Luis Benavides, P.E., T.E.	Project Manager
Susana Maciel, E.I.T.	Engineering I/II
Alan Miao, E.I.T.	Engineer I/II
Jove Alcazar	Engineer I/II
Veronica Benavides	Clerical

Persons Consulted:

Leslie Blair, P.E.	City of Visalia
Matt Ainley	4Creeks, Inc.

References

1. *Trip Generation,* 10th Edition, Washington D.C., Institute of Transportation Engineers, 2017
2. City of Visalia, *2030 General Plan*
3. *2014 California Manual on Uniform Traffic Control Devices*, Caltrans, November 7, 2014
4. Guide for the Preparation of Traffic Impact Studies, Caltrans, dated December 2002.
5. *Highway Design Manual*, 6th Edition, Caltrans, dated July 2, 2018

Appendix A: Scope of Work

City of Visalia

Memo

To: Matt Ainley, 4Creeks Engineering

From: Leslie Blair, Senior Civil Engineer

Date: September 18, 2018

Re: Traffic Impact Analysis SPR 18-038

During Site Plan Review, Traffic Safety commented that the proposed development project SPR 18-038 would be required to perform a Traffic Impact Analysis (TIA). Per ITE Trip Generation Manual for Land Use 937 – Coffee/Donut Shop with Drive-Through Window, a 4000 SF building will generate 400 trips in the AM peak hour. A project of this size requires a Category II TIA in accordance with Table 1 of City of Visalia Procedures for Traffic Impact Analysis (TIA), see attached.

In lieu of the Category II TIA requirement for this project, the City will allow a Category I Traffic Impact Statement (TIS). A TIS is typically applied to smaller projects that generate less than 100 peak hour trips. For this project, the modified TIS will require a lesser analysis than the Category II and shall include at a minimum:

- Existing condition analysis, including any existing driveways or intersections in the vicinity
- Sight distance evaluation
- Traffic generation
- Access number and spacing
- Access queuing evaluation
- Intersection and driveway geometrics analysis
    - Analyze adequacy or need for additional through traffic lanes or auxiliary right or left turn lanes and include storage requirements.
    - Analyze potential conflicts of proposed driveway locations with existing and/or proposed adjacent driveways or intersection traffic lane configurations.
- Deceleration lane evaluation
- On-site circulation evaluation

The following is an excerpt from City's procedures handbook:

TABLE 1

Analysis Category	Development Characteristic (a)	Study Horizons (b)	Minimum Study Area (c)(d)(e)
I	Traffic Impact Statement Less than 100 peak hour trips	• Opening year	• Site access drives • Any existing driveways or intersections in the vicinity

(a) The developer should first estimate the number of vehicle trips that will be generated by the proposed development and provide this information along with the other suggested study elements of the Traffic Impact Analysis to the City for review and approval prior to the start of any work.
(b) Assume full occupancy and build-out for single-phase developments. Multi-phase developments may require assessment of up to three (3) horizon years corresponding to key phases as directed by the City Engineer.
(c) An enlarged study area may be required when the minimum study areas identified in Table 1 do not provide sufficient information to meet the intent of the TIA guidelines.
(d) Vicinity (where traffic movements could be affected) shall be the area along the perimeter of and adjacent to the development.
(e) Intersections, if just outside of the designated radius of site to be studied, shall also be included in the study area.

To assist the performance of the TIS, the City will provide the following:

- Turn Movement Counts for intersection of Mooney and Riggin (August 2017)

TABLE 1

Analysis Category	Development Characteristic (a)(f)	Study Horizons (b)	Minimum Study Area (c)(d)(e)
I	Traffic Impact Statement Less than 100 peak hour trips (Not required for residential)	• Opening year	• Site access drives • Any existing driveways or intersections in the vicinity
II	Small Development 100-499 peak hour trips Residential Development 200-499 peak hour trips	• Opening year • 5 year	• Site access drives • All major intersections within ½ mile of the study site, either signalized or unsignalized • All driveways/intersections where traffic movements could be affected by new driveway traffic movements • Additional locations as requested by the reviewing agency
III	Moderate Development 500-999 peak hour trips	• Opening year • 5 year • 10 year	• Site access drives • All major intersections within 1 mile, either signalized or unsignalized • All driveways/intersections where traffic movements could be affected by new driveway traffic movements • Additional locations as requested by the reviewing agency
IV	Large Development 1000-1500 peak hour trips	• Opening year • 5 year • 10 year • 20 year	• Site access drives • All major intersections within 1 mile, either signalized or unsignalized • All driveways/intersections where traffic movements could be affected by new driveway traffic movements • Additional locations as requested by the reviewing agency
V	Regional Development 1500 plus peak hour trips	• Opening year • 5 year • 10 year • 20 year	• Site access drives • All signalized intersections and major street intersections without signal control within 3 miles, • All driveways/intersections where traffic movements could be affected by new driveway traffic movements • Additional locations as requested by the reviewing agency

(a) The developer should first estimate the number of vehicle trips that will be generated by the proposed development and provide this information along with the other suggested study elements of the Traffic Impact Analysis to the City for review and approval prior to the start of any work.

(b) Assume full occupancy and build-out for single-phase developments. Multi-phase developments may require assessment of up to three (3) horizon years corresponding to key phases as directed by the City Engineer.

(c) An enlarged study area may be required when the minimum study areas identified in Table 1 do not provide sufficient information to meet the intent of the TIA guidelines.

(d) Vicinity (where traffic movements could be affected) shall be the area along the perimeter of and adjacent to the development.

(e) Intersections, if just outside of the designated radius of site to be studied, shall also be included in the study area.

(f) For residential developments, TIA not required unless generating 200 or more peak hour trips.

Appendix B: Traffic Counts

Turning Movement Report
(Vehicles)

Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
Hanford, CA 93230

800-975-6938 Phone/Fax
www.metrotrafficdata.com

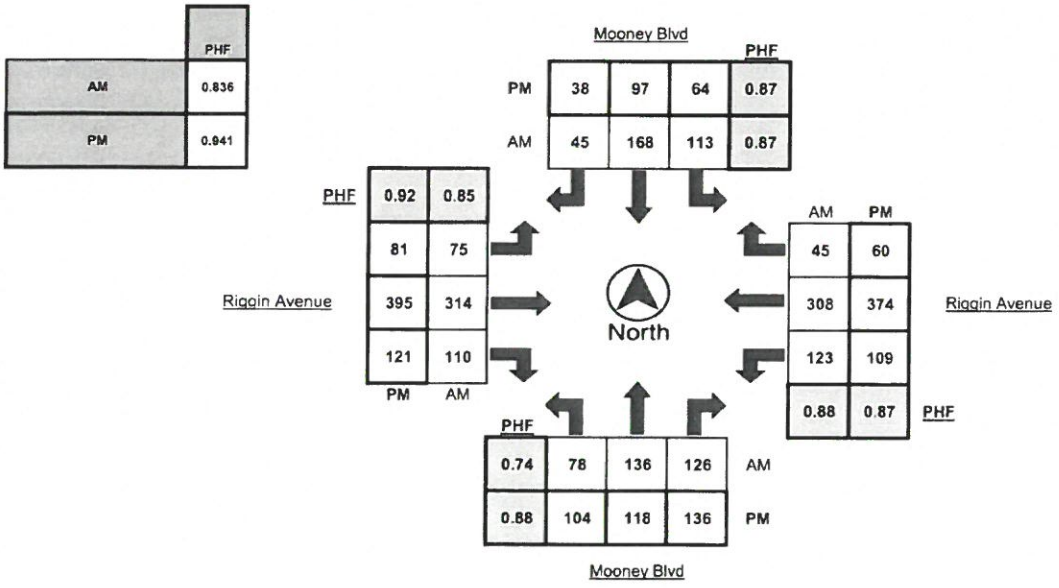
Prepared For:
City of Visalia
315 E. Acequia Ave.
Visalia, CA 93291

LOCATION: Mooney at Riggin
LATITUDE: 36.3564601
COUNTED BY: E. Hughes
LONGITUDE: -119.3143002
COLLECTION DATE: Tuesday, August 22, 2017
WEATHER: Clear

	Northbound				Southbound				Eastbound				Westbound				Interval
Time	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Total
7:00 AM - 7:15 AM	30	29	18	77	13	19	3	35	10	50	25	85	10	37	6	53	250
7:15 AM - 7:30 AM	17	15	9	41	11	33	6	50	10	53	15	78	9	61	6	76	245
7:30 AM - 7:45 AM	13	23	39	75	29	49	12	90	15	65	28	108	20	86	12	118	391
7:45 AM - 8:00 AM	21	53	41	115	40	48	6	94	26	84	37	147	41	78	16	135	491
HOUR TOTAL	81	120	107	308	93	149	27	269	61	252	105	418	80	262	40	382	1377
8:00 AM - 8:15 AM	29	44	29	102	21	47	20	88	18	86	23	127	34	76	9	119	436
8:15 AM - 8:30 AM	15	16	17	48	23	24	7	54	16	79	22	117	28	68	8	104	323
8:30 AM - 8:45 AM	15	13	11	39	16	19	6	41	7	58	12	77	12	72	4	88	245
8:45 AM - 9:00 AM	12	9	15	36	11	17	5	33	4	61	9	74	12	85	6	103	246
HOUR TOTAL	71	82	72	225	71	107	38	216	45	284	66	395	86	301	27	414	1250
11:00 AM - 11:15 AM	7	15	11	33	14	10	2	26	10	53	11	74	10	52	3	65	198
11:15 AM - 11:30 AM	13	13	4	30	3	7	5	15	8	67	10	85	13	55	11	79	209
11:30 AM - 11:45 AM	10	8	12	30	11	15	8	34	21	53	16	90	15	66	9	90	244
11:45 AM - 12:00 PM	12	10	14	36	12	14	4	30	7	46	11	64	10	62	13	85	215
HOUR TOTAL	42	46	41	129	40	46	19	105	46	219	48	313	48	235	36	319	866
12:00 PM - 12:15 PM	15	15	10	40	15	18	7	40	11	61	18	90	18	67	11	96	266
12:15 PM - 12:30 PM	17	18	7	42	9	15	2	26	6	79	7	92	13	65	12	90	250
12:30 PM - 12:45 PM	23	15	13	51	13	18	5	36	9	56	11	76	18	72	10	100	283
12:45 PM - 1:00 PM	13	17	12	42	18	16	8	42	5	77	17	99	20	67	13	100	283
HOUR TOTAL	68	65	42	175	55	67	22	144	31	273	53	357	69	271	46	386	1062
2:00 PM - 2:15 PM	10	28	12	50	26	35	10	71	13	61	12	86	14	70	7	91	298
2:15 PM - 2:30 PM	22	16	20	58	17	37	12	66	13	59	9	81	34	76	8	118	323
2:30 PM - 2:45 PM	12	14	9	35	22	13	3	38	6	83	21	110	16	80	10	106	289
2:45 PM - 3:00 PM	16	35	15	66	15	19	7	41	14	83	27	124	9	71	21	101	332
HOUR TOTAL	60	93	56	209	80	104	32	216	46	286	69	401	73	297	46	416	1242
3:00 PM - 3:15 PM	21	25	23	69	23	54	22	99	8	82	37	127	25	83	21	129	424
3:15 PM - 3:30 PM	14	18	26	58	16	20	5	41	14	82	34	130	23	78	14	115	344
3:30 PM - 3:45 PM	35	30	19	84	19	28	5	52	11	98	29	138	20	93	15	128	402
3:45 PM - 4:00 PM	21	32	23	76	19	19	12	50	15	97	31	143	26	76	14	116	385
HOUR TOTAL	91	105	91	287	77	121	44	242	48	359	131	538	94	330	64	488	1555
4:00 PM - 4:15 PM	20	31	16	67	14	16	7	37	10	81	33	124	22	66	24	112	340
4:15 PM - 4:30 PM	14	21	17	52	23	20	6	49	21	73	19	113	14	77	14	105	319
4:30 PM - 4:45 PM	16	22	13	51	13	27	6	46	13	79	16	108	21	72	16	109	314
4:45 PM - 5:00 PM	21	31	26	78	13	26	5	44	11	88	18	117	21	78	7	106	345
HOUR TOTAL	71	105	72	248	63	89	24	176	55	321	86	462	78	293	61	432	1318
5:00 PM - 5:15 PM	29	25	32	86	15	21	8	44	14	99	30	143	21	69	22	112	385
5:15 PM - 5:30 PM	33	32	37	102	14	15	13	42	19	91	21	131	29	102	14	145	420
5:30 PM - 5:45 PM	20	24	25	69	17	32	7	56	24	101	35	160	35	106	15	156	441
5:45 PM - 6:00 PM	22	37	42	101	18	29	10	57	24	104	35	163	24	97	9	130	451
HOUR TOTAL	104	118	136	358	64	97	38	199	81	395	121	597	109	374	60	543	1697

	Northbound				Southbound				Eastbound				Westbound				Peak
PEAK HOUR	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Total
7:30 AM - 8:30 AM	78	136	126	340	113	168	45	326	75	314	110	499	123	308	45	476	1641
5:00 PM - 6:00 PM	104	118	136	358	64	97	38	199	81	395	121	597	109	374	60	543	1697

	PHF
AM	0.836
PM	0.941



Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
Hanford, CA 93230

800-975-6938 Phone/Fax
www.metrotrafficdata.com

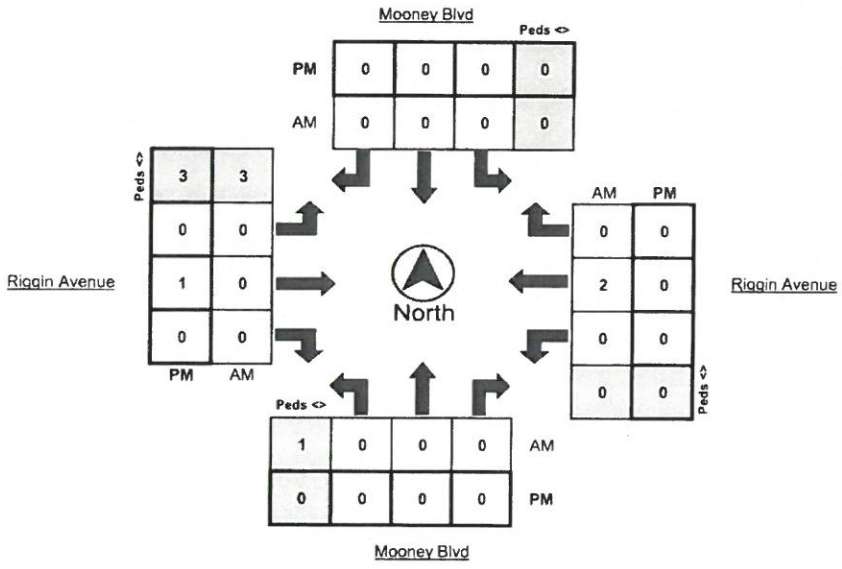
Turning Movement Report
(Bicycles & Pedestrians)

Prepared For:
City of Visalia
315 E. Acequia Ave.
Visalia, CA 93291

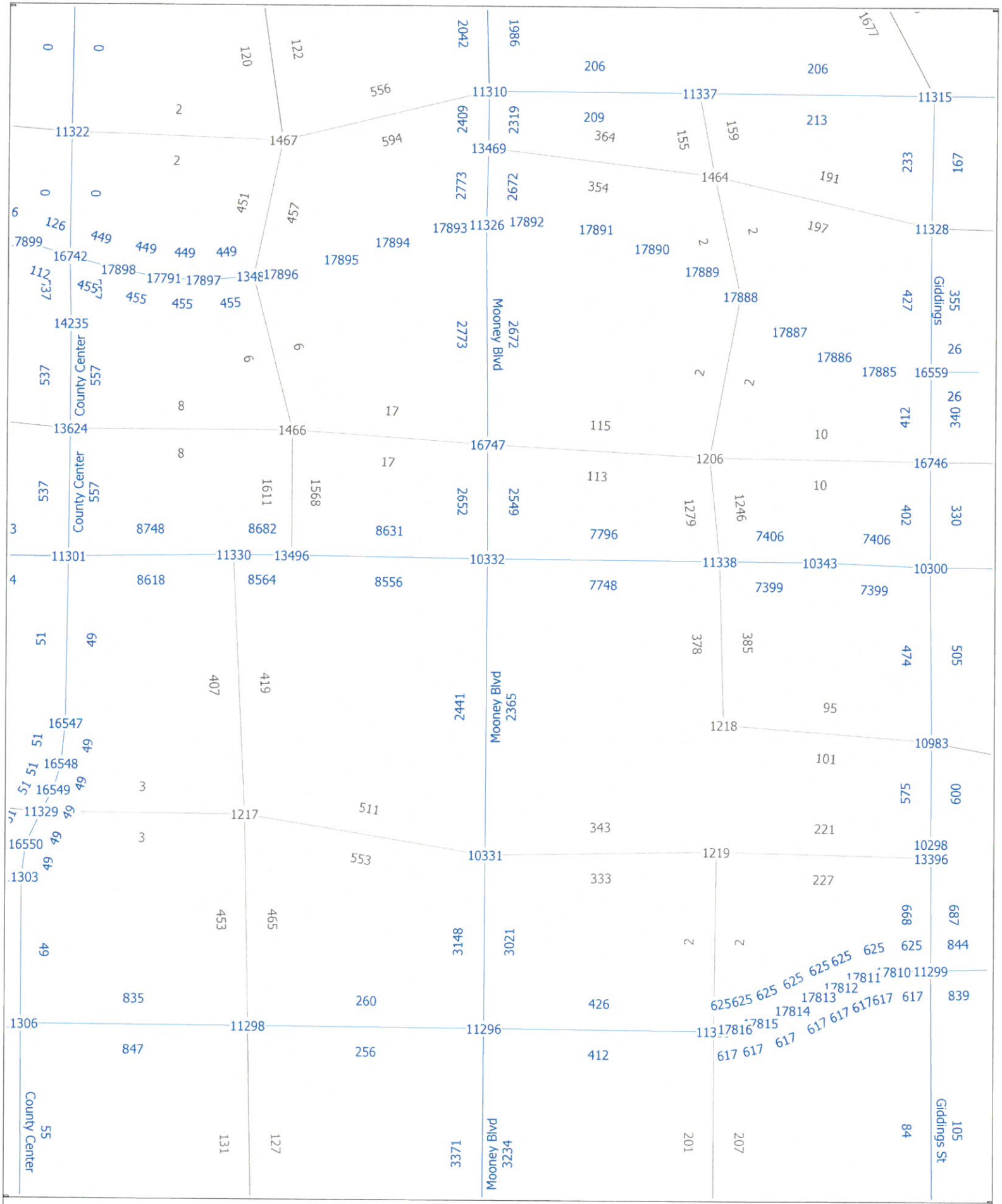
LOCATION: Mooney at Riggin
LATITUDE: 36.3564601
COUNTED BY: E. Hughes
LONGITUDE: -119.3143002
COLLECTION DATE: Tuesday, August 22, 2017
WEATHER: Clear

Time	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg	Total	Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Peds	Bikes
7:00 AM - 7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM - 7:30 AM	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	2	2
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0
7:45 AM - 8:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0
HOUR TOTAL	1	0	0	0	0	0	0	2	0	1	0	0	0	0	0	3	5	2
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	1	2
8:15 AM - 8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM - 8:45 AM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0
8:45 AM - 9:00 AM	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	2	0
HOUR TOTAL	0	0	0	1	0	0	0	3	0	0	0	0	0	2	0	1	5	2
11:00 AM - 11:15 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0
11:15 AM - 11:30 AM	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	2	0
11:30 AM - 11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM - 12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOUR TOTAL	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	3	0
12:00 PM - 12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM - 12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM - 12:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:45 PM - 1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOUR TOTAL	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:00 PM - 2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM - 2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM - 2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM - 3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOUR TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM - 3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0
3:15 PM - 3:30 PM	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	3	5	0
3:30 PM - 3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	0
3:45 PM - 4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	0
HOUR TOTAL	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	13	15	0
4:00 PM - 4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM - 4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
4:30 PM - 4:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0
4:45 PM - 5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	0
HOUR TOTAL	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	5	6	0
5:00 PM - 5:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1
5:15 PM - 5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0
5:30 PM - 5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM - 6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOUR TOTAL	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	3	3	1

PEAK HOUR	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg	Total	Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Peds	Bikes
7:30 AM - 8:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	4	2
5:00 PM - 6:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	3	3	1

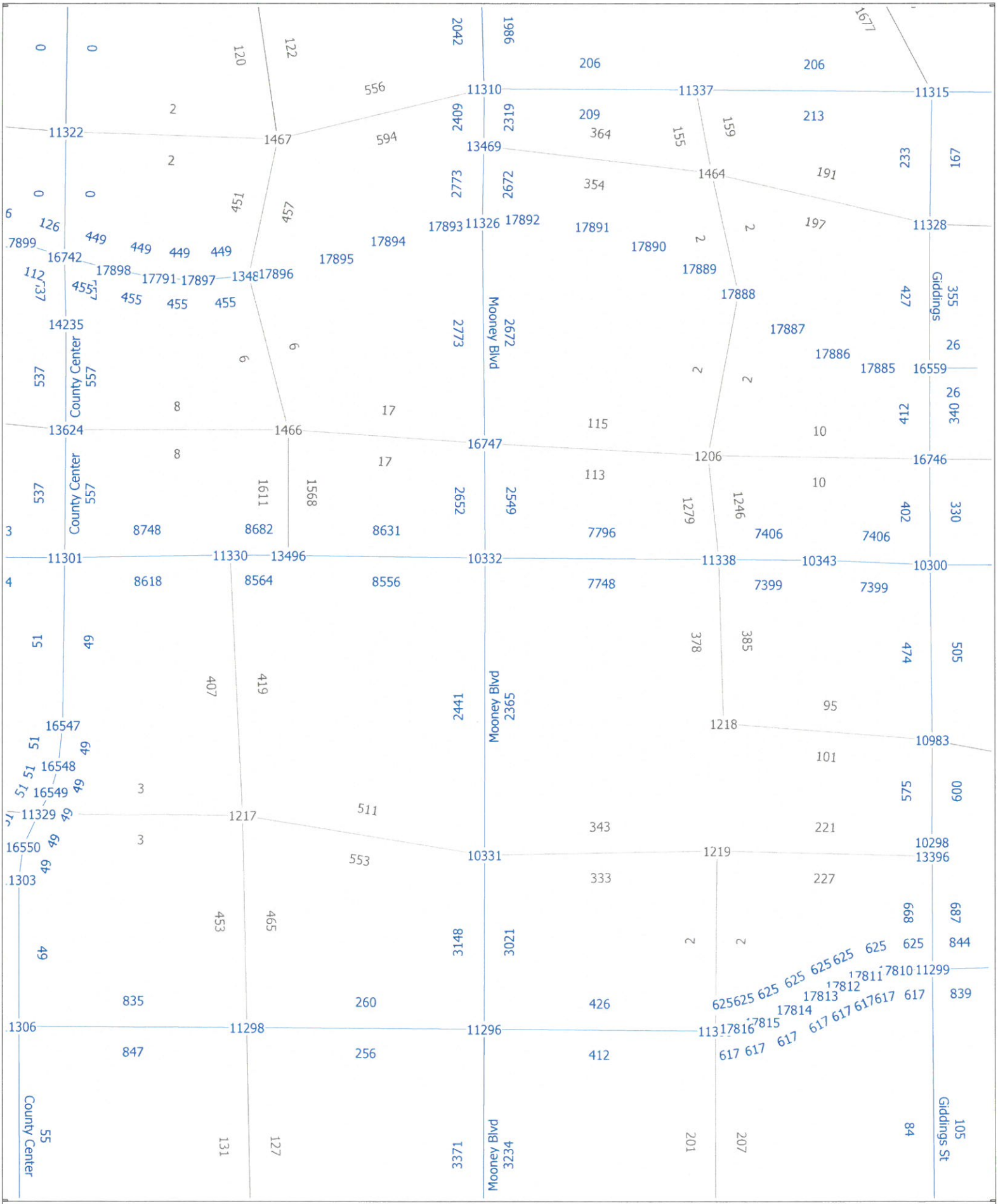


Appendix C: Traffic Modeling



Cumulative Year 2035
Daily Volumes
Mooney Blvd at Riggin Ave

cube



Cumulative Year 2035
Daily Volumes
Mooney Blvd at Riggin Ave

Appendix D: Methodology

Levels of Service Methodology

The description and procedures for calculating capacity and level of service (LOS) are found in the Transportation Research Board, Highway Capacity Manual (HCM). The HCM 2010 represents the research on capacity and quality of service for transportation facilities.

Quality of service requires quantitative measures to characterize operational conditions within a traffic stream. Level of service is a quality measure describing operational conditions within a traffic stream, generally in terms of such service measures as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience.

Six levels of service are defined for each type of facility that has analysis procedures available. Letters designate each level of service (LOS), from A to F, with LOS A representing the best operating conditions and LOS F the worst. Each LOS represents a range of operating conditions and the driver's perception of these conditions. Safety is not included in the measures that establish a LOS.

Urban Streets (Automobile Mode)

The term "urban streets" refers to urban arterials and collectors, including those in downtown areas. Arterial streets are roads that primarily serve longer through trips. However, providing access to abutting commercial and residential land uses is also an important function of arterials. Collector streets provide both land access and traffic circulation within residential, commercial and industrial areas. Their access function is more important than that of arterials, and unlike arterials their operation is not always dominated by traffic signals. Downtown streets are signalized facilities that often resemble arterials. They not only move through traffic but also provide access to local businesses for passenger cars, transit buses, and trucks. Pedestrian conflicts and lane obstructions created by stopping or standing taxicabs, buses, trucks and parking vehicles that cause turbulence in the traffic flow are typical of downtown streets.

Flow Characteristics

The speed of vehicles on urban streets is influenced by three main factors, street environment, interaction among vehicles and traffic control.

The street environment includes the geometric characteristics of the facility, the character of roadside activity, and adjacent land uses. Thus, the environment reflects the number and width of lanes, type of median, driveway/access point density, spacing between signalized intersections, existence of parking, level of pedestrian and bicyclist activity and speed limit.

The interaction among vehicles is determined by traffic density, the proportion of trucks and buses, and turning movements. This interaction affects the operation of vehicles at intersections and, to a lesser extent, between signals.

Traffic controls (including signals and signs) forces a portion of all vehicles to slow or stop. The delays and speed changes caused by traffic control devices reduce vehicle speeds; however, such controls are needed to establish right-of-way.

Levels of Service (automobile Mode)

The average travel speed for through vehicles along an urban street is the determinant of the operating level of service (LOS). The travel speed along a segment, section or entire length of an urban street is dependent on the running speed between signalized intersections and the amount of control delay incurred at signalized intersections.

LOS A describes primarily free-flow operation. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delay at signalized intersections is minimal. Travel speeds exceed 85 of the base free flow speed (FFS).

LOS B describes reasonably unimpeded operation. 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 percent of the base FFS.

LOS C describes stable operations. The ability to maneuver and change lanes in midblock location 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 percent of the base FFS.

LOS D indicates a less stable condition 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 volumes, inappropriate signal timing, at the boundary intersections. The travel speed is between 40 and 50 percent of the base FFS.

LOS E is characterized unstable operation 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 percent of the base FFS.

LOS F is characterized by street flow at extremely low speed. Congestion is likely occurring at the boundary intersections, as indicated by high delay and extensive queuing. The travel speed is 30 percent or less of the base FFS.

Table A-1: Urban Street Levels of Service (Automobile Mode)

Travel Speed as a Percentage of Base Free-Flow Speed (%)	LOS by Critical Volume-to-Capacity Ratio[a]	
	≤1.0	>1.0
>85	A	F
>67 to 85	B	F
>50 to 67	C	F
>40 to 50	D	F
>30 to 40	E	F
≤30	F	F

a = The Critical volume-to-capacity ratio is based on consideration of the through movement-to-capacity ratio at each boundary intersection in the subject direction of travel. The critical volume-to-capacity ratio is the largest ratio of those considered.
Source: Highway Capacity Manual 2010, Exhibit 16-4. Urban Street LOS Criteria (Automobile Mode)

Intersection Levels of Service

One of the more important elements limiting, and often interrupting the flow of traffic on a highway is the intersection. Flow on an interrupted facility is usually dominated by points of fixed operation such as traffic signals, stop and yield signs.

Signalized Intersections – Performance Measures

For signalized intersections the performance measures include automobile volume-to-capacity ratio, automobile delay, queue storage length, ratio of pedestrian delay, pedestrian circulation area, pedestrian perception score, bicycle delay, and bicycle perception score. LOS is also considered a performance measure. For the automobile mode average control delay per vehicle per approach is determined for the peak hour. A weighted average of control delay per vehicle is then determined for the intersection. A LOS designation is given to the weighted average control delay to better describe the level of operation. A description of LOS for signalized intersections is found in Table A-2.

Table A-2: Signalized Intersection Level of Service Description (Automobile Mode)

Level of Service	Description	Average Control Delay (seconds per vehicle)
A	Operations with a control delay of 10 seconds/vehicle or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when volume-to-capacity ratio is and either progression is exceptionally favorable or the cycle length is very short. If it's due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.	≤10
B	Operations with control delay between 10.1 to 20.0 seconds/vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.	>10.0 to 20.0
C	Operations with average control delays between 20.1 to 35.0 seconds/vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	>20 to 35
D	Operations with control delay between 35.1 to 55.0 seconds/vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop, and i ndividual cycle failures are noticeable.	>35 to 55
E	Operations with control delay between 55.1 to 80.0 seconds/vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.	>55 to 80
F	Operations with unacceptable control delay exceeding 80.0 seconds/vehicle and a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	>80

Source: Highway Capacity Manual 2010

Unsignalized Intersections

The HCM 2010 procedures use control delay as a measure of effectiveness to determine level of service. Delay is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, traffic and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions, i. e., in the absence of traffic control, geometric delay, any incidents, and any other vehicles. Control delay is the increased time of travel for a vehicle approaching and passing through an unsignalized intersection, compared with a free-flow vehicle if it were not required to slow or stop at the intersection.

All-Way Stop Controlled Intersections

All-way stop controlled intersections is a form of traffic controls in which all approaches to an intersection are required to stop. Similar to signalized intersections, at all-way stop controlled intersections the average control delay per vehicle per approach is determined for the peak hour. A weighted average of control delay per vehicle is then determined for the intersection as a whole. In other words the delay measured for all-way stop controlled intersections is a measure of the average delay for all vehicles passing through the intersection during the peak hour. A LOS designation is given to the weighted average control delay to better describe the level of operation.

Two-Way Stop Controlled Intersections

Two-way stop controlled (TWSC) intersections in which stop signs are used to assign the right-of-way, are the most prevalent type of intersection in the United States. At TWSC intersections the stop-controlled approaches are referred as the minor street approaches and can be either public streets or private driveways. The approaches that are not controlled by stop signs are referred to as the major street approaches.

The capacity of movements subject to delay are determined using the "critical gap" method of capacity analysis. Expected average control delay based on movement volume and movement capacity is calculated. A LOS for TWSC intersection is determined by the computed or measured control delay for each minor movement. LOS is not defined for the intersection as a whole for three main reasons: (a) major-street through vehicles are assumed to experience zero delay; (b) the disproportionate number of major-street through vehicles at the typical TWSC intersection skews the weighted average of all movements, resulting in a very low overall average delay from all vehicles; and (c) the resulting low delay can mask important LOS deficiencies for minor movements. Table A-3 provides a description of LOS at unsignalized intersections.

Table A-3: Unsignalized Intersection Level of Service Description (Automobile Mode)

Control Delay (seconds per vehicle)	LOS by Volume-to-Capacity Ratio	
	v/c ≤ 1.0	**v/c > 1.0**
≤10	A	F
>10 to 15	B	F
>15 to 25	C	F
>25 to 35	D	F
>35 to 50	E	F
>50	F	F

Source: HCM 2010 Exhibit 19-1.

Appendix E: Base Year 2017 Traffic Conditions

Intersection	
Intersection Delay, s/veh	45.9
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	75	314	110	123	308	45	78	136	126	113	168	45
Future Vol, veh/h	75	314	110	123	308	45	78	136	126	113	168	45
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	89	374	131	146	367	54	93	162	150	135	200	54
Number of Lanes	1	1	1	1	2	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	3	3
HCM Control Delay	74.8	28.5	47.5	25.5
HCM LOS	F	D	E	D

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	52%	0%	100%	0%	0%	100%	70%	0%	100%	0%
Vol Right, %	0%	48%	0%	0%	100%	0%	0%	30%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	78	262	75	314	110	123	205	148	113	168	45
LT Vol	78	0	75	0	0	123	0	0	113	0	0
Through Vol	0	136	0	314	0	0	205	103	0	168	0
RT Vol	0	126	0	0	110	0	0	45	0	0	45
Lane Flow Rate	93	312	89	374	131	146	244	176	135	200	54
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.284	0.883	0.273	1.09	0.356	0.444	0.708	0.499	0.426	0.606	0.152
Departure Headway (Hd)	11.222	10.385	11.02	10.501	9.774	11.299	10.778	10.556	11.793	11.277	10.554
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	322	352	325	344	367	321	337	343	307	322	342
Service Time	8.922	8.085	8.812	8.293	7.566	8.999	8.478	8.256	9.493	8.977	8.254
HCM Lane V/C Ratio	0.289	0.886	0.274	1.087	0.357	0.455	0.724	0.513	0.44	0.621	0.158
HCM Control Delay	18.3	56.2	17.9	108.4	17.9	22.7	35.8	23.3	23	29.9	15.1
HCM Lane LOS	C	F	C	F	C	C	E	C	C	D	C
HCM 95th-tile Q	1.1	8.5	1.1	13.9	1.6	2.2	5.1	2.7	2	3.7	0.5

Intersection	
Intersection Delay, s/veh	40
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	81	395	121	109	374	60	104	118	136	64	97	38
Future Vol, veh/h	81	395	121	109	374	60	104	118	136	64	97	38
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	86	420	129	116	398	64	111	126	145	68	103	40
Number of Lanes	1	1	1	1	2	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	3	3
HCM Control Delay	69.9	24.3	26.8	16.8
HCM LOS	F	C	D	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	46%	0%	100%	0%	0%	100%	68%	0%	100%	0%
Vol Right, %	0%	54%	0%	0%	100%	0%	0%	32%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	104	254	81	395	121	109	249	185	64	97	38
LT Vol	104	0	81	0	0	109	0	0	64	0	0
Through Vol	0	118	0	395	0	0	249	125	0	97	0
RT Vol	0	136	0	0	121	0	0	60	0	0	38
Lane Flow Rate	111	270	86	420	129	116	265	196	68	103	40
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.31	0.694	0.233	1.075	0.303	0.314	0.681	0.492	0.206	0.298	0.109
Departure Headway (Hd)	10.215	9.251	9.719	9.206	8.487	10.004	9.489	9.255	11.219	10.704	9.984
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	354	389	370	395	423	362	385	393	322	337	361
Service Time	7.915	7.04	7.472	6.959	6.24	7.704	7.189	6.955	8.919	8.404	7.684
HCM Lane V/C Ratio	0.314	0.694	0.232	1.063	0.305	0.32	0.688	0.499	0.211	0.306	0.111
HCM Control Delay	17.4	30.7	15.4	97.9	14.9	17.2	30.2	20.6	16.8	17.9	13.9
HCM Lane LOS	C	D	C	F	B	C	D	C	C	C	B
HCM 95th-tile Q	1.3	5.1	0.9	14.5	1.3	1.3	4.8	2.6	0.8	1.2	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	314	110	123	308	45	78	136	126	113	168	45
Future Volume (veh/h)	75	314	110	123	308	45	78	136	126	113	168	45
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	89	374	131	146	367	54	93	162	150	135	200	54
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	133	699	311	189	809	361	136	324	275	174	690	306
Arrive On Green	0.08	0.20	0.20	0.11	0.23	0.23	0.08	0.17	0.17	0.10	0.20	0.20
Sat Flow, veh/h	1767	3526	1570	1767	3526	1572	1767	1856	1572	1767	3526	1565
Grp Volume(v), veh/h	89	374	131	146	367	54	93	162	150	135	200	54
Grp Sat Flow(s),veh/h/ln	1767	1763	1570	1767	1763	1572	1767	1856	1572	1767	1763	1565
Q Serve(g_s), s	2.2	4.2	3.2	3.5	3.9	1.2	2.3	3.5	3.8	3.3	2.1	1.3
Cycle Q Clear(g_c), s	2.2	4.2	3.2	3.5	3.9	1.2	2.3	3.5	3.8	3.3	2.1	1.3
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	133	699	311	189	809	361	136	324	275	174	690	306
V/C Ratio(X)	0.67	0.54	0.42	0.77	0.45	0.15	0.68	0.50	0.55	0.78	0.29	0.18
Avail Cap(c_a), veh/h	217	1961	873	357	2241	1000	429	1483	1257	313	2585	1148
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.8	15.8	15.4	19.2	14.6	13.5	19.8	16.4	16.6	19.4	15.1	14.8
Incr Delay (d2), s/veh	5.7	0.6	0.9	6.6	0.4	0.2	5.9	1.2	1.7	7.3	0.2	0.3
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	1.4	1.0	1.5	1.2	0.3	1.0	1.3	1.2	1.5	0.7	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.5	16.5	16.4	25.8	15.0	13.7	25.7	17.6	18.3	26.7	15.3	15.0
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		594			567			405			389	
Approach Delay, s/veh		17.8			17.7			19.7			19.2	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.5	12.6	8.9	14.0	7.6	13.5	7.5	15.4
Change Period (Y+Rc), s	* 4.2	4.9	* 4.2	5.3	* 4.2	4.9	* 4.2	5.3
Max Green Setting (Gmax), s	* 7.8	35.2	* 8.9	24.5	* 11	32.3	* 5.4	28.0
Max Q Clear Time (g_c+I1), s	5.3	5.8	5.5	6.2	4.3	4.1	4.2	5.9
Green Ext Time (p_c), s	0.1	1.3	0.1	2.4	0.1	1.3	0.0	2.3

Intersection Summary	
HCM 6th Ctrl Delay	18.4
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	395	121	109	374	60	104	118	136	64	97	38
Future Volume (veh/h)	81	395	121	109	374	60	104	118	136	64	97	38
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		0.99
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	86	420	129	116	398	64	111	126	145	68	103	40
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	134	779	348	158	826	368	154	319	270	116	530	235
Arrive On Green	0.08	0.22	0.22	0.09	0.23	0.23	0.09	0.17	0.17	0.07	0.15	0.15
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	1856	1572	1767	3526	1563
Grp Volume(v), veh/h	86	420	129	116	398	64	111	126	145	68	103	40
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1856	1572	1767	1763	1563
Q Serve(g_s), s	1.9	4.3	2.9	2.6	4.0	1.3	2.5	2.5	3.5	1.5	1.1	0.9
Cycle Q Clear(g_c), s	1.9	4.3	2.9	2.6	4.0	1.3	2.5	2.5	3.5	1.5	1.1	0.9
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	134	779	348	158	826	368	154	319	270	116	530	235
V/C Ratio(X)	0.64	0.54	0.37	0.74	0.48	0.17	0.72	0.39	0.54	0.59	0.19	0.17
Avail Cap(c_a), veh/h	292	2177	971	404	2400	1070	378	1615	1369	249	2811	1246
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.5	14.2	13.6	18.3	13.6	12.6	18.3	15.1	15.5	18.7	15.3	15.2
Incr Delay (d2), s/veh	5.0	0.6	0.7	6.5	0.4	0.2	6.1	0.8	1.7	4.6	0.2	0.3
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	1.3	0.8	1.1	1.2	0.4	1.1	0.9	1.1	0.7	0.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.4	14.8	14.3	24.8	14.0	12.8	24.4	15.9	17.2	23.3	15.5	15.6
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		635			578			382			211	
Approach Delay, s/veh		15.8			16.0			18.9			18.0	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.9	12.0	7.9	14.4	7.8	11.1	7.3	14.9
Change Period (Y+Rc), s	* 4.2	4.9	* 4.2	5.3	* 4.2	4.9	* 4.2	5.3
Max Green Setting (Gmax), s	* 5.8	35.8	* 9.4	25.4	* 8.8	32.8	* 6.8	28.0
Max Q Clear Time (g_c+I1), s	3.5	5.5	4.6	6.3	4.5	3.1	3.9	6.0
Green Ext Time (p_c), s	0.0	1.1	0.1	2.8	0.1	0.7	0.0	2.5

Intersection Summary	
HCM 6th Ctrl Delay	16.8
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection: 1: Mooney Blvd & Riggin Ave

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (ft)	92	105	125	42	137	129	139	72	162	173	62	150
Average Queue (ft)	55	54	42	24	63	59	55	20	52	55	23	66
95th Queue (ft)	97	93	85	41	111	106	105	50	100	124	48	118
Link Distance (ft)		2304	2304			149	149			1174		
Upstream Blk Time (%)					0	0	0					
Queuing Penalty (veh)					0	0	0					
Storage Bay Dist (ft)	300			120	120			120	150		125	150
Storage Blk Time (%)			0		0	0	0		0	1		0
Queuing Penalty (veh)			0		0	0	0		1	2		0

Intersection: 1: Mooney Blvd & Riggin Ave

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	90	60	20
Average Queue (ft)	37	20	9
95th Queue (ft)	77	44	22
Link Distance (ft)	1168	1168	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			100
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 4

Intersection: 1: Mooney Blvd & Riggin Ave

Movement	EB	EB	EB	EB	WB	WB	WB	WB	B7	NB	NB	NB
Directions Served	L	T	T	R	L	T	T	R	T	L	T	R
Maximum Queue (ft)	88	126	107	111	144	212	119	137	39	114	131	87
Average Queue (ft)	38	78	63	29	64	70	62	24	1	59	43	29
95th Queue (ft)	73	110	109	67	112	138	108	68	13	106	90	60
Link Distance (ft)		2304	2304			149	149		2153		1174	
Upstream Blk Time (%)					1	0		0				
Queuing Penalty (veh)					0	0		0				
Storage Bay Dist (ft)	300			120	120			120		150		125
Storage Blk Time (%)			0	0	1	1	0	0			0	
Queuing Penalty (veh)			0	0	2	1	0	0			1	

Intersection: 1: Mooney Blvd & Riggin Ave

Movement	SB	SB	SB	SB
Directions Served	L	T	T	R
Maximum Queue (ft)	106	67	44	40
Average Queue (ft)	48	25	12	10
95th Queue (ft)	92	54	36	29
Link Distance (ft)		1168	1168	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	150			100
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 5

Appendix F: Opening Year 2019 plus Project Traffic Conditions

Intersection	
Intersection Delay, s/veh	77.2
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	124	333	117	136	341	51	83	173	134	158	199	74
Future Vol, veh/h	124	333	117	136	341	51	83	173	134	158	199	74
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	148	396	139	162	406	61	99	206	160	188	237	88
Number of Lanes	1	1	1	1	2	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	3	3
HCM Control Delay	113.2	44	110.9	39.3
HCM LOS	F	E	F	E

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	56%	0%	100%	0%	0%	100%	69%	0%	100%	0%
Vol Right, %	0%	44%	0%	0%	100%	0%	0%	31%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	83	307	124	333	117	136	227	165	158	199	74
LT Vol	83	0	124	0	0	136	0	0	158	0	0
Through Vol	0	173	0	333	0	0	227	114	0	199	0
RT Vol	0	134	0	0	117	0	0	51	0	0	74
Lane Flow Rate	99	365	148	396	139	162	271	196	188	237	88
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.334	1.156	0.492	1.267	0.419	0.541	0.867	0.617	0.645	0.78	0.273
Departure Headway (Hd)	12.521	11.716	12.629	12.105	11.371	12.893	12.368	12.14	13.118	12.598	11.87
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	289	314	288	305	319	282	295	300	277	289	305
Service Time	10.221	9.416	10.329	9.805	9.071	10.593	10.068	9.84	10.818	10.298	9.57
HCM Lane V/C Ratio	0.343	1.162	0.514	1.298	0.436	0.574	0.919	0.653	0.679	0.82	0.289
HCM Control Delay	21.4	135.1	27	177.4	22	29.8	60.8	32.6	36.9	48.7	19
HCM Lane LOS	C	F	D	F	C	D	F	D	E	E	C
HCM 95th-tile Q	1.4	14.9	2.5	17.8	2	3	7.6	3.8	4.1	6	1.1

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↑↑↱			↑↑↱	
Traffic Vol, veh/h	35	0	95	85	0	25	74	198	76	28	251	34
Future Vol, veh/h	35	0	95	85	0	25	74	198	76	28	251	34
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	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	25	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	38	0	103	92	0	27	80	215	83	30	273	37

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	620	810	155	614	787	149	310	0	0	298	0	0
Stage 1	352	352	-	417	417	-	-	-	-	-	-	-
Stage 2	268	458	-	197	370	-	-	-	-	-	-	-
Critical Hdwy	7.56	6.56	6.96	7.56	6.56	6.96	4.16	-	-	4.16	-	-
Critical Hdwy Stg 1	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	3.53	4.03	3.33	2.23	-	-	2.23	-	-
Pot Cap-1 Maneuver	370	311	860	374	320	868	1240	-	-	1253	-	-
Stage 1	635	628	-	581	587	-	-	-	-	-	-	-
Stage 2	712	563	-	783	616	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	334	284	860	307	292	868	1240	-	-	1253	-	-
Mov Cap-2 Maneuver	334	284	-	307	292	-	-	-	-	-	-	-
Stage 1	594	613	-	543	549	-	-	-	-	-	-	-
Stage 2	645	526	-	672	601	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.8	19.9	1.7	0.7
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1240	-	-	604	360	1253	-	-
HCM Lane V/C Ratio	0.065	-	-	0.234	0.332	0.024	-	-
HCM Control Delay (s)	8.1	-	-	12.8	19.9	7.9	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.9	1.4	0.1	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↱		↱
Traffic Vol, veh/h	0	625	508	38	0	20
Future Vol, veh/h	0	625	508	38	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	0	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	679	552	41	0	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	276
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.33
Pot Cap-1 Maneuver	0	-	-	-	0	718
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	718
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.2
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	718
HCM Lane V/C Ratio	-	-	-	0.03
HCM Control Delay (s)	-	-	-	10.2
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection	
Intersection Delay, s/veh	61.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	114	419	128	119	410	65	110	142	144	93	115	56
Future Vol, veh/h	114	419	128	119	410	65	110	142	144	93	115	56
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	121	446	136	127	436	69	117	151	153	99	122	60
Number of Lanes	1	1	1	1	2	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	3	3
HCM Control Delay	114.3	34.7	42.3	20.1
HCM LOS	F	D	E	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	50%	0%	100%	0%	0%	100%	68%	0%	100%	0%
Vol Right, %	0%	50%	0%	0%	100%	0%	0%	32%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	110	286	114	419	128	119	273	202	93	115	56
LT Vol	110	0	114	0	0	119	0	0	93	0	0
Through Vol	0	142	0	419	0	0	273	137	0	115	0
RT Vol	0	144	0	0	128	0	0	65	0	0	56
Lane Flow Rate	117	304	121	446	136	127	291	215	99	122	60
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.353	0.849	0.362	1.265	0.359	0.372	0.815	0.588	0.321	0.38	0.173
Departure Headway (Hd)	11.289	10.436	10.737	10.219	9.496	11.139	10.62	10.386	12.286	11.768	11.044
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	321	350	335	357	379	325	343	350	295	308	327
Service Time	8.989	8.136	8.508	7.991	7.267	8.839	8.32	8.086	9.986	9.468	8.744
HCM Lane V/C Ratio	0.364	0.869	0.361	1.249	0.359	0.391	0.848	0.614	0.336	0.396	0.183
HCM Control Delay	20	50.9	19.5	169.6	17.5	20.3	46.7	26.9	20.7	21.5	16
HCM Lane LOS	C	F	C	F	C	C	E	D	C	C	C
HCM 95th-tile Q	1.5	7.7	1.6	19.9	1.6	1.7	7	3.6	1.3	1.7	0.6

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	0	72	53	0	9	56	219	46	6	139	9
Future Vol, veh/h	14	0	72	53	0	9	56	219	46	6	139	9
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	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	25	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	15	0	78	58	0	10	61	238	50	7	151	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	411	580	81	475	560	144	161	0	0	288	0	0
Stage 1	170	170	-	385	385	-	-	-	-	-	-	-
Stage 2	241	410	-	90	175	-	-	-	-	-	-	-
Critical Hdwy	7.56	6.56	6.96	7.56	6.56	6.96	4.16	-	-	4.16	-	-
Critical Hdwy Stg 1	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	3.53	4.03	3.33	2.23	-	-	2.23	-	-
Pot Cap-1 Maneuver	523	422	959	470	433	874	1408	-	-	1264	-	-
Stage 1	812	754	-	607	607	-	-	-	-	-	-	-
Stage 2	738	591	-	904	751	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	498	401	959	415	412	874	1408	-	-	1264	-	-
Mov Cap-2 Maneuver	498	401	-	415	412	-	-	-	-	-	-	-
Stage 1	777	749	-	581	581	-	-	-	-	-	-	-
Stage 2	698	566	-	826	746	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.9	14.4	1.3	0.3
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1408	-	-	833	449	1264	-	-
HCM Lane V/C Ratio	0.043	-	-	0.112	0.15	0.005	-	-
HCM Control Delay (s)	7.7	-	-	9.9	14.4	7.9	-	-
HCM Lane LOS	A	-	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.5	0	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↱		↱
Traffic Vol, veh/h	0	656	578	24	0	16
Future Vol, veh/h	0	656	578	24	0	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	0	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	713	628	26	0	17

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	314
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.33
Pot Cap-1 Maneuver	0	-	-	-	0	679
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	679
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.4
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	679
HCM Lane V/C Ratio	-	-	-	0.026
HCM Control Delay (s)	-	-	-	10.4
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	333	117	136	341	51	83	173	134	158	199	74
Future Volume (veh/h)	124	333	117	136	341	51	83	173	134	158	199	74
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	148	396	139	162	406	61	99	206	160	188	237	88
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	187	685	305	207	725	323	130	359	303	234	889	395
Arrive On Green	0.11	0.19	0.19	0.12	0.21	0.21	0.07	0.19	0.19	0.13	0.25	0.25
Sat Flow, veh/h	1767	3526	1570	1767	3526	1570	1767	1856	1565	1767	3526	1567
Grp Volume(v), veh/h	148	396	139	162	406	61	99	206	160	188	237	88
Grp Sat Flow(s),veh/h/ln	1767	1763	1570	1767	1763	1570	1767	1856	1565	1767	1763	1567
Q Serve(g_s), s	4.2	5.2	4.0	4.6	5.3	1.6	2.8	5.2	4.7	5.3	2.8	2.3
Cycle Q Clear(g_c), s	4.2	5.2	4.0	4.6	5.3	1.6	2.8	5.2	4.7	5.3	2.8	2.3
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	187	685	305	207	725	323	130	359	303	234	889	395
V/C Ratio(X)	0.79	0.58	0.46	0.78	0.56	0.19	0.76	0.57	0.53	0.80	0.27	0.22
Avail Cap(c_a), veh/h	200	1649	734	338	1924	857	293	1295	1092	234	2343	1041
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.4	18.8	18.3	22.0	18.3	16.8	23.3	18.8	18.6	21.6	15.4	15.2
Incr Delay (d2), s/veh	18.0	0.8	1.1	6.3	0.7	0.3	8.8	1.4	1.4	18.0	0.2	0.3
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	2.4	1.8	1.3	2.0	1.8	0.5	1.4	2.0	1.5	3.1	0.9	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.4	19.5	19.3	28.3	19.0	17.1	32.1	20.2	20.0	39.6	15.5	15.5
LnGrp LOS	D	B	B	C	B	B	C	C	C	D	B	B
Approach Vol, veh/h		683			629			465			513	
Approach Delay, s/veh		24.0			21.2			22.7			24.3	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	14.8	10.2	15.3	8.0	17.8	9.6	15.8
Change Period (Y+Rc), s	* 4.2	4.9	* 4.2	5.3	* 4.2	4.9	* 4.2	5.3
Max Green Setting (Gmax), s	* 6.8	35.8	* 9.8	24.0	* 8.5	34.1	* 5.8	28.0
Max Q Clear Time (g_c+I1), s	7.3	7.2	6.6	7.2	4.8	4.8	6.2	7.3
Green Ext Time (p_c), s	0.0	1.6	0.1	2.5	0.1	1.7	0.0	2.5

Intersection Summary	
HCM 6th Ctrl Delay	23.0
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	419	128	119	410	65	110	142	144	93	115	56
Future Volume (veh/h)	114	419	128	119	410	65	110	142	144	93	115	56
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		0.99	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	121	446	136	127	436	69	117	151	153	99	122	60
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	156	792	353	165	810	361	153	327	276	141	598	267
Arrive On Green	0.09	0.22	0.22	0.09	0.23	0.23	0.09	0.18	0.18	0.08	0.17	0.17
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	1856	1564	1767	3526	1572
Grp Volume(v), veh/h	121	446	136	127	436	69	117	151	153	99	122	60
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1856	1564	1767	1763	1572
Q Serve(g_s), s	2.9	4.9	3.2	3.1	4.7	1.5	2.8	3.2	3.9	2.4	1.3	1.4
Cycle Q Clear(g_c), s	2.9	4.9	3.2	3.1	4.7	1.5	2.8	3.2	3.9	2.4	1.3	1.4
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	156	792	353	165	810	361	153	327	276	141	598	267
V/C Ratio(X)	0.78	0.56	0.38	0.77	0.54	0.19	0.76	0.46	0.55	0.70	0.20	0.23
Avail Cap(c_a), veh/h	291	2034	907	405	2260	1008	295	1491	1257	247	2736	1220
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.5	15.0	14.4	19.4	14.8	13.6	19.5	16.1	16.4	19.6	15.6	15.7
Incr Delay (d2), s/veh	8.1	0.6	0.7	7.4	0.6	0.3	7.6	1.0	1.7	6.1	0.2	0.4
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	1.3	1.6	0.9	1.4	1.5	0.4	1.3	1.2	1.2	1.1	0.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.6	15.7	15.1	26.8	15.3	13.8	27.1	17.1	18.2	25.7	15.8	16.1
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		703			632			421			281	
Approach Delay, s/veh		17.6			17.5			20.3			19.3	
Approach LOS		B			B			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.7	12.6	8.3	15.1	8.0	12.3	8.0	15.3
Change Period (Y+Rc), s	* 4.2	4.9	* 4.2	5.3	* 4.2	4.9	* 4.2	5.3
Max Green Setting (Gmax), s	* 6.1	35.1	* 10	25.2	* 7.3	33.9	* 7.2	28.0
Max Q Clear Time (g_c+I1), s	4.4	5.9	5.1	6.9	4.8	3.4	4.9	6.7
Green Ext Time (p_c), s	0.0	1.3	0.1	2.9	0.1	0.9	0.1	2.7

Intersection Summary	
HCM 6th Ctrl Delay	18.4
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection: 1: Mooney Blvd & Riggin Ave

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (ft)	250	148	157	58	154	139	134	52	93	150	90	176
Average Queue (ft)	92	73	51	27	85	76	65	21	47	61	30	94
95th Queue (ft)	177	118	101	48	139	123	112	47	84	119	57	155
Link Distance (ft)		2305	2305			230	230	230		1174		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300			120	120				150		125	150
Storage Blk Time (%)			0		4	2				1		7
Queuing Penalty (veh)			1		8	2				2		6

Intersection: 1: Mooney Blvd & Riggin Ave

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	166	147	40
Average Queue (ft)	51	42	16
95th Queue (ft)	113	95	33
Link Distance (ft)	206	206	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			125
Storage Blk Time (%)	1	0	
Queuing Penalty (veh)	1	0	

Intersection: 2: Mooney Blvd & Driveway One

Movement	EB	WB	NB	NB	NB	SB
Directions Served	LTR	LTR	L	T	TR	L
Maximum Queue (ft)	97	78	49	55	40	29
Average Queue (ft)	45	42	14	5	1	8
95th Queue (ft)	72	73	43	32	13	28
Link Distance (ft)	146	201		206	206	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			25			50
Storage Blk Time (%)			2			
Queuing Penalty (veh)			2			

Intersection: 3: Riggin Ave & Driveway 2

Movement	SB
Directions Served	R
Maximum Queue (ft)	66
Average Queue (ft)	15
95th Queue (ft)	44
Link Distance (ft)	45
Upstream Blk Time (%)	0
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 22

Intersection: 1: Mooney Blvd & Riggin Ave

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (ft)	89	68	87	42	150	140	164	27	92	151	40	133
Average Queue (ft)	62	58	47	25	95	103	97	26	68	82	31	83
95th Queue (ft)	88	76	83	44	159	160	164	27	89	173	47	144
Link Distance (ft)		2305	2305			230	230	230		1174		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300			120	120				150		125	150
Storage Blk Time (%)					10	7				4		0
Queuing Penalty (veh)					21	8				10		0

Intersection: 1: Mooney Blvd & Riggin Ave

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	45	43	20
Average Queue (ft)	20	23	17
95th Queue (ft)	53	41	21
Link Distance (ft)	206	206	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			125
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Mooney Blvd & Driveway One

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	55	55
Average Queue (ft)	35	30
95th Queue (ft)	52	59
Link Distance (ft)	146	201
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

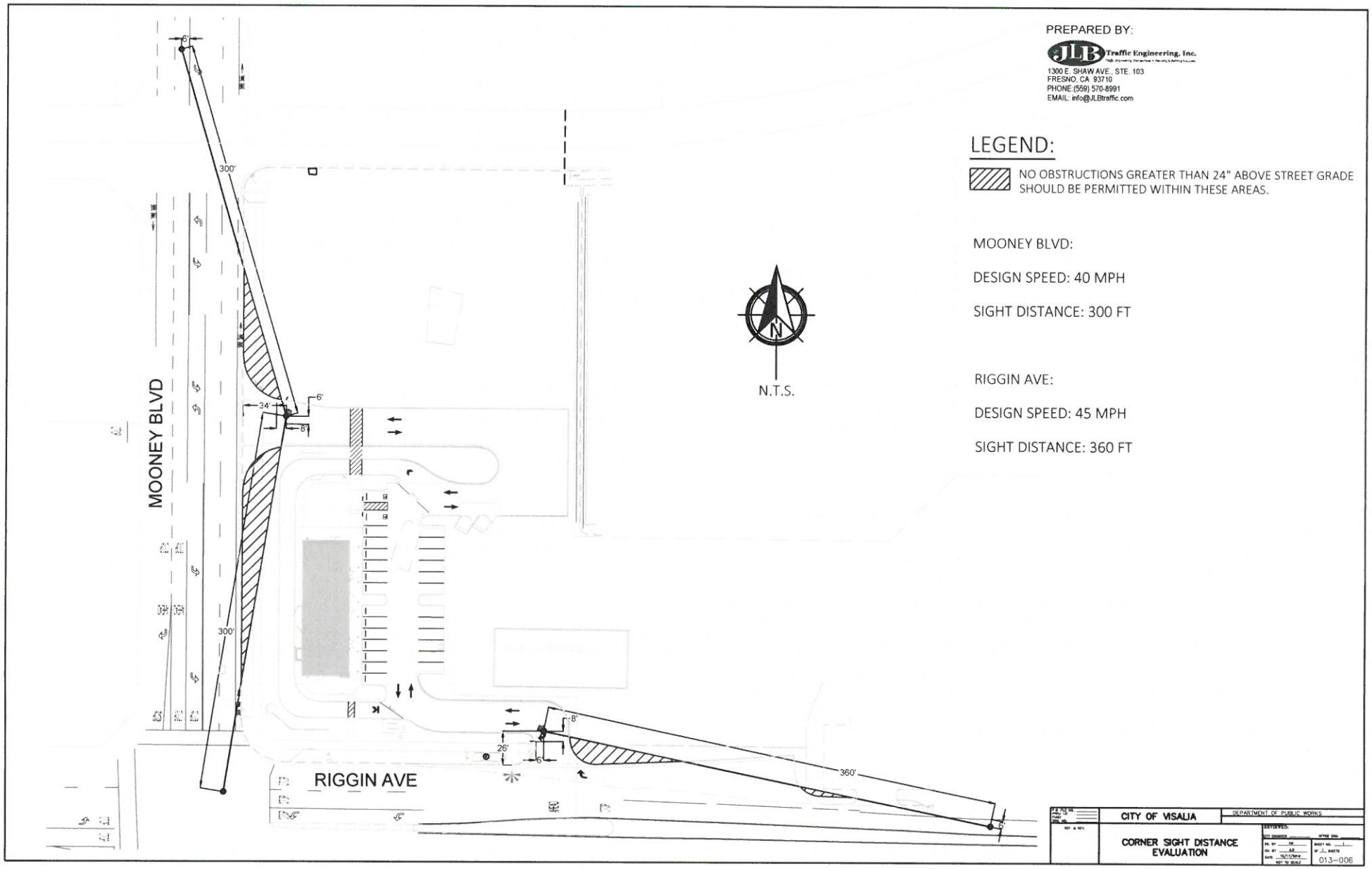
Intersection: 3: Riggin Ave & Driveway 2

Movement	SB
Directions Served	R
Maximum Queue (ft)	30
Average Queue (ft)	12
95th Queue (ft)	36
Link Distance (ft)	45
Upstream Blk Time (%)	0
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 38

Appendix G: Corner Sight Distance & Deceleration Length Analysis



PREPARED BY:
JLB Traffic Engineering, Inc.
1300 E. SHAW AVE., STE. 103
FRESNO, CA 93710
PHONE:(559) 570-8991
EMAIL: info@JLBtraffic.com

LEGEND:

NO OBSTRUCTIONS GREATER THAN 24" ABOVE STREET GRADE SHOULD BE PERMITTED WITHIN THESE AREAS.

MOONEY BLVD:

DESIGN SPEED: 40 MPH

SIGHT DISTANCE: 300 FT

RIGGIN AVE:

DESIGN SPEED: 45 MPH

SIGHT DISTANCE: 360 FT

CITY OF VISALIA

DEPARTMENT OF PUBLIC WORKS

CORNER SIGHT DISTANCE EVALUATION

013-006

Exhibit "F"

DESIGN NOTES

1. DECELERATION LANE

POSTED SPEED LIMIT IS "45 MPH". USE "10 MPH" FOR TURNING SPEED INTO PROJECT PER TOPIC 405.2 LEFT-TURN CHANNELIZATION AND TABLE 405.2B DECELERATION LANE LENGTH IN CALTRANS HDM, THE CITY CAN ALLOW FOR DECELERATION REDUCTION OF UP TO 20 MPH IN EXISTING TRAVEL LANE. USE 50% REDUCTION IN ORDER TO ACHIEVE A 10 MPH DECELERATION REDUCTION IN EXISTING TRAVEL LANE. THEREFORE, DESIGN SPEED FOR DECELERATION LANE IS "25 MPH".

DESIGN SPEED=45-10-10=25 MPH

THEREFORE, WE NEED 178' OF DECELERATION DISTANCE. THERE IS 202' PROVIDED, WHICH IS ACCEPTABLE.

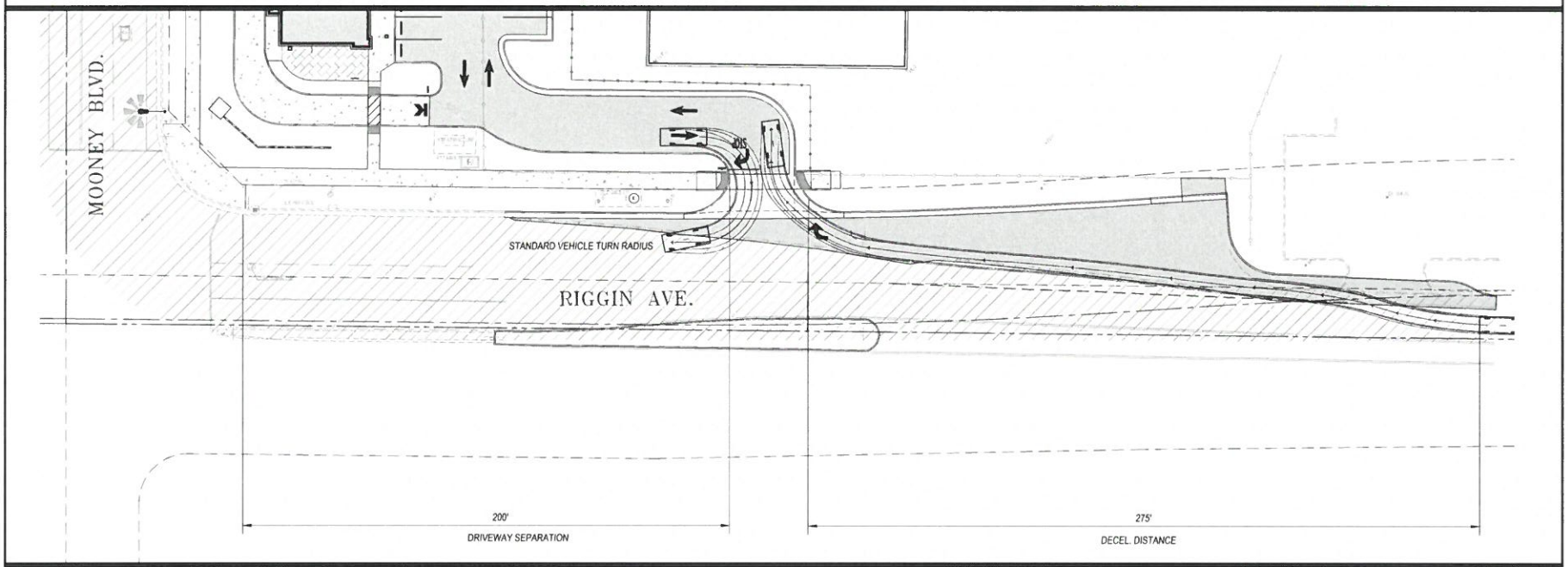
(DESIGN NOTES, CONT.)

2. RIGHT TURN U-TURN

A STANDARD PASSENGER VEHICLE U-TURN WAS PERFORMED IN AUTOTURN. THE TURN MOVEMENT COMPLETED WAS ADEQUATE TO NOT INTERCEPT ON-COMING TRAFFIC.

TABLE 405.2B
DECELERATION LANE LENGTH

DESIGN SPEED (MPH)	LENGTH TO STOP (FT)
25	178 (CALCULATED)
30	235
35	275
40	315
45	375
50	435
55	511
60	530



RIGGIN AVE RT. TURN EXHIBIT

REVISIONS
NO. | DESCRIPTION | DATE | BY

APPROVED BY:
DATE
STEVEN V. MAGAS
PROJECT ENGINEER
RCE 83380

PREPARED BY:
4CREEKS
284 S. SANTA FE, STE. A
P.O. BOX 7765
VISTA, CA 92081
TEL 888.802.3052
FAX 888.802.3575
DRN BY: EM
CHK BY: SVM

IMPROVEMENT PLANS FOR:
CRS FARMING, LLC
1189 A AVE. 108
VISTA, CA 92081
(888) 733-3052

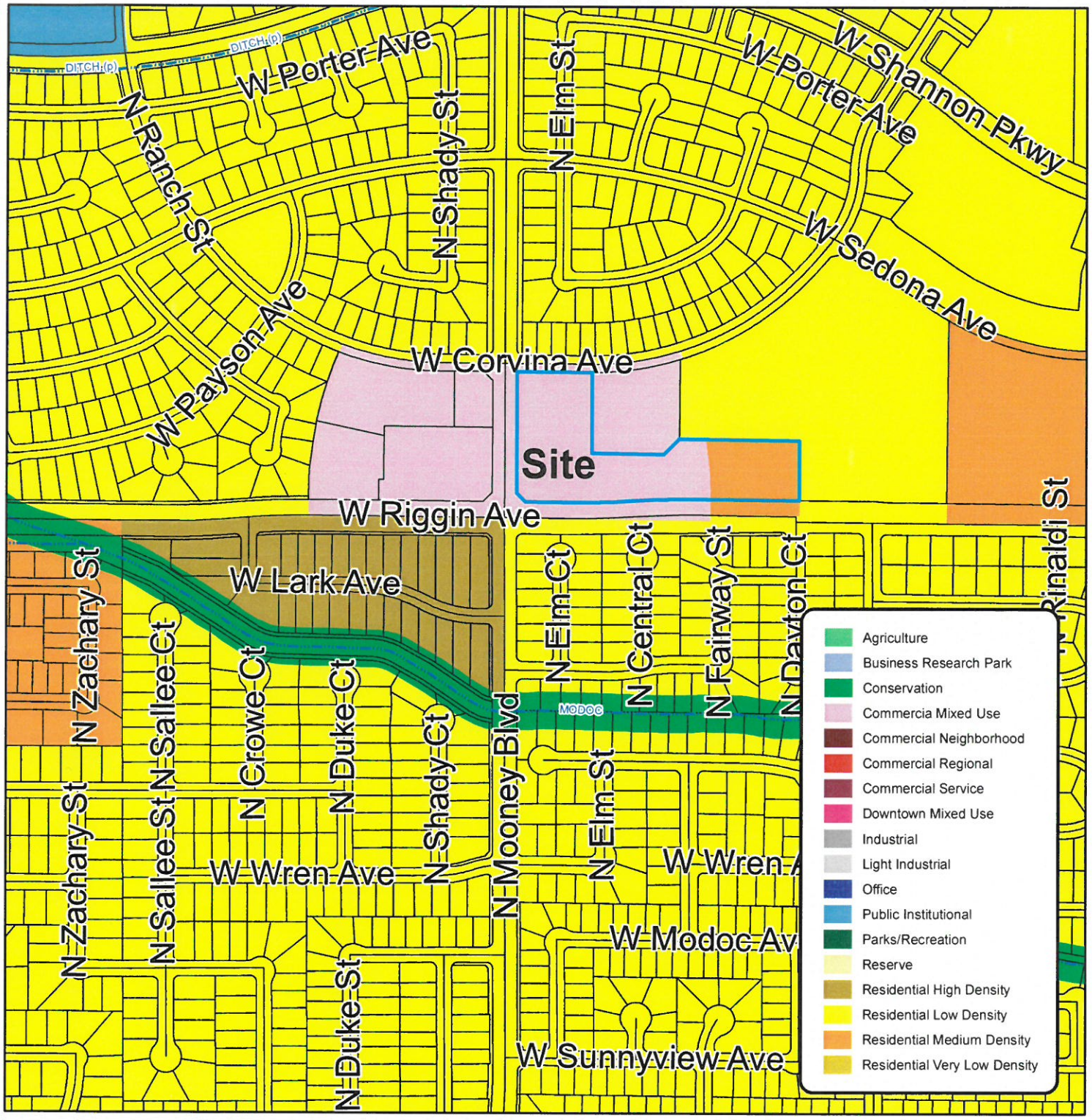
SHANNON VILLAGE EAST
RIGGIN AVE. EXHIBIT

PLOT DATE: Sep 21, 2018
JOB NO.: 15147
FILE NAME: Riggin Ave Exhibit
SCALE: 1" = 20'
SHEET NO.: 1 OF 1

Exhibit "G"

Conditional Use Permit No. 2018-19

APN: 078-120-034



General Plan Land Use Map

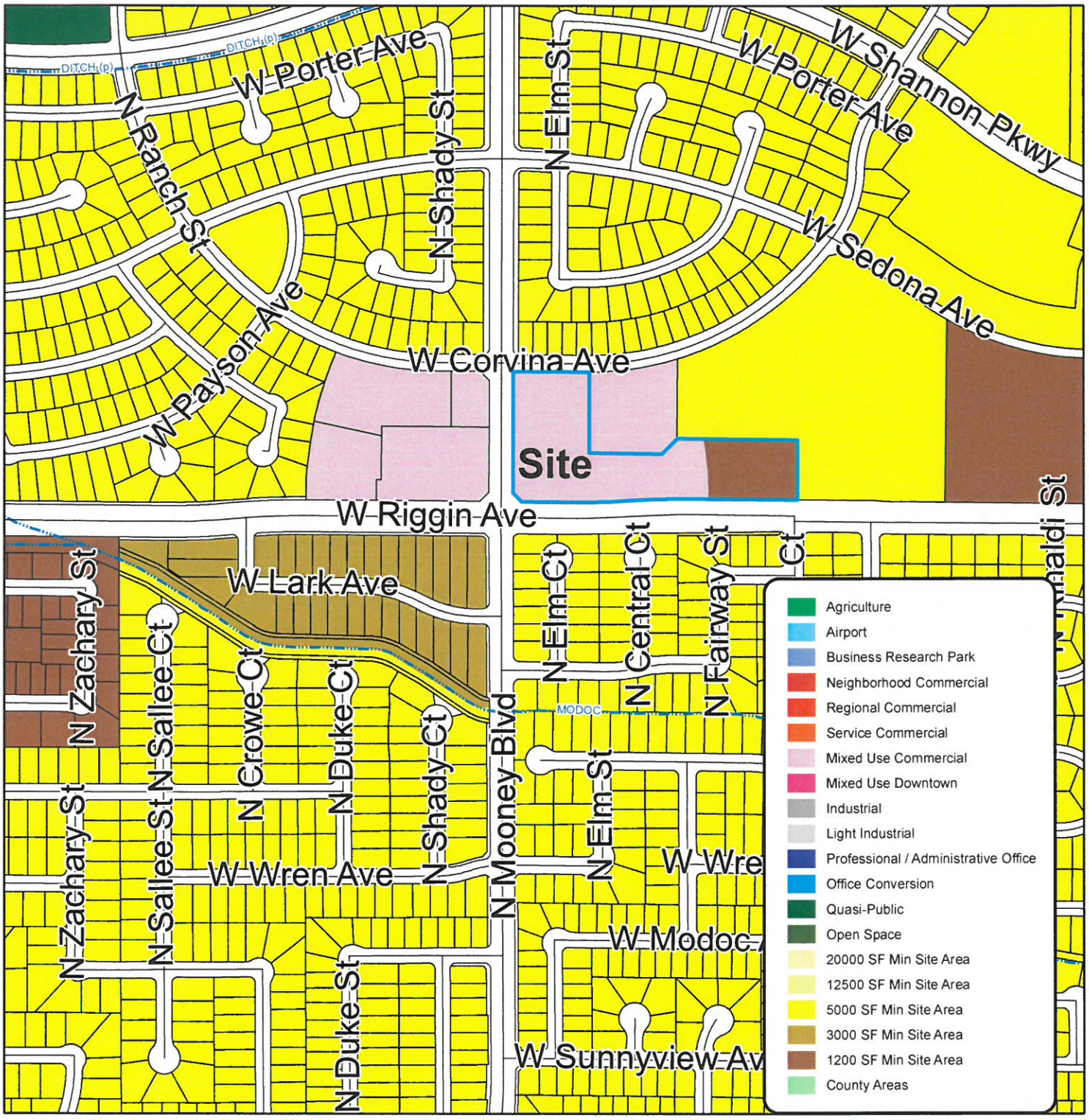
Feet

300 150 0 300 600

N W E S

Conditional Use Permit No. 2018-19

APN: 078-120-034



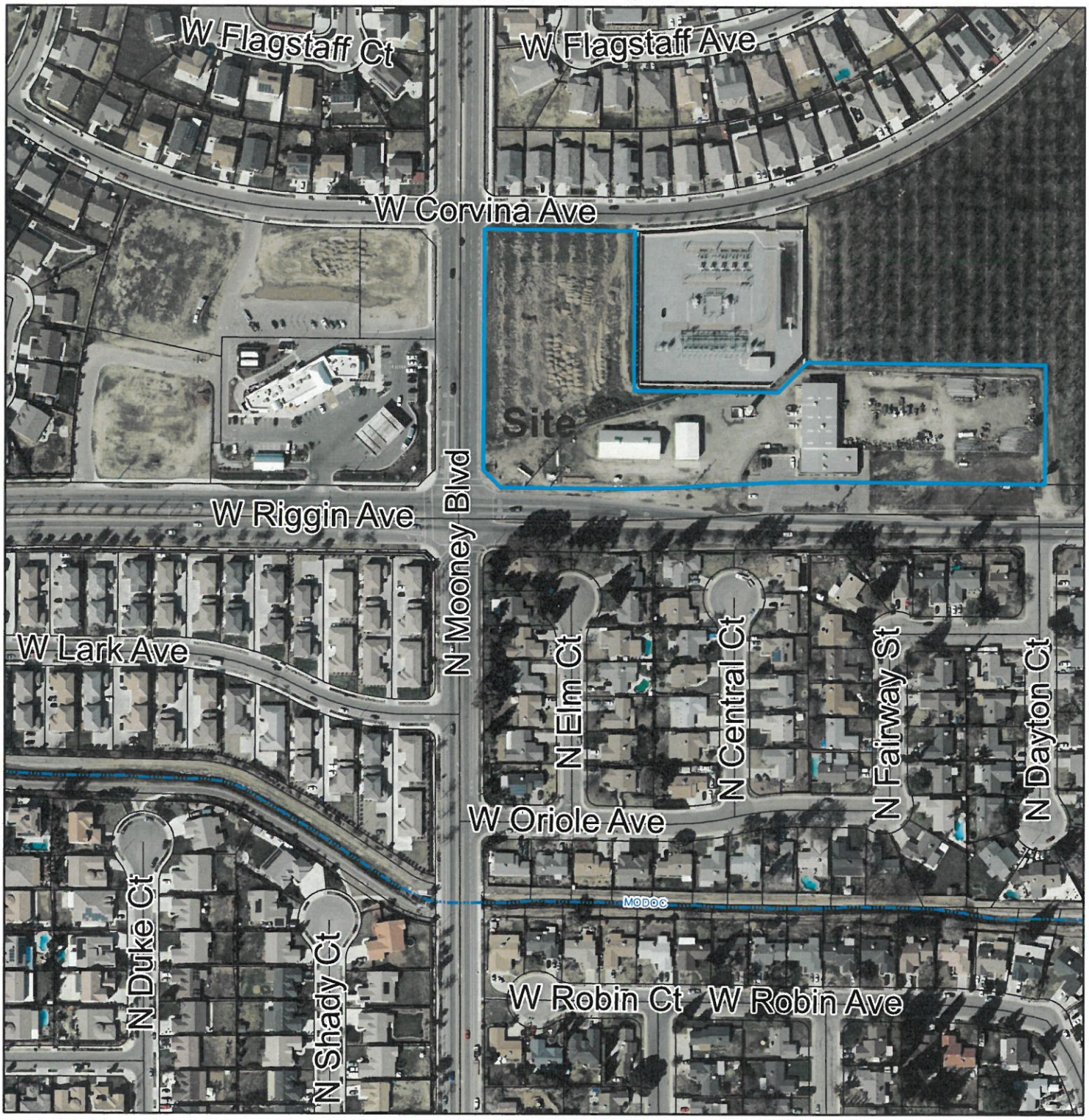
Zoning Map

300 150 0 300 600 Feet

N W E S

Conditional Use Permit No. 2018-19

APN: 078-120-034



Aerial Map

300 150 0 300 600 Feet

N W E S

Conditional Use Permit No. 2018-19

APN: 078-120-034

Vicinity Map

Feet

300 150 0 300 600

N W E S