

PLANNING COMMISSION AGENDA

Pending no technical difficulties, the Planning Commission meeting will be streamed via Facebook Live at <https://www.facebook.com/cityofvisalia/>

CHAIRPERSON:

Liz Wynn



VICE CHAIRPERSON:

Chris Gomez

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

MONDAY JUNE 8, 2020 AT 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. You may provide comments to the Planning Commission at this time, but the Planning Commission may only legally discuss those items already on tonight's agenda.

The Commission requests that a five (5) minute time limit be observed for Citizen Comments. You will be notified when your five minutes have expired.
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.
 - Time Extension for Tentative Parcel Map No. 2008-06 and Conditional Use Permit No. 2008-15
 - Time Extension for Rose Estates Tentative Subdivision Map No. 5567
 - Adoption of Resolution Nos. 2020-01A and 2020-02A, approving Caldwell & Demaree Garden Pack Tentative Subdivision Map No. 5573 and Conditional Use Permit No. 2020-01, in accordance with action taken by the Planning Commission during the regular meeting held on May 26, 2020
5. PUBLIC HEARING – Josh Dan
Conditional Use Permit No. 2020-12: A request by George Kassab to establish a Smoke Shop in a 555 square foot tenant space located at 515 W. Murray Ave. in the D-MU (Mixed Use Downtown) Zone (APN: 093-175-008). The project is Categorical Exempt from the California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines Section 15301, Categorical Exemption No. 2020-28

6. PUBLIC HEARING – Josh Dan
Tentative Parcel Map No. 2020-04: A request to subdivide a 10,894 sq.ft. parcel into two lots, located in the R-1-5 (Single-Family Residential, minimum 5,000 square foot lot size) Zone District. The project site is located on the north side of East Pershing Avenue at North Tracy Street. (APN: 098-170-072) The project is Categorically Exempt from the California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines Section 15315, Categorical Exemption No. 2020-26
 7. PUBLIC HEARING – Paul Bernal
 - Tentative Parcel Map No. 2019-08: A request by CRS Farming LLC, to subdivide a 5.96-acre site into eight parcels in the C-MU (Commercial Mixed Use) Zone. The project site is located on the northeast corner of N. Mooney Boulevard and W. Riggan Avenue (APN: 078-120-034). An Initial Study was prepared for this project, consistent with CEQA, which disclosed that environmental impacts are determined to be not significant with mitigation and that Negative Declaration No. 2020-19 was adopted.
 - Conditional Use Permit No. 2019-26: A request by CRS Farming LLC to establish a master planned commercial development including the development of a proposed fast food restaurant, parcels with less than the minimum five acre requirement, parcels with no public street frontage and to establish a master planned development for parcel without public street access for a C-MU (Commercial Mixed Use) zoned site. The project site is located on the northwest corner of N. Mooney Boulevard and W. Riggan Avenue (APN: 078-350-046 & 078-350-049). An Initial Study was prepared for this project, consistent with CEQA, which disclosed that environmental impacts are determined to be not significant with mitigation and that Negative Declaration No. 2020-19 was adopted.
 8. CITY PLANNER/ PLANNING COMMISSION DISCUSSION-
 - Next Planning Commission Meeting Monday June 22, 2020 will be held at the Convention Center.
 - City Council Appointment of Planning Commissioners Adam Peck and Mary Beatie.
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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 THURSDAY, JUNE 18, 2020 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 JUNE 22, 2020



REPORT TO CITY OF VISALIA PLANNING COMMISSION

HEARING DATE: June 8, 2020

PROJECT PLANNER: Paul Bernal, City Planner
Phone No.: (559) 713-4025
E-mail: paul.bernal@visalia.city

SUBJECT: Tentative Parcel Map No. 2019-08: A request by CRS Farming LLC, to subdivide a 5.96 acre site into eight parcels in the C-MU (Commercial Mixed Use) and the R-M-2 (Multi-Family 3,000 sq. ft. minimum site area) zones. The eight parcels will range in size from 16,422 sq. ft. to 1.33 acres. The project site is located on the northeast corner of N. Mooney Boulevard and W. Riggin Avenue (APN: 078-120-034).

Conditional Use Permit No. 2019-26: A request by CRS Farming LLC to establish a master planned commercial development that includes the development of a proposed fast-food restaurant pad, parcels with less than the minimum five-acre requirement, and to allow parcels without public street frontage. The overall project will be developed in phases in the C-MU (Commercial Mixed Use) and the R-M-2 (Multi-Family Residential, 3,000 sq. ft. minimum site area) zones. The project site is located on the northeast corner of N. Mooney Boulevard and W. Riggin Avenue (APN: 078-120-034).

STAFF RECOMMENDATION

Tentative Parcel Map No. 2019-08

Staff recommends approval of Tentative Parcel Map No. 2019-08 based on the findings and conditions in Resolution No. 2019-47. Staff's recommendation is based on the conclusion that the request is consistent with the Visalia General Plan, Zoning and Subdivision Ordinances.

Conditional Use Permit No. 2019-26

Staff recommends approval of Conditional Use Permit No. 2019-26 based upon the findings and conditions in Resolution No. 2019-46. Staff's recommendation is based on the conclusion that the request is consistent with the Visalia General Plan and Zoning Ordinance.

RECOMMENDED MOTION

I move to approve Tentative Parcel Map No. 2019-08 and Conditional Use Permit No. 2019-26 based on the findings and conditions in Resolution Nos. 2019-46 and 2019-47.

PROJECT DESCRIPTION

Tentative Parcel Map No. 2019-08 is a request to subdivide a 5.96 acre site into eight parcels as shown in Exhibit "A". The objective of the parcel map is to create parcels for commercial and future residential uses. The 5.96 acre site contains C-MU and R-M-2 zoned areas within the site. The R-M-2 portion of the site is approximately 1.33 acres which is located on Parcel No. 8 of the tentative parcel map. The eight parcels will range in size from 16,422 sq. ft. to 1.33 acres.

The associated Conditional Use Permit (CUP) No. 2019-26 is a request to establish a master planned commercial development by including the following:

- Development of a proposed 4,044 sq. ft. Burger King fast food restaurant with a drive thru lane on Parcel 5 of the associated tentative parcel map;
- Parcels 1 through 8 with less than the minimum five acre requirement in the C-MU zone;
- Creation of a parcel without public street frontage (Parcel 4);

As part of the CUP application, the applicant is seeking approval of a drive-thru lane associated with a new Burger King fast-food restaurant on Parcel 5 of the associated tentative parcel map (see Exhibit "B"). The drive thru lane does not meet the City's drive-thru lane performance standards specified in Visalia Municipal Code Section 17.32.162. In the C-MU 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 "B" is less than 250 feet away from residential zoned property (Zoning Ordinance Section 17.32.162.B.1).

As depicted per the site plan attached as Exhibit "B", the Burger King site involves development of a 4,044 sq. ft. building, 35 parking stalls, drive-thru lane, trash enclosure, and vehicle and pedestrian access on a 0.89 acre parcel (Parcel 5 of TPM No. 2019-08) of the overall 5.96 acre site. The drive-thru lane wraps around the north and east sides of the proposed building. Access to this site will be provided via a new drive approach on Riggin Avenue that is restricted to a three-quarter opening due to the new median-island to be constructed in Riggin Avenue with this development. The drive approach will be restricted to right-in / right-out turning movements and left-in turning movements for vehicles traveling eastbound on Riggin Avenue. In addition, there is a full access drive approach on Mooney Boulevard that provides access to the entire commercial area.

A common architectural theme, as illustrated in Exhibit "C", will be used throughout the site, consisting of a continuation of elements that are currently incorporated into the design of the Starbucks building developed on-site and the design elements of the Shannon West Village Market located on the northwest corner of Mooney Boulevard and Riggin Avenue.

The master plan also establishes the internal traffic circulation pattern that links the driveways with the parking fields for the entire site. The overall project will be developed in phases as depicted in Exhibit "D", and will consist of public improvements along Riggin Avenue. Those improvements include the construction of curb, gutter, sidewalks, landscaping, median-island (in Riggin Ave.), drive approaches and potential relocation of Southern California Edison power poles. The off-site improvements associated with the commercial center require the developer and the City's Traffic Engineer to work on identifying all necessary improvements once engineering plans are submitted defining the specific offsite improvements per each phase. This may require additional information and improvements once the off-site improvement plans are submitted, ensuring coordination of the transition between the off-site improvements proposed per each phase and the corresponding traffic improvements as defined in the Traffic Impact Analysis.

The master site plan for the entire 5.96 acre site is referred to as the Shannon Village East Commercial Center (see Exhibit "B"). Tenants for any of the other commercial pads have not been identified, nor has the applicant submitted any plans through the Site Plan Review process for the residential units along Corvina Avenue. Please note the residential units along Corvina Avenue will require the submittal and approval of a conditional use permit due to the C-MU zoning designation for this area. Residential units are a "conditionally permitted" use in all commercial and office zones. The R-M-2 zoned site permits the development of multi-family residential units as an allowed use by-right, subject to the Site Plan Review process.

The development of the 5.96 acre site, if approved, will create additional commercial space and future housing units in the northeast quadrant of the City. All other development standards including setbacks, building height, parking, etc. will be developed consistent with the C-MU and R-M-2 zone development standards.

BACKGROUND INFORMATION

General Plan Land Use Designation:	Commercial Mixed Use & Residential Medium Density
Zoning:	C-MU (Commercial Mixed Use) & R-M-2 (Multi-Family Residential, one unit per 3,000 sq. ft. site area)
Surrounding Land Use and Zoning:	North: C-MU / Vacant Property & Residential Subdivision South: Riggins Ave. four lane arterial roadway East: C-MU / Southern California Edison Sub-distribution facility West: Mooney Blvd. four lane arterial roadway
Environmental Review:	Initial Study / Negative Declaration No. 2020-19
Special Districts:	None
Site Plan Review No:	2019-013, 2019-093, 2019-094

RELATED PLANS & POLICIES

Please see attached summary of related plans and policies.

RELATED ACTIONS

Conditional Use Permit No. 2018-19, approved by the Planning Commission on December 10, 2018, was 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. Riggins Ave. (APN: 078-120-034).

Tentative Parcel Map No. 2019-01 and Conditional Use Permit No. 2019-01, approved by the Planning Commission on March 11, 2019, was a request by CRS Farming LLC, to subdivide a 5.96 acre site into one parcel with two remainder parcels while the associated CUP proposed to establish a planned commercial development by creating a parcel with less than the minimum five acre requirement for a C-MU (Commercial Mixed Use) zoned site. A final parcel map has not been submitted and the applicant has since filed Tentative Parcel Map No. 2019-08 and CUP No. 2019-26 to supersede TPM No. 2019-01 and CUP No. 2019-01.

PROJECT EVALUATION

Staff recommends approval of the tentative parcel map and conditional use permit based on the project's consistency with the Land Use Element Policies of the General Plan, Zoning Ordinance, and the Subdivision Ordinance for the tentative parcel map.

Land Use Compatibility

The 5.96 acre site has Commercial Mixed Use and Residential Medium Density land use designations. The development of the site, per the master site plan, establishes a unified plan that demonstrates the ability of the site to provide on-site vehicular circulation and pedestrian connectivity between each of the proposed parcels / commercial building pads. Commercial uses that are permitted in the C-MU zone include fast food, sandwich shops, commercial retail, offices and sit-down restaurants.

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

Planned Development Requirement

The minimum site area for properties in the C-MU zone is five acres (ref. Municipal Code Section 17.19.060.A). However, according to Municipal Code Section 17.26.040 pertaining to Planned Developments, the Planning Commission may consider lot sizes smaller than the minimum site area if "there are unique circumstances (shape, natural features, location, etc.) which would deprive the land owner of development potential consistent with other properties classified in the same underlying zone."

The Site Plan Review Committee has previously reviewed and issued a "Revise and Proceed" to a development plan and circulation pattern proposed for the site (see Exhibit "B"). The Site Plan Review Committee subsequently reviewed the proposed parcel map and has made the determination that the parcel map corresponds to the development plan and is consistent with City development standards. The proposed parcel map and planned development ultimately allow for the site to be developed while maintaining access points that minimize vehicle conflicts on N. Mooney Boulevard and W. Riggan Avenue.

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).

Staff's analysis has determined that the placement of the drive-thru lane as shown per Exhibit "B" is consistent with similar arrangements on other approved out-pad buildings with drive-thru lanes. Staff concludes that the drive-thru lane will not be a detriment to public health, safety, or welfare associated with the location of the drive-thru lane with respect to traffic on both Mooney Boulevard and Riggan Avenue and the adjacent land uses, which consist of both commercial and residential development. Staff's recommendation to support the project is based on the commercial shopping center design that incorporates design measures that foster adequate vehicle queue stacking for the drive-thru lane, shared parking, pedestrian connectivity, and on-site circulation to limit potential vehicular conflicts within the commercial shopping center site.

Off-site Street Improvements

Frontage improvements for this project include construction of sidewalks, curb, gutter, street lights, median-island in Riggan Avenue, parkway landscaping and a new drive approach as identified in the Phasing Plan (see Exhibit "D"). The frontage improvements along Mooney Boulevard have already been constructed with the development of the Starbucks building. However, the developer is required to repair/re-construct the drive approach installed on Riggan Avenue when the Starbucks commercial building was developed. The repair / re-construction of this drive approach shall be done with the on-site development of Phase 2; off-site improvements of Phase 1, as depicted per the Phasing Plan (see Exhibit "D"). This is included as Condition No. 7 of the Conditions of Project Approval for CUP No. 2019-26.

Traffic Analysis

A Traffic Impact Analysis Report was conducted for the project (ref.: Final Traffic Impact Analysis: Shannon Village East. JLB Traffic Engineering, Inc., April 28, 2020) which studied key roadways and intersections in the vicinity of the project site. The analysis considered existing roadway conditions, opening year with project, and 5-year cumulative conditions with the project. The analysis identified recommended roadway and intersection improvements to the vicinity of the project to ensure that the project will operate at acceptable Level Of Service (LOS) condition or better. In addition, the study conducted a queuing analysis for the proposed project. The queue length summary for left-turn and right-turn lanes at the study intersections under all study scenarios is provided in Table XII of the traffic study.

The study identified that the intersections of Giddings / Riggan and Mooney / Ferguson are projected to exceed the City's LOS threshold during the AM peak. However, both of these intersections are identified to be signalized in the near future and the City has established Capital Improvement Projects (CIPs) for both intersections. Currently, the Giddings / Riggan intersection is in design with poles ordered to convert this four-way stop intersection to a signalized intersection. The Mooney / Ferguson intersection is anticipated to start design in July 2020 with the four-way stop intersection being converted to a signalized intersection.

Furthermore, the study identified that with Phases 2, 5, and 6, Riggan Avenue off-site improvements associated with those phases shall be completed prior to occupancy of any buildings within these phases. All Riggan Avenue offsite improvements for buildout of the project associated with Phase 7 (i.e., multi-family site) shall be completed prior to occupancy of any buildings within Phase 7.

The City's Traffic Engineer has reviewed the TIA and is in general agreement with the analysis provided. However, the City reserves the right to require additional information and improvements when engineering plans are submitted defining the specific off-site improvements per each phase. This ensures coordination of the transition between the off-site improvements proposed per each phase, and addresses the corresponding traffic improvements as defined in the TIA, and as required by the City Engineer. This requirement is included as Condition No. 8 of the Conditions of Project Approval for CUP No. 2019-26.

Site Area / Access / Circulation & Utilities

The tentative parcel map shown in Exhibit "A" is subject to approval of the associated conditional use permit. The minimum parcel size in the C-MU zone is five acres unless approved as a part of an acceptable master plan. The development pattern approved through Site Plan Review Nos. 2019-013 and 2019-090 with shared access, ingress/egress, and parking constitutes an acceptable master plan and Planned Development which allows the proposed parcel sizes.

Staff is recommending Condition No. 5 be adopted for both the Tentative Parcel Map and Conditional Use Permit requiring the recordation of an agreement that addresses property owners' maintenance and responsibility for repair of the easement, repair and maintenance of shared public or private utilities, and that the easement area shall be kept free and clear of any structures.

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 façades consist 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.

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.

Subdivision Map Act Findings

California Government Code Section 66474 lists seven findings for which a legislative body of a city or county shall deny approval of a tentative map if it is able to make any of these findings. These seven "negative" findings have come to light through a recent California Court of Appeal decision (*Spring Valley Association v. City of Victorville*) that has clarified the scope of findings that a city or county must make when approving a tentative map under the California Subdivision Map Act.

Staff has reviewed the seven findings for a cause of denial and finds that none of the findings can be made for the proposed project. The seven findings and staff's analysis are below. Recommended findings in response to this Government Code section are included in the recommended findings for the approval of the tentative parcel map.

GC Section 66474 Finding	Analysis
(a) That the proposed map is not consistent with applicable general and specific plans as specified in Section 65451.	The proposed map has been found to be consistent with the City's General Plan. This is included as recommended Finding No. 1 of the Tentative Parcel Map. There are no specific plans applicable to the proposed map.
(b) That the design or improvement of the proposed subdivision is not consistent with applicable general and specific plans.	The proposed design and improvement of the map has been found to be consistent with the City's General Plan. This is included as recommended Finding No. 1 of the Tentative Parcel Map. There are no specific plans applicable to the proposed map.
(c) That the site is not physically suitable for the type of development.	The site is physically suitable for the proposed map and its affiliated development plan, which is designated as Commercial Mixed Use and Residential Medium Density. This is included as recommended Finding No. 3 of the Tentative Parcel Map.
(d) That the site is not physically suitable for the proposed density of development.	The site is physically suitable for the proposed map and its affiliated development plan, which is designated as Commercial Mixed Use and Residential Medium Density. This is included as recommended Finding No. 4 of the Tentative Parcel Map.
(e) That the design of the subdivision or the proposed improvements are likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat.	The proposed design and improvement of the map has been not been found likely to cause environmental damage or substantially and avoidable injure fish or wildlife or their habitat. This finding is further supported by the project's Negative Declaration determination under the Guidelines for the Implementation of the California Environmental Quality Act (CEQA), included as recommended Finding No. 6 of the Tentative Parcel Map.
(f) That the design of the subdivision or type of improvements is likely to cause serious public health problems.	The proposed design of the map has been found to not cause serious public health problems. This is included as recommended Finding No. 2 of the Tentative Parcel Map.
(g) That the design of the subdivision or the type of improvements will conflict with easements, acquired by the public at large, for access through or use of, property within the proposed subdivision.	The proposed design of the map does not conflict with any existing or proposed easements located on or adjacent to the subject property. This is included as recommended Finding No. 5 of the Tentative Parcel Map.

Correspondence from California Water Service Company

Staff received correspondence (Exhibit "E", attached herein) from the California Water Service Company (Cal Water). Cal Water, in its correspondence dated May 15, 2020, has indicated that Cal Water agrees to operate the water system and provide service in accordance with the rules and regulations of the California Public Utilities Commission. The determination of water availability shall remain vailed for two years from the date of their letter. The letter also states that if the project does not commence within the two-year time frame, Cal Water will be under

no obligation to serve the project site unless the developer receives an updated letter from Cal Water reconfirming water availability. In addition, the letter can be rescinded at any time in the event that water supply is severely reduced by legislative, regulatory or environmental factors.

Environmental Review

An Initial Study was prepared for this project, consistent with the California Environmental Quality Act (CEQA). The Initial Study disclosed that environmental impacts are determined to be not significant. Staff therefore recommends that Negative Declaration No. 2020-19 be adopted for this project.

RECOMMENDED FINDINGS

Tentative Parcel Map No. 2019-08

1. That the proposed location and layout of the tentative parcel map, its improvement and design, and the conditions under which it will be maintained is consistent with the policies and intent of the General Plan, Zoning Ordinance, and Subdivision Ordinance.
2. That the proposed tentative parcel map, its improvement and design, and the conditions under which it will be maintained will not be detrimental to the public health, safety, or welfare, nor materially injurious to properties or improvements in the vicinity, nor is it likely to cause serious public health problems.
3. That the site is physically suitable for the proposed tentative parcel map and the way that it will be improved and developed through the accompanying planned development (Conditional Use Permit No. 2019-26).
4. That the site is physically suitable for the proposed tentative parcel map and the project's density, which is consistent with the underlying Commercial Mixed Use General Plan Land Use Designation.
5. That the proposed tentative parcel map, design of the subdivision or the type of improvements will not conflict with easements, acquired by the public at large, for access through or use of, property within the proposed subdivision.
6. That an Initial Study was prepared for the proposed project, consistent with CEQA, which disclosed that environmental impacts are determined to be not significant and therefore Negative Declaration No. 2020-19 can be adopted for this project.

Conditional Use Permit No. 2019-26

1. That the proposed project, as conditioned, 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 findings of Zoning Ordinance Section 17.38.110:
 - a. 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. The 5.96 acre site has a Commercial Mixed Use and Residential Medium Density land use designation. The development of the site, per the master site plan exhibit, establishes a unified plan that demonstrates the ability of the site to provide on-site vehicular circulation and pedestrian connectivity between each of the proposed parcels / commercial building pads. Commercial uses that are permitted in the C-MU zone consist of fast food, sandwich shops, commercial retail, offices and sit-down restaurants.

Staff concludes the proposed commercial shopping center is consistent with the existing and future commercial land uses in the area. Both Mooney Boulevard and Riggan Avenue 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, 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 the vicinity. Staff's recommendation to support the project is based on the overall commercial shopping center design that incorporates design measures that foster adequate vehicle queue stacking for the drive-thru lanes, shared parking and on-site circulation to limit potential vehicular conflicts within the commercial shopping center site.
3. That an Initial Study was prepared for the proposed project, consistent with CEQA, which disclosed that environmental impacts are determined to be not significant and therefore Negative Declaration No. 2020-19 can be adopted for this project.

RECOMMENDED CONDITIONS OF APPROVAL

Tentative Parcel Map No. 2019-08

1. That the tentative parcel map shall be developed consistent with the comments and conditions of Site Plan Review Nos. 2019-013, 2019-093, and 2019-094 incorporated herein by reference.
2. That the tentative parcel map be prepared in substantial compliance with Exhibit "A".
3. That Conditional Use Permit No. 2019-26 shall be approved, and that requirements of the use permit which relate to this map shall be fulfilled.
4. That Tentative Parcel Map No. 2019-08 shall be null and void unless Conditional Use Permit No. 2019-26 is approved.
5. That an agreement addressing vehicular access, utilities, and any other pertinent infrastructure or services shall be recorded with the final parcel map. The agreement shall address property owners' responsibility for repair and maintenance of the easement, repair and maintenance of shared public or private utilities, and shall be kept free and clear of any structures excepting solid waste enclosures. The City Planner and City Engineer shall review for approval this agreement verifying compliance with these requirements prior to recordation. The agreement shall be recorded prior to the issuance of any building permits on the master planned site.
6. That prior to the recording of a final map on the site, the applicant / developer shall obtain and provide the City with a valid Will Serve Letter from the California Water Service Company.
7. That all other federal and state laws and city codes and ordinances be complied with.

Conditional Use Permit No. 2019-26

1. That the planned development shall be developed consistent with the comments and conditions of Site Plan Review Nos. 2019-013, 2019-093, and 2019-094, incorporated herein by reference.
2. That the planned development be prepared in substantial compliance with Exhibit "B".

3. That Tentative Parcel Map No. 2019-08 shall be approved, and that requirements of the parcel map which relate to this conditional use permit shall be fulfilled.
4. That Conditional Use Permit No. 2019-26 shall be null and void unless Tentative Parcel Map No. 2019-08 is approved and that the timeline for the lapse of Conditional Use Permit No. 2019-26 shall be tied to the timelines for Tentative Parcel Map No. 2019-08.
5. That an agreement addressing vehicular access, utilities, and any other pertinent infrastructure or services shall be recorded with the final parcel map. The agreement shall address property owners' responsibility for repair and maintenance of the easement, repair and maintenance of shared public or private utilities, and shall be kept free and clear of any structures excepting solid waste enclosures. The City Planner and City Engineer shall review for approval this agreement verifying compliance with these requirements prior to recordation. The agreement shall be recorded prior to the issuance of any building permits on the master planned site.
6. That prior to the recording of a final map on the site, the applicant / developer shall obtain and provide the City with a valid Will Serve Letter from the California Water Service Company.
7. That the existing drive-approach that was constructed along Riggan Ave. for the benefit of the Starbucks building located on the northeast corner of Mooney Blvd. and Riggan Ave., shall be repaired and/or re-constructed to comply with the City's Improvement Standards. The repair / re-construction of this drive approach shall be done with the on-site development of Phase 2, and the off-site improvements of Phase 1, as depicted per the Phasing Plan (see Exhibit "D").
8. The City's Traffic Engineer reserves the right to require additional information and improvements when engineering plans are submitted defining the specific off-site improvements per each phase. This ensures coordination of the transition between the off-site improvements proposed per each phase, and addresses the corresponding traffic improvements as defined in the TIA.
9. That all of the conditions and responsibilities of Conditional Use Permit No. 2019-26 shall run with the land and subsequent owners/operators shall also be subject to all of the conditions herein, unless amended or revoked.
10. That all applicable federal, state, regional, and city policies and ordinances be met.

APPEAL INFORMATION

According to the City of Visalia Subdivision Ordinance Section 16.28.080 and 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 North Santa Fe Street, 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.

Attachments:

- Related Plans & Policies
- Resolution No. 2019-46 (Conditional Use Permit No. 2019-26)
- Resolution No. 2019-47 (Tentative Parcel Map No. 2019-08)
- Exhibit "A" – Tentative Parcel Map
- Exhibit "B" – Master Site Plan
- Exhibit "C" – Elevations
- Exhibit "D" – Phasing Plan
- Exhibit "E" – California Water Service Company letter dated May 15, 2020
- Initial Study / Negative Declaration No. 2020-19
- Traffic Impact Analysis – JLB Traffic Engineering, Inc., April 28, 2020
- Site Plan Review Comments
- General Plan Land Use Map
- Zoning Map
- Aerial Map
- Vicinity Map

RELATED PLANS AND POLICIES

City of Visalia Zoning Ordinance [Title 17 of Visalia Municipal Code]

Planned Development (Visalia Zoning Ordinance Chapter 17.26)

17.26.010 Purpose and intent.

The purpose and intent of the Planned Development regulations contained in this chapter is to provide for land development consisting of a related group of residential housing types or commercial uses, including but not limited to, attached or detached single-family housing, cluster housing, patio homes, town houses, apartments, condominiums or cooperatives or any combination thereof and including related open spaces and community services consisting of recreational, commercial and offices, infrastructure, maintenance and operational facilities essential to the development, all comprehensively planned. Such land development normally requires deviation from the normal zoning regulations and standards regarding lot size, yard requirements, bulk and structural coverage in an effort to maximize the benefits accruing to the citizens of Visalia. (Ord. 2017-01 (part), 2017: Ord. 9718 § 2 (part), 1997: prior code § 7410)

17.26.020 Definitions.

For the purposes of this chapter the following definitions shall apply:

"Density bonus" means dwelling unit increases based on project amenities provided as part of a planned development.

"Dwelling unit" means one or more habitable rooms, designed for or used by one family for living and sleeping purposes and having only one kitchen or kitchenette. Dwelling unit can include various types including, but not limited to, attached or detached single-family homes, cluster homes, patio homes, town houses, condominiums, apartments, or cooperatives.

"Environment, natural" means the physical condition of a proposed PD site prior to proposed development; including, but not limited to, natural features such as waterways, vegetation, topographical features, and animal life.

"Homeowner's association" means an incorporated entity formed under applicable laws and including all properties within a planned development. Such association normally maintains and administers the common open space associated with a planned development.

"Lot or parcel net area" means the land area contained within the boundary of a lot or parcel. Land within public or private streets or property held in common for a particular development amenity is not considered as "net lot area."

"Maintenance district" means an assessment district formed under applicable laws that pays for maintaining dedicated or private open space facilities.

"Neighborhood commercial center" means a convenience shopping complex providing services within a neighborhood and meeting applicable ordinance and general plan requirements.

"Open space" means the area within a planned development not occupied with structures, driveways or parking and storage areas.

"Open space, common" means the area within a planned development under the control and ownership of a homeowner's association. Common open space may include recreation facilities, access and parking, paths, and storage areas.

"Open space, usable" means the area within a planned development that is deemed suitable for use by the residents of the PD; not including parking areas, private patios, required building separations, parking and access, or storage areas.

"Parking, guest" means designated off-street parking areas within a planned development reserved for guest or visitor parking.

"Parking, required" means off-street parking areas within a planned development to be used for long-term storage of resident vehicles, recreational vehicles, boats and trailers.

"Planned development" means a development that includes a mix of land uses and that requires a deviation from normal zoning standards regarding lot size, yard requirements, bulk and structural coverage and is subject to provisions of this chapter.

"Planned residential development" means a planned development consisting of residential uses only and subject to the provisions of this chapter.

"Planned unit development" means a planned development including two, or more, of the following uses: residential, commercial, professional office, quasi-public, and industrial.

"Recreation facility" means an area within a planned development that includes recreational installations for common use. Such installations normally include such things as a swimming pool, recreation building, patio areas, tot lots, and exercise areas.

"Site area, gross" means the total horizontal area included within the property lines of a proposed planned development after dedication of required right-of-way and open space areas. (Ord. 2017-01 (part), 2017: Ord. 9718 § 2 (part), 1997: prior code § 7411)

17.26.030 Location.

A planned development may be located in residential, commercial or industrial zone upon approval of necessary permits required under this chapter. Planned residential developments and planned unit developments may be located only in appropriate zones as follows:

1. A planned residential development may be allowed in any residential zone.
2. A planned unit development with commercial/industrial uses may be located where those uses are allowed in the underlying zone. (Ord. 2017-01 (part), 2017: Ord. 9718 § 2 (part), 1997: prior code § 7412)

17.26.040 Development standards.

The following is a list of development standards considered to be necessary to achieve the purpose and intent of this chapter:

A. Site Area.

1. The minimum site area for a planned residential development shall be one acre of gross site area.
2. The minimum site area for a planned unit development with residential uses shall be ten acres.
3. The minimum site area for a planned unit development without residential uses shall be five acres.
4. The minimum site area for a planned unit development with only industrial uses shall be twenty (20) acres.
5. Parcels smaller than the minimums stated above may be considered if the planning commission finds there are unique circumstances (shape, natural features, location, etc.) that would deprive the land owner of development potential consistent with other properties classified in the same underlying zone.

B. Density. The average number of dwelling units per net area shall not exceed the maximum density prescribed by the site area regulations or the site area per dwelling in which the planned unit development is located, subject to a density bonus that may be granted by the city council upon recommendation by the planning commission. A density bonus may be granted as part of a planned development based on the following guidelines:

Percent of Net Site in Usable Open Space	Area Percent of Density Bonus
6% to 10%	6%
11% to 20%	10%
21% to 25%	16%
Over 25%	20%

C. Usable Open Space. Usable open space shall be provided for all planned developments that include residential uses, except as provided in this section. Such open space shall include a minimum of five percent of the net site area of the residential portion of a planned development. The requirement for mandatory usable open space may be waived in developments wherein the net lot area of each lot meets or exceeds minimum standard in the underlying zone classification.

D. Site Design Criteria.

1. Location of proposed uses and their relationship to each other with a planned development shall be consistent with general plan policies and ordinance requirements.
2. The natural environment of a site is to be considered as part of the design criteria. Such features as natural ponding areas, waterways, natural habitats, and mature vegetation are to be considered.
3. If a planned development is located adjacent to a major arterial street, or other existing possible land use conflict, adequate buffering shall be included in the plan.

- E. Landscaping and Structural Coverage. Landscaping provided within a planned development shall conform to the general standards imposed by the underlying zone. Additional landscaping may be required as part of a planned development due to unusual circumstances.
- F. Circulation.
 - 1. Vehicle circulation shall be based on a street pattern as outlined within the circulation element of the general plan. Use of private streets and variations to normal city street standards are encouraged.
 - 2. There shall be no direct vehicle access from individual lots onto major arterial streets.
 - 3. Pedestrian access and bicycle paths should be incorporated within planned developments. Such paths and bikeways to be separated from vehicle streets when possible.
- G. Parking.
 - 1. Required parking shall conform with the existing parking standards required under the zoning ordinance.
 - 2. Guest parking and storage parking shall be encouraged and may be required in planned development.
 - 3. All parking shall be screened from adjacent public right-of-way. Such screening may include dense plantings, fences, landscaped berms, or grade separation.
 - 4. Parking clusters shall be provided rather than large (single) parking areas.
- H. Trash Enclosures.
 - 1. Trash enclosures shall be provided as specified by the city solid waste department.
 - 2. Such enclosures shall be screened from view from adjacent structures and roadways and be provided with solid gates. (Ord. 2017-01 (part), 2017: Ord. 9718 § 2 (part), 1997: prior code § 7413)

17.26.050 Application procedures.

The following procedures specify the process for review of a planned development.

- A. Pre-Application Review. Pre-application review shall be a two-step process including a mandatory meeting with the planning department and submittal of a concept plan to the site plan review committee. Such pre-application review shall include, but is not limited to, the following elements:
 - 1. Site area and location;
 - 2. Land use relationships within and outside the proposed site;
 - 3. Circulation and access;
 - 4. Environmental features;
 - 5. Open space and project amenities;
 - 6. Available and needed public improvements and facilities.
- B. Application Process. After completing the pre-application review process the owner, or agent, shall file an application for a planned development. Such application submittal shall be processed as a conditional use permit and shall require a site plan review permit. The city planner shall determine the extent of development detail required as part of the application submittal. Such details may include, but is not limited to, the following:
 - 1. Legal description and boundary survey map of the exterior boundaries of land to be developed;
 - 2. A topographic map indicating anticipated grading or fill areas, groupings of existing trees, and other natural features;
 - 3. For residential development:
 - a. The number and type of dwelling units. This may be stated as a range of maximum and minimum number of units by type,
 - b. The approximate total population anticipated in the entire development,
 - c. The proposed standards of height, open space, structural coverage, pedestrian and traffic circulation, and density within use areas;
 - 4. For nonresidential uses:
 - a. Types of uses proposed within the entire area,

- b. Anticipated employment base which may be stated as a range,
 - c. Methods proposed to control possible land use conflicts and environmental impacts,
 - d. The proposed structure heights, open space buffering, circulation, and parking/loading,
 - e. Pertinent social or economic characteristics of the development such as school enrollment, residence, employment, etc.;
5. A preliminary utilities report;
 6. The location, area, and type of sites proposed for open space, recreational facilities, and public facilities;
 7. The anticipated timing for each phase, if any, of the development. (Ord. 2017-01 (part), 2017: Ord. 9718 § 2 (part), 1997: Ord. 9605 § 30 (part), 1996: prior code § 7414)

17.26.060 Exceptions.

Exceptions to the design criteria specified in Section 17.26.040 may be modified by the city council upon recommendation by the planning commission based on unique circumstances. Such exceptions shall be reviewed by the site plan committee for comment prior to planning commission recommendation. (Ord. 2017-01 (part), 2017: Ord. 9718 § 2 (part), 1997: prior code § 7415)

17.26.070 Amendments.

Minor amendments to an approved planned development may be granted by the planning commission upon recommendation of the site plan committee. Major amendments shall be processed as an amendment to a conditional use permit with required public hearings. Major amendments include, but are not limited to, the following:

- A. Changes in residential density;
- B. Changes in land use relationships;
- C. Changes in the location and/or scope of open space;
- D. Changes in circulation patterns;
- E. Other changes as determined by the planning commission upon request. (Ord. 2017-01 (part), 2017: Ord. 9718 § 2 (part), 1997: prior code § 7416)

17.26.080 Timing.

Once granted, a planned development approval shall be valid for a period of two years. Extensions may be granted by the planning commission for one year periods, not to exceed three such extensions. (Ord. 2017-01 (part), 2017: Ord. 9718 § 2 (part), 1997: prior code § 7417)

Conditional Use Permits (Visalia Zoning Ordinance Chapter 17.38)

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)

17.38.020 Application procedures

- A. Application for a conditional use permit shall be made to the planning commission on a form prescribed by the commission which shall include the following data:
 1. Name and address of the applicant;

2. Statement that the applicant is the owner of the property or is the authorized agent of the owner;
 3. Address and legal description of the property;
 4. The application shall be accompanied by such sketches or drawings as may be necessary by the planning division to clearly show the applicant's proposal;
 5. The purposes of the conditional use permit and the general description of the use proposed;
 6. Additional information as required by the historic preservation advisory committee.
- B. The application shall be accompanied by a fee set by resolution of the city council sufficient to cover the cost of handling the application. (Prior code § 7526)

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.

17.38.070 Temporary uses or structures

- A. Conditional use permits for temporary uses or structures may be processed as administrative matters by the city planner and/or planning division staff. However, the city planner may, at his/her discretion, refer such application to the planning commission for consideration.
- B. The city planner and/or planning division staff is authorized to review applications and to issue such temporary permits, subject to the following conditions:
 1. Conditional use permits granted pursuant to this section shall be for a fixed period not to exceed thirty (30) days for each temporary use not occupying a structure, including promotional enterprises, or six months for all other uses or structures.
 2. Ingress and egress shall be limited to that designated by the planning division. Appropriate directional signing, barricades, fences or landscaping shall be provided where required. A security officer may be required for promotional events.
 3. Off-street parking facilities shall be provided on the site of each temporary use as prescribed in Section 17.34.020.
 4. Upon termination of the temporary permit, or abandonment of the site, the applicant shall remove all materials and equipment and restore the premises to their original condition.
 5. Opening and closing times for promotional enterprises shall coincide with the hours of operation of the sponsoring commercial establishment. Reasonable time limits for other uses may be set by the city planner and planning division staff.
 6. Applicants for a temporary conditional use permit shall have all applicable licenses and permits prior to issuance of a conditional use permit.
 7. Signing for temporary uses shall be subject to the approval of the city planner.
 8. Notwithstanding underlying zoning, temporary conditional use permits may be granted for fruit and vegetable stands on properties primarily within undeveloped agricultural areas. In reviewing applications for such stands, issues of traffic safety and land use compatibility shall be evaluated and mitigation measures and conditions may be imposed to ensure that the stands are built and are operated consistent with appropriate construction standards, vehicular access and off-street parking. All fruits and vegetables sold at such stands shall be grown by the owner/operator or purchased by said party directly from a grower/farmer.
- C. The applicant may appeal an administrative decision to the planning commission. (Ord. 9605 § 30 (part), 1996: prior code § 7532)

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)

Chapter 16.28: PARCEL MAPS

Section 16.28.020 Advisory agency.

The planning commission is designated as the advisory agency referred to in Article 2 of the Subdivision Map Act and is charged with the duty of making investigations and reports on the design and improvement of proposed divisions of land under this chapter. The city planner is designated as the clerk to the advisory agency with authority to receive parcel maps. (Ord. 9605 § 32 (part), 1996: prior code § 9215)

Section 16.28.060 Hearing and notice.

A. The city planning commission shall hold a public hearing on an application for a tentative parcel map or vesting tentative parcel map.

B. Notice of a public hearing shall be given not less than ten days or 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 proposed for subdivision. (Prior code § 9235)

Section 16.28.070 Consideration of tentative parcel maps.

The commission shall review the tentative parcel map and approve, conditionally approve, or disapprove the map within thirty (30) days after the receipt of such map, or at such later date as may be required to concurrently process the appurtenant environmental impact require documents required by state law and local regulations adopted in implementation thereof. (Prior code § 9240)

Section 16.28.080 Appeals.

If the applicant is dissatisfied with the decision of the planning commission, he may, within ten days after the decision of the planning commission, appeal in writing to the council for a hearing thereon. Such hearing need not be concluded on the day thus set but may be continued. (Prior code § 9245)

Section 16.28.110 Right-of-way dedications.

A. Pursuant to the Subdivision Map Act, the subdivider shall provide such dedication of right-of-way and/or easements as may be required by the planning commission.

B. The planning commission may, at its discretion, require that offers of dedication or dedication of streets include a waiver of direct access rights to any such streets from any property shown on the final map as abutting thereon, in accord with the provisions of the Subdivision Map Act. (Prior code § 9260)

RESOLUTION NO. 2019-46

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF VISALIA APPROVING CONDITIONAL USE PERMIT NO. 2019-26: A REQUEST BY CRS FARMING LLC TO ESTABLISH A MASTER PLANNED COMMERCIAL DEVELOPMENT THAT INCLUDES THE DEVELOPMENT OF A PROPOSED FAST-FOOD RESTAURANT PAD, PARCELS WITH LESS THAN THE MINIMUM FIVE-ACRE REQUIREMENT, AND TO ALLOW PARCELS WITHOUT PUBLIC STREET FRONTAGE. THE OVERALL PROJECT WILL BE DEVELOPED IN PHASES IN THE C-MU (COMMERCIAL MIXED USE) AND THE R-M-2 (MULTI-FAMILY 3,000 SQ. FT. MINIMUM SITE AREA) ZONES. THE PROJECT SITE IS LOCATED ON THE NORTHEAST CORNER OF N. MOONEY BOULEVARD AND W. RIGGIN AVENUE (APN: 078-120-034)

WHEREAS, Conditional Use Permit No. 2019-26 is a request by CRS Farming LLC to establish a master planned commercial development that includes the development of a proposed fast-food restaurant pad, parcels with less than the minimum five-acre requirement, and to allow parcels without public street frontage. The overall project will be developed in phases in the C-MU (Commercial Mixed Use) and the R-M-2 (Multi-Family 3,000 sq. ft. minimum site area) zones. The project site is located on the northeast corner of N. Mooney Boulevard and W. Riggan Avenue (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 June 8, 2020; and

WHEREAS, the Planning Commission of the City of Visalia finds Conditional Use Permit No. 2019-26, as conditioned, to be in accordance with Chapter 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, an Initial Study was prepared which disclosed that no significant environmental impacts would result from this project.

NOW, THEREFORE, BE IT RESOLVED that the Planning Commission adopt Negative Declaration No. 2020-19 for Tentative Parcel Map No. 2019-08 and Conditional Use Permit No. 2019-26 that was prepared consistent with the California Environmental Quality Act and City of Visalia Environmental Guidelines.

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, as conditioned, 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 findings of Zoning Ordinance Section 17.38.110:

- a. 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. The 5.96-acre site has a Commercial Mixed Use and Residential Medium Density land use designation. The development of the site, per the master site plan exhibit, establishes a unified plan that demonstrates the ability of the site to provide on-site vehicular circulation and pedestrian connectivity between each of the proposed parcels / commercial building pads. Commercial uses that are permitted in the C-MU zone consist of fast food, sandwich shops, commercial retail, offices and sit-down restaurants.

Staff concludes the proposed commercial shopping center is consistent with the existing and future commercial land uses in the area. Both Mooney Blvd. and Riggan Avenue 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, 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 the vicinity. Staff's recommendation to support the project is based on the overall commercial shopping center design that incorporates design measures that foster adequate vehicle queue stacking for the drive-thru lanes, shared parking and on-site circulation to limit potential vehicular conflicts within the commercial shopping center site.
3. That an Initial Study was prepared for the proposed project, consistent with CEQA, which disclosed that environmental impacts are determined to be not significant and therefore Negative Declaration No. 2020-19 can be adopted for this project.

BE IT FURTHER RESOLVED that the Planning Commission hereby approves the Conditional Use Permit on the real property here 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 planned development shall be developed consistent with the comments and conditions of Site Plan Review Nos. 2019-013, 2019-093, and 2019-094, incorporated herein by reference.
2. That the planned development be prepared in substantial compliance with Exhibit "B".
3. That Tentative Parcel Map No. 2019-08 shall be approved, and that requirements of the parcel map which relate to this conditional use permit shall be fulfilled.
4. That Conditional Use Permit No. 2019-26 shall be null and void unless Tentative Parcel Map No. 2019-08 is approved and that the timeline for the lapse of Conditional Use Permit No. 2019-26 shall be tied to the timelines for Tentative Parcel Map No. 2019-08.

5. That an agreement addressing vehicular access, utilities, and any other pertinent infrastructure or services shall be recorded with the final parcel map. The agreement shall address property owners' responsibility for repair and maintenance of the easement, repair and maintenance of shared public or private utilities, and shall be kept free and clear of any structures excepting solid waste enclosures. The City Planner and City Engineer shall review for approval this agreement verifying compliance with these requirements prior to recordation. The agreement shall be recorded prior to the issuance of any building permits on the master planned site.
6. That prior to the recording of a final map on the site, the applicant / developer shall obtain and provide the City with a valid Will Serve Letter from the California Water Service Company.
7. That the existing drive-approach that was constructed along Riggan Ave. for the benefit of the Starbucks building located on the northeast corner of Mooney Blvd. and Riggan Ave., shall be repaired and/or re-constructed to comply with the City's Improvement Standards. The repair / re-construction of this drive approach shall be done with the on-site development of Phase 2, and the off-site improvements of Phase 1, as depicted per the Phasing Plan (see Exhibit "D").
8. The City's Traffic Engineer reserves the right to require additional information and improvements when engineering plans are submitted defining the specific off-site improvements per each phase. This ensures coordination of the transition between the off-site improvements proposed per each phase, and addresses the corresponding traffic improvements as defined in the TIA.
9. That all of the conditions and responsibilities of Conditional Use Permit No. 2019-26 shall run with the land and subsequent owners/operators shall also be subject to all of the conditions herein, unless amended or revoked.
10. That all applicable federal, state, regional, and city policies and ordinances be met.

RESOLUTION NO. 2019-47

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF VISALIA APPROVING TENTATIVE PARCEL MAP NO. 2019-08: A REQUEST BY CRS FARMING LLC, TO SUBDIVIDE A 5.96-ACRE SITE INTO EIGHT PARCELS IN THE C-MU (COMMERCIAL MIXED USE) AND THE R-M-2 (MULTI-FAMILY 3,000 SQ. FT. MINIMUM SITE AREA) ZONES. THE EIGHT PARCELS WILL RANGE IN SIZE FROM 16,422 SQ. FT. TO 1.33 ACRES. THE PROJECT SITE IS LOCATED ON THE NORTHEAST CORNER OF N. MOONEY BOULEVARD AND W. RIGGIN AVENUE (APN: 078-120-034)

WHEREAS, Tentative Parcel Map No. 2019-08 is a request by CRS Farming LLC, to subdivide a 5.96-acre site into eight parcels in the C-MU (Commercial Mixed Use) and the R-M-2 (Multi-Family 3,000 sq. ft. minimum site area) zones. The eight parcels will range in size from 16,422 sq. ft. to 1.33 acres. The project site is located on the northeast corner of N. Mooney Boulevard and W. Riggan Avenue (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 June 8, 2020; and,

WHEREAS, the Planning Commission of the City of Visalia finds Tentative Parcel Map No. 2019-08, as conditioned, in accordance with Section 16.28.070 of the Ordinance Code of the City of Visalia based on the evidence contained in the staff report and testimony presented at the public hearing; and,

WHEREAS, an Initial Study was prepared which disclosed that no significant environmental impacts would result from this project.

NOW, THEREFORE, BE IT RESOLVED that the Planning Commission adopt Negative Declaration No. 2020-19 for Tentative Parcel Map No. 2019-08 and Conditional Use Permit No. 2019-26 that was prepared consistent with the California Environmental Quality Act and City of Visalia Environmental Guidelines.

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 location and layout of the Tentative Parcel Map, its improvement and design, and the conditions under which it will be maintained is consistent with the policies and intent of the General Plan, Zoning Ordinance, and Subdivision Ordinance.
2. That the proposed tentative parcel map, its improvement and design, and the conditions under which it will be maintained will not be detrimental to the public health, safety, or welfare, nor materially injurious to properties or improvements in the vicinity, nor is it likely to cause serious public health problems.

3. That the site is physically suitable for the proposed tentative parcel map and the way that it will be improved and developed through the accompanying planned development (Conditional Use Permit No. 2019-26).
4. That the site is physically suitable for the proposed tentative parcel map and the project's density, which is consistent with the underlying Commercial Mixed Use General Plan Land Use Designation.
5. That the proposed tentative parcel map, design of the subdivision or the type of improvements will not conflict with easements, acquired by the public at large, for access through or use of, property within the proposed subdivision.
6. That an Initial Study was prepared for the proposed project, consistent with CEQA, which disclosed that environmental impacts are determined to be not significant and therefore Negative Declaration No. 2020-19 can be adopted for this project.

BE IT FURTHER RESOLVED that the Planning Commission hereby approves the Tentative Parcel Map on the real property hereinabove described in accordance with the terms of this resolution under the provisions of Section 16.28.070 of the Ordinance Code of the City of Visalia, subject to the following conditions:

1. That the tentative parcel map shall be developed consistent with the comments and conditions of Site Plan Review Nos. 2019-013, 2019-093, and 2019-094 incorporated herein by reference.
2. That the tentative parcel map be prepared in substantial compliance with Exhibit "A".
3. That Conditional Use Permit No. 2019-26 shall be approved, and that requirements of the use permit which relate to this map shall be fulfilled.
4. That Tentative Parcel Map No. 2019-08 shall be null and void unless Conditional Use Permit No. 2019-26 is approved.
5. That an agreement addressing vehicular access, utilities, and any other pertinent infrastructure or services shall be recorded with the final parcel map. The agreement shall address property owners' responsibility for repair and maintenance of the easement, repair and maintenance of shared public or private utilities, and shall be kept free and clear of any structures excepting solid waste enclosures. The City Planner and City Engineer shall review for approval this agreement verifying compliance with these requirements prior to recordation. The agreement shall be recorded prior to the issuance of any building permits on the master planned site.
6. That prior to the recording of a final map on the site, the applicant / developer shall obtain and provide the City with a valid Will Serve Letter from the California Water Service Company.
7. That all other federal and state laws and city codes and ordinances be complied with.

**TENTATIVE PARCEL MAP
SHANNON VILLAGE EAST
COMMERCIAL CENTER**

A PORTION OF LOT 2 OF SHANNON RANCH CENTRAL SUBDIVISION, RECORDED IN VOL. 40 OF MAPS, AT PAGE 99, TIA, LOCATED IN THE SE 1/4 OF SECTION 11, TOWNSHIP 18 SOUTH, 24 EAST, RANGE 1, IN THE COUNTY OF VISALIA, CALIFORNIA.

JUNE 2019

PREPARED FOR: G&B ASSOCIATES
1575 AVENUE 208
VISALIA, CA 93291

PREPARED BY: 4CREKS, INC.
341 S. MARKET ST., SUITE A
VISALIA, CA 93291

SITE DATA:

APN: 078-12-34
 CURRENT ZONING: 5.96 AC. ±
 CHU
 DESIGN DISTRICT: K
 EXISTING USE: OFFICE BUILDING / AG
 PROPOSED USE: COMMERCIAL RETAIL/MF
 CITY OF VISALIA
 SEWER SERVICE: CALIFORNIA WATER
 WATER SERVICE: CALIFORNIA WATER
 STORM SERVICE: SOUTHERN CALIFORNIA
 GAS SERVICE: GAS COMPANY
 ELEC. SERVICE: SOUTHERN CALIFORNIA
 EDISON COMPANY
 CITY OF VISALIA
 UTILITIES: ATT
 FLOOD ZONE: X02 (PARTIAL)



30 S. MARKET ST., #2, A
 VISALIA, CA 93291
 TEL: 559.232.4444
 FAX: 559.232.4444
 WWW.4CREKS.COM



JUNE 2019

SHANNON VILLAGE EAST COMMERCIAL CENTER

(C.U.P. & PARCEL MAP)

A PORTION OF LOT 2 OF SHANNON VILLAGE CENTRAL SUBDIVISION, INCORPORATED IN VOL. 40 OF MAPS, AT PAGE 99, YES, LOCATED IN THE SE 1/4 OF SECTION 15, T44N, R10E, S4E, COUNTY OF VISALIA, CALIFORNIA, AND PART OF THE SHANNON VILLAGE COMMERCIAL CENTER, VISALIA, STATE OF CALIFORNIA

PREPARED BY: 4CREEPS, INC.
VISALIA, CALIFORNIA

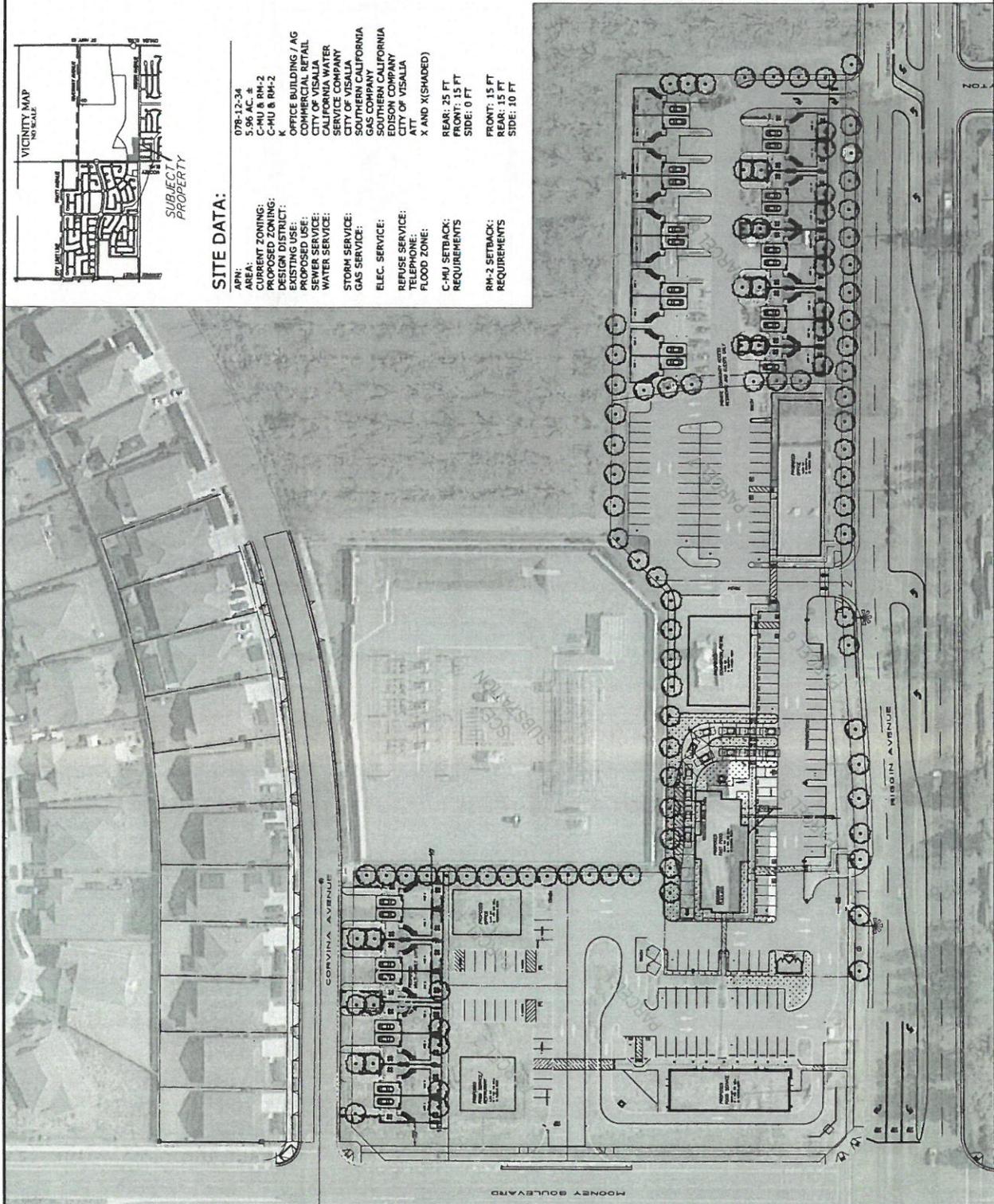


PARCEL DATA:

Parcel	Area / Use	Proposed Building Area	Proposed Use	Req. Parking	Proposed Parking
PARCEL 1	1.16 AC (50370 S.F.)	4000 S.F.	FOOD SERVICE	27 SPACES	28 SPACES
PARCEL 2	16,442 S.F.	2,300 S.F.	FOOD SERVICE	15 SPACES	15 SPACES
PARCEL 3	21,642 S.F.	8	MULTIFAMILY RESIDENTIAL	16 SPACES	16 SPACES
PARCEL 4	10,688 S.F.	2,400 S.F.	OFFICE	12 SPACES	11 SPACES
PARCEL 5	38,771 S.F.	38,771 S.F.	FOOD SERVICE	27 SPACES	35 SPACES
PARCEL 6	19,488 S.F.	4,400 S.F.	MULTIFAMILY/RETAIL	15 SPACES	17 SPACES (14 STD., 3 COMP.)
PARCEL 7	34,729 S.F.	5,560 S.F.	OFFICE	28	48
PARCEL 8	1.33 AC (57,798 S.F.)	19	MULTIFAMILY RESIDENTIAL	38 SPACES	38 SPACES
TOTAL REQUIRED RESIDENTIAL PARKING				61 SPACES	61 SPACES
TOTAL REQUIRED COMMERCIAL PARKING				124 SPACES	124 SPACES
TOTAL PROPOSED COMMERCIAL PARKING					151 SPACES

SITE DATA:

- APN: 078-12-34
- CURRENT ZONING: C-HU & RM-2
- DESIGN DISTRICT: K
- EXISTING USE: OFFICE BUILDING / AG COMMERCIAL RETAIL
- SEWER SERVICE: CITY OF VISALIA
- WATER SERVICE: CALIFORNIA WATER SERVICE COMPANY
- STORM SERVICE: CITY OF VISALIA
- ELEC. SERVICE: SOUTHERN CALIFORNIA GAS COMPANY
- REFUSE SERVICE: SOUTHERN CALIFORNIA EDISON COMPANY
- TELEPHONE: CITY OF VISALIA
- FLOOD ZONE: X AND X(SHADED)
- C-HU SETBACK REQUIREMENTS: REAR: 25 FT, FRONT: 15 FT, SIDE: 0 FT
- RM-2 SETBACK REQUIREMENTS: REAR: 15 FT, SIDE: 10 FT



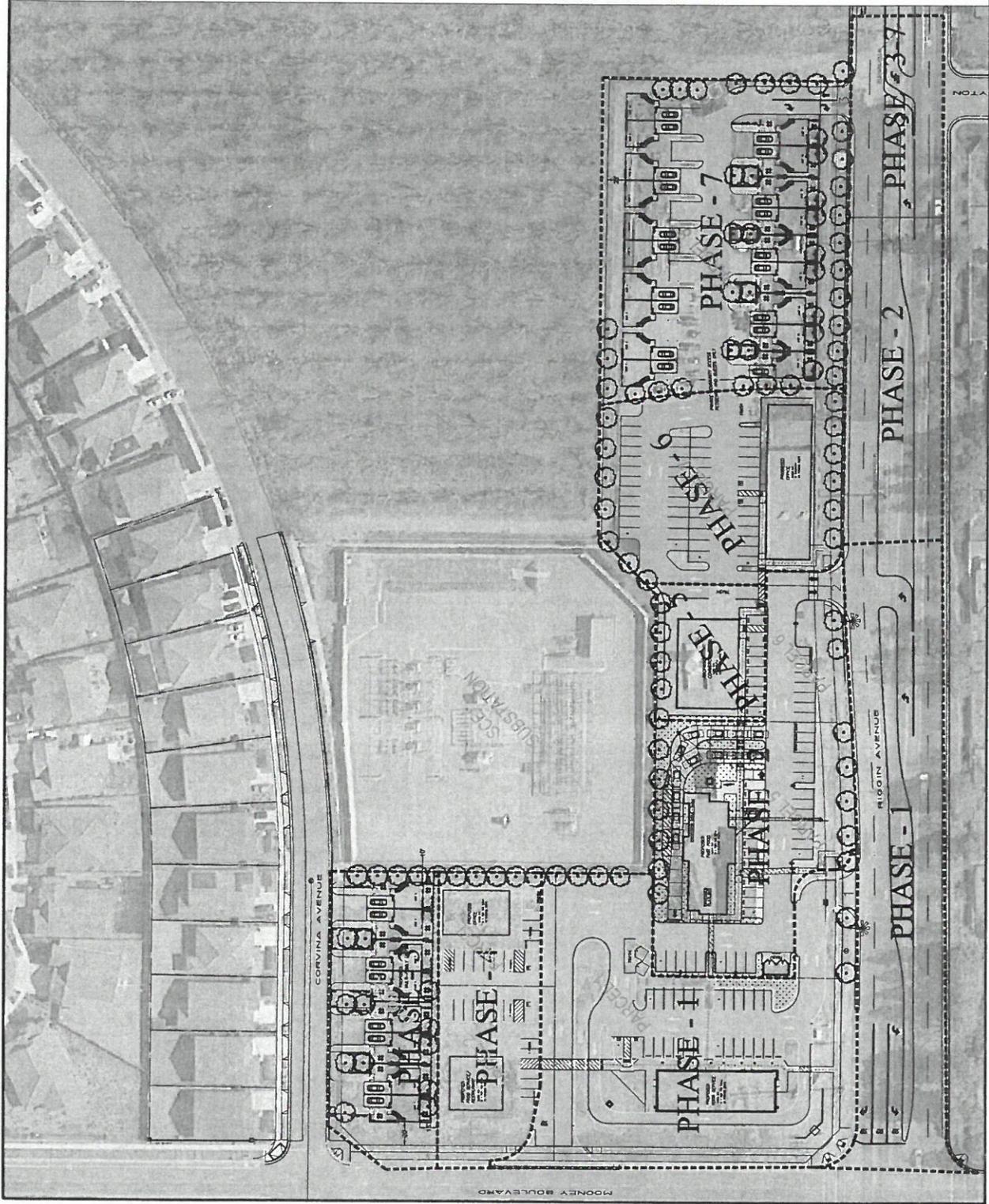
30 S. LINCOLN ST., FL. 4
VISALIA, CA 93277
TEL: 559.239.4444
WWW.4CREEPS.COM

JUNE 2019

SHANNON VILLAGE EAST COMMERCIAL CENTER

RIGGIN IMPROVEMENT PHASING:

- PHASE 1: Existing Rigin improvements from Starbucks.
(Development of Parcel 1)
- PHASE 2: Improve Rigin to Driveway #2, with temporary transition.
(Development of Parcel 5, 6, or 7)
- PHASE 3: Improve Rigin to east frontage line with transition to the east.
(Development of Parcel 8)



DESIGNED BY

 4CREEKS

2018 LICENSE #12, P.E. #
 12000000000000000000
 12000000000000000000
 12000000000000000000

SHANNON VILLAGE EAST
MASTER PLAN GUIDELINES
5-8-19

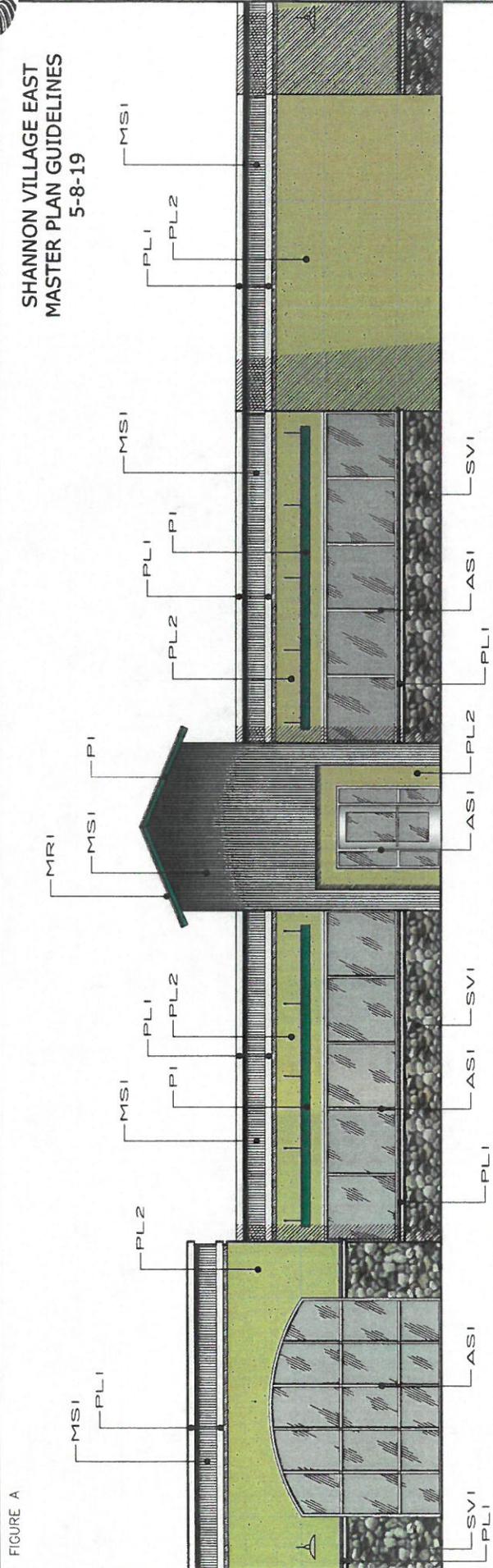


FIGURE A

EXTERIOR MATERIALS
1:30-1/4"

PL1	PAINT SWISS ALPINE WHITE	PL2	PAINT SWISS ALPINE EGG	P1	PAINT SWISS ALPINE GREEN	P2	PAINT SWISS ALPINE GREEN	P3	PAINT SWISS ALPINE BRONZE	MSI	METAL SIGNAGE MILITARY MILITARY	MRI	METAL ROOF ALUMINUM SHINGLES	ASI	ANODIZED ALUMINUM SIGNAGE	SVI	STONE VENEER COURTESY COURTESY
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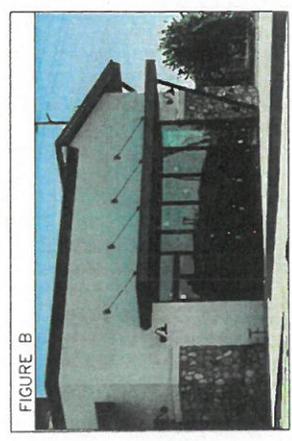


FIGURE B

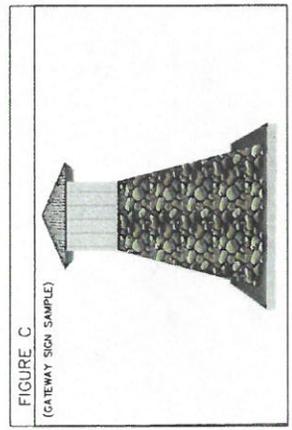


FIGURE C
(GATEWAY SIGN SAMPLE)

MASTER PLAN GUIDELINES
*EXTERIOR MATERIALS MAY CHANGE BUT SHOULD MATCH THE THEME OF THE MASTER SCHEMATIC DESIGN GUIDELINES.

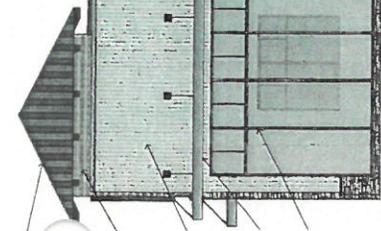
FIGURE A: ARCHITECTURAL THEME AND EXTERIOR BUILDING MATERIALS
 • THEME: MODERN FARMHOUSE WITH MIX OF CABLE ROOFING, ARTICULATED FACADES AND LOFTED SPACES.
 • EXTERIOR MATERIALS: MIX OF STONE VENEER, RAW/ANODIZED METAL, AND CORRUGATED ROOFING.
 • EXTERIOR PAINT TO REINFORCE A NATURAL LOOK CONSISTENT WITH SURROUNDING NEIGHBORHOOD, WITH ALLOWANCES FOR BRIGHTER ACCENT COLORS.

FIGURE B: BUILDING FEATURES
 • BUILDINGS TO UTILIZE ORIENTED GLASS TO LIMIT LIGHT POLLUTION. UP-LIGHTING, DOWN-LIGHTING OR A BUILDING TO UTILIZE ORIENTED GLASS TO LIMIT LIGHT POLLUTION.
 • BUILDING DESIGN TO UTILIZE LARGE BANKS OF WINDOWS FOR NATURAL LIGHTING.
 • LOUVERED OR SHEET METAL AWNINGS TO PROVIDE WINDOW SHADING AS NEEDED. CLOTH OR VINYL MATERIALS ARE DISCOURAGED.

FIGURE C: SIGN PROGRAM
 • GATEWAY SIGN: SIGNATURE SIGNAGE TO ESTABLISH SENSE OF PLACE. SIGNS TO MATCH BUILDING MATERIALS WITH ROCK VENEER, CORRUGATED AND/OR RAW METAL MATERIALS TO MATCH THE PRIMARY STRUCTURE ON THE SITE IN ARCHITECTURAL STYLE AND GENERAL APPEARANCE.
 • INDIVIDUAL TENANTS ARE RESPONSIBLE FOR SUBMITTING SIGN PERMITS AND MUST MEET CITY OF VISALIA SIGN STANDARDS.



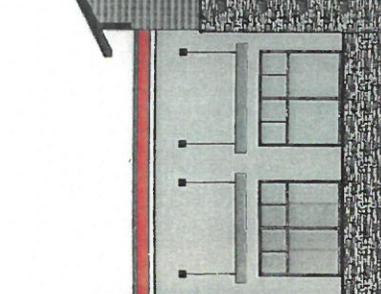
Metal Roofing
AEP Span
Champane



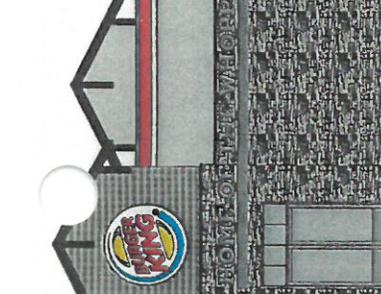
Nuchba Fiber
Cement Siding
"Sham" Hood
Cedar



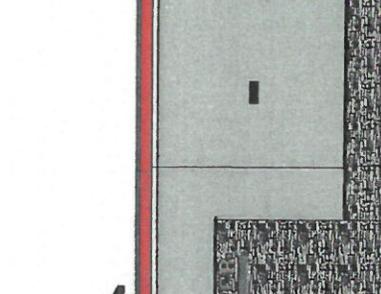
Metal Siding
AEP Span
Village



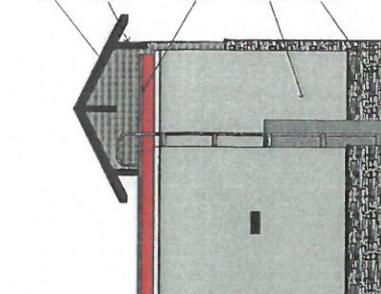
Metal Canopy's
Wentwater Drive



Stonefront Painted
Shamish Williams
Wentwater Drive



Burger King
Stonefront Light
Brick

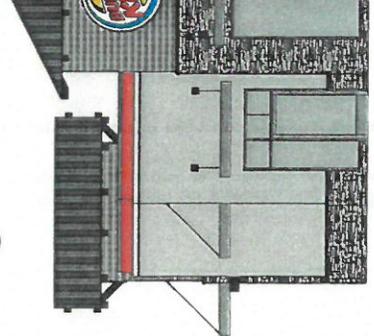


Black Finish
Cedar Siding
Williams Tangle
Cedar

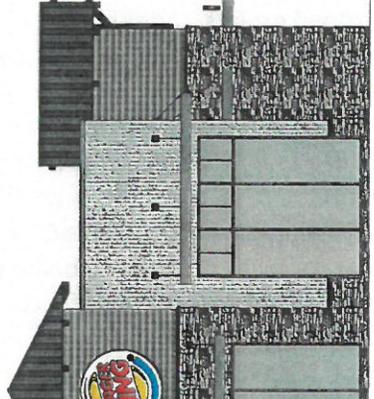
Board Siding
Burger King
Country
Legislations

8" x 8" Beaker
Burger Support
Stonefront Painted
Dark Bricks

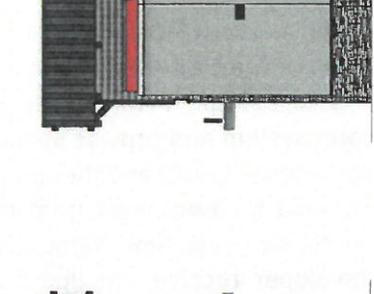
1 Right Elevation (South Along Right) A2.1 1/8" = 1'-0"



2 Front Elevation (West Facing Starbucks) A2.1 1/8" = 1'-0"



3 Rear Elevation (East) A2.1 1/8" = 1'-0"



4 Left Elevation (North) A2.1 1/8" = 1'-0"

PLEASE READ THESE NOTES
This drawing is not intended to be used for
contract pricing or fabrication purposes.
All materials are subject to change.
7/17/19

Shannon Village East
Burger King
Big Bidness
2050 West Riggin Avenue (Ventry)
Vista, California 92081
APN: 078-120-034 (Ventry)

Document Date:
July 17, 2019
Document Phase:
Schematic Documents
Rev. 0006 - Revise
7/17/19 - Rev. Per. Review

Elevations

A2.1

Exhibit "C"

TRACON BUILDING SOLUTIONS, INC.
Contractor License Number
C-45196
P.O. Office Box 7333
Vista, CA 92081
Cell: 619-230-2119
Fax: 619-433-0000
info@traconsolutions.com



CALIFORNIA WATER SERVICE

Visalia District 216 North Valley Oaks Drive
 Visalia, CA 93292 Tel: (559) 624-1600

May 15, 2020

City of Visalia
 Planning Division
 315 E Acequia Ave
 Visalia, CA 93291

Will Serve Letter
Tentative Parcel Map No, 2019-08, APN 078-120-034
Developer: CRS Farming LLC

Gentlemen:

As a regulated utility, California Water Service Company Visalia district ("Cal Water") has an obligation to provide water service in accordance with the rules and regulations of the California Public Utility Commission (CPUC). Assuming you receive all required permits from City of Visalia, Cal Water will provide water service to the above referenced project. Cal Water agrees to operate the water system and provide service in accordance with the rules and regulations of the California Public Utilities Commission (CPUC) and the company's approved tariffs on file with the CPUC. This will serve letter shall remain valid for **two years** from the date of this letter. If construction of the project has not commenced within this **two year** time frame, Cal Water will be under no further obligation to serve the project unless the developer receives an updated letter from Cal Water reconfirming our commitment to serve the above mentioned project. Additionally, Cal Water reserves the right to rescind this letter at any time in the event its water supply is severely reduced by legislative, regulatory or environmental actions.

Cal Water will provide such potable¹ water at such pressure as may be available from time to time as a result of its normal operations per the company's tariffs on file with the CPUC. Installation of facilities through developer funding shall be made in accordance with the current rules and regulations of the CPUC including, among others, Tariff Rules 15 and 16 and General Order 103-A. In order for us to provide adequate water for domestic use as well as fire service protection, it may be necessary for the developer to fund the cost of special facilities, such as, but not limited to, booster pumps, storage tanks and/or water wells,² in addition to the cost of mains and services. Cal Water will provide more specific information regarding special facilities and fees after you provide us with your improvement plans, fire department requirements, and engineering fees for this project.

¹ This portion of the letter to be modified accordingly in the event the development for which this letter is being generated is to be served with potable and non potable water.

² For the districts that collect facility fees on a per lot basis, delete the reference to wells as a special facility here and add in the following sentence, "Developer will also be required to contribute towards Cal Water's water supply by paying facilities fees on a per lot basis as described in Rule 15"

Quality. Service. Value.
 calwater.com



CALIFORNIA WATER SERVICE

This letter shall at all times be subject to such changes or modifications by the CPUC as said Commission may, from time to time, require in the exercise of its jurisdiction.

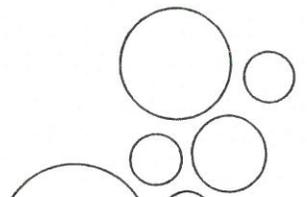
If you have any questions regarding the above, please call me at (559) 624-1600.

Sincerely,

A handwritten signature in black ink, appearing to read "Stephen Johnson", written over a horizontal line.

Stephen Johnson
Interim District Manager

cc: Ting He – Cal Water Engineering Dept.
File



CITY OF VISALIA
315 E. ACEQUIA STREET
VISALIA, CA 93291

**NOTICE OF A PROPOSED
INITIAL STUDY AND NEGATIVE DECLARATION**

Project Title: Tentative Parcel Map No. 2019-08 and Conditional Use Permit No. 2019-26

Project Description: **Tentative Parcel Map No. 2019-08** is a request by CRS Farming LLC, to subdivide a 5.96-acre site into eight parcels in the C-MU (Commercial Mixed Use) Zone. The eight parcels will range in size from 16,422 sq. ft. to 1.33 acres. **Conditional Use Permit No. 2019-26** is a request by CRS Farming LLC to establish a master planned commercial development that includes the development of a proposed fast-food restaurant pad, parcels with less than the minimum five-acre requirement, and to allow parcels without public street frontage. The overall project will be developed in phases and will consist of public improvements along Riggan Ave. consisting of the construction of curb, gutter, sidewalks, landscaping, median-island, drive approaches and relocation of Southern California Edison power poles.

Project Location: The project site is located on the northeast corner of N. Mooney Boulevard and W. Riggan Avenue within the City of Visalia, situated in Tulare County. (APN: 078-120-034)

Contact Person: Paul Bernal, City Planner. Phone: (559) 713-4025. Email: paul.bernal@visalia.city

Time and Place of Public Hearing: A public hearing will be held before the Planning Commission on June 8, 2020 at 7:00 p.m. in the City Hall Council Chambers located at 707 W. Acequia Avenue, Visalia, California.

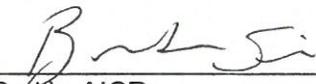
Pursuant to City Ordinance No. 2388, the Environmental Coordinator of the City of Visalia has reviewed the proposed project described herein and has found that the project, will not result in any significant effect upon the environment because of the reasons listed below:

Reasons for Negative Declaration: Initial Study No. 2020-19 has not identified any significant, adverse environmental impacts that may occur because of the project.

Copies of the initial study and other documents relating to the subject project may be examined by interested parties at the Planning Division in City Hall East, at 315 East Acequia Avenue, Visalia, CA. In the event that City Hall front counter services are closed to the public, copies of the initial study and other documents relating to the subject project may be requested by contacting project planner Paul Bernal, City Planner, by phone at (559) 713-4025 or by email at paul.bernal@visalia.city.

Comments on this proposed Negative Declaration will be accepted from May 14, 2020 to June 3, 2020.

Date: 5/11/2020

Signed: 
Brandon Smith, AICP
Environmental Coordinator
City of Visalia

NEGATIVE DECLARATION

Project Title: Tentative Parcel Map No. 2019-08 and Conditional Use Permit No. 2019-26

Project Description: **Tentative Parcel Map No. 2019-08** is a request by CRS Farming LLC, to subdivide a 5.96-acre site into eight parcels in the C-MU (Commercial Mixed Use) Zone. The eight parcels will range in size from 16,422 sq. ft. to 1.33 acres. **Conditional Use Permit No. 2019-26** is a request by CRS Farming LLC to establish a master planned commercial development that includes the development of a proposed fast-food restaurant pad, parcels with less than the minimum five-acre requirement, and to allow parcels without public street frontage. The overall project will be developed in phases and will consist of public improvements along Riggan Ave. consisting of the construction of curb, gutter, sidewalks, landscaping, median-island, drive approaches and relocation of Southern California Edison power poles

Project Location: The project site is located on the northeast corner of N. Mooney Boulevard and W. Riggan Avenue within the City of Visalia, situated in Tulare County. (APN: 078-120-034)

Project Facts: Refer to Initial Study for project facts, plans and policies, and discussion of environmental effects.

Attachments:

Initial Study	(X)
Environmental Checklist	(X)
Location Map	(X)
Traffic Impact Analysis	(X)
Site Plan/Parcel Map	(X)

DECLARATION OF NO SIGNIFICANT EFFECT:

This project will not have a significant effect on the environment for the following reasons:

- (a) The project does not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory.
- (b) The project does not have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals.
- (c) The project does not have environmental effects which are individually limited but cumulatively considerable. Cumulatively considerable means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.
- (d) The environmental effects of the project will not cause substantial adverse effects on human beings, either directly or indirectly.

This Negative Declaration has been prepared by the City of Visalia Planning Division in accordance with the California Environmental Quality Act of 1970, as amended. A copy may be obtained from the City of Visalia Planning Division Staff during normal business hours.

APPROVED
Brandon Smith, AICP
Environmental Coordinator

By: Brandon Smith

Date Approved: 5/13/20

Review Period: 20 days

INITIAL STUDY

I. GENERAL

A. Project Name and Description:

Tentative Parcel Map No. 2019-08 is a request by CRS Farming LLC, to subdivide a 5.96-acre site into eight parcels in the C-MU (Commercial Mixed Use) Zone. The eight parcels will range in size from 16,422 sq. ft. to 1.33 acres.

Conditional Use Permit No. 2019-26 is a request by CRS Farming LLC to establish a master planned commercial development including the development of a proposed fast food restaurant pad on Parcel 5 of the associated tentative parcel map, parcels with less than the minimum five acre requirement, and to establish a master planned development for parcel without public street access. The overall project will be developed in phases and will consist of public improvements along Riggan Ave. consisting of the construction of curb, gutter, sidewalks, landscaping, median-island, drive approaches and relocation of SCE power poles.

The development of the property, if approved, will create additional commercial space and future housing units in the northeast quadrant of the City which is consistent with the proposed land use designation of Commercial Mixed Use.

The project site is located on the northeast corner of N. Mooney Boulevard and W. Riggan Avenue within the City of Visalia, situated in Tulare County. (APN: 078-120-034)

B. Identification of the Environmental Setting: The overall project site is 5.96-acre and contains a portion of the site developed with a commercial pad with a drive-thru lane for a Starbucks and future quick serve restaurant. Frontage improvements, consisting of curb, gutter, sidewalk, streetlights, and landscaping exist along Mooney Blvd. and a portion of Riggan Ave. within the limits of the developed commercial pad. The remaining balance of the site is partially developed with a farming operating office and maintenance yard and vacant land with no additional street improvements. Development of the site will result in the office and farming maintenance yard to be removed from the site.

The project site is directly bounded to the north by Corvina Ave. a local street; and a Southern California Edison substation; Mooney Blvd., a four lane undivided arterial street to the west; Riggan Ave. a four lane divided arterial to the south; vacant property zone residential to the east. Development surrounding the project site consists of a Southern California Edison substation and residential subdivision to the north, commercial uses to the west, and residential subdivisions to the south.

The commercial development improvements will include widening of the unimproved north side of Riggan Ave. over multiple phases to its ultimate four-lane divided right-of-way width along the property frontage as determined by the City Engineer. All improvements for new streets will consist of through travel lanes and curb, gutter, sidewalk, street lights, and landscaping along the project frontage. Additional improvements include installation of parking lots and onsite landscaping.

The surrounding uses, Zoning, and General Plan are as follows:

	General Plan (2014 Land Use)	Zoning (2017)	Existing uses
North:	Corvina Ave. & Low Density Residential	R-1-5 (Single-family Residential)	Corvina Ave. (local street) and Southern California Edison substation.
South:	Riggan Ave. & Residential Low Density	R-1-5 (Single Family Residential, 5,000 sq. ft. minimum site area)	Riggan Ave. (4-lane arterial roadway) and residential subdivision.
East:	Residential Low Density	R-1-5 (Single Family Residential,	Vacant property planned and zoned for residential.

		5,000 sq. ft. minimum site area)	
West:	Mooney Blvd. & Commercial Mixed Use	Mooney Blvd. & C- MU	Mooney Blvd. (4-lane arterial roadway) & Shannon Village West Shopping Center

Fire and police protection services, street maintenance of public streets, refuse collection, and wastewater treatment will be provided by the City of Visalia upon the development of the area.

C. Plans and Policies: The General Plan Land Use Diagram, adopted October 14, 2014, designates the site as Commercial Mixed Use and the Zoning Map, adopted in 2017, designates the site as C-MU (Commercial Mixed Use). The proposed shopping center project is consistent with the Land Use Element of the General Plan. The proposed commercial uses are consistent with the Land Use Element, which supports retail establishments that serve residents and businesses in the surrounding area.

II. ENVIRONMENTAL IMPACTS

No significant adverse environmental impacts have been identified for this project that cannot be mitigated to less than significant impact. The City of Visalia Land Use Element, Circulation Element, Zoning and Subdivision Ordinances contain policies and regulations that are designed to mitigate impacts to a level of non-significance.

III. MITIGATION MEASURES

There are no mitigation measures for this project. The City of Visalia Zoning Ordinance contains guidelines, criteria, and requirements for the mitigation of potential impacts related to light/glare, visibility screening, noise, and traffic/parking to eliminate and/or reduce potential impacts to a level of non-significance.

IV. MITIGATION MONITORING PROGRAM

No mitigation is required for this project to reduce significance.

IV. PROJECT COMPATIBILITY WITH EXISTING ZONES AND PLANS

The project is compatible with the General Plan as the project relates to surrounding properties.

V. SUPPORTING DOCUMENTATION

The following documents are hereby incorporated into this Negative Declaration and Initial Study by reference:

- Visalia General Plan Update. Dyett & Bhatia, October 2014.
- Visalia City Council Resolution No. 2014-38 (Certifying the Visalia General Plan Update) passed and adopted October 14, 2014.
- Visalia General Plan Update Final Environmental Impact Report (SCH No. 2010041078). Dyett & Bhatia, June 2014.
- Visalia General Plan Update Draft Environmental Impact Report (SCH No. 2010041078). Dyett & Bhatia, March 2014.
- Visalia City Council Resolution No. 2014-37 (Certifying the EIR for the Visalia General Plan Update) passed and adopted October 14, 2014.
- Visalia Municipal Code, including Title 17 (Zoning Ordinance).
- California Environmental Quality Act Guidelines.
- City of Visalia, California, Climate Action Plan, Draft Final. Strategic Energy Innovations, December 2013.
- Visalia City Council Resolution No. 2014-36 (Certifying the Visalia Climate Action Plan) passed and adopted October 14, 2014.
- City of Visalia Storm Water Master Plan. Boyle Engineering Corporation, September 1994.
- City of Visalia Sewer System Master Plan. City of Visalia, 1994.
- City of Visalia Zoning Ordinance Update. City of Visalia, March 2017.
- Traffic Impact Analysis: Shannon Village East. JLB Traffic Engineering, Inc., April 28, 2020.

VI. NAME OF PERSON WHO PREPARED INITIAL STUDY



Paul Bernal
City Planner



Brandon Smith, AICP
Environmental Coordinator

**INITIAL STUDY
 ENVIRONMENTAL CHECKLIST**

Name of Proposal	Tentative Parcel Map No. 2019-08 and Conditional Use Permit No. 2019-26		
NAME OF PROPONENT:	CRS Farming	NAME OF AGENT:	Matt Ainley
Address of Proponent:	11878 Avenue 328 Visalia, CA 93291	Address of Agent:	4Creeks, Inc., 324 S. Santa Fe St. Ste. A Visalia, CA 93292
Telephone Number:	(559) 733-3022	Telephone Number:	(559) 802-3052
Date of Review	May 14, 2020	Lead Agency:	City of Visalia

The following checklist is used to determine if the proposed project could potentially have a significant effect on the environment. Explanations and information regarding each question follow the checklist.

1 = No Impact 2 = Less Than Significant Impact
 3 = Less Than Significant Impact with Mitigation Incorporated 4 = Potentially Significant Impact

I. AESTHETICS

Except as provided in Public Resources Code Section 21099, would the project:

- 2 a) Have a substantial adverse effect on a scenic vista?
- 1 b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?
- 2 c) Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?
- 2 d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

II. AGRICULTURAL RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

- 1 a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency to non-agricultural use?
- 1 b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?
- 1 c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?
- 1 d) Result in the loss of forest land or conversion of forest land to non-forest use?

- 1 e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to nonagricultural use?

III. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

- 2 a) Conflict with or obstruct implementation of the applicable air quality plan?
- 2 b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under applicable federal or state ambient air quality standard?
- 2 c) Expose sensitive receptors to substantial pollutant concentrations?
- 1 d) Result in other emissions, such as those leading to odors adversely affecting a substantial number of people?

IV. BIOLOGICAL RESOURCES

Would the project:

- 2 a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?
- 1 b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?
- 1 c) Have a substantial adverse effect on federally protected wetlands (including but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
- 1 d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
- 1 e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

- 1 f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

- 2 b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

V. CULTURAL RESOURCES

Would the project:

- 1 a) Cause a substantial adverse change in the significance of a historical resource pursuant to Public Resources Code Section 15064.5?
- 1 b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Public Resources Code Section 15064.5?
- 1 c) Disturb any human remains, including those interred outside of formal cemeteries?

VI. ENERGY

Would the project:

- 2 a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?
- 2 b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

VII. GEOLOGY AND SOILS

Would the project:

- a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - 1 i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.
 - 1 ii) Strong seismic ground shaking?
 - 1 iii) Seismic-related ground failure, including liquefaction?
 - 1 iv) Landslides?
- 1 b) Result in substantial soil erosion or loss of topsoil?
- 1 c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?
- 1 d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?
- 1 e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?
- 1 f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

VIII. GREENHOUSE GAS EMISSIONS

Would the project:

- 2 a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

IX. HAZARDS AND HAZARDOUS MATERIALS

Would the project:

- 1 a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
- 1 b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
- 1 c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
- 1 d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?
- 1 e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?
- 1 f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
- 1 g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

X. HYDROLOGY AND WATER QUALITY

Would the project:

- 2 a) Violate any water quality standards of waste discharge requirements or otherwise substantially degrade surface or groundwater quality?
- 2 b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?
- 2 c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
 - 2 i) result in substantial erosion or siltation on- or off-site;
 - 2 ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; or
 - 2 iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?
- 2 d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?
- 2 e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

XI. LAND USE AND PLANNING

Would the project:

- 2 a) Physically divide an established community?

- 2 b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

II. MINERAL RESOURCES

Would the project:

- 1 a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?
- 1 b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

XIII. NOISE

Would the project result in:

- 2 a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
- 1 b) Generation of excessive groundborne vibration or groundborne noise levels?
- 1 c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

XIV. POPULATION AND HOUSING

Would the project:

- 1 a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?
- 1 b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

XV. PUBLIC SERVICES

Would the project:

- 1 a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:
- 1 i) Fire protection?
- 1 ii) Police protection?
- 1 iii) Schools?
- 1 iv) Parks?
- 1 v) Other public facilities?

XVI. RECREATION

Would the project:

- 1 a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

- 1 b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

XVII. TRANSPORTATION / TRAFFIC

Would the project:

- 1 a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?
- 2 b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?
- 2 c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
- 1 d) Result in inadequate emergency access?

XVIII. TRIBAL CULTURAL RESOURCES

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- 1 a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
- 1 b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

XIX. UTILITIES AND SERVICE SYSTEMS

Would the project:

- 2 a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?
- 2 b) Have sufficient water supplies available to service the project and reasonable foreseeable future development during normal, dry, and multiple dry years?
- 1 c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?
- 1 d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?
- 1 e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

XX. WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

- 1 a) Substantially impair an adopted emergency response plan or emergency evacuation plan?
- 1 b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?
- 1 c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?
- 1 d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

Would the project:

- 2 a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?
- 2 b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?
- 2 c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Authority cited: Sections 21083 and 21083.05, Public Resources Code. Reference: Section 65088.4, Gov. Code; Sections 21080(c), 21080.1, 21080.3, 21083, 21083.05, 21083.3, 21093, 21094, 21095, and 21151, Public Resources Code; *Sundstrom v. County of Mendocino*, (1988) 202 Cal.App.3d 296; *Leonoff v. Monterey Board of Supervisors*, (1990) 222 Cal.App.3d 1337; *Eureka Citizens for Responsible Govt. v. City of Eureka* (2007) 147 Cal.App.4th 357; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th at 1109; *San Franciscans Upholding the Downtown Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656.

Revised 2019

Authority: Public Resources Code sections 21083 and 21083.09

Reference: Public Resources Code sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3/21084.2 and 21084.3

DISCUSSION OF ENVIRONMENTAL EVALUATION

AESTHETICS

- a. This project will not adversely affect the view of any scenic vistas. The Sierra Nevada mountain range may be considered a scenic vista, but views of the range will not be adversely impacted or significantly altered by the project.

The development of site with future commercial restaurants and retail buildings are considered compatible uses within commercial areas and adjacent to residential uses. City zoning regulations require that development of commercial sites include landscaping and building setbacks that are compatible with adjacent uses. The City's General Plan Land Use Map designates the site as Commercial Mixed Use. Staff believes that the proposed commercial center is consistent in nature and character with existing and future uses surrounding the project site, subject to the conditions of project approval for this project.

The Visalia General Plan contains multiple polices that together work to reduce the potential for impacts to the development of land as designated by the General Plan. With implementation of these policies and the existing City standards, impacts to land use development consistent with the General Plan will be less than significant.

- b. There are no scenic resources on the site.

The proposed project includes commercial development that will be aesthetically consistent with surrounding development and with General Plan policies. Furthermore, the City has development standards related to landscaping and other amenities that will ensure that the visual character of the area is enhanced and not degraded. Thus, the project would not substantially degrade the existing visual character of the site and its surroundings.

- d. The project will create new sources of light that are typical of commercial development. The City has development standards that require that light be directed and/or shielded so it does not fall upon adjacent properties.

II. AGRICULTURAL RESOURCES

- a. The project is located on property that is identified as Prime Farmland based on maps prepared by the California Department of Conservation and contained within the Visalia General Plan, Figure 6-4

The Visalia General Plan Update Environmental Impact Report (EIR) has already considered the environmental impacts of the conversion of properties within the Planning Area into non-agriculture uses. Overall, the General Plan results in the conversion of over 14,000 acres of Important Farmland to urban uses, which is considered significant and unavoidable. Aside from preventing development altogether the conversion of Important Farmland to urban uses cannot be directly mitigated, through the use of agricultural conservation easements or by other means. However, the General Plan contains multiple polices that

together work to limit conversion only to the extent needed to accommodate long-term growth. The General Plan policies identified under Impact 3.5-1 of the EIR serve as the mitigation that assists in reducing the severity of the impact to the extent possible while still achieving the General Plan's goals of accommodating a certain amount of growth to occur within the Planning Area. These policies include the implementation of a three-tier growth boundary system that assists in protecting open space around the City fringe and maintaining compact development within the City limits.

The project will be consistent with Policy LU-P-34. The conversion of the site from an agricultural use to urban development does not require mitigation to offset the loss of prime farmland as stated in Policy LU-P-34. The policy states; "the mitigation program shall specifically allow exemptions for conversion of agricultural lands in Tier I."

Because there is still a significant impact to loss of agricultural resources after conversion of properties within the General Plan Planning Area to non-agricultural uses, a Statement of Overriding Considerations was previously adopted with the Visalia General Plan Update EIR.

- b. The project site is zoned C-MU (Commercial Mixed Use) which is consistent with the land use designation of Commercial Mixed Use for the project site. The project is not located on property that is party to a Williamson Act contract. Existing City zoning for the area is C-MU (Commercial Mixed Use). As such zoning for agricultural use will not be affected.
- c. There is no forest land or timberland currently located on the site, nor does the site conflict with a zoning for forest land, timberland, or timberland zoned timberland production.
- d. There is no forest or timberland currently located on the site.
- e. The project will not involve any changes that would promote or result in the conversion of farmland to non-agriculture use. The subject property is currently designated for urban development rather than agricultural land use. Properties that are vacant may develop in a way that is consistent with their zoning and land use designated at any time. The adopted Visalia General Plan's implementation of a three-tier growth boundary system further assists in protecting open space around the City fringe to ensure that premature conversion of farmland to non-agricultural uses does not occur.

III. AIR QUALITY

- a. The project site is located in an area that is under the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD). The project in itself does not disrupt implementation of the San Joaquin Regional Air Quality Management Plan, and will therefore be a less than significant impact.

- b. Tulare County is designated non-attainment for certain federal ozone and state ozone levels. The project will result in a net increase of criteria pollutants. This site was evaluated in the Visalia General Plan Update EIR for conversion into urban development. Development under the General Plan will result in increases of construction and operation-related criteria pollutant impacts, which are considered significant and unavoidable. General Plan policies identified under Impacts 3.3-1, 3.3-2, and 3.3-3 serve as the mitigation that assists in reducing the severity of the impact to the extent possible while still achieving the General Plan's goals of accommodating a certain amount of growth to occur within the Planning Area.

The project is required to adhere to requirements administered by the SJVAPCD to reduce emissions to a level of compliance consistent with the District's grading regulations. Compliance with the SJVAPCD's rules and regulations will reduce potential impacts associated with air quality standard violations to a less than significant level.

In addition, development of the project may be subject to the SJVAPCD Indirect Source Review (Rule 9510) procedures that became effective on March 1, 2006. The Applicant will be required to obtain permits demonstrating compliance with Rule 9510, or payment of mitigation fees to the SJVAPCD.

- c. Residences located near the proposed project may be exposed to pollutant concentrations due to construction activities. The use of construction equipment will be temporary and is subject to SJVAPCD rules and regulations. The impact is considered as less than significant.
- d. The proposed project will not involve the generation of objectionable odors that would affect a substantial number of people.

IV. BIOLOGICAL RESOURCES

- a. The site has no known species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. The project would therefore not have a substantial adverse effect on a sensitive, candidate, or special species.

In addition, staff conducted an on-site visit to the site on May 5, 2020 to observe biological conditions and did not observe any evidence or symptoms that would suggest the presence of a sensitive, candidate, or special species.

Citywide biological resources were evaluated in the Visalia General Plan Update Environmental Impact Report (EIR). The EIR concluded that certain special-status species or their habitats may be directly or indirectly affected by future development within the General Plan Planning Area. This may be through the removal of or disturbance to habitat. Such effects would be considered significant. However, the General Plan contains multiple policies, identified under Impact 3.8-1 of the EIR, that together work to reduce the potential for impacts on special-status species likely to occur in the Planning Area. With implementation of these policies, impacts on special-status species will be less than significant.

- b. The project is not located within an identified sensitive riparian habitat or other natural community.

Citywide biological resources were evaluated in the Visalia General Plan Update Environmental Impact Report (EIR). The EIR concluded that certain sensitive natural communities may be directly or indirectly affected by future development within the General Plan Planning Area, particularly valley oak woodlands and valley oak riparian woodlands. Such effects would be considered significant. However, the General Plan contains multiple policies, identified under Impact 3.8-2 of the EIR, that together work to reduce the potential for impacts on woodlands located within in the Planning Area. With implementation of these policies, impacts on woodlands will be less than significant.

- c. The project is not located within or adjacent to federally protected wetlands as defined by Section 404 of the Clean Water Act.

Citywide biological resources were evaluated in the Visalia General Plan Update Environmental Impact Report (EIR). The EIR concluded that the movement of wildlife species may be directly or indirectly affected by future development within the General Plan Planning Area. Such effects would be considered significant. However, the General Plan contains multiple policies, identified under Impact 3.8-4 of the EIR, that together work to reduce the potential for impacts on wildlife movement corridors located within in the Planning Area. With implementation of these policies, impacts on wildlife movement corridors will be less than significant.

- d. Citywide biological resources were evaluated in the Visalia General Plan Update Environmental Impact Report (EIR). The EIR concluded that the movement of wildlife species may be directly or indirectly affected by future development within the General Plan Planning. Such effects would be considered significant. However, the General Plan contains multiple policies, identified under Impact 3.8-4 of the EIR, that together work to reduce the potential for impacts on wildlife movement corridors located within in the Planning Area. With implementation of these policies, impacts on wildlife movement corridors will be less than significant.

- e. The City has a municipal ordinance in place to protect valley oak trees. There are no Valley Oak trees onsite.

- f. There are no local or regional habitat conservation plans for the area.

V. CULTURAL RESOURCES

- a. There are no known historical resources located within the project area. Furthermore, staff conducted an on-site visit to the site on May 5, 2020 to observe conditions and did not observe any evidence of historical or cultural resources of significance. If some potentially historical or cultural resource is unearthed during development all work will cease until a qualified professional archaeologist can evaluate the finding and make necessary mitigation recommendations.

- b. There are no known archaeological resources located within the project area. If some archaeological resource is unearthed during development all work will cease until a qualified professional archaeologist can evaluate the finding and make necessary mitigation recommendations.

- c. There are no known human remains buried in the project vicinity. If human remains are unearthed during development all work should cease until the proper authorities are notified and a qualified professional archaeologist can evaluate the finding and make any necessary mitigation recommendations. In the event that potentially significant cultural resources are discovered during ground disturbing activities associated with project preparation, construction, or completion, work shall halt in that area until a qualified Native American Tribal observer, archeologist, or paleontologist can assess the significance of the find, and, if necessary, develop appropriate treatment measures in consultation with Tulare County Museum, Coroner, and other appropriate agencies and interested parties.

VI. ENERGY

- a. Development of the site will require the use of energy supply and infrastructure. However, the use of energy will be typical of that associated with commercial development associated with the underlying zoning. Furthermore, the use is not considered the type of use or intensity that would result in wasteful, inefficient, or unnecessary consumption of energy resources during construction or operation. The project will be required to comply with California Building Code Title 24 standards for energy efficiency.

Policies identified under Impacts 3.4-1 and 3.4-2 of the EIR will reduce any potential impacts to a less than significant level. With implementation of these policies and the existing City standards, impacts to energy will be less than significant.

- b. The project will not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, based on the discussion in section VI.a above.

VII. GEOLOGY AND SOILS

- a. The State Geologist has not issued an Alquist-Priolo Earthquake Fault Map for Tulare County. The project area is not located on or near any known earthquake fault lines. Therefore, the project will not expose people or structures to potential substantial adverse impacts involving earthquakes.
- b. The development of this site will require movement of topsoil. Existing City Engineering Division standards require that a grading and drainage plan be submitted for review to the City to ensure that off- and on-site improvements will be designed to meet City standards.
- c. The project area is relatively flat and the underlying soil is not known to be unstable. Soils in the Visalia area have few limitations with regard to development. Due to low clay content and limited topographic relief, soils in the Visalia area have low expansion characteristics.
- d. Due to low clay content, soils in the Visalia area have an expansion index of 0-20, which is defined as very low potential expansion.
- e. The project does not involve the use of septic tanks or alternative wastewater disposal systems since sanitary sewer lines are available for connection for the disposal of wastewater at this location.
- f. There are no known unique paleontological resources or geologic features located within the project area. In the

event that potentially significant cultural resources are discovered during ground disturbing activities associated with project preparation, construction, or completion, work shall halt in that area until a qualified Native American Tribal observer, archeologist, or paleontologist can assess the significance of the find, and, if necessary, develop appropriate treatment measures in consultation with Tulare County Museum, Coroner, and other appropriate agencies and interested parties.

VIII. GREENHOUSE GAS EMISSIONS

- a. The project is expected to generate Greenhouse Gas (GHG) emissions in the short-term as a result of the construction of the commercial center, and long-term as a result of day-to-day operation of the proposed commercial center.

The City has prepared and adopted a Climate Action Plan (CAP) which includes a baseline GHG emissions inventories, reduction measures, and reduction targets consistent with local and State goals. The CAP was prepared concurrently with the proposed General Plan and its impacts are also evaluated in the Visalia General Plan Update EIR.

The Visalia General Plan and the CAP both include policies that aim to reduce the level of GHG emissions emitted in association with buildout conditions under the General Plan. Although emissions will be generated as a result of the projects, implementation of the General Plan and CAP policies will result in fewer emissions than would be associated with a continuation of baseline conditions. Thus, the impact to GHG emissions will be less than significant.

- b. The State of California has enacted the Global Warming Solutions Act of 2006 (AB 32), which included provisions for reducing the GHG emission levels to 1990 baseline levels by 2020 and to a level 80% below 1990 baseline levels by 2050. In addition, the State has enacted SB 32 which included provisions for reducing the GHG emission levels to a level 40% below 1990 baseline levels by 2030.

The proposed project will not impede the State's ability to meet the GHG emission reduction targets under AB 32 and SB 32. Current and probable future state and local GHG reduction measures will continue to reduce the project's contribution to climate change. As a result, the project will not contribute significantly, either individually or cumulatively, to GHG emissions.

IX. HAZARDS AND HAZARDOUS MATERIALS

- a. No hazardous materials are anticipated with the project.
- b. Construction activities associated with development of the project may include maintenance of on-site construction equipment that could lead to minor fuel and oil spills. The use and handling of any hazardous materials during construction activities would occur in accordance with applicable federal, state, regional, and local laws. Therefore, impacts are considered to be less than significant.
- c. Riverway Elementary School is located within one-quarter mile from the project. There is no reasonably foreseeable condition or incident involving the project that could affect existing or proposed school sites within one-quarter mile of school sites.

d. The project area does not include any sites listed as hazardous materials sites pursuant to Government Code Section 65692.5.

e. The City's adopted Airport Master Plan shows the project area is located outside of all Airport Zones. There are no restrictions for the proposed project related to Airport Zone requirements.

The project area is not located within 2 miles of a public airport.

f. The project will not interfere with the implementation of any adopted emergency response plan or evacuation plan.

g. There are no wild lands within or near the project area.

X. HYDROLOGY AND WATER QUALITY

a. Development projects associated with buildout under the Visalia General Plan are subject to regulations that serve to ensure that such projects do not violate water quality standards of waste discharge requirements. These regulations include the Federal Clean Water Act (CWA), the National Pollutant Discharge Elimination System (NPDES) permit program. State regulations include the State Water Resources Control Board (SWRCB) and more specifically the Central Valley Regional Water Quality Control Board (RWQCB), of which the project site area falls within the jurisdiction of.

Adherence to these regulations results in projects incorporating measures that reduce pollutants. The project will be required to adhere to municipal wastewater requirements set by the Central Valley RWQCB and any permits issued by the agency.

Furthermore, there are no reasonably foreseeable reasons why the project would result in the degradation of water quality. The Visalia General Plan contains multiple polices, identified under Impact 3.6-2 and 3.9-3 of the EIR, that together work to reduce the potential for impacts to water quality. With implementation of these policies and the existing City standards, impacts to water quality will be less than significant.

b. The project will not substantially deplete groundwater supplies in the project vicinity. The project will be served by a water lateral for domestic, irrigation, and fire protection use. The project area overlies the southern portion of the San Joaquin unit of the Central Valley groundwater aquifer. The project will result in an increase of impervious surfaces on the project site, which might affect the amount of precipitation that is recharged to the aquifer. However, as the City of Visalia is already largely developed and covered by impervious surfaces, the increase of impervious surfaces through this project will be small by comparison. The project therefore might affect the amount of precipitation that is recharged to the aquifer. The City of Visalia's water conservation measures and explorations for surface water use over groundwater extraction will assist in offsetting the loss in groundwater recharge.

c.
i. The development of this site will require movement of topsoil. Existing City Engineering Division standards require that a grading and drainage plan be submitted for review to the City to ensure that off- and on-site

improvements will be designed to meet City standards.

ii. Development of the site will create additional impervious surfaces. However, existing and planned improvements to storm water drainage facilities as required through the Visalia General Plan policies will reduce any potential impacts to a less than significant level.

Polices identified under Impact 3.6-2 of the EIR will reduce any potential impacts to a less than significant level. With implementation of these policies and the existing City standards, impacts to groundwater supplies will be less than significant.

iii. Development of the site will create additional impervious surfaces. However, existing and planned improvements to storm water drainage facilities as required through the Visalia General Plan policies will reduce any potential impacts to a less than significant level.

Polices identified under Impact 3.6-2 of the EIR will reduce any potential impacts to a less than significant level. With implementation of these policies and the existing City standards, impacts to groundwater supplies will be less than significant.

Furthermore, the project will be required to meet the City's improvement standards for directing storm water runoff to the existing City storm water drainage system consistent with the City's adopted City Storm Drain Master Plan.

d. The project area is located sufficiently inland and distant from bodies of water, and outside potentially hazardous areas for seiches and tsunamis. The site is also relatively flat, which will contribute to the lack of impacts by mudflow occurrence. Therefore there will be no impact related to these hazards.

e. Development of the site has the potential to affect drainage patterns in the short term due to erosion and sedimentation during construction activities and in the long term through the expansion of impervious surfaces. Impaired storm water runoff may then be intercepted and directed to a storm drain or water body, unless allowed to stand in a detention area. The City's existing standards may require the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) in accordance with the SWRCB's General Construction Permit process, which would address erosion control measures.

The Visalia General Plan contains multiple polices, identified under Impact 3.6-1 of the EIR, that together work to reduce the potential for erosion. With implementation of these policies and the existing City standards, impacts to erosion will be less than significant.

XI. LAND USE AND PLANNING

a. The project will not physically divide an established community, as the site is vacant and would not result in development that would split existing urban areas. The General Plan Land Use Diagram, adopted October 1, 2014, designates the 5.96-acre project area as Commercial Mixed Use. The Zoning Map, adopted on April 6, 2017, designates the site as C-MU (Commercial

Mixed Use), which is consistent with the General Plan Land Use Designation of Commercial Mixed Use as identified in Table 9-1 "Consistency Between the Plan and Zoning" of the General Plan. Commercial centers that include quick service restaurants, retail shops, drive-thru lanes, and sit-down restaurants are considered compatible uses in commercial areas where potential impacts can be addressed through the conditional use permit process. The site is located at the northeast corner of N. Mooney Blvd. and W. Riggin Ave., both designated arterial roadways.

The Visalia General Plan contains multiple policies, identified under Impact 3.1-2 of the EIR, that together work to reduce the potential for impacts to the development of land as designated by the General Plan. With implementation of these policies and the existing City standards, impacts to land use development consistent with the General Plan will be less than significant.

- b. The project site is within the Urban Development Tier 1 Boundary. Development of commercial lands in Tier 1 may occur at any time. The proposed project is consistent with Land Use Policies LU-P-19 of the General Plan. Policy LU-P-19 states; "Ensure that growth occurs in a compact and concentric fashion by implementing the General Plan's phased growth strategy."

The project as a whole does not conflict with any land use plan, policy or regulation of the City of Visalia. The site's General Plan Land Use Designation of Commercial Mixed Use and the Zoning Designation of C-MU are consistent with each other based on the underlying allowed land uses as identified in Table 9-1 "*Consistency between the Plan and Zoning*" of the General Plan. The City of Visalia's Zoning Ordinance allows for commercial development as a permitted use, though the subdivision of land requires a Tentative Parcel Map and the specific uses identified in the commercial development together with parcels less than five acres in size with no street access require a Conditional Use Permit.

The proposed project will be consistent with the Land Use Element of the General Plan, and consistent with the standards for commercial development pursuant to the Visalia Municipal Code Title 17 (Zoning Ordinance) Chapters 17.18 and 17.30.

XII. MINERAL RESOURCES

- a. No mineral areas of regional or statewide importance exist within the Visalia area.
- b. There are no mineral resource recovery sites delineated in the Visalia area.

XIII. NOISE

- a. The project will result in noise generation typical of urban development, but not in excess of standards established in the City of Visalia's General Plan or Noise Ordinance. The Visalia Noise Element and City Ordinance contain criterion for acceptable noise levels inside and outside residential living spaces. This standard is 65 dB DNL for outdoor activity areas associated with residences and 45 dB DNL for indoor areas. Traffic and related noise impacts from the proposed project will occur along Mooney Boulevard and Riggin Avenue (arterial roadways) on the west and south. The City's standards for setbacks will reduce noise levels to a level that is less than

significant. Noise levels will also increase temporarily during the construction of the project but shall remain within the noise limits and restricted to the allowed hours of construction defined by the City of Visalia Noise Ordinance. Temporary increase in ambient noise levels is considered to be less than significant.

Ambient noise levels will increase beyond current levels as a result of the project, however these levels will be typical of noise levels associated with urban development and not in excess of standards established in the City of Visalia's General Plan or Noise Ordinance. The City's standards for setbacks and construction of walls along major streets and between residential uses reduce noise levels to a level that is less than significant. Noise associated with the establishment of new residential uses was previously evaluated with the General Plan for the conversion of land to urban uses.

Noise levels will increase temporarily during the construction of the project but shall remain within the limits defined by the City of Visalia Noise Ordinance. Temporary increase in ambient noise levels is considered to be less than significant.

- b. Ground-borne vibration or ground-borne noise levels may occur as part of construction activities associated with the projects. Construction activities will be temporary and will not expose persons to such vibration or noise levels for an extended period of time; thus the impacts will be less than significant. There are no existing uses near the project area that create ground-borne vibration or ground-borne noise levels.
- c. The project area is not within two miles of a public airport, and there is no private airstrip near the project area.

XIV. POPULATION AND HOUSING

- a. The project will not directly induce substantial unplanned population growth that is in excess of that planned in the General Plan.
- b. Development of the site will not displace any housing or people on the site. The area being developed is partially developed with a commercial pad with a drive-thru lane (i.e., Starbucks) and an office and maintenance yard for an agricultural business.

XV. PUBLIC SERVICES

- a.
 - i. Current fire protection facilities are located at the Visalia Station 54, located approximately one and half miles to the southeast of the property, and can adequately serve the site without a need for alteration. Impact fees will be paid to mitigate the project's proportionate impact on these facilities.
 - ii. Current police protection facilities can adequately serve the site without a need for alteration. Impact fees will be paid to mitigate the project's proportionate impact on these facilities.
 - iii. The project will not generate new students for which existing schools in the area may accommodate.

- iv. Current park facilities can adequately serve the site without a need for alteration. Impact fees will be paid to mitigate the project's proportionate impact on these facilities.
- v. Other public facilities can adequately serve the site without a need for alteration.

XVI. RECREATION

- a. The proposed project does not include recreational facilities or require the construction or expansion of recreational facilities within the area that might have an adverse physical effect on the environment. Nor will the project increase the use of existing neighborhood and regional parks as no residential uses are proposed.
- b. The proposed project does not include recreational facilities or require the construction or expansion of recreational facilities within the area that might have an adverse physical effect on the environment.

XVII. TRANSPORTATION AND TRAFFIC

- a. Development and operation of the project is not anticipated to conflict with applicable plans, ordinances, or policies establishing measures of effectiveness of the City's circulation system. The project will result in an increase in traffic levels on arterial and collector roadways, although the City of Visalia's Circulation Element has been prepared to address this increase in traffic.
- b. Development of the site will result in increased traffic in the immediate area; but will not cause a substantial increase in traffic Citywide. This site was evaluated in the Visalia General Plan Update Environmental Impact Report (EIR) for Regional Commercial urban use.

A Traffic Impact Analysis Report was conducted for the project (ref.: Final Traffic Impact Analysis: Shannon Village East. JLD Traffic Engineering, Inc., April 28, 2020) which studied key roadways and intersections in the vicinity of the project site. The analysis considered existing roadway conditions, opening year with project, and 5-year cumulative conditions with the project. The analysis identified recommended roadway and intersection improvements to the vicinity of the project to ensure that the project will operate at acceptable Level Of Service (LOS) condition or better. In addition, the study conducted a queuing analysis for the proposed project. The queue length summary for left-turn and right-turn lanes at the study intersections under all study scenarios is provided in Table XII of the traffic study (pages 31-33).

Trip generation rates for the proposed Project were obtained from the 10th Edition of the Trip Generation Manual published by the Institute of Transportation Engineers (ITE). At buildout, the proposed Project is estimated to generate a maximum of 3,143 daily, 246 AM peak hour and 238 PM peak hour trips (before internal capture and pass-by trip reductions are taken into account). After internal capture and pass-by trip reductions are taken into account, the Project is estimated to generate a maximum of 2,389 daily, 147 AM peak hour and 131 PM peak hour trips.

The study identified the intersections of Giddings / Riggins and Mooney / Ferguson are projected to exceed the City's LOS threshold during the AM peak. However, both of these intersections are identified to be signalized in the

near future and the City has established Capital Improvement Projects (CIP) for both intersections. Currently, the Giddings / Riggins intersection is in design with poles ordered to convert this four-way stop intersection to a signalized intersection. The Mooney / Ferguson intersection is anticipated start design July 2020 with the four-way stop intersection being converted to a signalized intersection.

Furthermore, the study identified with Phases 2, 5, and 6, Riggins Avenue offsite improvements associated with those phases shall be completed prior to occupancy of any buildings within these phases. All Riggins Ave. offsite improvements for buildout of the Project associated with Phase 7 shall be completed prior to occupancy of any buildings within Phase 7.

The City's Traffic Engineer has reviewed the TIA and is in general agreement with the analysis provided. However, the City reserves the right to require additional information and improvements when engineering plans are submitted defining the specific offsite improvements per each phase. This ensures coordination of the transition between the offsite improvements proposed per each phase to existing and addresses the corresponding traffic improvements as defined in the TIA, and as required by the City Engineer.

- c. There are no planned geometric designs associated with the project that are considered hazardous.
- d. The project will not result in inadequate emergency access.

XVIII. TRIBAL CULTURAL RESOURCES

The proposed project would not cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe.

- a. The site is not listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).
- b. The site has been determined to not be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Further, the EIR (SCH 2010041078) for the 2014 General Plan update included a thorough review of sacred lands files through the California Native American Heritage Commission. The sacred lands file did not contain any known cultural resources information for the Visalia Planning Area.

XIX. UTILITIES AND SERVICE SYSTEMS

- a. The project will be connecting to existing City sanitary sewer lines, consistent with the City Sewer Master Plan. The Visalia wastewater treatment plant has a current rate capacity of 22 million gallons per day, but currently treats an average daily maximum month flow of 12.5 million gallons per day. With the completed project, the plant has

more than sufficient capacity to accommodate impacts associated with the proposed project. The proposed project will therefore not cause significant environmental impacts.

The project site will be accommodated by connection to the City's sanitary sewer lines. Usage of these lines is consistent with the City Sewer System Master Plan. These improvements will not cause significant environmental impacts.

The project site will be accommodated by City storm water drainage lines that handle on-site and street runoff. As part of the project, storm drain main connection to the project site is required. Usage of these lines is consistent with the City Storm Drain Master Plan. These improvements will not cause significant environmental impacts.

- b. California Water Service Company has determined that there are sufficient water supplies to support the site, and that service can be extended to the site.
- c. The City has determined that there is adequate capacity existing to serve the site's projected wastewater treatment demands at the City wastewater treatment plant.
- d. Current solid waste disposal facilities can adequately serve the site without a need for alteration.
- e. The project will be able to meet the applicable regulations for solid waste. Removal of debris from construction will be subject to the City's waste disposal requirements.

WILDFIRE

- a. The project is located on a site that is adjacent on multiple sides by existing development. The site will be further served by multiple points of access. In the event of an emergency response, coordination would be made with the City's Engineering, Police, and Fire Divisions to ensure that adequate access to and from the site is maintained.
- b. The project area is relatively flat and the underlying soil is not known to be unstable. Therefore, the site is not in a location that is likely to exacerbate wildfire risks.
- c. The project is located on a site that is adjacent on multiple sides by existing development. New project development

will require the installation and maintenance of associated infrastructure; however the infrastructure would be typical of commercial development and would be developed to the standards of the underlying responsible agencies.

- d. The project area is relatively flat and the underlying soil is not known to be unstable. Therefore, the site is not in a location that would expose persons or structures to significant risks of flooding or landslides.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

- a. The project will not affect the habitat of a fish or wildlife species or a plant or animal community. This site was evaluated in the Program EIR (SCH No. 2010041078) for the City of Visalia's General Plan Update for conversion to urban use. The City adopted mitigation measures for conversion to urban development. Where effects were still determined to be significant a statement of overriding considerations was made.
- b. This site was evaluated in the Program EIR (SCH No. 2010041078) for the City of Visalia General Plan Update for the area's conversion to urban use. The City adopted mitigation measures for conversion to urban development. Where effects were still determined to be significant a statement of overriding considerations was made.
- c. This site was evaluated in the Program EIR (SCH No. 2010041078) for the City of Visalia General Plan Update for conversion to urban use. The City adopted mitigation measures for conversion to urban development. Where effects were still determined to be significant a statement of overriding considerations was made.

DETERMINATION OF REQUIRED ENVIRONMENTAL DOCUMENT

On the basis of this initial evaluation:

- I find that the proposed project **COULD NOT** have a significant effect on the environment. **A NEGATIVE DECLARATION WILL BE PREPARED.**
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on the attached sheet have been added to the project. **A MITIGATED NEGATIVE DECLARATION WILL BE PREPARED.**
- I find the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.
- I find that the proposed project **MAY** have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.
- I find that as a result of the proposed project no new effects could occur, or new mitigation measures would be required that have not been addressed within the scope of the Program Environmental Impact Report (SCH No. 2010041078). The Environmental Impact Report prepared for the City of Visalia General Plan was certified by Resolution No. 2014-37 adopted on October 14, 2014. **THE PROGRAM ENVIRONMENTAL IMPACT REPORT WILL BE UTILIZED.**



Brandon Smith, AICP
Environmental Coordinator

5/13/20

Date

Final Traffic Impact Analysis

Shannon Village East

Located on the Northeast Corner of
Mooney Boulevard and Riggin Avenue

In the City of Visalia, California

Prepared for:

CRS Farming
11878 Avenue 328
Visalia, CA 93291

April 28, 2020

Project No. 013-009



Traffic Engineering, Transportation Planning, & Parking Solutions

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Traffic Engineering, Transportation Planning, & Parking Solutions

Final Traffic Impact Analysis

For Shannon Village East located on the Northeast Corner of Mooney Boulevard and Riffin Avenue

In the City of Visalia, CA

April 28, 2020

This Final Traffic Impact Analysis 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, PE, TE

President



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Introduction and Summary

Introduction

This report describes a Revised Traffic Impact Analysis (TIA) prepared by JLB Traffic Engineering, Inc. (JLB) for the proposed Shannon Village East (Project) located on the northeast corner of Mooney Boulevard and Riggin Avenue in the City of Visalia. The TIA has been revised to address comments provided by the City of Visalia on a letter dated February 3, 2020. The Project proposes to develop parcels 2 through 8 of Shannon Village East with a mix of land uses. The Project includes a mix of restaurants, multifamily residential, office and retail land uses. Parcel 1 has been previously analyzed and permitted and, as such, is not part of this Project. Per information provided to JLB, the Project is consistent with the City of Visalia General Plan. Figure 1 shows the location of the proposed Project site relative to the surrounding roadway network.

The purpose of the TIA is to evaluate the potential on-site and off-site traffic impacts, identify short-term and long-term roadway and circulation needs, determine potential mitigation measures, and identify any critical traffic issues that should be addressed in the on-going planning process. The TIA 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, County of Tulare and Caltrans staff.

Summary

The potential traffic impacts of the proposed Project were evaluated in accordance with the standards set forth by the Level of Service (LOS) policy of the City of Visalia, County of Tulare and Caltrans.

Existing Traffic Conditions

- JLB conducted a search of the Statewide Integrated Traffic Records System (SWITRS) to review collision data for the most recent three-year period. Based on the collision data recorded during the three-year period, all existing study intersections have experienced a relatively low average number of collisions per year with two exceptions. The exceptions are the intersections of County Center Street at Riggin Avenue and Giddings Street at Riggin Avenue. Since the City of Visalia already has plans to signalize both of these intersections, no other changes to these intersections are recommended.
- At present, the intersections of Giddings Street at Riggin Avenue and Mooney Boulevard at Ferguson Avenue are projected to exceed its LOS threshold during the AM peak. To improve the LOS at these intersections, it is recommended that the following improvements be implemented.
 - Giddings Street / Riggin Avenue
 - Add a northbound left-turn lane;
 - Modify the northbound left-through-right lane to a through-right lane;
 - Add a southbound left-turn lane;
 - Modify the southbound left-through-right lane to a through-right lane;
 - Signalize the intersection with protective left-turn phasing on all approaches; and
 - Modify the intersection to accommodate the added lanes.
 - Mooney Boulevard / Ferguson Avenue
 - Signalize the intersection with protective left-turn phasing on all approaches.

Opening Year plus Project Traffic Conditions

- JLB analyzed the location of the existing access point relative to the existing local roads and driveways in the Project's vicinity. A review of the existing driveway indicates that it is located at a point that minimizes traffic operational impacts to the existing roadway network. However, it is recommended that the easternmost Project driveway to Riggin Avenue be as close as possible aligned with Dayton Street. Furthermore, the Project is requesting a deviation from the City Standard C-32 Drive Approach Locations to allow for an additional drive approach on the Riggin Avenue frontage.
- After Internal capture trip reductions and pass-by trip reductions are applied, the Project is estimated to generate 2,389 daily trips, 147 AM peak hour trips and 131 PM peak hour trips.
- It is likely that the onsite development improvements will be developed in phases as illustrated on the latest Project Site Plan. With Phases 1, 3 and 4 no additional offsite improvements are needed. However, with Phases 2, 5, 6 and 7, additional offsite improvements would be necessary. It is recommended that the Riggin Avenue offsite improvements associated with Phases 2, 5 or 6 be completed prior to occupancy of any buildings within these Phases. It is recommended that all Riggin Avenue offsite improvements for buildout of the Project associated with Phase 7 be completed prior to occupancy of any buildings within Phase 7.
- 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.
- Under this scenario, the intersection of Mooney Boulevard and Ferguson Avenue is projected to exceed its LOS threshold during the AM peak. To improve its LOS, it is recommended that this intersection be signalized with protective left-turn phasing on all approaches.

Cumulative Five (5) Years plus Project Traffic Conditions

- The total trip generation for the Near Term Projects is 34,046 daily trips, 2,197 AM peak hour trips and 2,912 PM peak hour trips.
- Under this scenario, the intersection of Mooney Boulevard and Ferguson Avenue is projected to exceed its LOS threshold during the AM peak. To improve its LOS, it is recommended that this intersection be signalized with protective left-turn phasing on all approaches.

Project Equitable Fair Share Impact Analysis

- It is recommended that the Project contribute its equitable fair share as presented in Table XI.

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 TIA focused on evaluating traffic conditions at study intersections that may potentially be impacted by the proposed Project. On September 4, 2019, a Draft Scope of Work for the preparation of a Traffic Impact Analysis for this Project was provided to the City of Visalia, County of Tulare and Caltrans for their review and comment. The Draft Scope of Work was based on preliminary communication with City of Visalia staff. Any comments to the proposed Scope of Work were asked to be received within three (3) weeks.

On September 5, 2019, Caltrans responded and approved the Draft Scope of Work as presented. Similarly, on October 1, 2019, County of Tulare responded and approved the Draft Scope of Work as presented. On September 16, 2019, City of Visalia responded to the Draft Scope of Work commenting that all major intersections within a half mile of the Project location be included and stated that the City of Visalia requires analysis of the opening year and horizon 5-year, with and without project. On September 19, 2019, JLB responded to confirm the changes and clarify the study facilities. On September 20, 2020, City of Visalia confirmed the intersections. On October 29, 2019, JLB followed up with the City of Visalia in order to verify that the intersections of Shannon Parkway and Mooney Boulevard and Shannon Parkway and Giddings Street had been removed and that the Opening Day No Project scenario and Cumulative Five (5) No Project scenario be removed. The City of Visalia confirmed these changes on October 29, 2019.

Based on the comments received, the TIA includes all study intersections and scenarios requested by the City of Visalia. The Draft Scope of Work and the comments received from the lead agency and responsible agencies are included in Appendix A.

Study Facilities

The existing peak hour turning movement volume counts were conducted at the study intersections in October, November and December 2019, while schools in the vicinity of the proposed Project were in session. The intersection turning movement counts included pedestrian volumes. The traffic counts for the existing study intersections are contained in Appendix B. The existing intersection turning movement volumes, intersection geometrics and traffic controls are illustrated in Figure 2.

Study Intersections

1. Mooney Boulevard / Project Driveway 1
2. County Center Street / Riggins Avenue
3. Mooney Boulevard / Riggins Avenue
4. Project Driveway 2 / Riggins Avenue
5. Project Driveway 3 / Riggins Avenue
6. Project Driveway 4 / Riggins Avenue
7. Giddings Street / Riggins Avenue
8. Mooney Boulevard / Ferguson Avenue

Study Scenarios

Existing Traffic Conditions

This scenario evaluates the Existing Traffic Conditions based on existing traffic volumes and roadway conditions from traffic counts and field surveys conducted in late 2019.

Opening Year plus Project Traffic Conditions

This scenario evaluates total traffic volumes and roadway conditions based on the Opening Year plus Project Traffic Conditions. For purposed of this TIA, it is assumed the project will be operational by 2020. The Opening Year plus Project traffic volumes were obtained by first expanding the Base Year 2019 traffic volumes by an average annual growth rate for one (1) year to 2020 and then adding the Net New Project Only Trips. Based on a review of the Tulare County Association of Governments (TCAG) models, traffic in the vicinity of the Project is projected to grow at an average annual growth rate of 2.1 percent. The Net New Project Only Trips to the study facilities were developed based on existing travel patterns, the existing roadway network, engineering judgment, data provided by the developer, knowledge of the study area, existing residential and commercial densities, and the City of Visalia 2030 General Plan Circulation Element. The TCAG models are contained in Appendix C.

Cumulative Five (5) Years plus Project Traffic Conditions

This scenario evaluates total traffic volumes and roadway conditions based on the Cumulative Five (5) Years plus Project Traffic Conditions. The Cumulative Five (5) Years plus Project traffic volumes were obtained by first expanding the Base Year 2019 traffic volumes by an average annual growth rate of 2.1 percent for six (6) years to 2025. Then comparing those traffic volumes to the near term project trips' assignment located in Figure 8 and using the greater volume of each movement. These volumes were added to Base Year 2019 traffic volumes. Lastly, the Net New Project Only Trips were added to create the traffic volumes used in the Cumulative Five (5) Years plus Project scenario.

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)* 6th Edition 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 included in Appendix D.

A traffic impact is considered significant if it renders an unacceptable LOS on an intersection or roadway segment, or if it worsens an already unacceptable LOS condition on an intersection or roadway segment. At unsignalized intersections, a traffic impact would be considered "adverse but not significant" if the LOS standard is exceeded but the projected traffic does not satisfy traffic signal warrants. Under these conditions, the typical means to completely alleviate delays to stop-controlled vehicles would be to install a traffic signal. However, the unmet signal warrants would imply that the reduction in delay for the stop-controlled vehicles may not justify new delays that would be incurred by the major street traffic, which is currently not stopped. Under these circumstances, the installation of a traffic signal would not be recommended and the substandard LOS for stop-controlled vehicles would be considered an "adverse but not significant" impact.

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.

Caltrans endeavors to maintain a target LOS at the transition between LOS C and D on State highway facilities consistent with the *Caltrans Guide for the Preparation of Traffic Impact Studies* dated December 2002. However, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. In this TIA, however, all study facilities fall within the City of Visalia. Therefore, the City of Visalia LOS threshold is utilized.

Operational Analysis Assumptions and Defaults

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

- Yellow time consistent with the California Manual of Uniform Traffic Control Devices (CA MUTCD) based on approach speeds
- Yellow time of 3.2 seconds for left-turn phases
- 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
- All new or modified signals utilize protective left-turn phasing
- A 3 percent heavy vehicle factor
- The number of observed pedestrians at existing intersections was utilized under all study scenarios
- An average of 3 pedestrian calls per hour at signalized intersections
- At existing intersections, the observed approach Peak Hour Factor (PHF) is utilized in the Existing and Opening Year plus Project scenarios.
- For the Cumulative Five (5) Year plus Project scenario, the following PHF's were utilized to reflect an increase in future traffic volumes. As roadways start to reach their saturated flow rates, PHF's tend to increase to 0.90 or higher. The following PHF was established based on historical traffic counts collected by JLB.
 - A PHF of 0.88, or the existing PHF if higher, is utilized for all other intersections.

Existing Traffic Conditions

Roadway Network

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

County Center Street is an existing north-south two-lane collector divided by a two-way left turn lane in the vicinity of the proposed Project. In this area, County Center Street extends from Pratt Road to approximately 1,000 feet south of Houston Avenue and between Mineral King Avenue and Visalia Parkway. The 2030 General Plan Circulation Element designates County Center Street as a collector between Avenue 320 and Houston Avenue and between Mineral King Avenue and Avenue 272.

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

Giddings Street is an existing north-south two-lane undivided collector in the vicinity of the proposed Project. In this area, Giddings Street extends from Riverway Drive to approximately 650 feet south of Houston Avenue and from Murray Avenue to approximately 400 feet south of Whitendale Avenue. Giddings Street is a two-lane undivided collector between Riverway Drive and to 650 feet south of Houston Avenue and between Murray Avenue and Walnut Avenue. Giddings Street is a two-lane collector divided by a two-way left turn lane from Walnut Avenue to Whitendale Avenue. The City of Visalia 2030 General Plan Circulation Element designates Giddings Street as a two-lane collector between Avenue 316 and Houston Avenue and between Murray Avenue and Whitendale Avenue.

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) to the east and to State Route 99 to the west. It should be noted that western extension of Riggin Avenue beyond the western City limits becomes Betty Drive. 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, and a four-lane arterial between Dinuba Avenue and Santa Fe Street. East of Santa Fe Street, Riggin Avenue becomes St. Johns Parkway. 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.

Ferguson Avenue is an east-west two-lane collector divided by a two-way left turn lane in the vicinity of the proposed Project. In this area, Ferguson Avenue exists between Shirk Road and Akers Street and between Linwood Street and Dinuba Boulevard as a two-lane collector divided by a two-way left-turn lane and a two-lane undivided collector between Akers Street and Linwood Street. The City of Visalia 2030 General Plan Circulation Element designates Ferguson Avenue as a two- to four- lane arterial between Camp Drive to Road 76 and as a two- to four- lane collector from Road 76 to Santa Fe Street.

Collision Analysis

JLB conducted a search of the Statewide Integrated Traffic Records System (SWITRS) to review collision reports for the most recent and complete three-year period (January 1, 2016 to December 31, 2018). The SWITRS "is a database that serves as a means to collect and process data gathered from a collision scene. The internet SWITRS application is a tool by which CHP staff and members of its Allied Agencies throughout California can request various types of statistical reports in an electronic format." All collision reports found in SWITRS between January 1, 2016 and December 31, 2018 were included in the analysis. Collision data for each existing study intersection are contained in Appendix E.

In the three-year period, a total of twenty (20) collisions were reported within the influence zone of the existing study intersections. Table I summarizes the total number of collisions reported at each existing study intersection, the type of collision, the severity of the collision, the type of violation, and whether the collision involved another motor vehicle, a pedestrian/bicyclist or a fixed object. Based on the collision data recorded during the three-year period, all existing study intersections have experienced a relatively low average number of collisions per year with two exceptions. The exceptions are the intersections of County Center Street at Riggin Avenue with a total of six (6) collisions and Giddings Street at Riggin Avenue with a total of seven (7) collisions during the three-year period. The type of collisions at the intersection of County Center Street at Riggin Avenue include four (4) broadsides, one (1) hit object and one (1) sideswipe. The type of violations at the intersection of County Center Street at Riggin Avenue include five (5) traffic signal and sign violations and one (1) right of way violation. The type of collisions at the intersection of Giddings Street at Riggin Avenue include five (5) broadsides, one (1) hit object and one (1) sideswipe. The type of violations at the intersection of Giddings Street at Riggin Avenue include two (2) traffic signal and sign violation, four (4) right of way violations and one (1) improper turning violation.

JLB analyzed the data contained within the SWITRS database for the three-year analysis period of each existing study intersection, however, was unable to reach a conclusion that would explain any justification for the modification of lane geometrics or traffic controls beyond what is already planned. Considering both of these intersections are already being signalized the number of correctable collisions experienced at the existing study intersections is considered less than significant to warrant anything more than the signalization that the City is in the process of implementing.

Table I: Three-Year Intersection Collision Analysis

ID	Intersection	Number of Collisions	Type of Collision						Severity				Violation						Motor Vehicle Involved With				
			Broadside	Rear End	Head-On	Hit Object	Slideswipe	Overturned	Fatal	Injury (Severe)	Injury (Other Visible)	Injury (Complaint of Pain)	PDO (Property Damage Only)	Traffic Signals & Signs	Right of Way	Unsafe Speed	Other Than Drive (or Pedestrian)	Improper Turning	DUI	Pedestrian Violation	Pedestrian	Other Motor Vehicle	Fixed Object
2	County Center Street / Riggan Avenue	6	4	-	-	1	1	-	-	-	1	4	1	5	1	-	-	-	-	-	1	5	-
3	Mooney Boulevard / Riggan Avenue	4	3	-	-	1	-	-	-	1	2	1	-	3	1	-	-	-	-	-	3	1	
6	Dayton Street / Riggan Avenue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
7	Giddings Street / Riggan Avenue	7	5	-	-	1	1	-	-	2	5	-	2	4	-	-	1	-	-	-	7	-	
8	Mooney Boulevard / Ferguson Avenue	3	2	-	-	1	-	-	-	1	-	2	1	2	-	-	-	-	-	1	2	-	

Traffic Signal Warrants

Eight-hour signal warrants, as appropriate, were prepared for the unsignalized major intersections in the Existing Traffic Conditions scenario. Also, warrant 3 "Peak Hour" signal warrants were prepared for any unsignalized minor intersections in the Existing Traffic Conditions Scenario. These warrants are found in Appendix I. These warrants were prepared pursuant to the CA MUTCD guidelines for the preparation of traffic signal warrants. Under this scenario, the intersections of County Center Street at Riggan Avenue, Giddings Street at Riggan Avenue and Mooney Boulevard at Ferguson Avenue satisfy the eight-hour signal warrant. Based on the signal warrant and engineering judgement, signalizations of the intersections of Giddings Street at Riggan Avenue and Mooney Boulevard at Ferguson Avenue are recommended. However, signalization of the intersection of County Center Street at Riggan Avenue could be implemented in the next year or two. It is worth noting that the CA MUTCD states "satisfaction of a signal warrant or warrants shall not in itself require the installation of a traffic signal." It should be noted that the City of Visalia is currently in the design phase for the signalization of the intersections of County Center Street and Riggan Avenue and Giddings Street at Riggan Avenue and that these will likely be constructed within a year or two.



Results of Existing Level of Service Analysis

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

At present, the intersections of Giddings Street at Riggin Avenue and Mooney Boulevard at Ferguson Avenue are projected to exceed their LOS threshold during the AM peak period. To improve the LOS at this intersection, it is recommended that the following improvements be implemented.

- Giddings Street / Riggin Avenue
 - Add a northbound left-turn lane;
 - Modify the northbound left-through-right lane to a through-right lane;
 - Add a southbound left-turn lane;
 - Modify the south left-through-right lane to a through-right lane;
 - Signalize the intersection with protective left-turn phasing on all approaches; and
 - Modify the intersection to accommodate the added lanes.
- Mooney Boulevard / Ferguson Avenue
 - Signalize the intersection with protective left-turn phasing on all approaches.

Table II: Existing Intersection LOS Results

ID	Intersection	Intersection Control	AM (7 - 9) Peak Hour		PM (4 - 6) Peak Hour	
			Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS
1	Mooney Blvd / Project Drwy 1	TWSC	22.9	C	11.8	B
2	County Center St / Riggin Ave	AWSC	30.5	D	26.6	D
3	Mooney Boulevard / Riggin Ave	Signalized	24.6	C	20.2	C
4	Project Drwy 2 / Riggin Ave	OWSC	10.1	B	10.3	B
5	Project Drwy 3 / Riggin Ave	Does Not Exist	-	-	-	-
6	Project Drwy 4 / Riggin Ave	OWSC	12.8	B	13.9	B
7	Giddings St / Riggin Ave	AWSC	64.3	F	31.0	D
		Signalized	20.2	C	18.5	B
8	Mooney Blvd / Ferguson Ave	AWSC	65.6	F	18.1	C
		Signalized	24.7	C	17.6	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.



LEGEND

● = STUDY INTERSECTION



Not To Scale

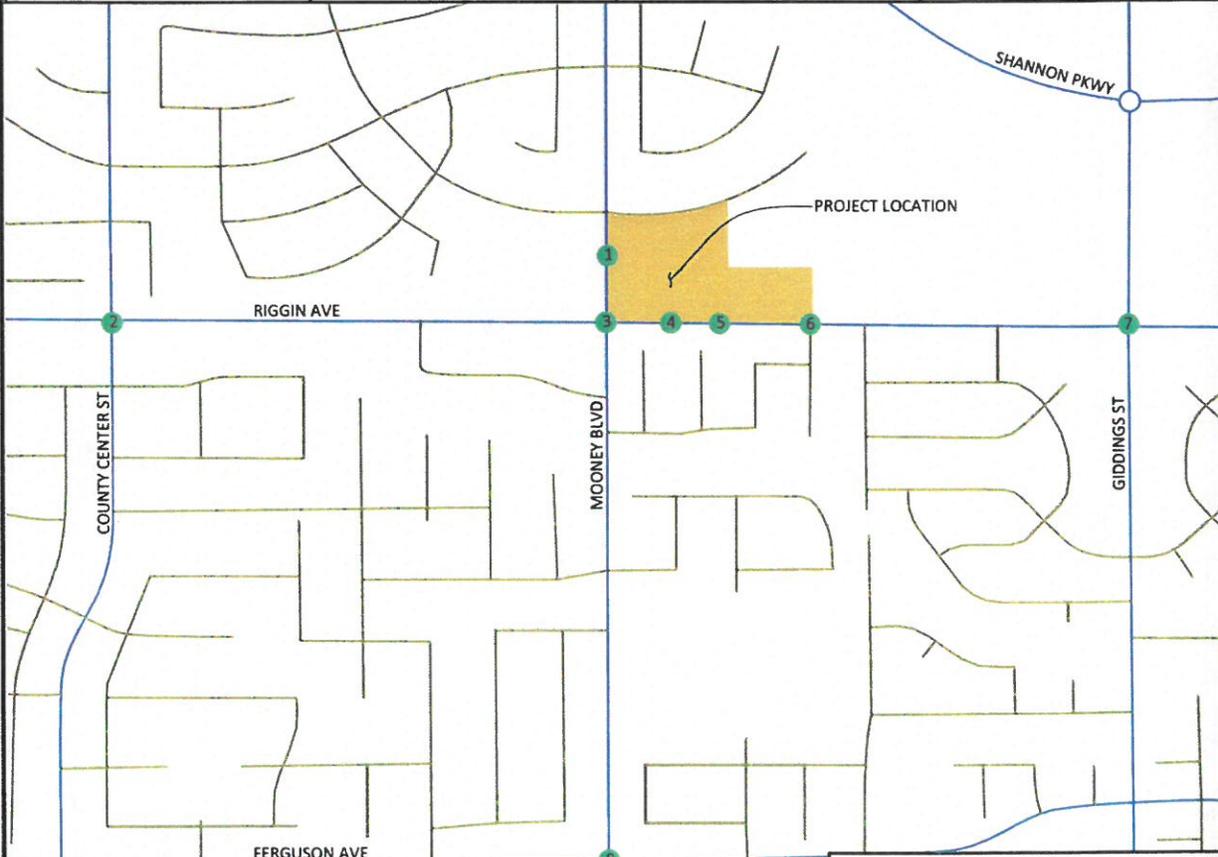
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Shannon Village East - City of Visalia Existing - Traffic Volumes, Geometrics and Controls

Figure 2

<p>1. Mooney Blvd & Project Drwy 1</p> <p>37(24) 344(174) 38(11) 22(8) 2(3) 42(3) Drwy 14(18) 3(3) 42(75) Mooney Blvd 44(78) 287(207) 100(22)</p>	<p>2. County Center St & Riggins Ave</p> <p>75(34) 116(74) 50(47) 25(57) 450(401) 66(100) 1(2) Riggins Ave County Center St 29(69) 397(560) 30(98) 88(56) 82(93) 102(83)</p>	<p>3. Mooney Blvd & Riggins Ave</p> <p>98(38) 221(140) 84(63) 47(53) 324(403) 88(75) 16(9) Riggins Ave Mooney Blvd 23(27) 104(98) 313(436) 106(113) 88(87) 227(158) 72(71)</p>	<p>4. Project Drwy 2 & Riggins Ave</p> <p>49(43) 0(21) 426(497) Project Drwy 2 Riggins Ave</p>
<p>5. Project Drwy 3 & Riggins Ave</p> <p style="color: red; font-size: 2em; transform: rotate(-45deg);">DOES NOT EXIST</p>	<p>6. Dayton St & Riggins Ave</p> <p>420(490) 5(11) Riggins Ave Dayton St 438(548) 1(5) 3(3) 14(13)</p>	<p>7. Giddings St & Riggins Ave</p> <p>57(48) 150(56) 42(13) 36(12) 313(435) 43(56) Riggins Ave Giddings St 55(90) 406(462) 39(30) 42(23) 160(58) 50(60)</p>	<p>8. Mooney Blvd & Ferguson Ave</p> <p>38(37) 318(249) 97(49) 39(57) 188(198) 70(54) Ferguson Ave Mooney Blvd 46(65) 259(188) 127(65) 91(82) 199(249) 59(68)</p>



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LEGEND

- = STUDY INTERSECTION
- = AM PEAK HOUR TRIPS
- = PM PEAK HOUR TRIPS
- = SIGNALIZED INTERSECTION
- = STOP SIGN

Not To Scale

Opening Year plus Project Traffic Conditions

Project Description

The Project proposes to develop parcels 2 through 8 of Shannon Village East with a mix of land uses. The Project includes a mix of restaurants, multifamily residential, office, and retail commercial land uses. Parcel 1 has been previously analyzed and permitted and therefore is not part of this Project. Per information provided to JLB, the Project is consistent with the City of Visalia 2030 General Plan. Figure 3 illustrates the latest Project Site Plan.

Project Access

Based on the Project Site Plan, access to and from the Project site will be from a four (4) different driveways. The first is an existing full access driveway which is located on the east side of Mooney Boulevard approximately 250 feet north of Mooney Boulevard. The second is also an existing right-in, right-out access driveway which is located on the north side of Riggan Avenue approximately 245 feet east of Mooney Boulevard. The third project driveway is located on the north side of Riggan Avenue approximately 520 feet east of Mooney Boulevard and is proposed to be limited left-in, right-in and right-out access. The fourth project driveway is proposed to be located on the north side of Riggan Avenue approximately 950 feet east of Mooney Boulevard and is proposed to be limited left-in, right-in and right-out access. It should be noted that the City of Visalia Improvement Standard C-32 calls for driveways to arterials to be limited to be no closer than 200 feet from an intersection and a spacing of 500 feet between driveways. Therefore, the Project is requesting a deviation from the City of Visalia Standard C-32 to allow for an additional drive approach on the Riggan Avenue frontage due to site constraints.

The Project Site Plan has spaced the drive approaches on Riggan Ave to the greatest extent possible; however, they do not conform to the City standard. The reason is that the Project Site has no local street frontage to the north or east. The Project is mostly bounded by a Southern California Edison substation to the north and an adjacent, separately-owned residential parcel. There is very little ability to get traffic on the eastern side of the Project out to streets on the west, north, or east. Due to this unique Project site constraint, the Project is requesting approval from the City Engineer of deviation from the City of Visalia Standard C-32.

Based on the Synchro LOS analysis of the two additional Project driveways along the north side of Riggan Avenue, no substandard LOS operations were revealed nor are queuing issues projected. As a result, JLB finds that the proposed Project driveway locations and median island openings can be supported based on the current site plan and proposed land uses.

It should be noted that that the proposed locations of the existing and proposed Project driveways and median island openings are very similar to that which exists at the shopping center located on the northeast corner of Riggan Avenue and Demaree Street.

JLB analyzed the location of the existing access point relative to the existing local roads and driveways in the Project's vicinity. A review of the existing driveway indicates that it is located at a point that minimizes traffic operational impacts to the existing roadway network. However, it is recommended that the easternmost Project driveway to Riggan Avenue be as close as possible aligned with Dayton Street.

Potential Onsite Phasing and Associated Off-Site Roadway Improvements

Roadway transitions are best determined during the design phase of a Project. Therefore, any offsite roadway transitions would be developed by the Project's Civil Engineer, 4Creeks, in consultation with City of Visalia staff. Additionally, the roadway transitions should follow, to the extent possible, the City of Visalia Standards. Since the preparation of the TIA dated January 22, 2020, 4Creeks has prepared proposed roadway transition layouts for the City's review and consideration. The offsite roadway transition layouts are necessary with the development of Phases 2, 5, 6, 7 and for Buildout of the Project. The offsite roadway improvement concept designs have been included in Appendix J. At present, ultimate roadway improvements exist along the Project's frontage to Corvina Avenue, Mooney Boulevard, and approximately 150 feet of the western portion of Riggin Avenue. As the Project is developed, it will be necessary to complete the missing roadway improvements along the Project's frontage to Riggin Avenue. Given the level of offsite improvements needed, it is very likely that improvements to Riggin Avenue will be phased-in as onsite components of the Project are developed.

Based on data provided to JLB by Client, it is likely that the onsite development improvements will be developed in phases as illustrated on the latest Project Site Plan. With Phases 1, 3 and 4 no additional offsite improvements are needed. However, with Phases 2, 5, 6 and 7, additional offsite improvements would be necessary. It is recommended that the Riggin Avenue offsite improvements associated with Phases 2, 5 or 6 be completed prior to occupancy of any buildings within these phases. It is recommended that all Riggin Avenue offsite improvements for buildout of the Project associated with Phase 7 be completed prior to occupancy of any buildings within Phase 7. Appendix J contains the Riggin Avenue roadway transition layouts. The first is a roadway transition layout that coincides with the development of Phases 2, 5, or 6 while the second roadway transition layout coincides with the development of Phase 7. Both of these roadway transition layouts also illustrate the needed transitions to the east of the Project site.

Project Trip Generation

Trip generation rates for the proposed Project were obtained from the 10th Edition of the Trip Generation Manual published by the Institute of Transportation Engineers (ITE). Table III presents the trip generation for the proposed Project with trip generation rates for Fast-Food Restaurant without Drive-Through Window, Multifamily Housing (low-Rise), General office Building, Fast-Food Restaurant with Drive-Through Window and Shopping Center. At buildout, the proposed Project is estimated to generate a maximum of 3,143 daily, 246 AM peak hour and 238 PM peak hour trips (before internal capture and pass-by trip reductions are taken into account). After internal capture and pass-by trip reductions are taken into account, the Project is estimated to generate a maximum of 2,389 daily, 147 AM peak hour and 131 PM peak hour trips.

Table III: Total Project Trip Generation

Land Use (ITE Code)	Size	Unit	Daily		AM Peak Hour					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)	2.300	k.s.f.	346.23	796	25.10	60	40	35	23	58	28.34	50	50	33	32	65
Multifamily Housing (Low-Rise) (220)	27	d.u.	7.32	198	0.46	23	77	3	9	12	0.56	63	37	9	6	15
General office Building (710)	7.960	k.s.f.	9.74	78	1.16	86	14	8	1	9	1.15	16	84	1	8	9
Fast-Food Restaurant with Drive-Through Window (934)	4.044	k.s.f.	470.95	1,905	40.19	51	49	83	80	163	32.67	52	48	69	63	132
Shopping Center (820)	4.400	k.s.f.	37.75	166	0.94	62	38	2	2	4	3.81	48	52	8	9	17
Total Driveway Trips				3,143				131	115	246				120	118	238

Note: k.s.f. = Thousand Square Feet
 d.u. = Dwelling Units

Internal capture rates were prepared pursuant to the NCHRP 684 Internal Trip Capture procedure. Internal Capture trip reductions are applied to account for the interaction between various individual land uses assumed for the trip generation of the Project. For example, in a mixed-use development containing offices and shops, trips made by the office workers to the shops within the site are defined as internal, or captured, trips within the site. Table IV presents the results of the internal capture reduction for the proposed Project. Internal capture trips are presented as negative numbers because they are deducted from the total number of trips presented in Table III. Table V presents the adjusted driveway trip generation resulting from the internal capture trip reductions. As can be seen from Table V, the trips after internal capture reductions that the Project is estimated to generate are 2,954 daily trips, 240 AM peak hour trips and 212 PM peak hour trips.

Table IV: Internal Capture Reductions

Land Use (ITE Code)	Daily	AM (7-9) Peak Hour			PM (4-6) Peak Hour		
	Total	In	Out	Total	In	Out	Total
Fast-Food Restaurant without Drive-Through Window (933)	-48	-1	0	-1	-2	-2	-4
Multifamily Housing (Low-Rise) (220)	-12	0	-2	-2	-3	-2	-5
General office Building (710)	-5	-1	0	-1	0	-1	-1
Fast-Food Restaurant with Drive-Through Window (934)	-114	-1	-1	-2	-2	-3	-5
Shopping Center (820)	-10	0	0	0	-6	-5	-11
Pass-By Trip Reductions	-189	-3	-3	-6	-13	-13	-26

Table V: Project Trip Generation Adjusted for Internal Capture Reductions

Land Use (ITE Code)	Daily	AM (7-9) Peak Hour			PM (4-6) Peak Hour		
	Total	In	Out	Total	In	Out	Total
Fast-Food Restaurant without Drive-Through Window (933)	748	34	23	57	31	30	61
Multifamily Housing (Low-Rise) (220)	186	3	7	10	6	4	10
General office Building (710)	73	7	1	8	1	7	8
Fast-Food Restaurant with Drive-Through Window (934)	1,791	82	79	161	67	60	127
Shopping Center (820)	156	2	2	4	2	4	6
Adjusted Project Trip Generation	2,954	128	112	240	107	105	212

The trip generation applies pass-by trip reductions pursuant to the 3rd Edition of the Trip Generation Handbook published by ITE. Pass-by trip reductions are applied to vehicles already on the road that the Project may attract. Table VI presents the results of the pass-by trip reduction analysis for the proposed Project. Pass-by trips are presented in negative numbers because they are deducted from the total number of trips presented in Table V. Lastly, Table VII presents the adjusted trip generation resulting from the internal capture and pass-by trip reductions. As can be seen from Table VII, the maximum net new trips that the Project is estimated to generate are 2,389 daily trips, 150 AM trips and 134 PM trips.

Table VI: Pass-By Trip Reductions

Land Use (ITE Code)	Daily	AM (7-9) Peak Hour			PM (4-6) Peak Hour		
	Total	In	Out	Total	In	Out	Total
Fast-Food Restaurant without Drive-Through Window (933)	-90	-6	-6	-12	-8	-8	-16
Multifamily Housing (Low-Rise) (220)	0	0	0	0	0	0	0
General office Building (710)	0	0	0	0	0	0	0
Fast-Food Restaurant with Drive-Through Window (934)	-448	-39	-39	-78	-30	-30	-60
Shopping Center (820)	-27	0	0	0	-1	-1	-2
Adjusted Project Trip Generation	-565	-45	-45	-90	-39	-39	-78

Table VII: Project Trip Generation Adjusted for Pass-By Trip Reductions

Land Use (ITE Code)	Daily	AM (7-9) Peak Hour			PM (4-6) Peak Hour		
	Total	In	Out	Total	In	Out	Total
Fast-Food Restaurant without Drive-Through Window (933)	658	28	17	45	23	22	45
Multifamily Housing (Low-Rise) (220)	186	3	7	10	6	4	10
General office Building (710)	73	7	1	8	1	7	8
Fast-Food Restaurant with Drive-Through Window (934)	1,343	43	40	83	37	30	67
Shopping Center (820)	129	2	2	4	1	3	4
Adjusted Project Trip Generation	2,389	83	67	150	68	66	134

Trip Distribution

The trip distribution assumptions were developed based on existing travel patterns, the Tulare County Association of Government (TCAG) Project Select Zone, the existing roadway network, engineering judgment, data provided by the developer, knowledge of the study area, existing residential and commercial densities, and the City of Visalia 2030 General Plan Circulation Element in the vicinity of the Project. Figure 4 illustrates the Total Driveway Trips (After Internal Capture), Figure 5 presents the Project's Pass-By Trip Reductions, and Figure 6 presents the Net New Project Only Trips (after the Pass-By Trip Reductions have been taken into account).

Corner Sight Distance

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 give Table 20.1...". Therefore, the CSD for the Mooney Boulevard driveway is 300 feet. The CSD for the three driveways along Riggin are, from west to east 360 feet. Appendix J includes the CSD evaluation which includes areas where obstructions greater than two (2) feet above the street grade should not be approved.

Traffic Signal Warrants

Peak hour traffic signal warrants, as appropriate, were prepared for the unsignalized intersections in the Opening Year plus Project Traffic Conditions scenario. These warrants are found in Appendix I. These warrants were prepared pursuant to the CA MUTCD guidelines for the preparation of traffic signal warrants. Under this scenario, the intersection of Mooney Boulevard at Ferguson Avenue is projected to satisfy the peak hour signal warrant during both peak periods. Based on the signal warrant and engineering judgement, signalization of this intersection is recommended.

Results of Opening Year plus Project Level of Service Analysis

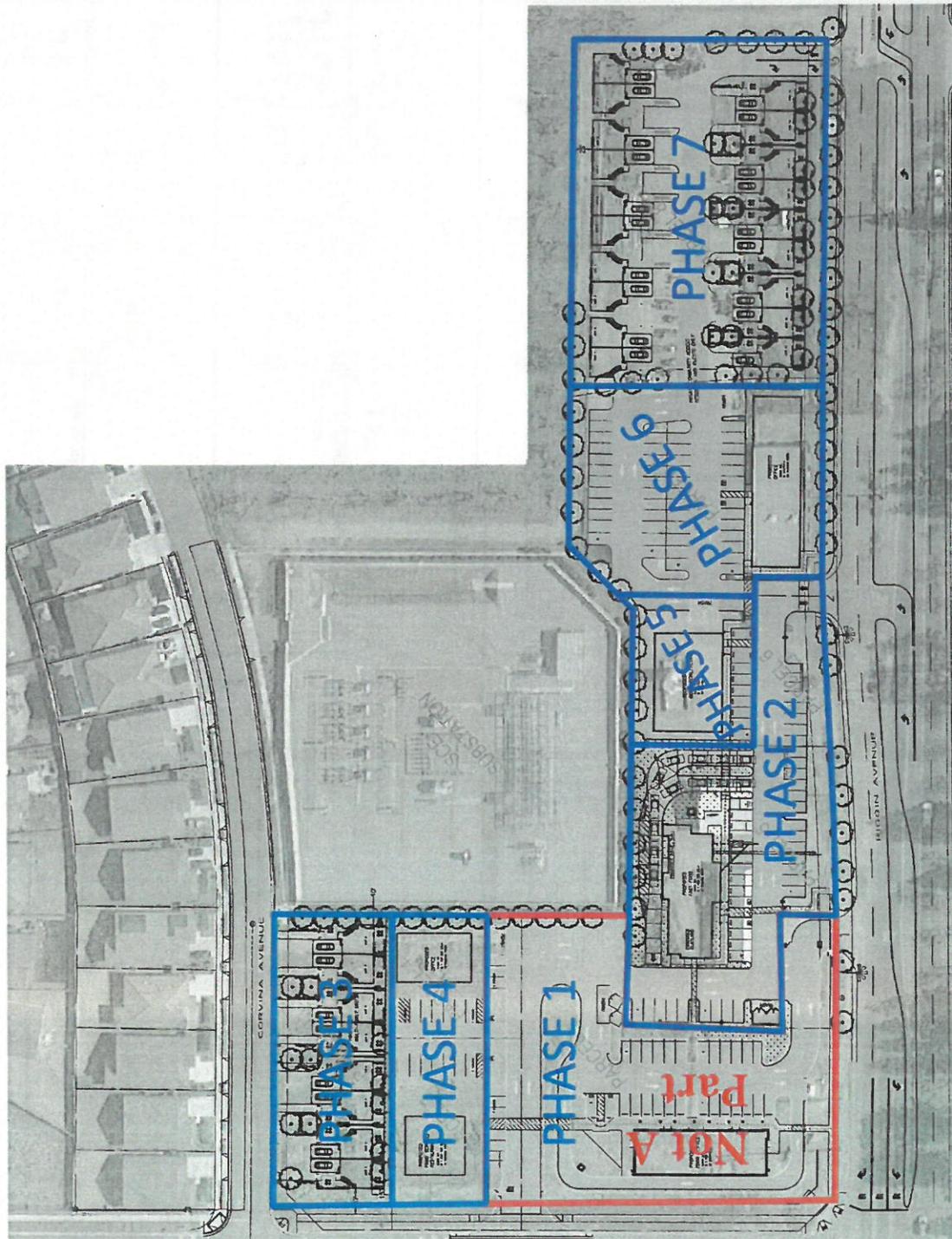
The Opening Year plus Project Traffic Conditions scenario assumes that the Existing roadway geometrics and traffic controls will remain in place with a few exceptions. For purposes of this TIA, it is assumed that the intersections of County Center Street at Riggin Avenue and Giddings Street at Riggin Avenue are signalized by the year 2020. The geometrics of County Center Street and Riggin Avenue will remain the same; however, the intersection of Giddings Street and Riggin Avenue will have left-turn lanes added on the north and south approaches. Figure 7 illustrates the Opening Year plus Project turning movement volumes, intersection geometrics and traffic controls. LOS worksheets for the Opening plus Project Traffic Conditions scenario are provided in Appendix G. Table VIII presents a summary of the Opening Year plus Project peak hour LOS at the study intersections.

Under this scenario, Mooney Boulevard at Ferguson Avenue is projected to exceed its LOS threshold during the AM peak period. To improve its LOS, it is recommended the intersection be signalized with protective left-turn phasing on all approaches.

Table VIII: Opening Year plus Project Intersection LOS Results

ID	Intersection	Intersection Control	AM (7 - 9) Peak Hour		PM (4 - 6) Peak Hour	
			Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS
1	Mooney Blvd / Project Drwy 1	TWSC	31.3	D	14.1	B
2	County Center St / Riggin Ave	Signalized	22.3	C	22.8	C
3	Mooney Boulevard / Riggin Ave	Signalized	30.0	C	21.6	C
4	Project Drwy 2 / Riggin Ave	OWSC	10.6	B	10.8	B
5	Project Drwy 3 / Riggin Ave	OWSC	9.9	A	10.2	B
6	Project Drwy 4 / Riggin Ave	TWSC	11.8	B	12.5	B
7	Giddings St / Riggin Ave	Signalized	21.6	C	18.3	B
8	Mooney Blvd / Ferguson Ave	AWSC	74.9	F	19.5	C
		Signalized	25.9	C	18.0	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.



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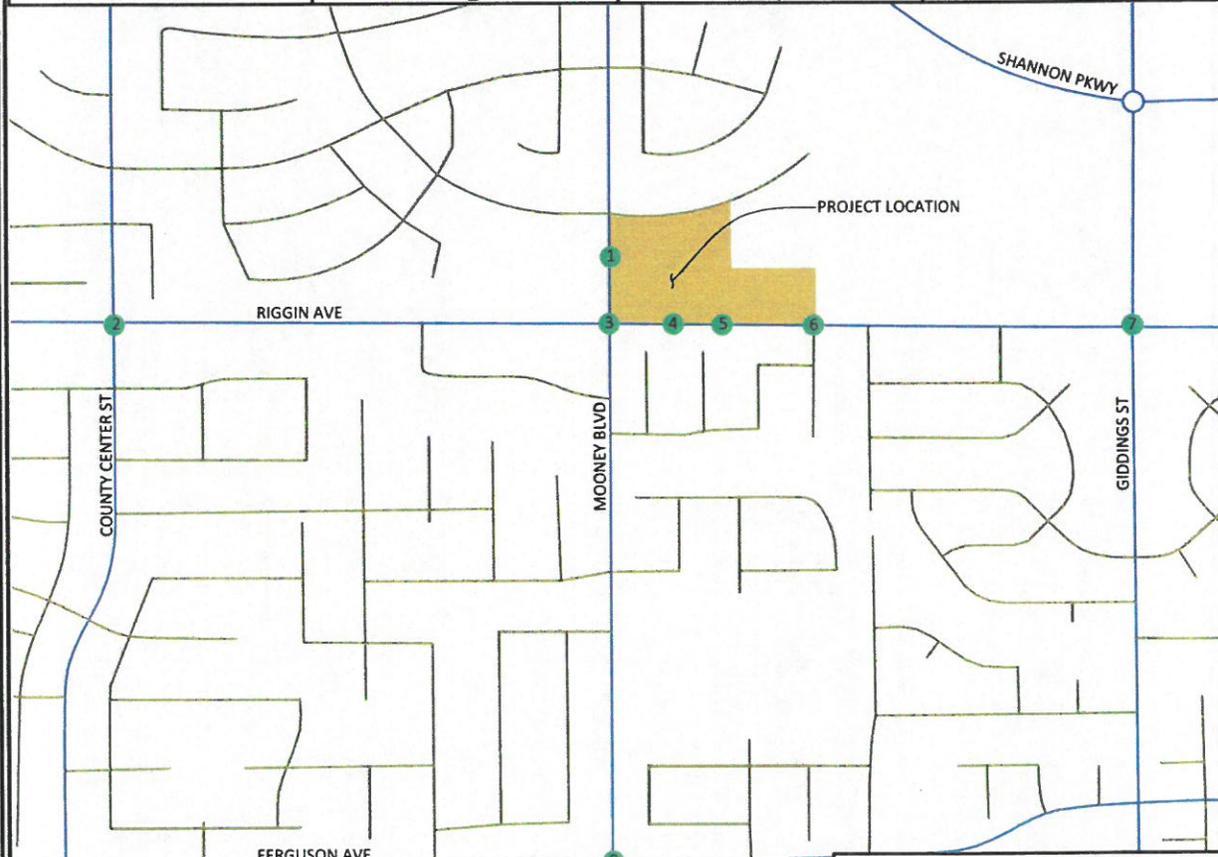


Not To Scale

Shannon Village East - City of Visalia Total Driveway Trips (After Internal Capture)

Figure 4

<p>1. Mooney Blvd & Project Drwy 1</p>	<p>2. County Center St & Riggan Ave</p>	<p>3. Mooney Blvd & Riggan Ave</p>	<p>4. Project Drwy 2 & Riggan Ave</p>
<p>5. Project Drwy 3 & Riggan Ave</p>	<p>6. Project Drwy 4/Dayton St & Riggan Ave</p>	<p>7. Giddings St & Riggan Ave</p>	<p>8. Mooney Blvd & Ferguson Ave</p>



LEGEND

- = STUDY INTERSECTION
- = AM PROJECT ONLY TRIPS
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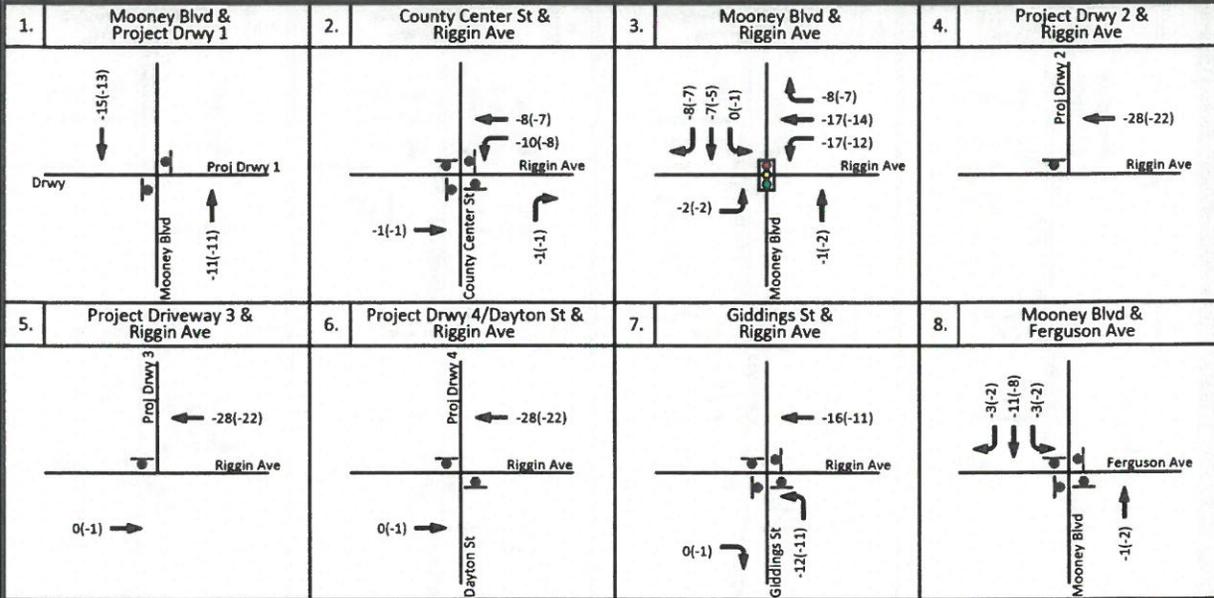
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Shannon Village East - City of Visalia Pass-By Trip Reductions

Figure 5



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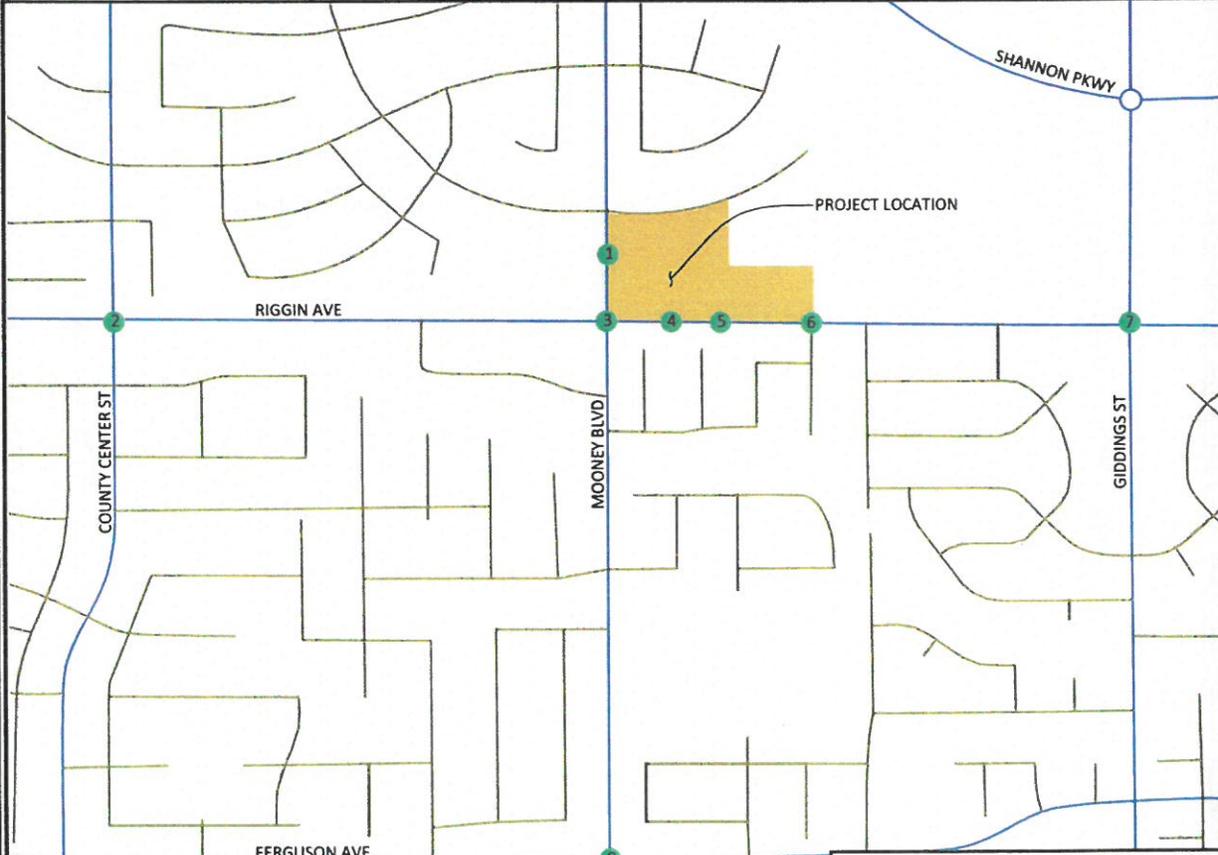
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Shannon Village East - City of Visalia Net New Project Only Trips

Figure 6

<p>1. Mooney Blvd & Project Drwy 1</p>	<p>2. County Center St & Riggan Ave</p>	<p>3. Mooney Blvd & Riggan Ave</p>	<p>4. Project Drwy 2 & Riggan Ave</p>
<p>5. Project Drwy 3 & Riggan Ave</p>	<p>6. Project Drwy 4/Dayton St & Riggan Ave</p>	<p>7. Giddings St & Riggan Ave</p>	<p>8. Mooney Blvd & Ferguson Ave</p>



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- = AM PROJECT ONLY TRIPS
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<p>1. Mooney Blvd & Project Drwy 1</p>	<p>2. County Center St & Riggan Ave</p>	<p>3. Mooney Blvd & Riggan Ave</p>	<p>4. Project Drwy 2 & Riggan Ave</p>
<p>5. Project Drwy 3 & Riggan Ave</p>	<p>6. Project Drwy 4/Dayton St & Riggan Ave</p>	<p>7. Giddings St & Riggan Ave</p>	<p>8. Mooney Blvd & Ferguson Ave</p>



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- = STUDY INTERSECTION
- XX = AM PEAK HOUR TRIPS
- (XX) = PM PEAK HOUR TRIPS
- = SIGNALIZED INTERSECTION
- = STOP SIGN

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Cumulative Five (5) Years plus Project Traffic Conditions

Description of Approved and Pipeline Projects

Approved and Pipeline Projects consist of developments that are either under construction, built but not fully occupied, are not built but have final site development review (SDR) approval, or for which the lead agency or responsible agencies have knowledge of. The City of Visalia, County of Tulare and Caltrans staff were consulted throughout the preparation of this TIA regarding approved and/or known projects that could potentially impact the study intersections. JLB staff conducted a reconnaissance of the surrounding area to confirm the Near Term Projects. Subsequently, it was determined that the projects listed in Table IX were approved, near approval, or in the pipeline within the proximity of the proposed Project.

The trip generation listed in Table IX is that which is anticipated to be added to the streets and highways by these projects between the time of the preparation of this report and five years from 2020. As shown in Table IX, the total trip generation for the Near Term Projects is 34,046 daily trips, 2,197 AM peak hour trips and 2,912 PM peak hour trips. Figure 8 illustrates the location of the approved, near approval, or pipeline projects and their combined trip assignment to the study intersections.

Table IX: Near Term Projects' Trip Generation

Approved Project Location	Approved or Pipeline Project Name	Daily Trips	AM Peak Hour	PM Peak Hour
A	Sterling Oaks (portion of)	444	35	47
B	Luisi Acres (portion of)	293	23	31
C	Shannon Ranch 3 (portion of)	1,425	112	149
D	River Island Ranch	2,256	177	237
E	Orchard Walk (SFR)	972	76	102
F	Highland Park Estates	2,615	205	274
G	Shannon Village Phase 4	209	17	21
H	Orchard Walk West	15,039	1,004	1,140
I	Grocery Store	5,553	199	480
J	Mixed-Use	2,735	182	226
K	Orchard Walk (MFR)	1,581	99	121
L	Assisted Living	338	25	34
M	Fast Food Restaurant	520	38	43
N	Orchard Walk (SFR)	66	5	7
Total Approved and Pipeline Project Trips		34,046	2,197	2,912

Note: Trip Generation prepared by JLB Traffic Engineering, Inc. based on readily available information

Traffic Signal Warrants

Peak hour traffic signal warrants, as appropriate, were prepared for the unsignalized intersections in the Cumulative Five (5) Years plus Project Traffic Conditions scenario. These warrants are found in Appendix I. These warrants were prepared pursuant to the CA MUTCD guidelines for the preparation of traffic signal warrants. Under this scenario, the intersection of Mooney Boulevard at Ferguson Avenue is projected to satisfy the peak hour signal warrant during both peak periods. Based on the signal warrant and engineering judgement, signalization of this intersection is recommended.



Results of Cumulative Five (5) Years plus Project Level of Service Analysis

The Cumulative Five (5) Years plus Project Traffic Conditions scenario assumes that the Opening Year plus Project roadway geometrics and traffic controls will remain in place. Figure 9 illustrates the Opening Year plus Project turning movement volumes, intersection geometrics and traffic controls. LOS worksheets for the Cumulative Five (5) Years plus Project Traffic Conditions scenario are provided in Appendix H. Table X presents a summary of the Cumulative Five (5) Years plus Project peak hour LOS at the study intersections.

Under this scenario, Mooney Boulevard and Ferguson Avenue is projected to exceed its LOS threshold during the AM peak period. To improve its LOS, it is recommended that the intersection be signalized with protective left-turn phasing on all approaches.

Table X: Cumulative Five (5) Years plus Project Intersection LOS Results

ID	Intersection	Intersection Control	AM (7 - 9) Peak Hour		PM (4 - 6) Peak Hour	
			Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS
1	Mooney Blvd / Project Drwy 1	TWSC	33.3	D	16.6	C
2	County Center St / Riggan Ave	Signalized	25.3	C	26.1	C
3	Mooney Boulevard / Riggan Ave	Signalized	35.3	D	30.0	C
4	Project Drwy 2 / Riggan Ave	OWSC	12.2	B	12.3	B
5	Project Drwy 3 / Riggan Ave	OWSC	10.8	B	11.3	B
6	Project Drwy 4 / Riggan Ave	TWSC	13.8	B	15.9	C
7	Giddings St / Riggan Ave	Signalized	46.2	D	48.0	D
8	Mooney Blvd / Ferguson Ave	AWSC	77.1	F	29.8	D
		Signalized	44.4	D	42.0	D

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.

Fair Share Analysis

The Project's equitable fair share percentages to future improvements that are not fully funded by existing impact fee programs or grant funding are provided in Table XI. The Project's equitable fair share percentage impacts were calculated pursuant to the Caltrans guidelines for the Preparation of Traffic Impact Studies. The Project's pro-rata fair shares were calculated utilizing the Existing volumes, Net New Project Only Trips, and Cumulative Year 2039 plus Project volumes. The Cumulative Year 2039 plus Project volumes were not used elsewhere in the report and were created by expanding the Existing volumes with the same growth rate from earlier of 2.1 percent to 2039 and adding the Net New Project Only Trips. Figure 2 illustrates the Existing Volumes and Figure 6 illustrates the Net New Project Only Trips. Since the critical peak period for the study facility was determined to be during the AM peak, the AM peak volumes are utilized to determine the Project's pro-rata fair share.

It is recommended that the Project contribute its equitable fair share as listed in Table XI for the future improvements necessary to maintain an acceptable LOS or turn lane storage capacity. However, fair share contributions should only be made for those facilities, or portion thereof, currently not funded by the responsible agencies' roadway impact fee program(s) or grant funding, as appropriate. For those improvements not presently covered by local and regional roadway impact fee programs or grant funding, it is recommended that the Project contribute its equitable fair share. Payment of the Project's equitable fair share, in addition to the local and regional impact fee programs would satisfy the Project's traffic mitigation measures.

This study does not provide construction costs for the recommended mitigation measures; therefore, if the recommended mitigation measures are implemented, it is recommended that the developer work with the City of Visalia, and/or responsible agency, to develop the estimated construction costs.

Table XI: Project's Fair of Share of Future Roadway Improvements

ID	Intersection	Existing Traffic Volumes (AM Peak)	Cumulative Five (5) Years plus Project Traffic Volumes (AM Peak)	Project Only Trips (AM Peak)	Project's Fair Share (%)
8	Mooney Blvd / Ferguson Ave	1,531	2,347	27	3.31

Note: Project Fair Share = ((Project Only Trips) / (Cumulative Five (5) Years + Project Traffic Volumes - Existing Traffic Volumes)) x 100



Shannon Village East - City of Visalia Near Term Projects' Trip Assignment

Figure 8

<p>1. Mooney Blvd & Project Drwy 1</p>	<p>2. County Center St & Riggins Ave</p>	<p>3. Mooney Blvd & Riggins Ave</p>	<p>4. Project Drwy 2 & Riggins Ave</p>
<p>5. Project Drwy 3 & Riggins Ave</p>	<p>6. Project Drwy 4/Dayton St & Riggins Ave</p>	<p>7. Giddings St & Riggins Ave</p>	<p>8. Mooney Blvd & Ferguson Ave</p>



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- = STUDY INTERSECTION
- XX = AM NEAR TERM TRIPS
- (XX) = PM NEAR TERM TRIPS
- 🚦 = SIGNALIZED INTERSECTION
- 🛑 = STOP SIGN
- # = NEAR TERM PROJECT LOCATION

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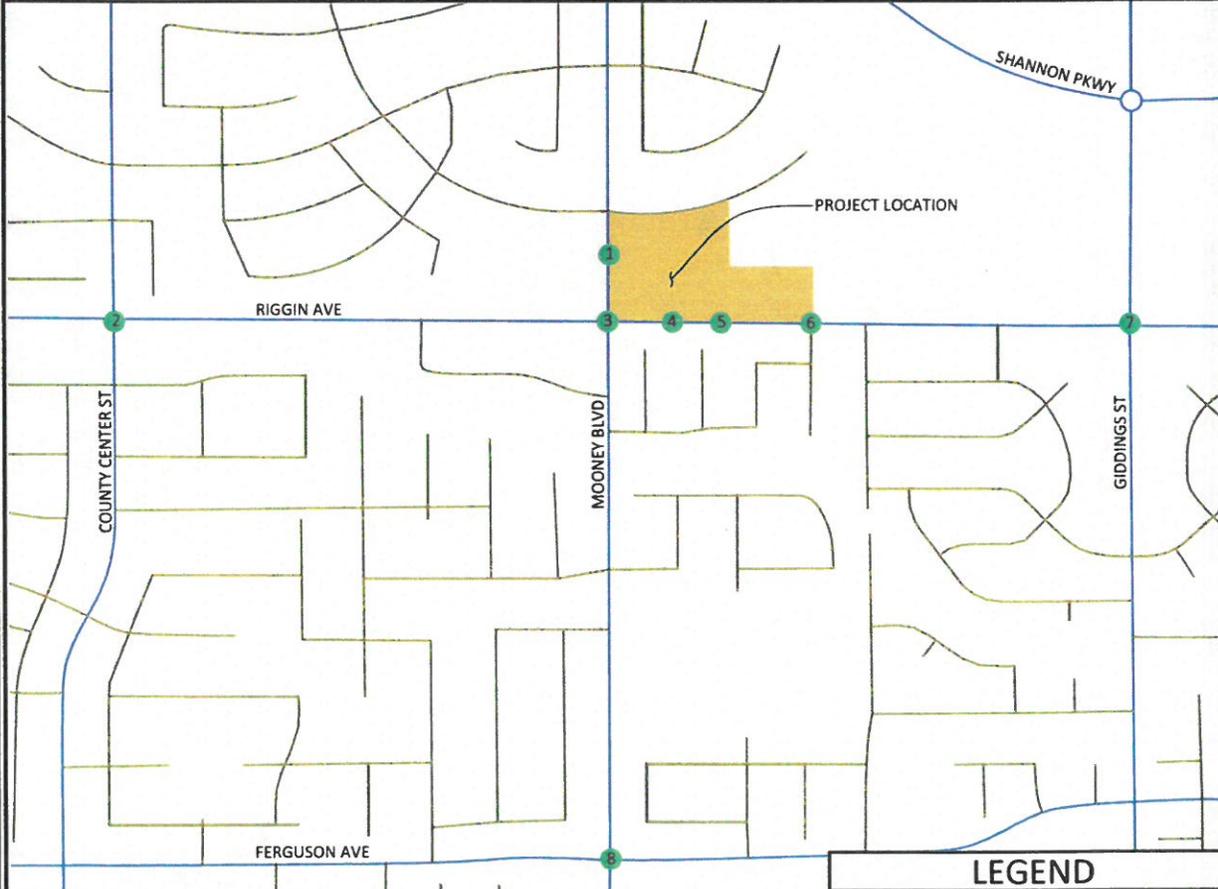
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Shannon Village East - City of Visalia Cumulative Five (5) Years plus Project - Traffic Volumes, Geometrics and Controls

Figure 9

<p>1. Mooney Blvd & Project Drwy 1</p>	<p>2. County Center St & Riggan Ave</p>	<p>3. Mooney Blvd & Riggan Ave</p>	<p>4. Project Drwy 2 & Riggan Ave</p>
<p>5. Project Drwy 3 & Riggan Ave</p>	<p>6. Project Drwy 4/Dayton St & Riggan Ave</p>	<p>7. Giddings St & Riggan Ave</p>	<p>8. Mooney Blvd & Ferguson Ave</p>



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Queuing Analysis

Table XII provides a queue length summary for left-turn and right-turn lanes at the study intersections under 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). According to 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 XII 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 un-necessary 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 in Table XII.

Based on the SimTraffic output files and engineering judgement, it is recommended that the storage capacity for the following be considered. At the remaining approaches of the study intersections, the existing storage capacity will be sufficient to accommodate the maximum queue. Based on the Sim-Traffic queuing analysis, there will be no queues of the westbound right-turns onto the Project site. Table XII of the Revised TIA has been updated to show these movements with the projected zero (0) feet queue. Therefore, dedicated right-turn lanes for the proposed Project driveways along the north side of Riggin Avenue are not warranted. These findings would result in similar roadway improvements to Riggin Avenue as those approved by the City of Visalia for the existing shopping centers located at the northwest corner of Riggin Avenue and Mooney Boulevard, and the northeast corner of Riggin Avenue and Demaree Street.

- Mooney Boulevard / Riggin Avenue
 - While the queuing (rounded up to the nearest 25 feet) for the westbound left-turn lane is projected to be 175 feet under the Cumulative 5 Years plus Project scenario, JLB recommends that the storage length for this movement to set to 250 feet.
- Driveway 3 / Riggin Avenue
 - While the queuing (rounded up to the nearest 25 feet) for the eastbound left-turn lane is projected to be 50 feet under the Cumulative 5 Years plus Project, JLB recommends that the storage length for this movement be set between 75 to 100 feet.
- Driveway 4 / Riggin Avenue
 - While the queuing (rounded up to the nearest 25 feet) for the eastbound left-turn lane is projected to be 25 feet under the Cumulative 5 Years plus Project, JLB recommends that the storage length for this movement be set to 75 feet.

Table XII: Queuing Analysis

ID	Intersection	Existing Queue Storage Length (ft.)		Existing		Opening Year plus Project		Cumulative Five (5) Years plus Project	
				AM	PM	AM	PM	AM	PM
1	Mooney Blvd / Project Drwy 1	EB Left-Thru-Right	>500	52	62	64	66	63	76
		WB Left-Thru-Right	>500	56	39	73	55	74	66
		NB Left	50	44	46	44	37	42	51
		NB Thru	>500	17	0	10	0	0	30
		NB Thru-Right	>500	7	0	13	0	7	17
		SB Left	50	37	0	51	25	50	31
		SB Thru	>500	0	0	0	0	20	0
		SB Thru-Right	>500	0	0	14	0	0	0
2	County Center St / Riggins Ave	EB Left	250	32	58	41	86	71	96
		EB Thru	>500	69	102	115	121	144	208
		EB Thru-Right	>500	73	116	107	140	170	230
		WB U-Left	150	62	83	87	109	106	185
		WB Thru	>500	95	93	124	122	191	193
		WB Thru-Right	>500	108	108	142	148	211	223
		NB Left	200	58	45	90	76	132	107
		NB Thru-Right	>500	98	82	117	150	226	241
		SB Left	130	53	49	105	71	114	96
		SB Thru	>500	72	62	96	82	132	139
		SB Right	130	61	47	56	38	64	57
3	Mooney Blvd / Riggins Ave	EB U-Left	300	275	173	195	214	178	184
		EB Thru	>500	144	95	96	109	125	216
		EB Thru	>500	94	120	90	122	131	239
		EB Right	100	51	50	56	56	54	55
		WB U-Left	125	152	102	132	156	167	154
		WB Thru	>500	127	122	139	130	149	188
		WB Thru	>500	119	121	131	121	173	191
		WB Right	125	55	48	53	51	63	51
		NB Left	160	96	100	111	98	124	131
		NB Thru	>500	98	75	94	65	112	138
		NB Thru-Right	>500	114	91	154	87	173	208
		SB Left	150	82	76	84	74	148	164
		SB Thru	>500	133	101	134	87	230	194
SB Right	>300	42	32	47	29	50	35		

Note: * = Does not exist or is not projected to exist



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Table XII: Queuing Analysis (cont.)

ID	Intersection	Existing Queue Storage Length (ft.)		Existing		Opening Year plus Project		Cumulative Five (5) Years plus Project	
				AM	PM	AM	PM	AM	PM
4	Project Drwy 2 / Riggins Ave	EB Thru	>500	14	50	0	0	0	0
		EB Thru	>500	20	45	0	0	0	0
		WB Thru	>500	0	0	0	0	0	0
		WB Thru-Right	*	*	*	0	0	0	0
		SB Right	*	43	41	80	62	75	65
5	Project Drwy 3 / Riggins Ave	EB Left	100	0	0	44	35	44	49
		EB Thru	>500	0	0	0	17	18	90
		EB Thru	>500	0	0	0	25	18	91
		WB Thru	>500	0	0	0	0	0	0
		WB Thru-Right	*	*	*	0	0	0	0
6	Project Drwy 4 / Riggins Ave	EB Left	100	*	*	0	9	0	0
		EB Thru	*	*	*	0	0	0	0
		EB Thru-Right	>500	0	0	0	0	0	0
		WB Left	90	15	25	0	16	12	25
		WB Thru	>500	0	0	0	0	0	0
		WB Thru-Right	*	*	*	0	0	0	0
		NB Left-Right	>300	38	38	*	*	*	*
		NB Right	>300	*	*	36	32	34	33
SB Right	*	*	*	24	18	18	0		
7	Giddings St / Riggins Ave	EB Left	155	96	98	99	133	183	193
		EB Thru-Right	>500	216	220	217	226	384	408
		WB Left	155	75	69	66	64	169	180
		WB Thru-Right	>500	217	200	159	162	410	1324
		NB Left	100	64	40	72	64	154	85
		NB Thru-Right	>500	126	70	117	88	325	179
		SB Left	155	61	32	68	41	149	80
		SB Thru-Right	>500	158	63	145	88	271	187

Note: * = Does not exist or is not projected to exist

Table XII: Queuing Analysis (cont.)

ID	Intersection	Existing Queue Storage Length (ft.)		Existing		Opening Year plus Project		Cumulative Five (5) Years plus Project	
				AM	PM	AM	PM	AM	PM
8	Mooney Blvd / Ferguson Ave	EB Left	150	65	69	79	79	187	144
		EB Thru-Right	>500	161	130	237	171	411	314
		WB Left	160	82	81	112	69	142	139
		WB Thru	>500	126	157	141	146	239	218
		WB Right	60	55	99	66	66	75	122
		NB Left	155	113	88	132	84	152	147
		NB Thru	>500	151	140	164	171	168	252
		NB Right	>300	54	52	60	56	59	50
		SB Left	150	106	55	103	65	130	79
		SB Thru	>500	94	78	109	82	118	116
		SB Thru-Right	>500	118	86	115	71	151	140

Note: * = Does not exist or is not projected to exist

Conclusions and Recommendations

Conclusions and recommendations regarding the proposed Project are presented below.

Existing Traffic Conditions

- JLB conducted a search of the Statewide Integrated Traffic Records System (SWITRS) to review collision data for the most recent three-year period. Based on the collision data recorded during the three-year period, all existing study intersections have experienced a relatively low average number of collisions per year with two exceptions. The exceptions are the intersections of County Center Street at Riggin Avenue and Giddings Street at Riggin Avenue. Since the City of Visalia already has plans to signalize both of these intersections, no other changes to these intersections are recommended.
- At present, the intersections of Giddings Street at Riggin Avenue and Mooney Boulevard at Ferguson Avenue are projected to exceed its LOS threshold during the AM peak. To improve the LOS at these intersections, it is recommended that the following improvements be implemented.
 - Giddings Street / Riggin Avenue
 - Add a northbound left-turn lane;
 - Modify the northbound left-through-right lane to a through-right lane;
 - Add a southbound left-turn lane;
 - Modify the southbound left-through-right lane to a through-right lane;
 - Signalize the intersection with protective left-turn phasing on all approaches; and
 - Modify the intersection to accommodate the added lanes.
 - Mooney Boulevard / Ferguson Avenue
 - Signalize the intersection with protective left-turn phasing on all approaches.

Opening Year plus Project Traffic Conditions

- JLB analyzed the location of the existing access point relative to the existing local roads and driveways in the Project's vicinity. A review of the existing driveway indicates that it is located at a point that minimizes traffic operational impacts to the existing roadway network. However, it is recommended that the easternmost Project driveway to Riggin Avenue be as close as possible aligned with Dayton Street. Furthermore, the Project is requesting a deviation from the City Standard C-32 Drive Approach Locations to allow for an additional drive approach on the Riggin Avenue frontage.
- It is likely that the onsite development improvements will be developed in phases as illustrated in the latest Project Site Plan. With Phases 1, 3 and 4 no additional offsite improvements are needed. However, with Phases 2, 5, 6 and 7, additional offsite improvements would be necessary. It is recommended that the Riggin Avenue offsite improvements associated with Phases 2, 5 and 6 be completed prior to occupancy of any buildings within these Phases. It is recommended that all Riggin Avenue offsite improvements for buildout of the Project associated with Phase 7 be completed prior to occupancy of any buildings within Phase 7. Appendix J contains the Riggin Avenue roadway transition layouts that would coincide with each of the development Phases that are recommended to include offsite improvements along Riggin Avenue. The first is a roadway transition layout that coincides with the development of Phases 2, 5, or 6 while the second roadway transition layout coincides with the development of Phase 7. Both of these roadway transition layouts also illustrate the needed transitions to the east of the Project site.

- At buildout, the proposed Project is estimated to generate a maximum of 3,143 daily, 246 AM peak hour and 238 PM peak hour total driveway trips. However, the TIA takes into account Internal capture trip reductions pursuant to the NCHRP 684 Internal Capture procedure and pass-by trip reductions pursuant to the 3rd Edition of the Trip Generation Handbook published by ITE. After Internal capture trip reductions and pass-by trip reductions are applied, the maximum net new trips that the Project is estimated to generate are 2,389 daily trips, 147 AM peak hour trips and 131 PM peak hour trips.
- 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.
- Under this scenario, the intersection of Mooney Boulevard and Ferguson Avenue is projected to exceed its LOS threshold during the AM peak. To improve its LOS, it is recommended that the intersection be signalized with protective left-turn phasing on all approaches.

Cumulative Five (5) Years plus Project Traffic Conditions

- The total trip generation for the Near Term Projects is 34,046 daily trips, 2,197 AM peak hour trips and 2,912 PM peak hour trips.
- Under this scenario, the intersection of Mooney Boulevard at Ferguson Avenue is projected to exceed its LOS threshold during the AM peak. To improve its LOS, it is recommended that this intersection be signalized with protective left-turn phasing on all approaches.

Project Equitable Fair Share Impact Analysis

- It is recommended that the Project contribute its equitable fair share as presented in Table XI.

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, PE, TE	Project Manager
Susana Maciel, EIT	Project Engineer
Matthew Arndt, EIT	Engineer I/II
Jove Alcazar, EIT	Engineer I/II
Javier Rios	Engineer I/II
Dennis Wynn	Sr. Engineering Technician
Jesus Garcia	Engineer I/II
Michael McConnell	Engineering Aide
Adrian Benavides	Engineering Aide

Persons Consulted:

Leslie Blair, P.E.	City of Visalia
Paul Bernal	City of Visalia
Hector Guerra	County of Tulare
David Deel	Caltrans, District 6
Derek Winning	Tulare COG
Kasia Poleszczuk	Tulare COG

References

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

Appendix A: Scope of Work



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Page | A

September 4, 2019

Leslie Blair
City of Visalia
315 East Acequia Avenue
Visalia, CA 93291

Via Email Only: leslie.blair@visalia.city

Subject: Draft Scope of Work for the Preparation of a Category II Traffic Impact Analysis for the Shannon Village East Mixed-Use Shopping Center to be located at the Northeast Corner of Riggin Avenue and Mooney Boulevard in the City of Visalia (JLB Project 013-009)

Dear Mrs. Blair,

JLB Traffic Engineering, Inc. (JLB) hereby submits this Draft Scope of Work for the preparation of a Category II Traffic Impact Analysis (TIA) for the above referenced Project located in the City of Visalia. Based on information provided to JLB, the Project proposes to develop parcels 2 through 8 of Shannon Village East with a mix of land uses. The Project includes a mix of restaurants, multifamily residential, office, and retail commercial uses. Parcel 1 has been previously analyzed and permitted and therefore is not part of this TIA. Per information provided to JLB, the Project is consistent with the City of Visalia General Plan. The Project site is located at the northeast corner of Riggin Avenue and Mooney Boulevard.

The purpose of the TIA is to evaluate the potential on-site and off-site traffic impacts, identify short-term roadway and circulation needs, determine potential mitigation measures and identify any critical traffic issues that should be addressed in the ongoing planning process. To evaluate the on-site and off-site traffic impacts of the proposed Project, JLB proposes the following Scope of Work.

Scope of Work

- JLB will request from the Tulare County Association of Governments (Tulare CAG) traffic forecast model runs for the Base Year 2019 and Cumulative Five (5) Years plus Project scenarios.
- JLB will obtain recent (less than 12 months) or schedule and conduct new traffic counts at the study facility(ies) as necessary. These counts will include pedestrians and vehicles.
- JLB will perform a site visit to observe existing traffic conditions, especially during the AM and PM peak hours. Existing roadway conditions including intersection geometrics and traffic controls will be verified.
- JLB will evaluate on-site circulation and provide recommendations as necessary to improve circulation to and within the Project site.
- JLB will prepare California Manual on Uniform Traffic Control Devices (CA MUTCD) Warrant 1 "8-hour" for existing unsignalized intersections under the Existing Traffic Conditions scenario.



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- JLB will prepare CA MUTCD CA MUTCD Warrant 3 "Peak Hour" signal warrants for unsignalized study intersections under the Opening Year plus Project and Cumulative Five (5) Years plus Project scenarios.
- JLB will forecast trip distribution based on turn count information and knowledge of the existing and planned circulation network in the vicinity of the Project.
- JLB will evaluate existing and forecast future levels of service (LOS) at the study intersections. JLB will use HCM 6th or HCM 2000 methodologies (as appropriate) within Synchro to perform this analysis for the AM and PM peak hours. JLB will identify causes of poor LOS.
- JLB will provide a table with the Project's pro-rata fair share allocation to improvement measures identified (if any) that are not currently funded by an existing funding source.
- JLB will prepare a corner sight distance evaluation for each of the four (4) proposed project driveways.
- JLB will prepare a three-year collision analysis based on the Statewide Integrated Traffic Reporting System (SWITRS) database for all existing study intersections.

Study Scenarios

1. Existing Traffic Conditions with proposed improvement measures (if any);
2. Opening Year plus Project traffic conditions with proposed mitigation measures (if any); and
3. Cumulative Five (5) Years plus Project traffic conditions with proposed with mitigations measures (if any).

Weekday peak hours to be analyzed (Tuesday through Thursday only)

1. 7 - 9 AM peak hour
2. 4 - 6 PM peak hour

Study Intersections

1. Shannon Parkway / Mooney Boulevard
2. Shannon Parkway / Giddings Street
3. Project Driveway 1 / Mooney Boulevard
4. Riggin Avenue / County Center Street
5. Riggin Avenue / Mooney Boulevard
6. Riggin Avenue / Project Driveway 2
7. Riggin Avenue / Project Driveway 3
8. Riggin Avenue / Project Driveway 4
9. Riggin Avenue / Giddings Street
10. Mooney Boulevard / Ferguson Avenue

Queuing analysis is included in the proposed Scope of Work for the study intersection(s) listed above under all study scenarios. This analysis will be utilized to recommend minimum storage lengths for left-turn and right-turn lanes at all study intersections.

Study Segments

1. none

Project Trip Generation

The trip generation rates for the proposed Project were obtained from the 10th Edition of the Trip Generation Manual published by the Institute of Transportation Engineers (ITE). Table I presents the trip generation for the proposed Project with trip generation rates for Fast-Food Restaurant without Drive-Through Window, Multifamily Housing (Low-Rise), General Office Building, Fast-Food Restaurant with Drive-Through Window, and Shopping Center. At buildout, the proposed Project is estimated to generate a maximum of 3,143 daily trips, 246 AM peak hour trips and 238 PM peak hour trips (before internal capture and pass-by rate reductions are taken into account).

Table I: Project Driveway Trip Generation

Land Use (ITE Code)	Size	Unit	Daily		AM Peak Hour					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)	2.300	k.s.f.	346.23	796	25.10	60	40	35	23	58	28.34	50	50	33	32	65
Multifamily Housing (Low-Rise) (220)	27	d.u.	7.32	198	0.46	23	77	3	9	12	0.56	63	37	9	6	15
General Office Building (710)	7.960	k.s.f.	9.74	78	1.16	86	14	8	1	9	1.15	16	84	1	8	9
Fast-Food Restaurant with Drive-Through Window (934)	4.044	k.s.f.	470.95	1,905	40.19	51	49	83	80	163	32.67	52	48	69	63	132
Shopping Center (820)	4.400	k.s.f.	37.75	166	0.94	62	38	2	2	4	3.81	48	52	8	9	17
Total Project Trips				3,143				131	115	246				120	118	238

Note: k.s.f. = Thousand Square Feet
 d.u. = Dwelling Units

The TIA proposes to take into account reductions in trip generation as a result of internal capture. Internal capture rates were prepared pursuant to the NCHRP 684 Internal Trip Capture procedure. Internal capture trip reductions are applied to account for the interaction between various individual land uses assumed for the trip generation of the Project. For example, in a mixed-use development containing offices and shops, trips made by the office workers to the stops within the site are defined as internal, or captured, trips within the site. Table II presents the results of the internal capture analysis for the proposed Project. Captured trips are presented as negative numbers because they are deducted from the total number of driveway trips presented in Table I. Table III presented the adjusted driveway trip generation resulting from the internal capture trip reductions.

Table II: Internal Capture Trip Reductions

Land Use (ITE Code)	Daily	AM Peak Hour			PM Peak Hour		
	Total	In	Out	Total	In	Out	Total
Fast-Food Restaurant without Drive-Through Window (933)	-48	-1	0	-1	-2	-2	-4
Multifamily Housing (Low-Rise) (220)	-12	0	-2	-2	-3	-2	-5
General Office Building (710)	-5	-1	0	-1	0	-1	-1
Fast-Food Restaurant with Drive-Through Window (934)	-114	-1	-1	-2	-2	-3	-5
Shopping Center (820)	-10	0	0	0	-6	-5	-11
Internal Capture Trip Reductions	-189	-3	-3	-6	-13	-13	-26

Table III: Project Driveway Trip Generation Adjusted for Internal Capture Reductions

Land Use (ITE Code)	Daily	AM Peak Hour			PM Peak Hour		
	Total	In	Out	Total	In	Out	Total
Fast-Food Restaurant without Drive-Through Window (933)	748	34	23	57	31	30	61
Multifamily Housing (Low-Rise) (220)	186	3	7	10	6	4	10
General Office Building (710)	73	7	1	8	1	7	8
Fast-Food Restaurant with Drive-Through Window (934)	1,791	82	79	161	67	60	127
Shopping Center (820)	156	2	2	4	2	4	6
Adjusted Project Trip Generation	2,954	128	112	240	107	105	212

In addition to internal capture trip reductions, the TIA proposes to also apply pass-by trip reductions pursuant to the 3rd Edition of the Trip Generation Handbook published by ITE. Pass-by trip reductions are applied to vehicles already on the road that the Project may attract. Average pass-by trip rate reductions were applied as a reasonable percentage considering background traffic on the adjacent streets, i.e. Riggan Avenue and Mooney Boulevard. Since the Trip Generation Handbook does not provide daily weekday pass-by rates for the Shopping Center land use, JLB assumed that the daily pass-by rates would be the average of the AM and PM peak hour rates. Additionally, the Trip Generation Handbook does not provide pass-by trip rate reductions for the Fast-Food Restaurant without Drive-Through Window land use. However, it is expected that the Fast-Food Restaurant without Drive-Through Window land use will observe similar pass-by rate reductions to that of the Fast-Food Restaurant with Drive-Through Window land use. To be conservative, JLB assumed that the Fast-Food Restaurant without Drive-Through Window land use would observe half of the pass-by trip rates observed for the Fast-Food Restaurant with Drive-Through Window land use. Table IV presents the results of the pass-by trip reduction analysis for the proposed Project. Pass-by trips are presented as negative numbers because they are deducted from the adjusted number of trips presented in Table III. Table V presents the adjusted trip generation resulting from the pass-by trip reductions. As can be seen from Table V, the maximum net new trips that the Project is estimated to generate are 2,389 daily trips, 147 AM peak hour trips and 131 PM peak hour trips.



Table IV: Pass-By Trip Reductions

Land Use (ITE Code)	Daily	AM Peak Hour			PM Peak Hour		
	Total	In	Out	Total	In	Out	Total
Fast-Food Restaurant without Drive-Through Window (933)	-90	-7	-7	-14	-7	-8	-15
Multifamily Housing (Low-Rise) (220)	0	0	0	0	0	0	0
General Office Building (710)	0	0	0	0	0	0	0
Fast-Food Restaurant with Drive-Through Window (934)	-448	-40	-39	-79	-32	-32	-64
Shopping Center (820)	-27	0	0	0	-1	-1	-2
Pass-By Trip Reductions	-565	-47	-46	-93	-40	-41	-81

Table V: Project Net New Driveway Trip Generation Adjusted for Pass-By Reductions

Land Use (ITE Code)	Daily	AM Peak Hour			PM Peak Hour		
	Total	In	Out	Total	In	Out	Total
Fast-Food Restaurant without Drive-Through Window (933)	658	27	16	43	24	22	46
Multifamily Housing (Low-Rise) (220)	186	3	7	10	6	4	10
General Office Building (710)	73	7	1	8	1	7	8
Fast-Food Restaurant with Drive-Through Window (934)	1,343	42	40	82	35	28	64
Shopping Center (820)	129	2	2	4	1	3	4
Adjusted Project Trip Generation	2,389	81	66	147	67	64	131

JLB will coordinate with the City, County, or Caltrans on Near Term Projects which are projected to be whole or partially built by the Cumulative Five (5) Years plus Project Scenario. These Near Term Projects will be included in the Cumulative Five (5) Years plus Project Scenario. It is anticipated that the City, County, and Caltrans as appropriate would provide JLB with details such as a project description, location, proposed land uses with breakdowns and type of residential units and square footages for non-residential uses.

The above Scope of Work is based on our understanding of this Project and our experience with similar TIAs. If you have any questions or require additional information, please contact me by phone at (559) 317-6234 or by e-mail at marndt@JLBtraffic.com.

Sincerely,



Matthew Arndt
 Engineer I/II

cc: Hector Guerra, County of Tulare
 David Deel, Caltrans District 6
 Jose Luis Benavides, JLB Traffic Engineering, Inc.

Z:\01 Projects\013 Visalia\013-009 Shannon Village East TIA\DSOW\L09042019 Draft Scope of Work.docx



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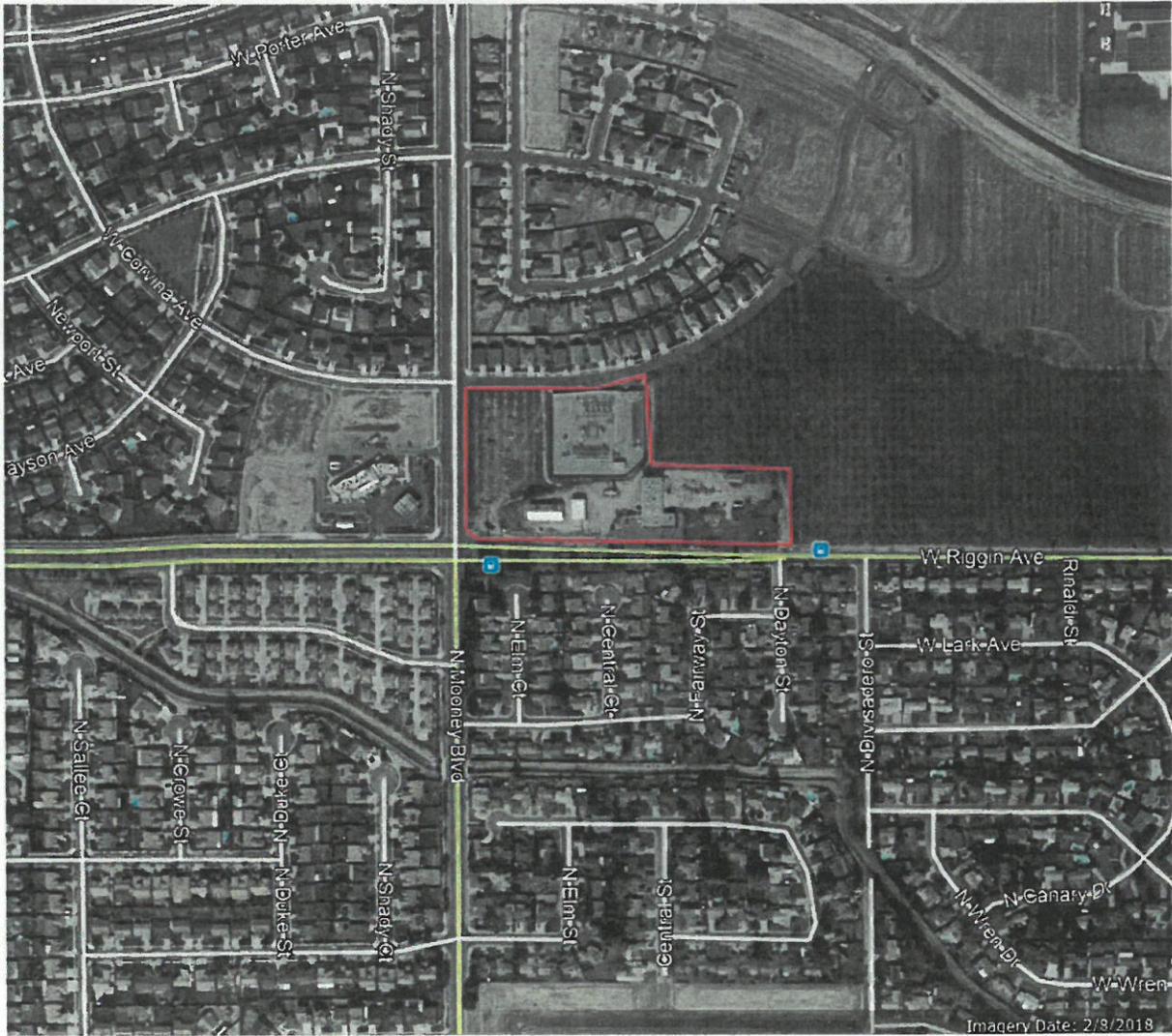
info@JLBtraffic.com

516 W. Shaw Ave., Ste. 103

Fresno, CA 93704

(559) 570-8991

Exhibit A – Aerial



Matt Arndt

From: Deel, David@DOT <david.deel@dot.ca.gov>
Sent: Thursday, September 5, 2019 10:21 AM
To: Matt Arndt; leslie.blair@visalia.city
Cc: Jose Benavides; hguerra@co.tulare.ca.us; Navarro, Michael@DOT; Hernandez, Edgar@DOT; Mendoza, Lupita@DOT; Lau, Scott@DOT
Subject: RE: Draft Scope of Work for Shannon Village East TIA

Matt –

Caltrans appreciates being included in the TIS scope review and comment for the Shannon Village East shopping center.

After review of the scope and site location, Caltrans anticipates minimal impacts of Project trips to the State Route 63/Riggin Avenue intersection which is current designed with a right turn, dual lefts, 2 thru lanes and a bike lane.

Caltrans has "No Comment" on the TIA Scope.

Thank You,

DAVID DEEL | 559.488.7396 | CALTRANS D6

From: Matt Arndt <marndt@jlbtraffic.com>
Sent: Wednesday, September 04, 2019 4:25 PM
To: leslie.blair@visalia.city
Cc: Jose Benavides <jbenavides@jlbtraffic.com>; Deel, David@DOT <david.deel@dot.ca.gov>; hguerra@co.tulare.ca.us
Subject: Draft Scope of Work for Shannon Village East TIA

Hello Mrs. Blair,

Attached is the Draft Scope of Work for the preparation of a Traffic Impact Analysis for Shannon Village East in the city of Visalia.

Please take a moment to review and comment on the proposed Scope of Work. It would be appreciated if we could receive comments in 3 weeks, however if this timeline does not work with just let me know.

If you have any questions or require additional information, please feel free to contact me by phone at 559.317.6243 or email at marndt@jlbtraffic.com. I appreciate your time and attention to this matter.

Have a good rest of your day.

Sincerely,

Matthew Arndt



Matt Arndt

From: Hector Guerra <HGuerra@co.tulare.ca.us>
Sent: Tuesday, October 1, 2019 8:06 AM
To: Matt Arndt
Subject: Re: Draft Scope of Work for Shannon Village East TIA Comments

We have no comments at this time.

>>> Matt Arndt <marndt@jlbtraffic.com> 9/30/2019 2:25 PM >>>
Hello,

I'm following up on a Draft Scope of Work for the preparation of a Traffic Impact Analysis for Shannon Village East in the City of Visalia.

That Draft Scope of Work was sent out on September 4, 2019 and a follow up email on September 24, 2019 for comments. It is likely you have no comments on the scope, but I'm reaching out to you in order to verify that is the case. If you have any questions, concerns or if the Draft Scope of Work is acceptable please contact me by phone at 559.317.6243 or email at marndt@jlbtraffic.com<mailto:marndt@jlbtraffic.com>.

Sincerely,

Matthew Arndt

[cid:image001.png@01D5779A.F402F0C0]

Traffic Engineering, Transportation Planning and Parking Solutions Certified Disadvantaged Business Enterprise (DBE) and Small Business Enterprise (SBE)

516 W. Shaw Ave., Ste. 103
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Direct: (559) 317-6243
Cell: (559) 360-1886
www.JLBtraffic.com

Jose Benavides

From: Leslie Blair <Leslie.Blair@visalia.city>
Sent: Tuesday, October 29, 2019 8:59 AM
To: Jose Benavides
Cc: Matt Arndt; Matt Ainley
Subject: RE: Draft Scope of Work for Shannon Village East TIA

Hi Jose,

Yes, this is correct.

Regards,
Leslie Blair, PE
Senior Civil Engineer
City of Visalia
(559)713-4633
leslie.blair@visalia.city

From: Jose Benavides [mailto:jbenavides@jlbtraffic.com]
Sent: Tuesday, October 29, 2019 8:40 AM
To: Leslie Blair
Cc: Matt Arndt; Matt Ainley
Subject: RE: Draft Scope of Work for Shannon Village East TIA

Good morning Leslie,

It's my understanding that the City has agreed to the following:

1. The TIA for this Project no longer needs to analyze the intersections of 1) Shannon Parkway at Mooney Boulevard or Shannon Parkway at Giddings Street
2. 1) Opening Day No Project and 2) 5 Year No Project are no longer necessary.

Let us know if our interpretation of what was agreed to last week is accurate or if correction is needed.

Sincerely,

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



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Main: (559) 570-8991
Call: (559) 694-6000
(559) 317-6854
www.JLBtraffic.com

From: Leslie Blair <Leslie.Blair@visalia.city>
Sent: Friday, September 20, 2019 10:58 AM
To: Jose Benavides <jbenavides@jlbtraffic.com>
Cc: david.deel@dot.ca.gov; hguerra@co.tulare.ca.us; Matt Arndt <marndt@jlbtraffic.com>; Matt Ainley <matta@4-creeks.com>
Subject: RE: Draft Scope of Work for Shannon Village East TIA

Hi Jose,

The intersections listed in the scope of work are within a ½ mile radius of the proposed site; therefore, the City is in agreement that they meet the study requirements for a Category II TIA.

Please let me know if you have any additional questions or need clarification.

Thanks,
Leslie Blair, PE
Senior Civil Engineer
City of Visalia
(559)713-4633
leslie.blair@visalia.city

From: Jose Benavides [<mailto:jbenavides@jlbtraffic.com>]
Sent: Thursday, September 19, 2019 5:39 PM
To: Leslie Blair; Matt Ainley
Cc: david.deel@dot.ca.gov; hguerra@co.tulare.ca.us; Matt Arndt
Subject: RE: Draft Scope of Work for Shannon Village East TIA

Hi Leslie, Thank you for the feedback,

1. Looks like the City would like us to add two scenarios as follows:
 - a. Opening Year No Project traffic conditions with proposed mitigation measures (if any); and
 - b. Cumulative Five (5) Years No Project traffic conditions with proposed with mitigations measures (if any).

As you may recall we had previously discussed with you via emails the proposed study intersections and that is what we included the attached draft scope of work. However, based on your comment it is not clear to us if the City agrees with the listed study facilities or not. Can you clarify this for us?

Thank you for your time and attention to this item.

Sincerely,

 Luis Benavides, P.E., T.E.
President



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Fax: (559) 317-6854
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From: Leslie Blair <Leslie.Blair@visalia.city>
Sent: Monday, September 16, 2019 4:10 PM
To: Matt Arndt <marndt@jlbtraffic.com>
Cc: Jose Benavides <jbenavides@jlbtraffic.com>; david.deel@dot.ca.gov; hguerra@co.tulare.ca.us
Subject: RE: Draft Scope of Work for Shannon Village East TIA

Hi Matthew,

Thank you for giving the City the opportunity to review your scoping letter in preparation for the Traffic Impact Analysis (TIA) for the proposed Shannon Village East Center to be located at the northeast corner of Riggan Ave and Mooney Blvd. Since this project will generate over 100 peak hour trips, it falls under a City of Visalia Category II TIA. A Category II requires that all major intersections within a ½-mile radius of the project site, whether signalized or unsignalized, be included in the study. Please note that the City requires analysis of the opening year and horizon 5-year, with and without project. Please feel free to contact me should you have additional questions.

Thank you,
Leslie Blair, PE
Senior Civil Engineer
City of Visalia
(559)713-4633
leslie.blair@visalia.city

From: Matt Arndt [<mailto:marndt@jlbtraffic.com>]
Sent: Wednesday, September 4, 2019 4:25 PM
To: Leslie Blair
Cc: Jose Benavides; david.deel@dot.ca.gov; hguerra@co.tulare.ca.us
Subject: Draft Scope of Work for Shannon Village East TIA

Hello Mrs. Blair,

Attached is the Draft Scope of Work for the preparation of a Traffic Impact Analysis for Shannon Village East in the city of Visalia.

Please take a moment to review and comment on the proposed Scope of Work. It would be appreciated if we could receive comments in 3 weeks, however if this timeline does not work with just let me know.

If you have any questions or require additional information, please feel free to contact me by phone at 559.317.6243 or email marndt@jlbtraffic.com. I appreciate your time and attention to this matter.

Appendix B: Traffic Counts



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File Name : Mooney and Driveway 11072019

Site Code : 00000000

Start Date : 11/7/2019

Page No : 1

Groups Printed- Unshifted

Start Time	MOONEY Southbound				Project Driveway 1 Westbound				MOONEY Northbound				Driveway Eastbound				Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
07:00 AM	8	38	5	0	10	4	3	0	10	43	28	1	2	2	6	0	160
07:15 AM	7	60	8	0	11	0	6	0	13	52	21	5	4	0	5	3	195
07:30 AM	9	108	8	0	7	0	5	0	8	66	29	1	3	0	14	0	258
07:45 AM	9	104	11	0	13	2	5	0	9	103	23	2	4	3	13	1	302
Total	33	310	32	0	41	6	19	0	40	264	101	9	13	5	38	4	915
08:00 AM	13	72	5	2	11	0	6	0	14	66	27	4	3	0	10	0	233
08:15 AM	3	42	1	0	6	0	8	0	14	25	22	0	1	1	8	0	131
08:30 AM	10	26	3	0	4	1	3	0	14	27	16	1	1	2	8	0	116
08:45 AM	4	13	3	0	7	1	3	0	13	14	11	0	1	3	8	0	81
Total	30	153	12	2	28	2	20	0	55	132	76	5	6	6	34	0	561

04:00 PM	4	26	6	0	1	0	2	0	14	35	9	0	2	0	11	0	110
04:15 PM	2	23	2	0	4	1	0	0	17	42	5	0	4	0	15	0	115
04:30 PM	3	34	6	0	1	0	0	0	9	47	5	0	4	1	15	0	125
04:45 PM	4	34	8	0	2	2	2	0	17	47	8	0	2	0	17	0	143
Total	13	117	22	0	8	3	4	0	57	171	27	0	12	1	58	0	493
05:00 PM	5	43	7	0	1	1	1	0	26	55	6	0	5	2	22	0	174
05:15 PM	2	44	6	0	0	0	3	0	18	58	1	2	3	0	14	0	151
05:30 PM	0	53	3	2	0	0	2	0	17	47	7	0	8	1	22	0	162
05:45 PM	4	34	3	0	6	0	1	0	15	48	11	0	4	0	9	0	135
Total	11	174	19	2	7	1	7	0	76	208	25	2	20	3	67	0	622
Grand Total	87	754	85	4	84	12	50	0	228	775	229	16	51	15	197	4	2591
Apprch %	9.4	81.1	9.1	0.4	57.5	8.2	34.2	0	18.3	62.1	18.3	1.3	19.1	5.6	73.8	1.5	
Total %	3.4	29.1	3.3	0.2	3.2	0.5	1.9	0	8.8	29.9	8.8	0.6	2	0.6	7.6	0.2	

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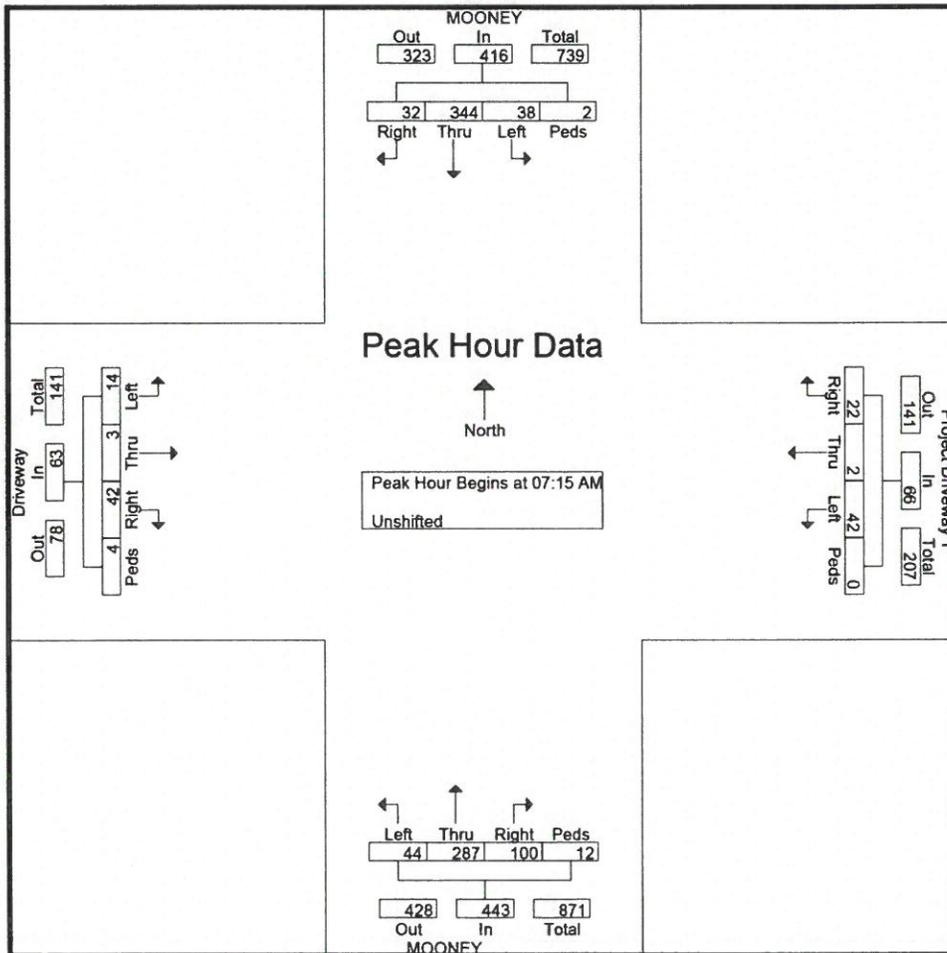
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Site Code : 00000000

Start Date : 11/7/2019

Page No : 2

Start Time	MOONEY Southbound					Project Driveway 1 Westbound					MOONEY Northbound					Driveway Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	7	60	8	0	75	11	0	6	0	17	13	52	21	5	91	4	0	5	3	12	195
07:30 AM	9	108	8	0	125	7	0	5	0	12	8	66	29	1	104	3	0	14	0	17	258
07:45 AM	9	104	11	0	124	13	2	5	0	20	9	103	23	2	137	4	3	13	1	21	302
08:00 AM	13	72	5	2	92	11	0	6	0	17	14	66	27	4	111	3	0	10	0	13	233
Total Volume	38	344	32	2	416	42	2	22	0	66	44	287	100	12	443	14	3	42	4	63	988
% App. Total	9.1	82.7	7.7	0.5		63.6	3	33.3	0		9.9	64.8	22.6	2.7		22.2	4.8	66.7	6.3		
PHF	.731	.796	.727	.250	.832	.808	.250	.917	.000	.825	.786	.697	.862	.600	.808	.875	.250	.750	.333	.750	.818



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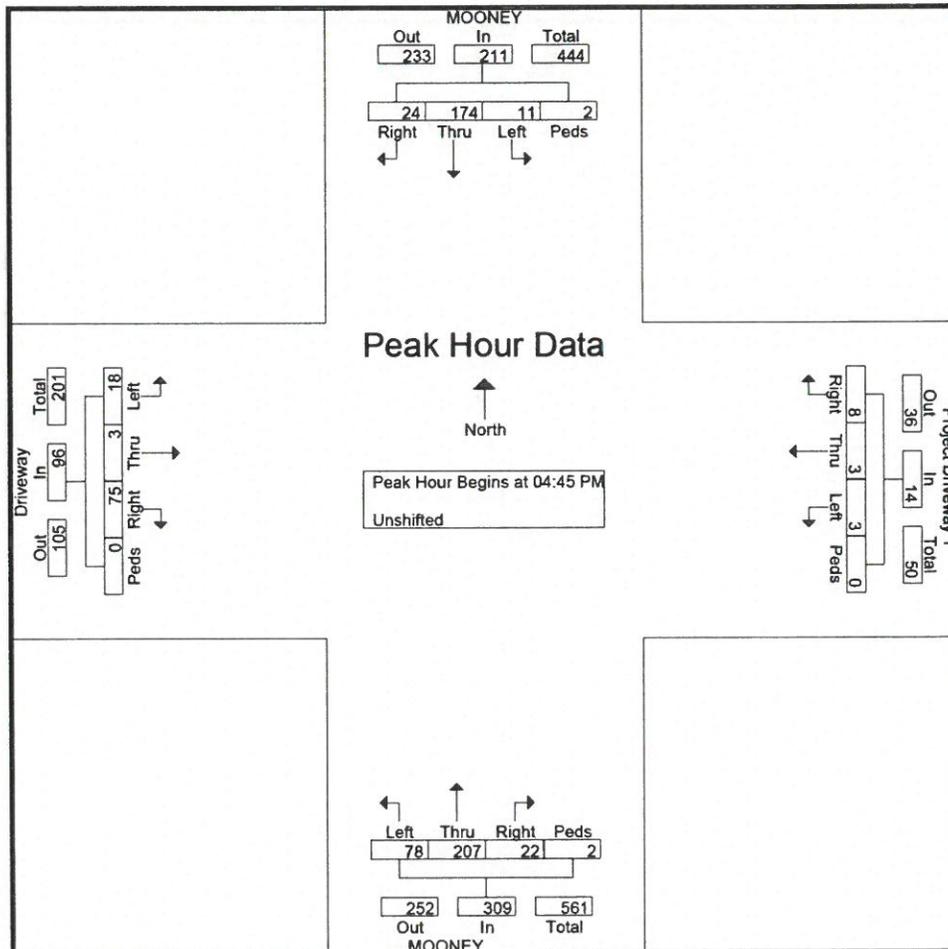
File Name : Mooney and Driveway 11072019

Site Code : 00000000

Start Date : 11/7/2019

Page No : 3

Start Time	MOONEY Southbound					Project Driveway 1 Westbound					MOONEY Northbound					Driveway Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	4	34	8	0	46	2	2	2	0	6	17	47	8	0	72	2	0	17	0	19	143
05:00 PM	5	43	7	0	55	1	1	1	0	3	26	55	6	0	87	5	2	22	0	29	174
05:15 PM	2	44	6	0	52	0	0	3	0	3	18	58	1	2	79	3	0	14	0	17	151
05:30 PM	0	53	3	2	58	0	0	2	0	2	17	47	7	0	71	8	1	22	0	31	162
Total Volume	11	174	24	2	211	3	3	8	0	14	78	207	22	2	309	18	3	75	0	96	630
% App. Total	5.2	82.5	11.4	0.9		21.4	21.4	57.1	0		25.2	67	7.1	0.6		18.8	3.1	78.1	0		
PHF	.550	.821	.750	.250	.909	.375	.375	.667	.000	.583	.750	.892	.688	.250	.888	.563	.375	.852	.000	.774	.905

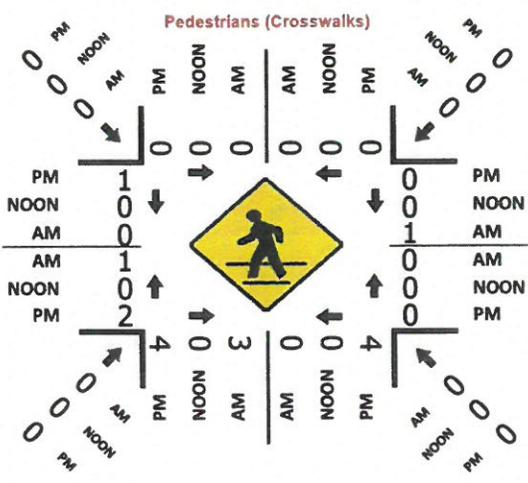
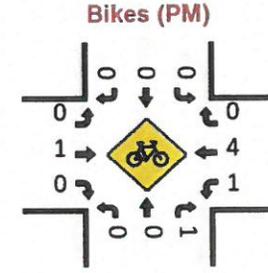
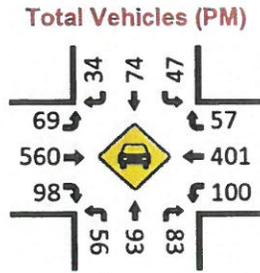
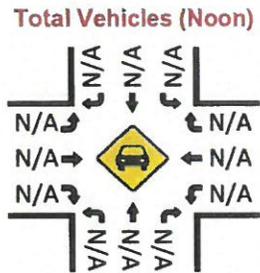
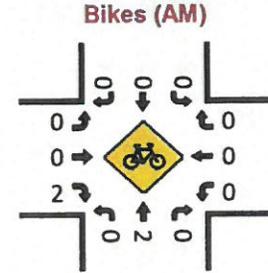
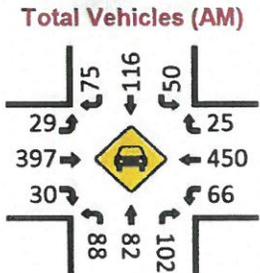
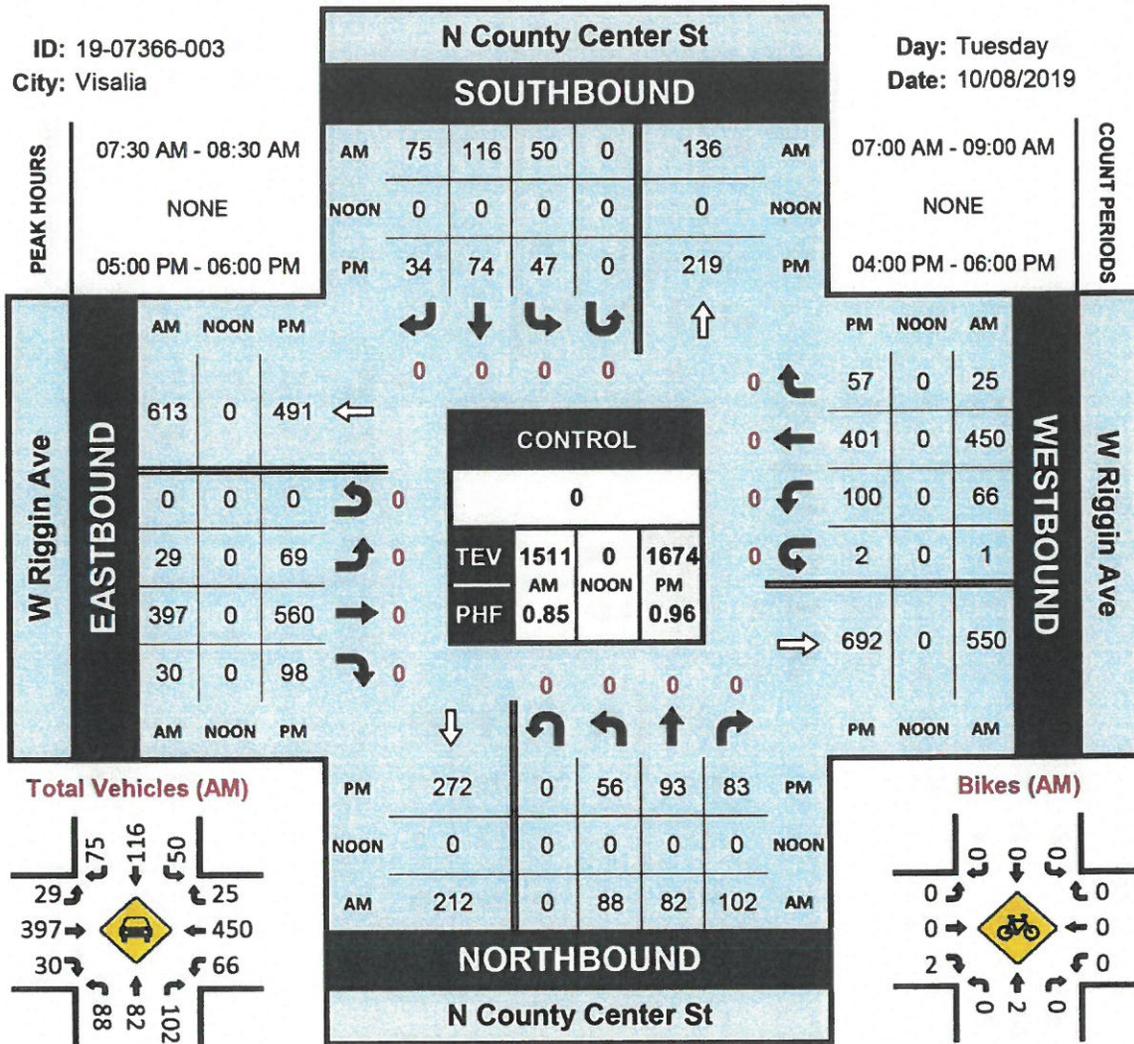


N County Center St & W Riggin Ave

Peak Hour Turning Movement Count

ID: 19-07366-003
City: Visalia

Day: Tuesday
Date: 10/08/2019

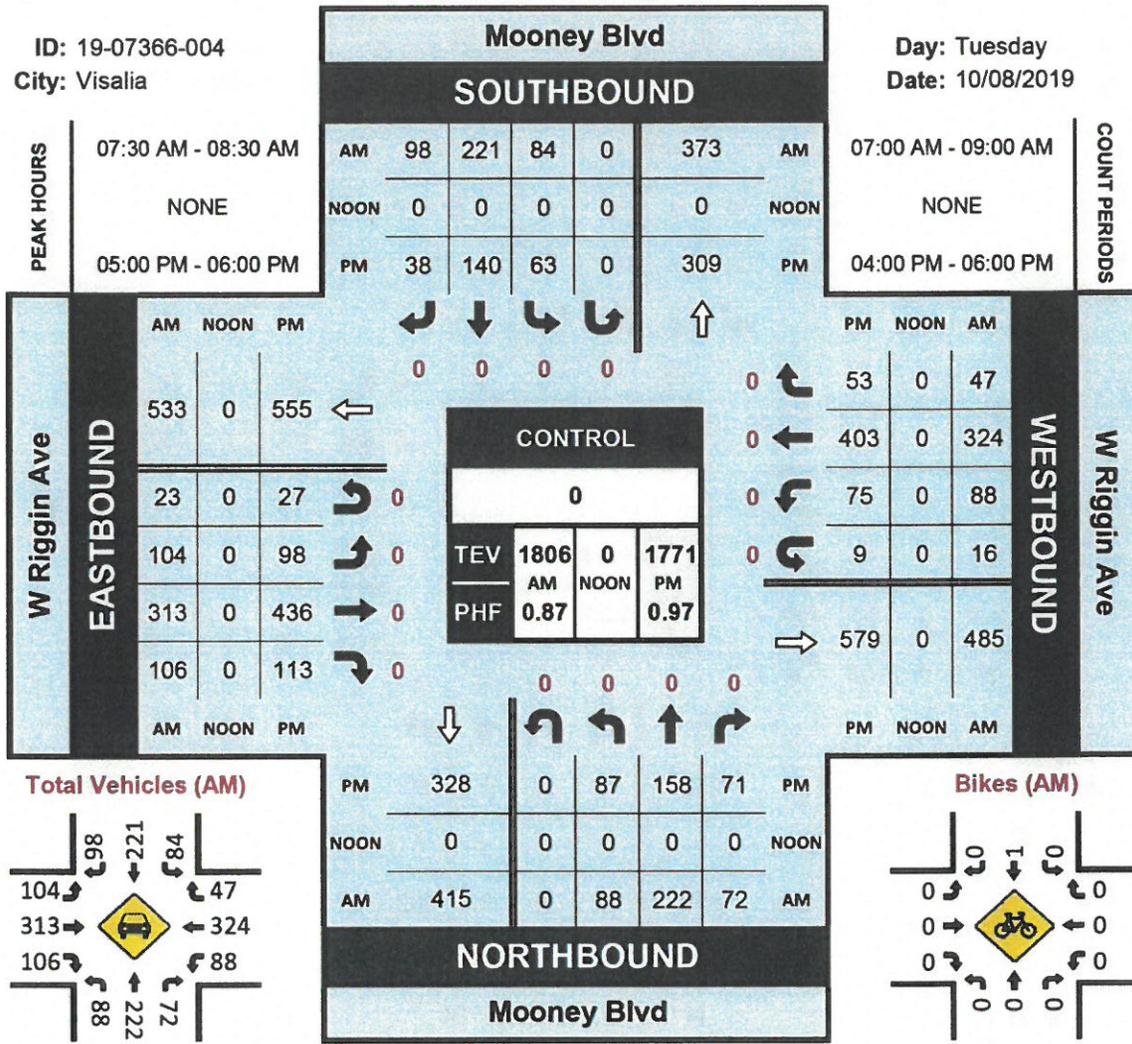


Mooney Blvd & W Riggin Ave

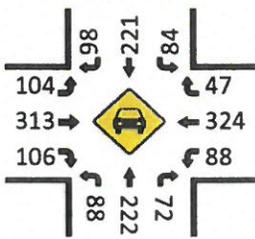
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City: Visalia

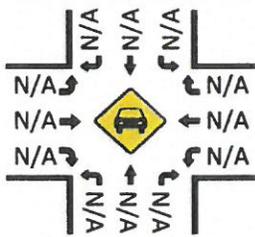
Day: Tuesday
Date: 10/08/2019



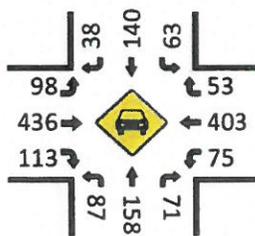
Total Vehicles (AM)



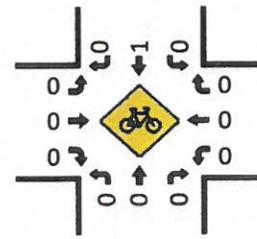
Total Vehicles (Noon)



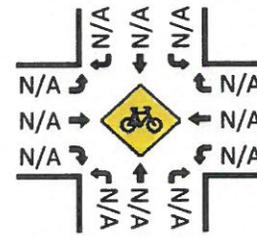
Total Vehicles (PM)



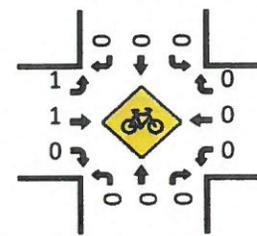
Bikes (AM)



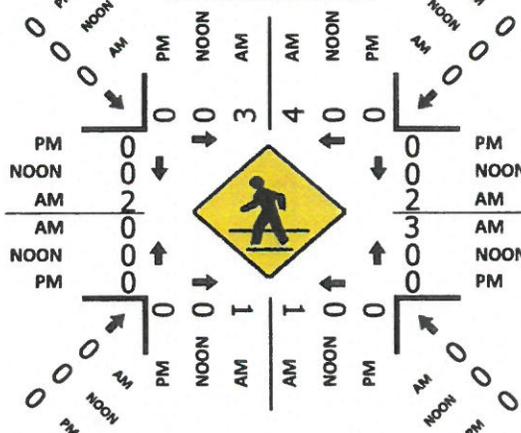
Bikes (NOON)



Bikes (PM)



Pedestrians (Crosswalks)



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File Name : Dayton and Riggin 12172019

Site Code : 00000000

Start Date : 12/17/2019

Page No : 1

Groups Printed- Unshifted

Start Time	RIGGIN Westbound		DAYTON Northbound			RIGGIN Eastbound			Int. Total
	Left	Thru	Left	Right	Peds	Thru	Right	Peds	
07:00 AM	0	61	0	2	0	62	0	0	125
07:15 AM	1	84	1	1	0	84	0	1	172
07:30 AM	0	103	1	6	0	95	0	0	205
07:45 AM	2	114	1	5	0	127	0	0	249
Total	3	362	3	14	0	368	0	1	751
08:00 AM	2	114	0	3	0	107	1	0	227
08:15 AM	1	89	1	0	0	109	0	0	200
08:30 AM	2	88	0	0	0	82	0	0	172
08:45 AM	1	66	1	1	0	69	0	0	138
Total	6	357	2	4	0	367	1	0	737

04:00 PM	0	116	0	1	0	126	0	0	243
04:15 PM	1	128	0	3	0	137	1	1	271
04:30 PM	6	124	1	1	1	139	1	2	275
04:45 PM	1	124	1	4	0	132	2	2	266
Total	8	492	2	9	1	534	4	5	1055
05:00 PM	3	114	1	5	0	140	1	1	265
05:15 PM	4	133	1	4	0	110	1	0	253
05:30 PM	1	92	0	3	0	116	1	0	213
05:45 PM	1	125	2	3	0	134	1	0	266
Total	9	464	4	15	0	500	4	1	997
Grand Total	26	1675	11	42	1	1769	9	7	3540
Apprch %	1.5	98.5	20.4	77.8	1.9	99.1	0.5	0.4	
Total %	0.7	47.3	0.3	1.2	0	50	0.3	0.2	

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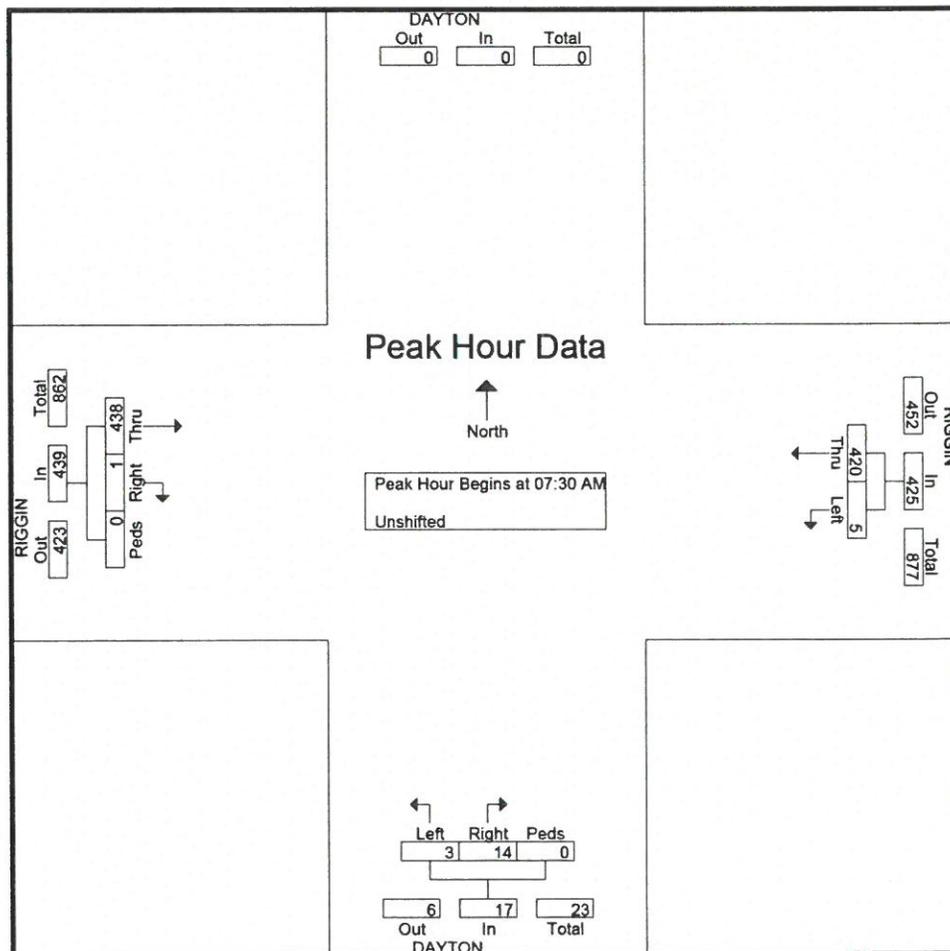
File Name : Dayton and Riggin 12172019

Site Code : 00000000

Start Date : 12/17/2019

Page No : 2

Start Time	RIGGIN Westbound			DAYTON Northbound				RIGGIN Eastbound				Int. Total
	Left	Thru	App. Total	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1												
Peak Hour for Entire Intersection Begins at 07:30 AM												
07:30 AM	0	103	103	1	6	0	7	95	0	0	95	205
07:45 AM	2	114	116	1	5	0	6	127	0	0	127	249
08:00 AM	2	114	116	0	3	0	3	107	1	0	108	227
08:15 AM	1	89	90	1	0	0	1	109	0	0	109	200
Total Volume	5	420	425	3	14	0	17	438	1	0	439	881
% App. Total	1.2	98.8		17.6	82.4	0		99.8	0.2	0		
PHF	.625	.921	.916	.750	.583	.000	.607	.862	.250	.000	.864	.885



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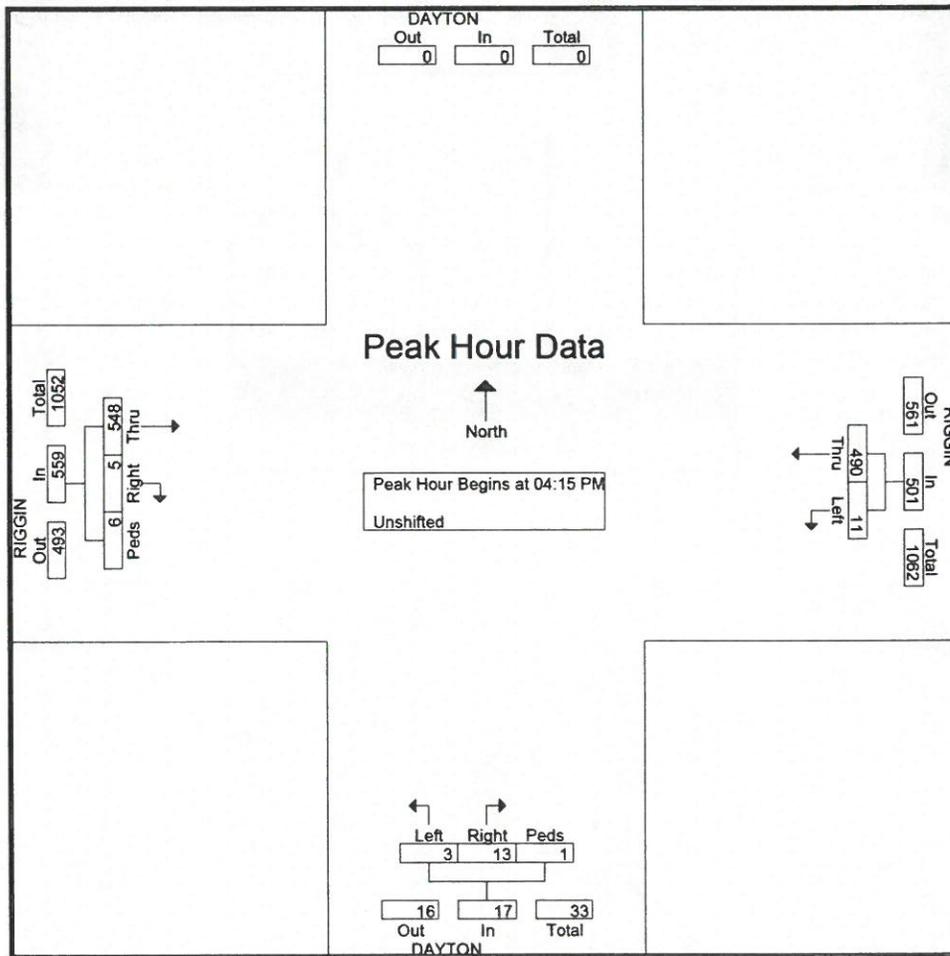
File Name : Dayton and Riggin 12172019

Site Code : 00000000

Start Date : 12/17/2019

Page No : 3

Start Time	RIGGIN Westbound			DAYTON Northbound				RIGGIN Eastbound				Int. Total
	Left	Thru	App. Total	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1												
Peak Hour for Entire Intersection Begins at 04:15 PM												
04:15 PM	1	128	129	0	3	0	3	137	1	1	139	271
04:30 PM	6	124	130	1	1	1	3	139	1	2	142	275
04:45 PM	1	124	125	1	4	0	5	132	2	2	136	266
05:00 PM	3	114	117	1	5	0	6	140	1	1	142	265
Total Volume	11	490	501	3	13	1	17	548	5	6	559	1077
% App. Total	2.2	97.8		17.6	76.5	5.9		98	0.9	1.1		
PHF	.458	.957	.963	.750	.650	.250	.708	.979	.625	.750	.984	.979

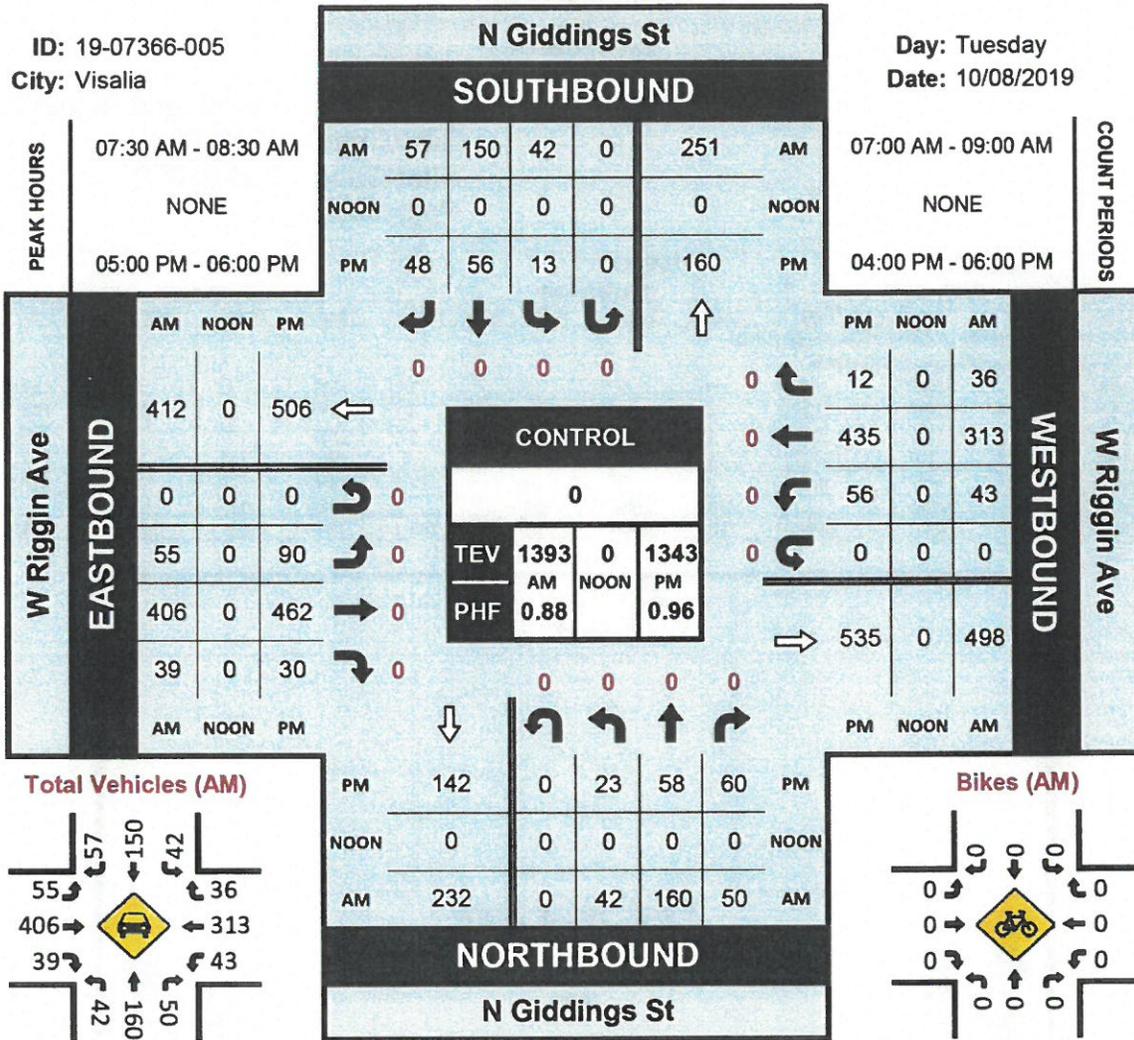


N Giddings St & W Riggin Ave

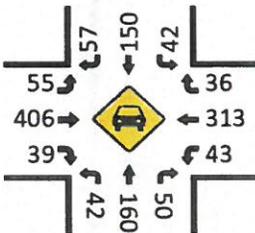
Peak Hour Turning Movement Count

ID: 19-07366-005
City: Visalia

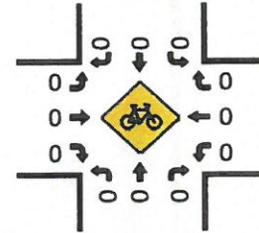
Day: Tuesday
Date: 10/08/2019



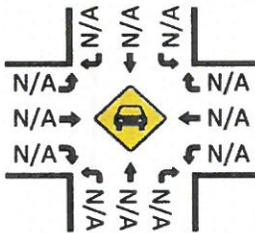
Total Vehicles (AM)



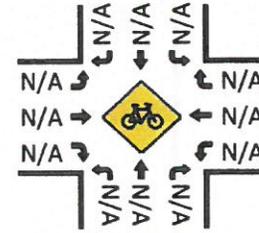
Bikes (AM)



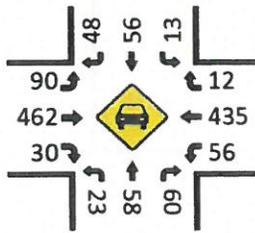
Total Vehicles (Noon)



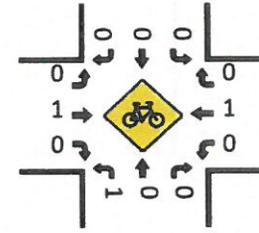
Bikes (NOON)



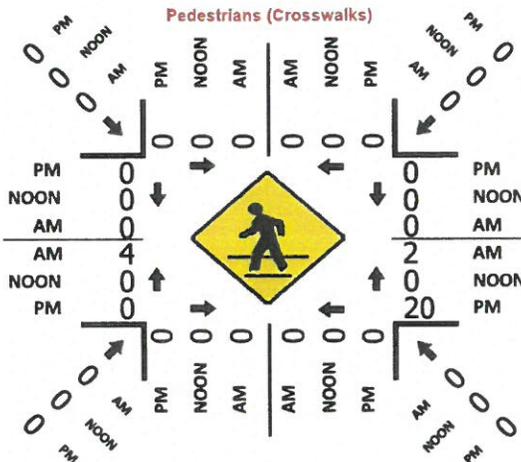
Total Vehicles (PM)



Bikes (PM)



Pedestrians (Crosswalks)

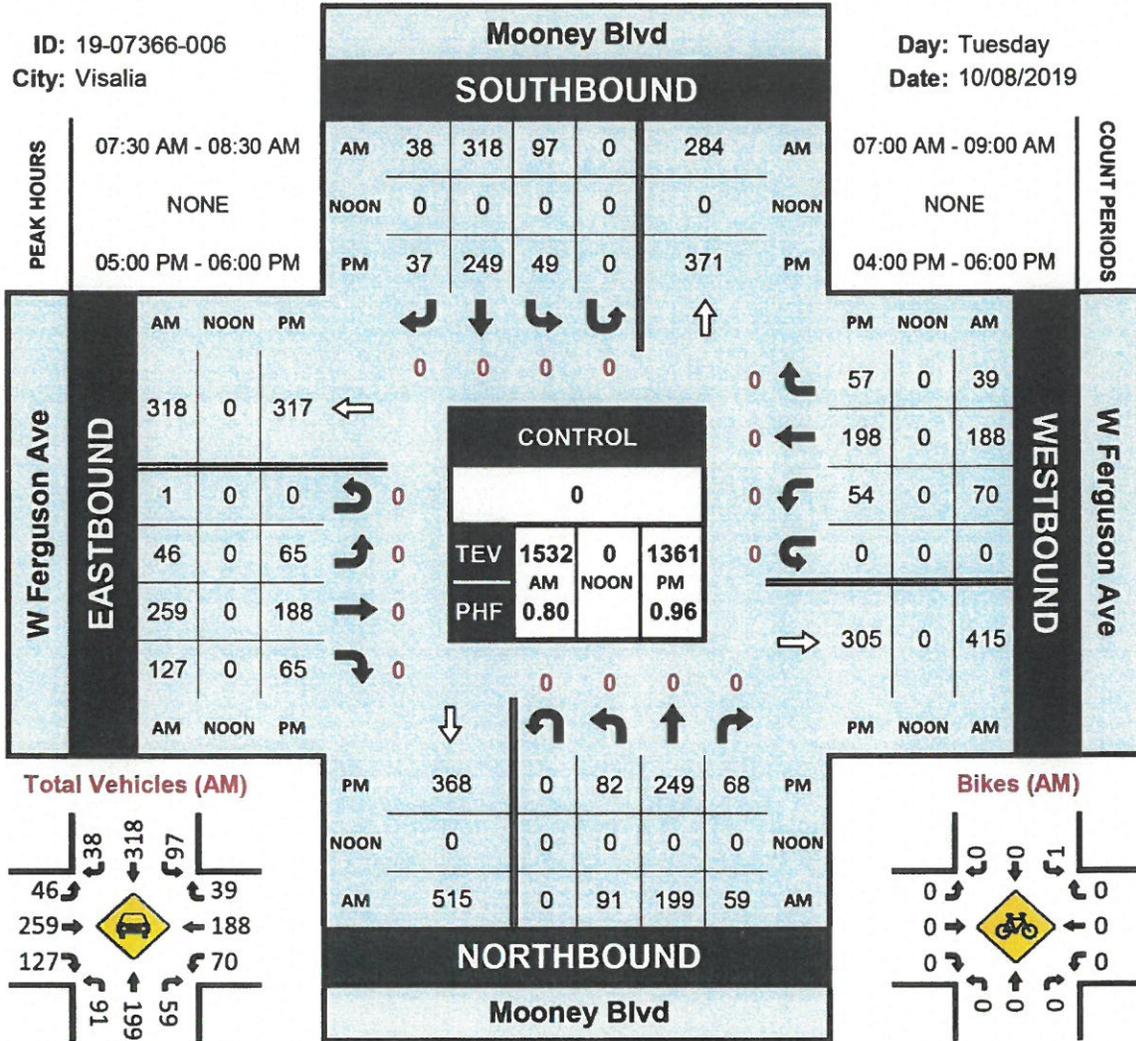


Mooney Blvd & W Ferguson Ave

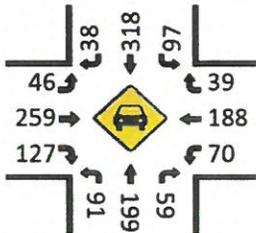
Peak Hour Turning Movement Count

ID: 19-07366-006
City: Visalia

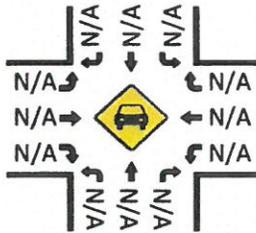
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Date: 10/08/2019



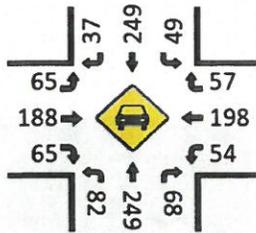
Total Vehicles (AM)



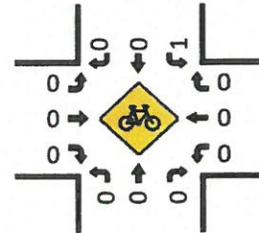
Total Vehicles (Noon)



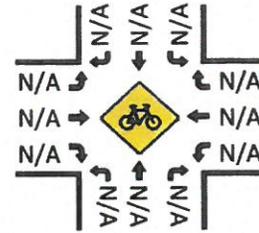
Total Vehicles (PM)



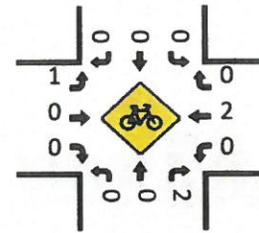
Bikes (AM)



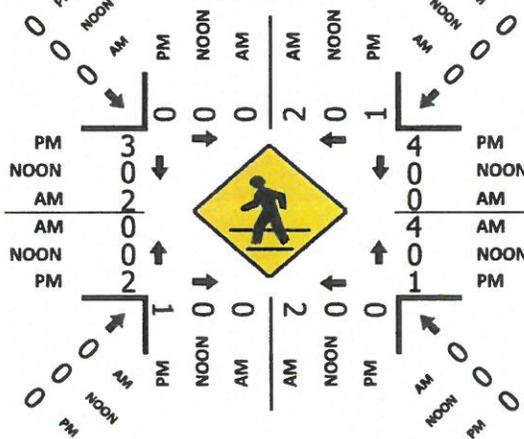
Bikes (NOON)



Bikes (PM)



Pedestrians (Crosswalks)



Appendix C: Traffic Modeling



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October 1, 2019

Derek Winning
Senior Regional Planner
Tulare County Association of Governments
210 N. Church St. Suite B
Visalia, CA 93291

Via E-mail Only: DWinning@tularecog.org

Subject: Traffic Modeling Request for the Preparation of a Traffic Impact Analysis for the Shannon Village East (Project) located on the Northeast Corner of Mooney Boulevard and Riggin Avenue in the City of Visalia (JLB Project 013-009)

Dear Mr. Winning,

JLB Traffic Engineering, Inc. (JLB) hereby requests traffic modeling for the Shannon Village East (Project) located on the northeast corner of Mooney Boulevard and Riggin Avenue in the City of Visalia. The Project proposes to develop parcels 2 through 8 of Shannon Village East with a mix of land uses including a mix of restaurants, multifamily residential, office, and retail/commercial uses. Parcel 1 has been previously analyzed and permitted, thus it is not part of this TIA. Based on information provided to JLB, the Project is consistent with the City of Visalia General Plan. An aerial of the Project vicinity and Project Site Plan are shown in Exhibits A and Exhibit B, respectively.

The purpose of the TIA is to evaluate the potential on-site and off-site traffic impacts, identify short-term roadway and circulation needs, determine potential mitigation measures and identify any critical traffic issues that should be addressed in the on-going planning process.

Scenarios:

The following scenarios are requested:

1. Base Year 2019 (with Link and TAZ modifications)
2. Cumulative Year 2035 plus Project Select Zone (with Link and TAZ modifications)
3. Differences between model runs 2 and 1 above.

Changes and/or additions to the Model Network or TAZ's

JLB reviewed the Tulare CAG model network for the Base Year 2019 and Cumulative Year 2035. Based on this review, JLB requests the following Link and TAZ Network modifications. Details on the requested Link and TAZ modifications for Base Year 2019 and Cumulative Year 2035 are illustrated in Exhibit C.



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LINK and TAZ MODIFICATIONS (For Base Year 2019):

1. Modify TAZ 1467 to eliminate the TAZ connector to Pratt Road.

LINK and TAZ MODIFICATIONS (For Base Year 2019 and Cumulative Year 2035 plus Project Select Zone):

1. Modify TAZ 1216 to eliminate the TAZ connector to Riggin Avenue.
2. Modify Mooney Boulevard as follows:
 - a. Increase southbound lanes between Shannon Parkway and Riggin Avenue to two lanes.
 - b. Increase northbound lanes between Node 17246 and Riggin Avenue to two lanes.
 - c. Increase lanes between Ferguson Avenue and Houston Avenue to two lanes in each direction.
3. Modify TAZ 1218 to create a TAZ connector to Mooney Boulevard.
4. Create Giddings Street between Riverway Drive and Shannon Parkway.
 - a. Classification: Collector
 - b. Lanes: One in each direction
 - c. Speed: 35 MPH
5. Decrease the speed on Giddings Street between Shannon Parkway and Node 12194 from 50 MPH to 35 MPH in both directions.
6. Modify Shannon Parkway to increase lanes between Giddings Street and Node 12580 to two lanes in each direction.
7. Modify State Route 63 to increase southbound lanes between Riverway Drive and Shannon Parkway to two lanes.

LINK and TAZ MODIFICATIONS (For Cumulative Year 2035 plus Project Select Zone only):

1. Create TAZ A to be generally located 500 feet east of Mooney Boulevard and 300 feet north of Riggin Avenue (see Exhibit C). TAZ A shall have one TAZ connector to Mooney Boulevard and another TAZ connector to Riggin Avenue.

TAZ A Trip Generation (Cumulative Year 2035 plus Project Select Zone Scenario Only)

The trip generation rates for TAZ A were obtained from the 10th Edition of the Trip Generation Manual published by the Institute of Transportation Engineers (ITE). Table I presents the Project Driveway trip generation for TAZ A with trip generation rates for Fast Food Restaurant without Drive-Through Window, Multifamily Housing, General Office Building, Fast Food Restaurant with Drive Through Window and Shopping Center. At buildout, TAZ A is estimated to generate a maximum of 2,954 daily, 240 AM peak hour and 212 PM peak hour driveway trips (internal capture trip reductions are taken into account).

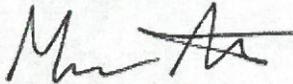
Mr. Winning
Tulare COG Modeling Request (JLB Project No.013-009)
October 1, 2019

Table I: TAZ A Trip Generation Adjusted for Internal Capture Reductions

Land Use (ITE Code)	Daily	AM Peak Hour			PM Peak Hour		
	Total	In	Out	Total	In	Out	Total
Fast-Food Restaurant without Drive-Through Window (933)	748	34	23	57	31	30	61
Multifamily Housing (Low-Rise) (220)	186	3	7	10	6	4	10
General Office Building (710)	73	7	1	8	1	7	8
Fast-Food Restaurant with Drive-Through Window (934)	1,791	82	79	161	67	60	127
Shopping Center (820)	156	2	2	4	2	4	6
Adjusted Trip Generation	2,954	128	112	240	107	105	212

If you have any questions or require additional information, please do not hesitate to contact me by phone at (559) 317-6243 or by e-mail at marndt@JLBtraffic.com.

Sincerely,



Matthew Arndt
Engineer I/II

CC: Jose Benavides, JLB Traffic Engineering, Inc.
Roberto Brady, Tulare COG

Z:\01 Projects\013 Visalia\013-009 Shannon Village East TIA\Modeling\L10012019 (JLB Project No. 013-009).docx



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Exhibit B – Project Site Plan

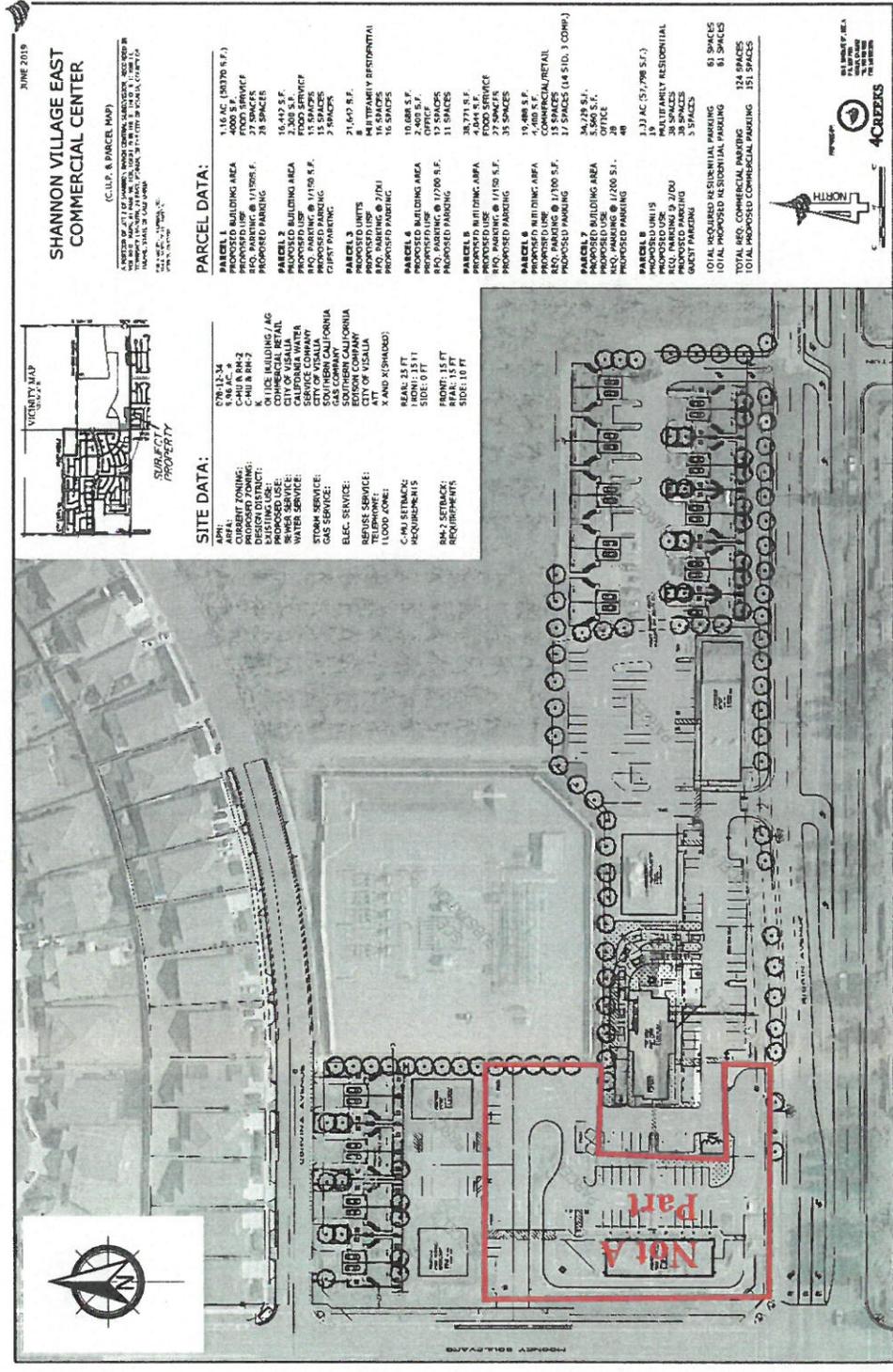
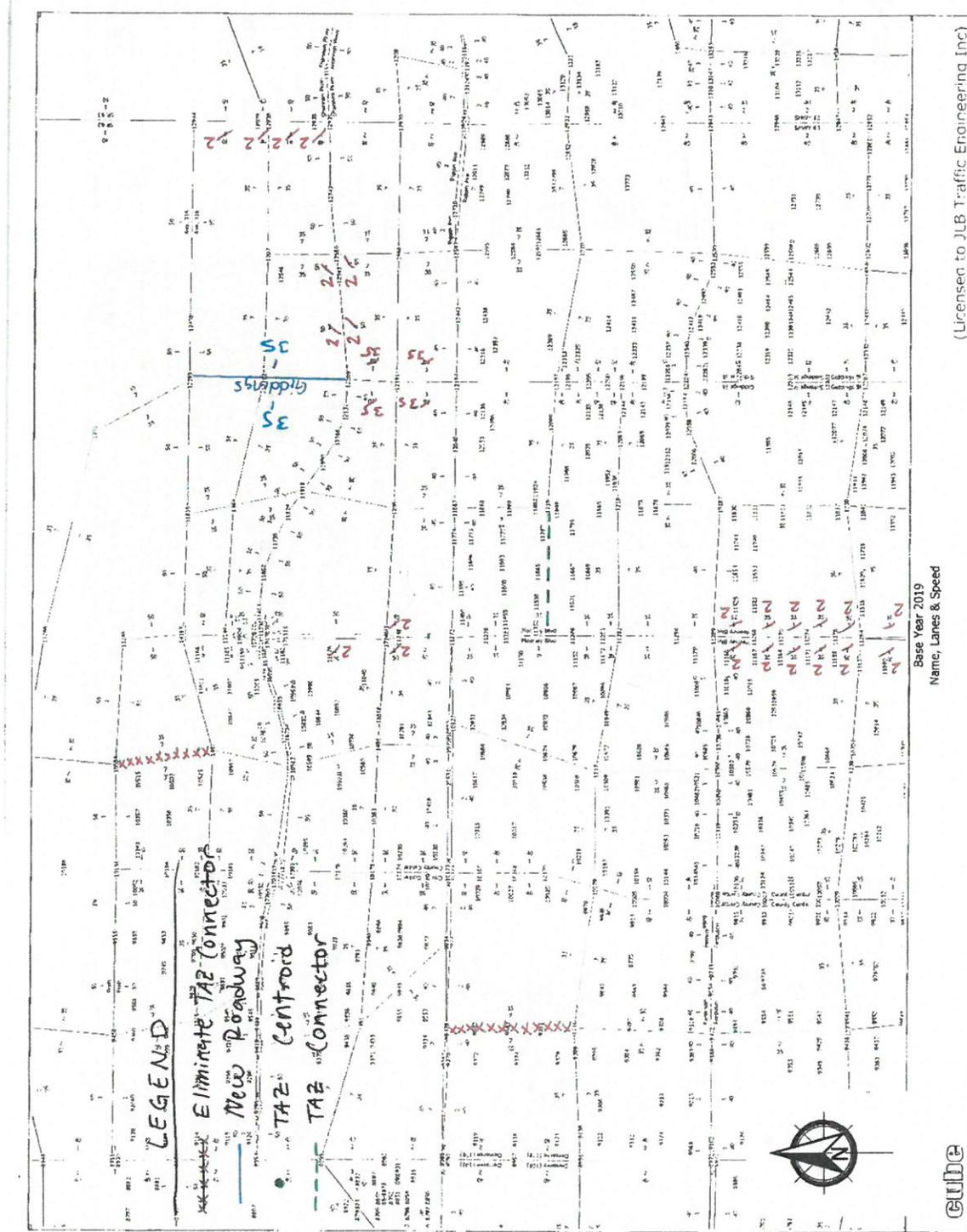
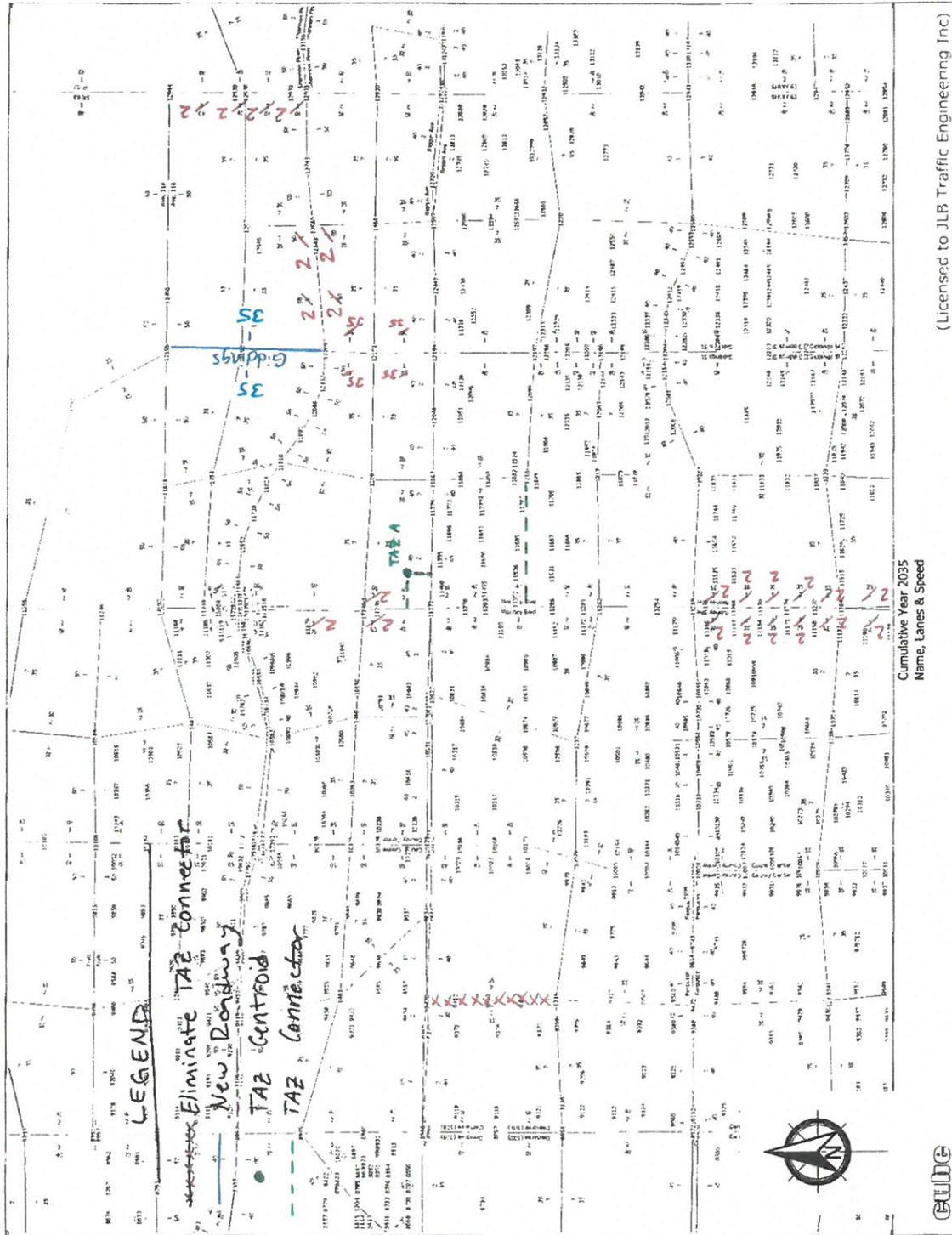


Exhibit C – Model TAZ Modifications





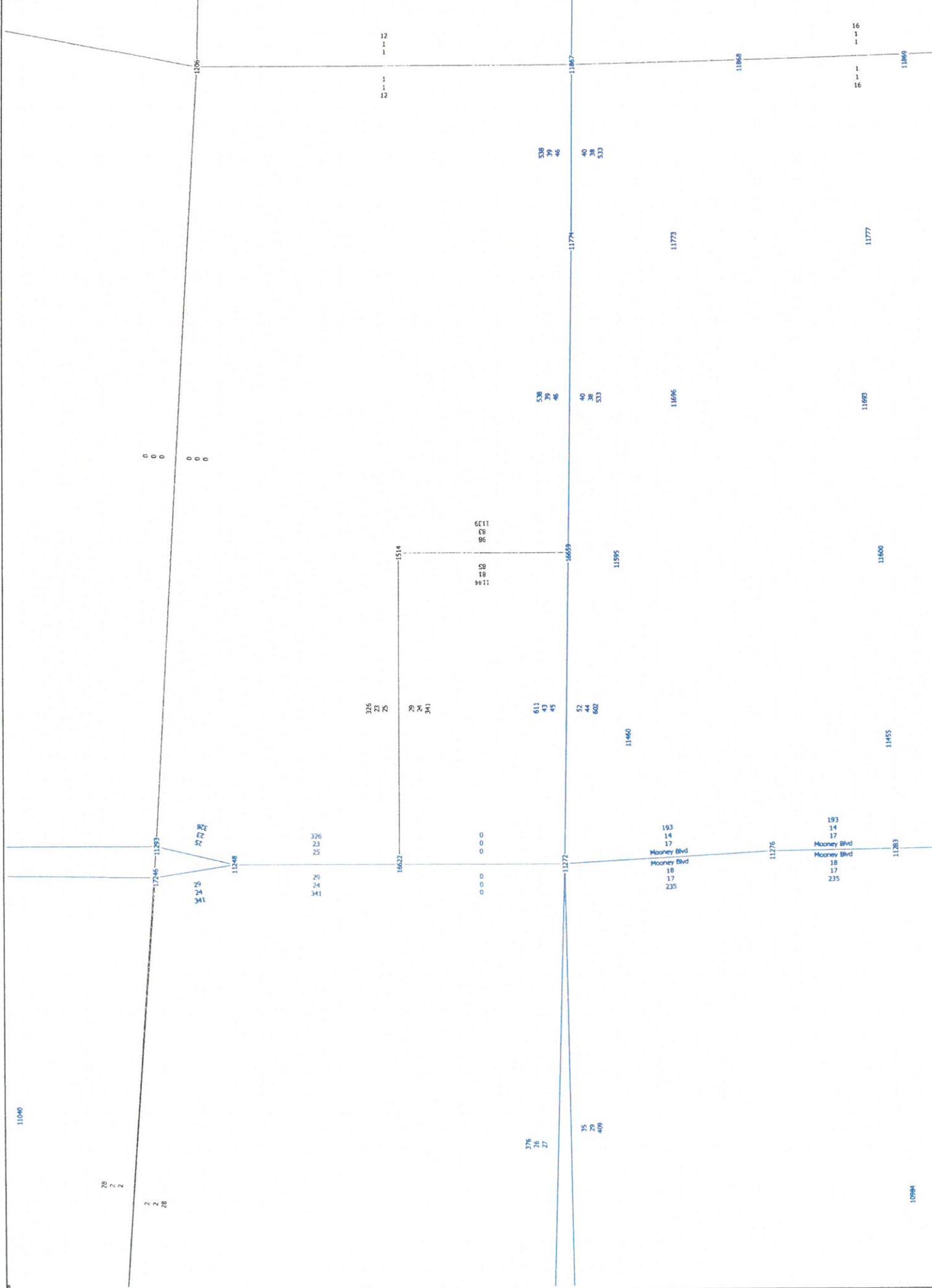
(Licensed to JLB Traffic Engineering Inc)

Cumulative Year 2035
 Name, Lanes & Speed





Cumulative Year 2035 Select Zone
AM, PM and Daily Volumes



28
2
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25

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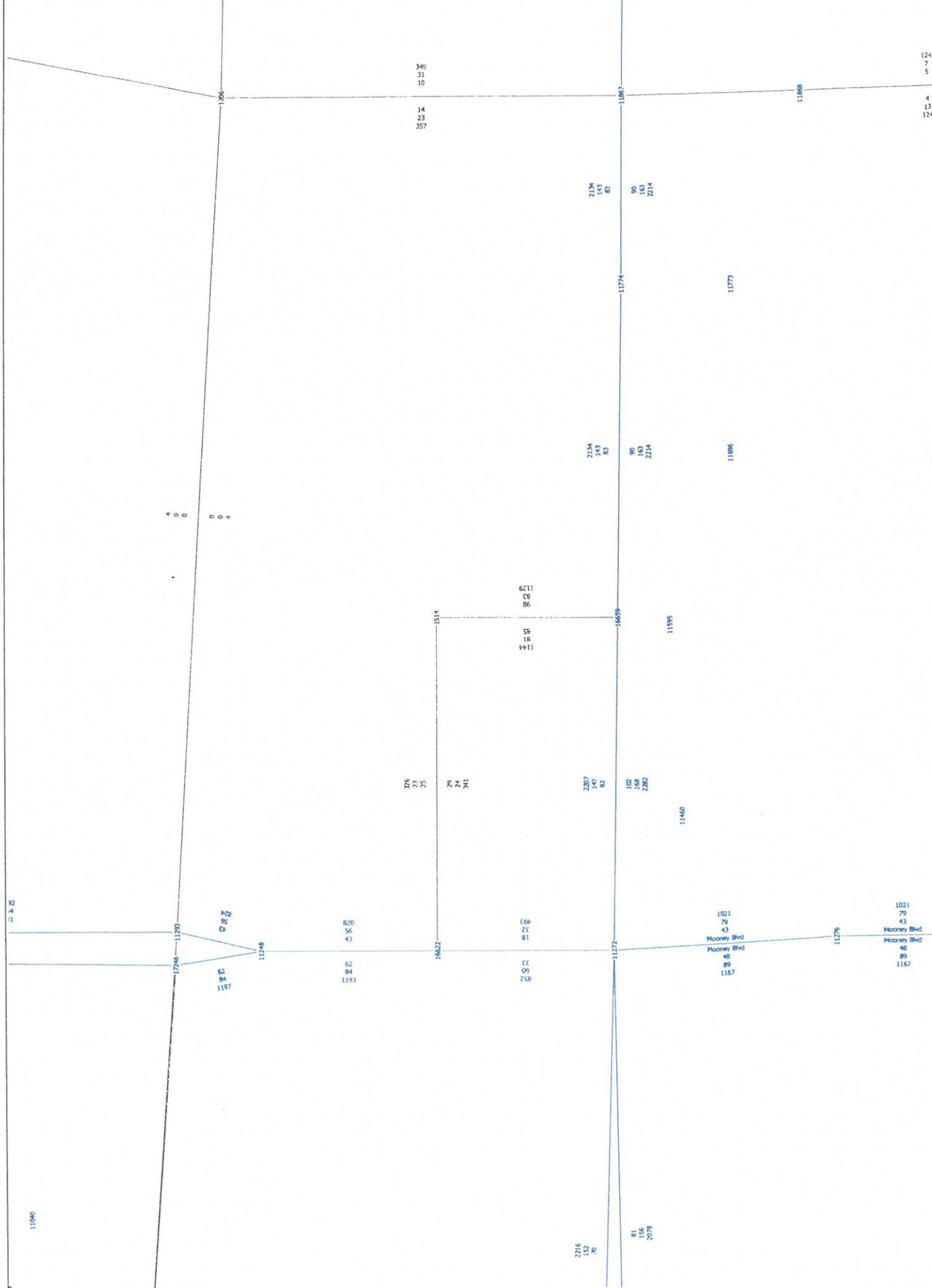
12124

12125



Cumulative Year 2035
AM, PM and Daily Volumes





Cumulative Year 2025
AM, PM : Daily Volumes

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Appendix D: Methodology



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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.



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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.



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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 individual 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.



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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.



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Appendix E: Collision Data



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Primary Rd	Distance (ft)	Direction	Secondary Rd	COUNTRY CTR	NCIC	5407	State Hwy?	N	Route	Postmile Prefix	Postmile	Time	2026	Day	FRI	Side of Hwy	
City	Tulare	Population	Rpt Dist	Beat	Type	0	CalTrans	0	Badge	K163	Collision Date	20160401	Time	2026	Day	FRI	Side of Hwy
Primary Collision Factor	STOP SGN/SIG	Violation	Collision Type	SIDESWIPE	PDO	NO UNUSL CND	Rdwy Cond2	0	#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20160506	Side of Hwy
Weather1	CLEAR	Weather2	DRY	Lighting	DARK - ST	Ped Action	Other MV	Motor Vehicle Involved With	OTHER MV	Party Info	Party Info	Party Info	Party Info	Party Info	Party Info	Party Info	Party Info
Age	17	Sex	M	W	W	A	0100	HONDA	2010	3	A	22350	M	G	0	0	0
Type	DRVR	Age	68	F	W	A	0100	KIA	2006	3	A	22350	M	G	0	0	0
Role	DRVR	Age	17	M	W	A	0100	HONDA	2010	3	N	-	M	G	0	0	0
Role	DRVR	Age	68	F	W	A	0100	KIA	2006	3	A	22350	M	G	0	0	0
Role	DRVR	Age	17	M	W	A	0100	HONDA	2010	3	N	-	M	G	0	0	0
1	DRVR	67	M	H	H	A	0000	NISSA	2013	-	-	N	-	G	-	-	-
2	DRVR	31	F	H	H	A	0000	DODGE	1996	-	-	N	-	G	-	-	-
1	DRVR	50	F	H	H	A	0000	SUZUK	2006	-	-	-	-	G	-	-	-
2	DRVR	56	F	H	H	A	0000	HONDA	1998	-	-	-	-	G	-	-	-
1	DRVR	21	F	H	H	A	0100	MERCE	2002	-	-	3	A	14601	-	L	G
1	DRVR	34	F	W	W	A	0000	NISSA	2013	-	-	F	-	G	-	-	-
2	DRVR	59	M	H	H	A	0000	HYUND	2004	-	-	N	-	G	-	-	-

Include State Highways cases

Primary Rd	County	Distance (ft)	Direction	Population	Violation	Weather1	Weather2	Motor Vehicle Involved With	Other MV	Lighting	Daylight	Roadway	Other	Severity	PDO	Killed	Other	Postmile Prefix	Collision Date	Tow Away?	Spec Cond	Loc Type	Ramp/Int	Side of Hwy	
FERGUSON ST	Visalia	132	E	5	Rpt Dist 480	UNSAFE SPEED	Weather2	Motor Vehicle Involved With	OTHER MV	Lighting DAYLIGHT		NO UNSL CND	ROWY COND2	5407	0	0	0	A285	20170207	0	0	0		0811	TUE
1F	DRVR	17	M	W	HNBD	PROC ST	W	A	0100	FORD 2007	-	3	N	0	0	0	0		20170207	0	0	0			Ejected
2	DRVR	43	M	H	HNBD	STOPPED	W	A	0100	GMC 2001	-	3	N	0	0	0	0								
FRANK ST	Visalia	0	Direction	5	Rpt Dist 480	WRONG SIDE	Weather2	Motor Vehicle Involved With	OTHER MV	Lighting DAYLIGHT		NO UNSL CND	ROWY COND2	5407	0	0	0	M222	20171011	0	0	0		1213	WED
1F	DRVR	17	M	W	HNBD	PROC ST	W	A	0100	FORD 2007	-	3	N	0	0	0	0		20171011	0	0	0			Ejected
2	DRVR	53	M	M	HNBD	PROC ST	S	D	2200	CHEVR 2008	-	3	N	0	0	0	0								
GIDDINGS	Visalia	0	Direction	5	Rpt Dist 180	WRONG SIDE	Weather2	Motor Vehicle Involved With	OTHER MV	Lighting DAYLIGHT		NO UNSL CND	ROWY COND2	5407	0	0	0	M243	20171218	0	0	0		1009	MON
1F	DRVR	19	M	W	HNBD	OPPOS LN	N	D	2200	ISUZU 1998	-	3	N	0	0	0	0		20171218	0	0	0			Ejected
2	DRVR	48	M	M	HNBD	PROC ST	W	A	0100	HONDA 2004	-	3	N	0	0	0	0								
GIDDINGS	Visalia	10	Direction	5	Rpt Dist 480	PED VIOL	Weather2	Motor Vehicle Involved With	PED	Lighting DARK - ST		NO UNSL CND	ROWY COND2	5407	0	0	0	A260	20170603	0	0	0		0117	SAT
1F	DRVR	31	M	W	HNBD	PROC ST	W	D	2200	WESTCOTT	-	3	N	0	0	0	0		20170603	0	0	0			Ejected
2	DRVR	48	M	M	HNBD	LFT TURN	W	A	0100	HONDA 2004	-	3	N	0	0	0	0								
GIDDINGS ST	Visalia	0	Direction	5	Rpt Dist 480	R-O-W AUTO	Weather2	Motor Vehicle Involved With	OTHER MV	Lighting DARK - ST		NO UNSL CND	ROWY COND2	5407	0	0	0	A272	20170723	0	0	0		2040	SUN
1F	DRVR	55	F	W	IMP UNK	IMP UNK	W	N	6000	CHEVR 2015	-	3	N	0	0	0	0		20170723	0	0	0			Ejected
2	DRVR	23	F	W	HNBD	PROC ST	N	A	0100	CHEVR 2015	-	3	N	0	0	0	0								
GIDDINGS ST	Visalia	0	Direction	5	Rpt Dist 480	CLEAR	Weather2	Motor Vehicle Involved With	OTHER MV	Lighting DARK - ST		NO UNSL CND	ROWY COND2	5407	0	0	0		20170913	0	0	0			Ejected
1F	DRVR	34	M	W	HNBD	PROC ST	S	J	0000	HONDA 2011	-	3	N	0	0	0	0		20170913	0	0	0			Ejected
2	DRVR	28	F	W	HNBD	RGT TURN	S	J	4198	FORD 2016	-	3	N	0	0	0	0								

Include State Highways cases

Party Info															Victim Info														
Primary Rd	N County Center	Distance (ft)	0	Direction	5	Rpt Dist	480	Secondary Rd	W RIGGIN AV	NCIC	5407	State Hwy?	N	Route	Postmile Prefix	11624	Collision Date	20181204	Time	2144	Day	TUE	Side of Hwy						
City	Visalia	County	STOP SGN/SIG	Violation	22450A	Collision Type	BROADSIDE	Severity	INJURY	NO UNUSL CND	Rdwy Cond2	NO UNUSL CND	Rdwy Cond2	#Killed	0	#Injured	2	Tow Away?	Y	Process Date	20190212								
Weather1	CLEAR	Weather2	Motor Vehicle Involved With	OTHER MV	Lighting	DARK - ST	Ped Action	Cntrl Dev																					
Hit and Run																													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected					
1F	DRVR	22	M	H	HNBD	PROC ST	E	A	0100	MAZDA	2002	-	-	N	-	L	G	DRVR	COMP	PN	22	M	1	0					
2	DRVR	16	F	W	HNBD	PROC ST	N	A	0800	HONDA	2012	-	-	N	-	L	G	DRVR	COMP	PN	16	F	1	0					
<p>Primary Rd N COURT ST Distance (ft) 0 Direction Tulare County DRVR ALC/DRG Weather1 CLEAR Weather2 MSDMNR Motor Vehicle Involved With OTHER MV</p>																													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected					
1F	DRVR	66	F	H	HNBD	PROC ST	N	A	0100	TOYOT	2013	-	3	A	21751	-	M	B											
2	DRVR	32	M	H	HNBD	RGT TURN	N	-	0000	TOYOT	2009	-	3	A	21751	-	M	B											
<p>Primary Rd N COURT ST Distance (ft) 0 Direction Tulare County IMPROP TURN Weather1 CLEAR Weather2 Motor Vehicle Involved With FIXED OBJ</p>																													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected					
1F	DRVR	20	M	H	HNBD	RGT TURN	E	-	0000	-	1997	-	3	N	-	M	G												
<p>Primary Rd N COURT ST Distance (ft) 150 Direction Tulare County DRVR ALC/DRG Weather1 CLEAR Weather2 Motor Vehicle Involved With OTHER MV</p>																													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected					
1F	DRVR	24	F	H	HBD-UI	PROC ST	E	A	0100	CHEVR	2012	-	3	A	21650	-	M	G	PASS		19	F	3	0					
2	DRVR	40	M	H	HNBD	PROC ST	W	A	0100	TOYOT	2006	-	3	N	-	L	G												
<p>Primary Rd N COURT ST Distance (ft) 0 Direction Tulare County IMPROP TURN Weather1 CLEAR Weather2 Motor Vehicle Involved With OTHER MV</p>																													
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected					
1F	DRVR	40	M	H	HNBD	PROC ST	W	A	0100	TOYOT	2006	-	3	N	-	L	G												
2	DRVR	32	M	H	HNBD	PROC ST	S	A	0100	ACURA	1999	-	3	N	-	L	G												

Include State Highways cases

Primary Rd RIGGIN AV Distance (ft) 80 Direction Population 5 W Secondary Rd AKERS ST Beat 15282 NCIC 5407 State Hwy? N Route 2030 Day THU Side of Hwy
 City Visalia County Tulare UNSAFE SPEED Violation 22350 Rpt Dist 5 Beat REAR END Type 0 CallTrans Badge 20180614 Time 2030 Day THU
 Primary Collision Factor UNSAFE SPEED Weather1 CLEAR Weather2 Motor Vehicle Involved With OTHER MV Rowdy Surface DRY Lighting DUSK/DAWN Ped Action NO UNUSL CND Rwy Cond2 #Killed 0 Tow Away? Y Process Date 20190221
 Hit and Run Motor Vehicle Involved With OTHER MV

Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	Role	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F DRVR	18	M	H	HNB		SLOWING	E	A	0100	HONDA	1994	-	3	N	-	M	G	PASS	31	M	3	0	M	G
2 DRVR	30	F	W	HNB		PROC ST	E	A	0100	FORD	2016	-	3	N	-	M	G							

Primary Rd RIGGIN AV Distance (ft) 0 Direction Population 5 W Secondary Rd DEMAREE ST Beat 23153E NCIC 5407 State Hwy? N Route 1321 Day MON Side of Hwy
 City Visalia County UNKNOWN Violation 23153E Rpt Dist 480 Beat REAR END Type 0 CallTrans Badge 20180101 Time 1321 Day MON
 Primary Collision Factor UNKNOWN Weather1 CLEAR Weather2 Motor Vehicle Involved With OTHER MV Rowdy Surface DRY Lighting DAYLIGHT NO UNUSL CND Rwy Cond2 #Killed 0 Tow Away? Y Process Date 20180209
 Hit and Run Motor Vehicle Involved With OTHER MV

Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	Role	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F DRVR	20	M	H	HNB		PROC ST	E	A	0100	TOYOT	2011	-	A	22350	-	L	G	DRVR	OTH VIS	20	M	1	0	L	G
2 DRVR	47	M	HNB			PROC ST	E	D	2200	FORD	2010	-	N	-	-	M	G	DRVR	COMP PN	47	M	1	0	M	G

Primary Rd RIGGIN AV Distance (ft) 0 Direction Population 5 W Secondary Rd DEMAREE ST Beat 21453B NCIC 5407 State Hwy? N Route 0722 Day MON Side of Hwy
 City Visalia County R-O-W AUTO Violation 21453B Rpt Dist 480 Beat BROADSIDE Type 0 CallTrans Badge 20180122 Time 0722 Day MON
 Primary Collision Factor R-O-W AUTO Weather1 CLEAR Weather2 Motor Vehicle Involved With OTHER MV Rowdy Surface DRY Lighting DAYLIGHT NO UNUSL CND Rwy Cond2 #Killed 0 Tow Away? Y Process Date 20180307
 Hit and Run Motor Vehicle Involved With OTHER MV

Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	Role	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F DRVR	67	M	HNB			RGT TURN	E	H	1300	THOMA	2013	-	3	N	-	G	-	DRVR	OTH VIS	20	M	1	0	L	G
2 DRVR	41	M	HNB			LFT TURN	W	D	2200	FORD	2007	-	3	N	-	G	-	DRVR	COMP PN	47	M	1	0	M	G

Primary Rd RIGGIN AV Distance (ft) 0 Direction Population 5 W Secondary Rd GIDDINGS ST Beat 21801A NCIC 5407 State Hwy? N Route 1235 Day THU Side of Hwy
 City Visalia County R-O-W AUTO Violation 21801A Rpt Dist 480 Beat BROADSIDE Type 0 CallTrans Badge 20181213 Time 1235 Day THU
 Primary Collision Factor R-O-W AUTO Weather1 CLEAR Weather2 Motor Vehicle Involved With OTHER MV Rowdy Surface DRY Lighting DAYLIGHT NO UNUSL CND Rwy Cond2 #Killed 0 Tow Away? Y Process Date 20190205
 Hit and Run Motor Vehicle Involved With OTHER MV

Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	Role	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F DRVR	26	F	HNB			LFT TURN	S	A	0100	MAZDA	2017	-	3	N	-	L	G	PASS	COMP PN	10	F	5	0	L	G
2 DRVR	21	M	HNB			PROC ST	E	A	0100	HONDA	2017	-	3	N	-	M	G	PASS	COMP PN	10	F	6	0	L	G

Primary Rd RIGGIN AV Distance (ft) 309 Direction Population 5 W Secondary Rd LARK AV Beat 0-26 NCIC 5407 State Hwy? N Route 2227 Day SUN Side of Hwy
 City Visalia County WRONG SIDE Violation 21650A Rpt Dist 480 Beat OVERTURNED Type 0 CallTrans Badge 20180408 Time 2227 Day SUN
 Primary Collision Factor WRONG SIDE Weather1 CLEAR Weather2 Motor Vehicle Involved With OTHER MV Rowdy Surface DRY Lighting DARK - ST NO UNUSL CND Rwy Cond2 #Killed 0 Tow Away? Y Process Date 20180605
 Hit and Run Motor Vehicle Involved With OTHER MV

Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	Role	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F DRVR	30	M	IMP UNK			IMP UNK	RAN OFF RD	E	D	2200	CHEVR	2002	-	3	N	-	M	B						

Include State Highways cases

Primary Rd **W RIGGIN AV** Distance (ft) **0** Direction **Population** **5** Rpt Dist **480** Secondary Rd **COUNTY CENTER** NCIC **5407** State Hwy? **N** Route **5407** Postmile Prefix **M279** Collision Date **20181117** Side of Hwy **SAT**
 City **Visalia** County **STOP SGN/SIG** Tulare **Weather/2** **VIOLATION** **22450A** Collision Type **BROADSIDE** Severity **INJURY** #Killed **0** #Injured **2** Tow Away? **Y** Process Date **20190109**
 Primary Collision Factor **CLEAR** Weather/1 **CLEAR** Weather/2 **Weather/2** **VIOLATION** **22450A** Collision Type **BROADSIDE** Severity **INJURY** #Killed **0** #Injured **2** Tow Away? **Y** Process Date **20190109**
 Hit and Run **CLEAR** Weather/1 **CLEAR** Weather/2 **Weather/2** **VIOLATION** **22450A** Collision Type **BROADSIDE** Severity **INJURY** #Killed **0** #Injured **2** Tow Away? **Y** Process Date **20190109**

Party Info
 Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip
 1F DRVR 37 M H HBD-JI PROC ST E A 0100 FORD 2005 - 3 G - - L G
 2 DRVR 32 F H HNB LFT TURN S A 0100 BUICK 2015 - 3 G - - L G

Primary Rd **W RIGGIN AV** Distance (ft) **124** Direction **Population** **5** Rpt Dist **480** Secondary Rd **LINWOOD ST** NCIC **5407** State Hwy? **N** Route **5407** Postmile Prefix **11624** Collision Date **20180408** Side of Hwy **SUN**
 City **Visalia** County **WRONG SIDE** Tulare **Weather/2** **VIOLATION** **21650** Collision Type **HIT OBJECT** Severity **PDO** #Killed **0** #Injured **0** Tow Away? **Y** Process Date **20180522**
 Primary Collision Factor **CLEAR** Weather/1 **CLEAR** Weather/2 **Weather/2** **VIOLATION** **21650** Collision Type **HIT OBJECT** Severity **PDO** #Killed **0** #Injured **0** Tow Away? **Y** Process Date **20180522**
 Hit and Run **CLEAR** Weather/1 **CLEAR** Weather/2 **Weather/2** **VIOLATION** **21650** Collision Type **HIT OBJECT** Severity **PDO** #Killed **0** #Injured **0** Tow Away? **Y** Process Date **20180522**

Party Info
 Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip
 1F DRVR 98 - - - IMP UNK IMP UNK RAN OFF RD - A 0100 BMW 2006 - - N - - -

Primary Rd **W RIGGIN AV** Distance (ft) **0** Direction **Population** **5** Rpt Dist **480** Secondary Rd **N DIVISADERO ST** NCIC **5407** State Hwy? **N** Route **5407** Postmile Prefix **M226** Collision Date **20180725** Side of Hwy **WED**
 City **Visalia** County **UNSAFE SPEED** Tulare **Weather/2** **VIOLATION** **22350** Collision Type **REAR END** Severity **INJURY** #Killed **0** #Injured **1** Tow Away? **N** Process Date **20180917**
 Primary Collision Factor **CLOUDY** Weather/1 **CLOUDY** Weather/2 **Weather/2** **VIOLATION** **22350** Collision Type **REAR END** Severity **INJURY** #Killed **0** #Injured **1** Tow Away? **N** Process Date **20180917**
 Hit and Run **CLOUDY** Weather/1 **CLOUDY** Weather/2 **Weather/2** **VIOLATION** **22350** Collision Type **REAR END** Severity **INJURY** #Killed **0** #Injured **1** Tow Away? **N** Process Date **20180917**

Party Info
 Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip
 1F DRVR 31 F H HNB PROC ST E A 0100 HONDA 2016 - 3 N - - M G
 2 DRVR 56 F H HNB RGT TURN E A 0100 FORD 2001 - 3 N - - M G

Primary Rd **W SADY AV** Distance (ft) **0** Direction **Population** **5** Rpt Dist **NN415** Secondary Rd **HALL** NCIC **5407** State Hwy? **N** Route **5407** Postmile Prefix **C03** Collision Date **20181017** Side of Hwy **WED**
 City **Visalia** County **IMPROP TURN** Tulare **Weather/2** **VIOLATION** **22107** Collision Type **HIT OBJECT** Severity **INJURY** #Killed **0** #Injured **1** Tow Away? **Y** Process Date **20181115**
 Primary Collision Factor **CLEAR** Weather/1 **CLEAR** Weather/2 **Weather/2** **VIOLATION** **22107** Collision Type **HIT OBJECT** Severity **INJURY** #Killed **0** #Injured **1** Tow Away? **Y** Process Date **20181115**
 Hit and Run **CLEAR** Weather/1 **CLEAR** Weather/2 **Weather/2** **VIOLATION** **22107** Collision Type **HIT OBJECT** Severity **INJURY** #Killed **0** #Injured **1** Tow Away? **Y** Process Date **20181115**

Party Info
 Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip
 1F DRVR 36 M HNB UNS TURN N A 0100 TOYOT 1998 - 3 N - - M G

Primary Rd **W SEDONA AV** Distance (ft) **0** Direction **Population** **5** Rpt Dist **480** Secondary Rd **N MOONEY BL** NCIC **5407** State Hwy? **N** Route **5407** Postmile Prefix **11620** Collision Date **20181102** Side of Hwy **FRI**
 City **Visalia** County **WRONG SIDE** Tulare **Weather/2** **VIOLATION** **21650** Collision Type **SIDESWIPE** Severity **PDO** #Killed **0** #Injured **0** Tow Away? **N** Process Date **20190430**
 Primary Collision Factor **CLEAR** Weather/1 **CLEAR** Weather/2 **Weather/2** **VIOLATION** **21650** Collision Type **SIDESWIPE** Severity **PDO** #Killed **0** #Injured **0** Tow Away? **N** Process Date **20190430**
 Hit and Run **CLEAR** Weather/1 **CLEAR** Weather/2 **Weather/2** **VIOLATION** **21650** Collision Type **SIDESWIPE** Severity **PDO** #Killed **0** #Injured **0** Tow Away? **N** Process Date **20190430**

Party Info
 Party Type Age Sex Race Sobriety1 Sobriety2 Move Pre Dir SW Veh CHP Veh Make Year SP Info OAF1 Viol OAF2 Safety Equip
 1F DRVR 19 F W HNB PROC ST E A 0100 FORD 2015 - 3 J - - M G

Appendix F: Existing Traffic Conditions



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info@JLBtraffic.com

516 W. Shaw Ave., Ste. 103

Fresno, CA 93704

(559) 570-8991

Page | F

HCM 6th TWSC
1: Mooney Boulevard & Project Driveway 1

Existing AM Peak
01/14/2020

Intersection												
Int Delay, s/veh	3.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕		↕		↕		↕		↕		↕	
Traffic Vol, veh/h	14	3	42	42	2	22	44	287	100	38	344	32
Future Vol, veh/h	14	3	42	42	2	22	44	287	100	38	344	32
Conflicting Peds, #/hr	0	0	4	4	0	0	2	0	12	12	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	17	4	51	51	2	27	54	350	122	46	420	39

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	818	1126	236	839	1084	248	461	0	0	484	0	0
Stage 1	534	534	-	531	531	-	-	-	-	-	-	-
Stage 2	284	592	-	308	553	-	-	-	-	-	-	-
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	266	202	763	257	214	749	1089	-	-	1068	-	-
Stage 1	495	520	-	497	522	-	-	-	-	-	-	-
Stage 2	696	490	-	674	510	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	236	181	759	216	192	740	1087	-	-	1056	-	-
Mov Cap-2 Maneuver	236	181	-	216	192	-	-	-	-	-	-	-
Stage 1	470	496	-	467	491	-	-	-	-	-	-	-
Stage 2	634	461	-	594	487	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	14.5		22.9		0.9		0.8	
HCM LOS	B		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1087	-	-	450	281	1056	-	-
HCM Lane V/C Ratio	0.049	-	-	0.16	0.286	0.044	-	-
HCM Control Delay (s)	8.5	-	-	14.5	22.9	8.6	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.6	1.2	0.1	-	-

Intersection	
Intersection Delay, s/veh	30.5
Intersection LOS	D

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↵	↕			↵	↕		↵	↕		↵	↕
Traffic Vol, veh/h	29	397	30	1	66	450	25	88	82	102	50	116
Future Vol, veh/h	29	397	30	1	66	450	25	88	82	102	50	116
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	34	467	35	1	78	529	29	104	96	120	59	136
Number of Lanes	1	2	0	0	1	2	0	1	1	0	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	32.9	38.9	21.6	17.3
HCM LOS	D	E	C	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%	45%	0%	100%	82%	0%	100%	86%	0%	100%	0%
Vol Right, %	0%	55%	0%	0%	18%	0%	0%	14%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	88	184	29	265	162	67	300	175	50	116	75
LT Vol	88	0	29	0	0	67	0	0	50	0	0
Through Vol	0	82	0	265	132	0	300	150	0	116	0
RT Vol	0	102	0	0	30	0	0	25	0	0	75
Lane Flow Rate	104	216	34	311	191	79	353	206	59	136	88
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.295	0.563	0.094	0.813	0.492	0.212	0.899	0.518	0.176	0.388	0.233
Departure Headway (Hd)	10.256	9.368	9.918	9.404	9.271	9.679	9.165	9.063	10.752	10.239	9.521
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	350	383	360	383	388	370	395	397	333	351	376
Service Time	8.042	7.154	7.703	7.189	7.056	7.461	6.947	6.845	8.546	8.033	7.315
HCM Lane V/C Ratio	0.297	0.564	0.094	0.812	0.492	0.214	0.894	0.519	0.177	0.387	0.234
HCM Control Delay	17.3	23.7	13.7	42.5	20.8	15.1	54.5	21.3	15.8	19.4	15.2
HCM Lane LOS	C	C	B	E	C	C	F	C	C	C	C
HCM 95th-tile Q	1.2	3.3	0.3	7.2	2.6	0.8	9.3	2.9	0.6	1.8	0.9

Intersection

Intersection Delay, s/veh
Intersection LOS

Movement	SBR
Lane Configurations	1
Traffic Vol, veh/h	75
Future Vol, veh/h	75
Peak Hour Factor	0.85
Heavy Vehicles, %	3
Mvmt Flow	88
Number of Lanes	1

Approach

Opposing Approach
Opposing Lanes
Conflicting Approach Left
Conflicting Lanes Left
Conflicting Approach Right
Conflicting Lanes Right
HCM Control Delay
HCM LOS

HCM Signalized Intersection Capacity Analysis
 3: Mooney Boulevard & Riggin Avenue

Existing AM Peak
 01/14/2020

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	23	104	313	106	16	88	324	47	88	222	72	84
Future Volume (vph)	23	104	313	106	16	88	324	47	88	222	72	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.2	5.3	5.3			4.2	5.3	5.3	4.2	4.9	4.2
Lane Util. Factor		1.00	0.95	1.00			1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes		1.00	1.00	0.98			1.00	1.00	0.98	1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00			1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	1.00	0.85			1.00	1.00	0.85	1.00	0.96	1.00
Flt Protected		0.95	1.00	1.00			0.95	1.00	1.00	0.95	1.00	0.95
Satd. Flow (prot)		1752	3505	1533			1752	3505	1543	1752	3364	1752
Flt Permitted		0.95	1.00	1.00			0.95	1.00	1.00	0.95	1.00	0.95
Satd. Flow (perm)		1752	3505	1533			1752	3505	1543	1752	3364	1752
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	26	120	360	122	18	101	372	54	101	255	83	97
RTOR Reduction (vph)	0	0	0	94	0	0	0	42	0	41	0	0
Lane Group Flow (vph)	0	146	360	28	0	119	372	12	101	297	0	97
Confl. Peds. (#/hr)				2				7			5	
Turn Type	Prot	Prot	NA	Perm	Prot	Prot	NA	Perm	Prot	NA		Prot
Protected Phases	7	7	4		3	3	8		5	2		1
Permitted Phases				4				8				
Actuated Green, G (s)		5.3	13.2	13.2			5.3	13.2	13.2	5.3	14.9	5.3
Effective Green, g (s)		5.3	13.2	13.2			5.3	13.2	13.2	5.3	14.9	5.3
Actuated g/C Ratio		0.09	0.23	0.23			0.09	0.23	0.23	0.09	0.26	0.09
Clearance Time (s)		4.2	5.3	5.3			4.2	5.3	5.3	4.2	4.9	4.2
Vehicle Extension (s)		3.0	3.0	3.0			3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		162	807	353			162	807	355	162	874	162
v/s Ratio Prot		c0.08	0.10				0.07	c0.11		c0.06	0.09	0.06
v/s Ratio Perm				0.02					0.01			
v/c Ratio		0.90	0.45	0.08			0.73	0.46	0.04	0.62	0.34	0.60
Uniform Delay, d1		25.7	18.9	17.3			25.3	19.0	17.1	25.0	17.2	25.0
Progression Factor		1.00	1.00	1.00			1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		43.2	0.4	0.1			15.8	0.4	0.0	7.3	0.2	5.8
Delay (s)		68.9	19.3	17.4			41.1	19.4	17.1	32.3	17.4	30.8
Level of Service		E	B	B			D	B	B	C	B	C
Approach Delay (s)			30.5				23.9			20.9		
Approach LOS			C				C			C		
Intersection Summary												
HCM 2000 Control Delay			24.6				HCM 2000 Level of Service					C
HCM 2000 Volume to Capacity ratio			0.57									
Actuated Cycle Length (s)			57.3				Sum of lost time (s)			18.6		
Intersection Capacity Utilization			52.0%				ICU Level of Service			A		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 3: Mooney Boulevard & Riggins Avenue

Existing AM Peak
 01/14/2020



Movement	SBT	SBR
Lane Configurations	↑	↗
Traffic Volume (vph)	221	98
Future Volume (vph)	221	98
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.9	4.9
Lane Util. Factor	1.00	1.00
Frbp, ped/bikes	1.00	0.99
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	1845	1548
Flt Permitted	1.00	1.00
Satd. Flow (perm)	1845	1548
Peak-hour factor, PHF	0.87	0.87
Adj. Flow (vph)	254	113
RTOR Reduction (vph)	0	84
Lane Group Flow (vph)	254	29
Confl. Peds. (#/hr)		2
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	14.9	14.9
Effective Green, g (s)	14.9	14.9
Actuated g/C Ratio	0.26	0.26
Clearance Time (s)	4.9	4.9
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	479	402
v/s Ratio Prot	0.14	
v/s Ratio Perm		0.02
v/c Ratio	0.53	0.07
Uniform Delay, d1	18.2	16.0
Progression Factor	1.00	1.00
Incremental Delay, d2	1.1	0.1
Delay (s)	19.3	16.1
Level of Service	B	B
Approach Delay (s)	20.9	
Approach LOS	C	

Intersection Summary

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↑		↑
Traffic Vol, veh/h	0	485	426	0	0	49
Future Vol, veh/h	0	485	426	0	0	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	100	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	545	479	0	0	55

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	- 240
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	-	-	-	0 758
Stage 1	0	-	-	-	0 -
Stage 2	0	-	-	-	0 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	- 758
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	758
HCM Lane V/C Ratio	-	-	-	0.073
HCM Control Delay (s)	-	-	-	10.1
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.2

Intersection

Int Delay, s/veh 0.3

Movement EBT EBR WBL WBT NBL NBR

Lane Configurations	↗		↘	↑	↖	
Traffic Vol, veh/h	438	1	5	420	3	14
Future Vol, veh/h	438	1	5	420	3	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	90	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	492	1	6	472	3	16

Major/Minor Major1 Major2 Minor1

Conflicting Flow All	0	0	493	0	977	493
Stage 1	-	-	-	-	493	-
Stage 2	-	-	-	-	484	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1065	-	277	574
Stage 1	-	-	-	-	612	-
Stage 2	-	-	-	-	618	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1065	-	275	574
Mov Cap-2 Maneuver	-	-	-	-	275	-
Stage 1	-	-	-	-	612	-
Stage 2	-	-	-	-	614	-

Approach EB WB NB

HCM Control Delay, s	0	0.1	12.8
HCM LOS			B

Minor Lane/Major Mvmt NBLn1 EBT EBR WBL WBT

Capacity (veh/h)	482	-	-	1065	-
HCM Lane V/C Ratio	0.04	-	-	0.005	-
HCM Control Delay (s)	12.8	-	-	8.4	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Intersection Delay, s/veh	64.3
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↘		↙	↘			↕			↕	
Traffic Vol, veh/h	55	406	39	43	313	36	42	160	50	42	150	57
Future Vol, veh/h	55	406	39	43	313	36	42	160	50	42	150	57
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	63	461	44	49	356	41	48	182	57	48	170	65
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	112.7	48.6	28.4	28
HCM LOS	F	E	D	D

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	17%	100%	0%	100%	0%	17%
Vol Thru, %	63%	0%	91%	0%	90%	60%
Vol Right, %	20%	0%	9%	0%	10%	23%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	252	55	445	43	349	249
LT Vol	42	55	0	43	0	42
Through Vol	160	0	406	0	313	150
RT Vol	50	0	39	0	36	57
Lane Flow Rate	286	62	506	49	397	283
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.67	0.154	1.168	0.119	0.904	0.663
Departure Headway (Hd)	8.991	8.899	8.315	9.281	8.684	8.992
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	404	406	440	388	420	405
Service Time	6.991	6.599	6.015	6.981	6.384	6.992
HCM Lane V/C Ratio	0.708	0.153	1.15	0.126	0.945	0.699
HCM Control Delay	28.4	13.2	125	13.2	53	28
HCM Lane LOS	D	B	F	B	F	D
HCM 95th-tile Q	4.7	0.5	19	0.4	9.6	4.6

Intersection

Intersection Delay, s/veh65.6
Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↘		↙	↘	↙	↙	↘	↙	↙	↘	
Traffic Vol, veh/h	46	259	127	70	188	39	91	199	59	97	318	38
Future Vol, veh/h	46	259	127	70	188	39	91	199	59	97	318	38
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	58	324	159	88	235	49	114	249	74	121	398	48
Number of Lanes	1	1	0	1	1	1	1	1	1	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	2
HCM Control Delay	161.1	27.6	28	28.4
HCM LOS	F	D	D	D

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	0%	67%	0%	100%	0%	0%	100%	74%
Vol Right, %	0%	0%	100%	0%	33%	0%	0%	100%	0%	0%	26%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	91	199	59	46	386	70	188	39	97	212	144
LT Vol	91	0	0	46	0	70	0	0	97	0	0
Through Vol	0	199	0	0	259	0	188	0	0	212	106
RT Vol	0	0	59	0	127	0	0	39	0	0	38
Lane Flow Rate	114	249	74	58	482	88	235	49	121	265	180
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.334	0.697	0.193	0.166	1.294	0.262	0.672	0.13	0.345	0.719	0.479
Departure Headway (Hd)	11.51	10.987	10.256	10.385	9.655	11.596	11.078	10.353	11.155	10.634	10.441
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	314	331	352	347	381	312	329	349	325	342	347
Service Time	9.21	8.687	7.956	8.085	7.355	9.296	8.778	8.053	8.855	8.334	8.141
HCM Lane V/C Ratio	0.363	0.752	0.21	0.167	1.265	0.282	0.714	0.14	0.372	0.775	0.519
HCM Control Delay	19.9	35.5	15.4	15.1	178.5	18.4	33.8	14.6	19.6	36.4	22.4
HCM Lane LOS	C	E	C	C	F	C	D	B	C	E	C
HCM 95th-tile Q	1.4	4.9	0.7	0.6	21.9	1	4.6	0.4	1.5	5.3	2.5

Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↙	↕		↙	↕	
Traffic Vol, veh/h	18	3	75	3	3	8	78	207	22	11	174	24
Future Vol, veh/h	18	3	75	3	3	8	78	207	22	11	174	24
Conflicting Peds, #/hr	0	0	0	0	0	0	2	0	2	2	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	20	3	82	3	3	9	86	227	24	12	191	26

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	517	655	111	534	656	128	219	0	0	253	0	0
Stage 1	230	230	-	413	413	-	-	-	-	-	-	-
Stage 2	287	425	-	121	243	-	-	-	-	-	-	-
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	439	382	918	427	382	895	1340	-	-	1302	-	-
Stage 1	749	710	-	584	590	-	-	-	-	-	-	-
Stage 2	694	582	-	868	701	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	407	353	916	364	353	893	1337	-	-	1300	-	-
Mov Cap-2 Maneuver	407	353	-	364	353	-	-	-	-	-	-	-
Stage 1	700	702	-	545	551	-	-	-	-	-	-	-
Stage 2	639	544	-	779	693	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.9	11.8	2	0.4
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1337	-	-	713	545	1300	-	-
HCM Lane V/C Ratio	0.064	-	-	0.148	0.028	0.009	-	-
HCM Control Delay (s)	7.9	-	-	10.9	11.8	7.8	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.5	0.1	0	-	-

Intersection	
Intersection Delay, s/veh	26.6
Intersection LOS	D

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↕			↕	↕		↘	↕		↘	↕
Traffic Vol, veh/h	69	560	98	2	100	401	57	56	93	83	47	74
Future Vol, veh/h	69	560	98	2	100	401	57	56	93	83	47	74
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	72	583	102	2	104	418	59	58	97	86	49	77
Number of Lanes	1	2	0	0	1	2	0	1	1	0	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	35.7	21.5	18.1	14.7
HCM LOS	E	C	C	B

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%	53%	0%	100%	66%	0%	100%	70%	0%	100%	0%
Vol Right, %	0%	47%	0%	0%	34%	0%	0%	30%	0%	0%	100%
Sign Control	Stop										
Traffic Vol by Lane	56	176	69	373	285	102	267	191	47	74	34
LT Vol	56	0	69	0	0	102	0	0	47	0	0
Through Vol	0	93	0	373	187	0	267	134	0	74	0
RT Vol	0	83	0	0	98	0	0	57	0	0	34
Lane Flow Rate	58	183	72	389	297	106	278	199	49	77	35
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.16	0.46	0.174	0.887	0.656	0.267	0.661	0.459	0.142	0.213	0.091
Departure Headway (Hd)	9.866	9.036	8.716	8.207	7.962	9.05	8.54	8.327	10.45	9.939	9.224
Convergence, Y/N	Yes										
Cap	363	398	412	443	454	397	423	433	343	361	388
Service Time	7.622	6.792	6.461	5.952	5.707	6.799	6.289	6.075	8.212	7.701	6.986
HCM Lane V/C Ratio	0.16	0.46	0.175	0.878	0.654	0.267	0.657	0.46	0.143	0.213	0.09
HCM Control Delay	14.5	19.3	13.3	48.3	24.7	15.1	26.5	18	14.9	15.4	12.9
HCM Lane LOS	B	C	B	E	C	C	D	C	B	C	B
HCM 95th-tile Q	0.6	2.3	0.6	9.4	4.6	1.1	4.6	2.4	0.5	0.8	0.3

Intersection

Intersection Delay, s/veh
Intersection LOS

Movement SBR

Lane Configurations	1
Traffic Vol, veh/h	34
Future Vol, veh/h	34
Peak Hour Factor	0.96
Heavy Vehicles, %	3
Mvmt Flow	35
Number of Lanes	1

Approach

Opposing Approach
Opposing Lanes
Conflicting Approach Left
Conflicting Lanes Left
Conflicting Approach Right
Conflicting Lanes Right
HCM Control Delay
HCM LOS

HCM Signalized Intersection Capacity Analysis
 3: Mooney Boulevard & Riggin Avenue

Existing PM Peak
 01/14/2020

												
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	27	98	436	113	9	75	403	53	87	158	71	63
Future Volume (vph)	27	98	436	113	9	75	403	53	87	158	71	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.2	5.3	5.3		4.2	5.3	5.3	4.2	4.9		4.2
Lane Util. Factor		1.00	0.95	1.00		1.00	0.95	1.00	1.00	0.95		1.00
Flt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	0.95		1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (prot)		1752	3505	1568		1752	3505	1568	1752	3342		1752
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (perm)		1752	3505	1568		1752	3505	1568	1752	3342		1752
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	28	101	449	116	9	77	415	55	90	163	73	65
RTOR Reduction (vph)	0	0	0	86	0	0	0	40	0	57	0	0
Lane Group Flow (vph)	0	129	449	30	0	86	415	15	90	179	0	65
Turn Type	Prot	Prot	NA	Perm	Prot	Prot	NA	Perm	Prot	NA		Prot
Protected Phases	7	7	4		3	3	8		5	2		1
Permitted Phases				4				8				
Actuated Green, G (s)		5.5	14.3	14.3		5.9	14.7	14.7	6.0	12.4		3.9
Effective Green, g (s)		5.5	14.3	14.3		5.9	14.7	14.7	6.0	12.4		3.9
Actuated g/C Ratio		0.10	0.26	0.26		0.11	0.27	0.27	0.11	0.23		0.07
Clearance Time (s)		4.2	5.3	5.3		4.2	5.3	5.3	4.2	4.9		4.2
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)		174	909	406		187	935	418	190	752		124
v/s Ratio Prot		c0.07	c0.13			0.05	0.12		c0.05	0.05		0.04
v/s Ratio Perm				0.02				0.01				
v/c Ratio		0.74	0.49	0.07		0.46	0.44	0.04	0.47	0.24		0.52
Uniform Delay, d1		24.1	17.3	15.4		23.1	16.8	15.0	23.1	17.5		24.7
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2		15.6	0.4	0.1		1.8	0.3	0.0	1.9	0.2		4.0
Delay (s)		39.7	17.8	15.5		24.9	17.1	15.0	24.9	17.6		28.7
Level of Service		D	B	B		C	B	B	C	B		C
Approach Delay (s)			21.5				18.1			19.7		
Approach LOS			C				B			B		
Intersection Summary												
HCM 2000 Control Delay			20.2				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.49									
Actuated Cycle Length (s)			55.1						Sum of lost time (s)			18.6
Intersection Capacity Utilization			45.8%						ICU Level of Service			A
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 3: Mooney Boulevard & Riggin Avenue

Existing PM Peak
 01/14/2020



Movement	SBT	SBR
Lane Configurations	↑	↗
Traffic Volume (vph)	140	38
Future Volume (vph)	140	38
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.9	4.9
Lane Util. Factor	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	1845	1568
Flt Permitted	1.00	1.00
Satd. Flow (perm)	1845	1568
Peak-hour factor, PHF	0.97	0.97
Adj. Flow (vph)	144	39
RTOR Reduction (vph)	0	32
Lane Group Flow (vph)	144	7
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	10.3	10.3
Effective Green, g (s)	10.3	10.3
Actuated g/C Ratio	0.19	0.19
Clearance Time (s)	4.9	4.9
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	344	293
v/s Ratio Prot	0.08	
v/s Ratio Perm		0.00
v/c Ratio	0.42	0.02
Uniform Delay, d1	19.8	18.3
Progression Factor	1.00	1.00
Incremental Delay, d2	0.8	0.0
Delay (s)	20.6	18.3
Level of Service	C	B
Approach Delay (s)	22.3	
Approach LOS	C	
Intersection Summary		

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↑		↑
Traffic Vol, veh/h	0	579	497	21	0	43
Future Vol, veh/h	0	579	497	21	0	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	100	-	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	629	540	23	0	47

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	270
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	-	-	-	725
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	725
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	725
HCM Lane V/C Ratio	-	-	-	0.064
HCM Control Delay (s)	-	-	-	10.3
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.2

Intersection

Int Delay, s/veh 0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑		↓	↑	↓	
Traffic Vol, veh/h	548	5	11	490	3	13
Future Vol, veh/h	548	5	11	490	3	13
Conflicting Peds, #/hr	0	6	6	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	90	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	559	5	11	500	3	13

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	570
Stage 1	-	-	568
Stage 2	-	-	522
Critical Hdwy	-	4.13	6.43
Critical Hdwy Stg 1	-	-	5.43
Critical Hdwy Stg 2	-	-	5.43
Follow-up Hdwy	-	2.227	3.527
Pot Cap-1 Maneuver	-	997	237
Stage 1	-	-	565
Stage 2	-	-	593
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	991	233
Mov Cap-2 Maneuver	-	-	233
Stage 1	-	-	562
Stage 2	-	-	586

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	13.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	421	-	-	991	-
HCM Lane V/C Ratio	0.039	-	-	0.011	-
HCM Control Delay (s)	13.9	-	-	8.7	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Intersection Delay, s/veh	31
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↵		↵	↵			↕			↕	
Traffic Vol, veh/h	90	462	30	56	435	12	23	58	60	13	56	48
Future Vol, veh/h	90	462	30	56	435	12	23	58	60	13	56	48
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	94	481	31	58	453	13	24	60	63	14	58	50
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	38.3	31.9	13.2	12.7
HCM LOS	E	D	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	16%	100%	0%	100%	0%	11%
Vol Thru, %	41%	0%	94%	0%	97%	48%
Vol Right, %	43%	0%	6%	0%	3%	41%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	141	90	492	56	447	117
LT Vol	23	90	0	56	0	13
Through Vol	58	0	462	0	435	56
RT Vol	60	0	30	0	12	48
Lane Flow Rate	147	94	512	58	466	122
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.293	0.18	0.906	0.114	0.84	0.247
Departure Headway (Hd)	7.18	6.919	6.365	7.027	6.498	7.287
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	499	518	569	510	559	492
Service Time	5.237	4.662	4.109	4.772	4.242	5.346
HCM Lane V/C Ratio	0.295	0.181	0.9	0.114	0.834	0.248
HCM Control Delay	13.2	11.2	43.3	10.7	34.6	12.7
HCM Lane LOS	B	B	E	B	D	B
HCM 95th-tile Q	1.2	0.7	10.9	0.4	8.8	1

Intersection

Intersection Delay, s/veh 18.1
Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑		↙	↑	↗	↙	↑	↗	↙	↑↑	
Traffic Vol, veh/h	65	188	65	54	198	57	82	249	68	49	249	37
Future Vol, veh/h	65	188	65	54	198	57	82	249	68	49	249	37
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	68	196	68	56	206	59	85	259	71	51	259	39
Number of Lanes	1	1	0	1	1	1	1	1	1	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	3	3
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	3	2	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	3	3	3	2
HCM Control Delay	20.5	16.9	19.2	15.6
HCM LOS	C	C	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	0%	74%	0%	100%	0%	0%	100%	69%
Vol Right, %	0%	0%	100%	0%	26%	0%	0%	100%	0%	0%	31%
Sign Control	Stop										
Traffic Vol by Lane	82	249	68	65	253	54	198	57	49	166	120
LT Vol	82	0	0	65	0	54	0	0	49	0	0
Through Vol	0	249	0	0	188	0	198	0	0	166	83
RT Vol	0	0	68	0	65	0	0	57	0	0	37
Lane Flow Rate	85	259	71	68	264	56	206	59	51	173	125
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.21	0.602	0.15	0.167	0.599	0.142	0.491	0.13	0.129	0.411	0.289
Departure Headway (Hd)	8.869	8.358	7.642	8.864	8.184	9.086	8.578	7.867	9.064	8.552	8.331
Convergence, Y/N	Yes										
Cap	405	433	469	407	443	395	421	455	396	420	431
Service Time	6.619	6.107	5.391	6.564	5.884	6.835	6.327	5.616	6.816	6.304	6.082
HCM Lane V/C Ratio	0.21	0.598	0.151	0.167	0.596	0.142	0.489	0.13	0.129	0.412	0.29
HCM Control Delay	14	23	11.7	13.3	22.4	13.3	19.4	11.8	13.2	17.2	14.5
HCM Lane LOS	B	C	B	B	C	B	C	B	B	C	B
HCM 95th-tile Q	0.8	3.8	0.5	0.6	3.8	0.5	2.6	0.4	0.4	2	1.2

HCM 6th Signalized Intersection Summary
7: Giddings Street & Riggin Avenue

Existing AM Peak
01/14/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	406	39	43	313	36	42	160	50	42	150	57
Future Volume (veh/h)	55	406	39	43	313	36	42	160	50	42	150	57
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		0.98	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	62	461	44	49	356	41	48	182	57	48	170	65
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	103	557	53	88	532	61	86	263	82	86	249	95
Arrive On Green	0.06	0.33	0.33	0.05	0.33	0.33	0.05	0.20	0.20	0.05	0.20	0.20
Sat Flow, veh/h	1767	1668	159	1767	1634	188	1767	1349	423	1767	1279	489
Grp Volume(v), veh/h	62	0	505	49	0	397	48	0	239	48	0	235
Grp Sat Flow(s),veh/h/ln	1767	0	1827	1767	0	1822	1767	0	1772	1767	0	1768
Q Serve(g_s), s	1.7	0.0	12.5	1.3	0.0	9.2	1.3	0.0	6.2	1.3	0.0	6.1
Cycle Q Clear(g_c), s	1.7	0.0	12.5	1.3	0.0	9.2	1.3	0.0	6.2	1.3	0.0	6.1
Prop In Lane	1.00		0.09	1.00		0.10	1.00		0.24	1.00		0.28
Lane Grp Cap(c), veh/h	103	0	610	88	0	593	86	0	346	86	0	345
V/C Ratio(X)	0.60	0.00	0.83	0.56	0.00	0.67	0.56	0.00	0.69	0.56	0.00	0.68
Avail Cap(c_a), veh/h	183	0	859	183	0	857	223	0	685	183	0	623
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.6	0.0	15.1	22.8	0.0	14.3	22.8	0.0	18.4	22.8	0.0	18.4
Incr Delay (d2), s/veh	5.6	0.0	4.7	5.5	0.0	1.3	5.5	0.0	2.5	5.5	0.0	2.4
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	0.8	0.0	4.7	0.6	0.0	3.1	0.6	0.0	2.5	0.6	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.2	0.0	19.8	28.3	0.0	15.6	28.3	0.0	20.9	28.3	0.0	20.7
LnGrp LOS	C	A	B	C	A	B	C	A	C	C	A	C
Approach Vol, veh/h		567			446			287			283	
Approach Delay, s/veh		20.7			17.0			22.1			22.0	
Approach LOS		C			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.6	14.2	6.6	21.7	6.6	14.2	7.1	21.3				
Change Period (Y+Rc), s	* 4.2	* 4.6	* 4.2	5.3	* 4.2	4.6	* 4.2	5.3				
Max Green Setting (Gmax), s	* 5.1	* 19	* 5.1	23.1	* 6.2	17.3	* 5.1	23.1				
Max Q Clear Time (g_c+I1), s	3.3	8.2	3.3	14.5	3.3	8.1	3.7	11.2				
Green Ext Time (p_c), s	0.0	1.0	0.0	1.9	0.0	0.8	0.0	1.7				

Intersection Summary												
HCM 6th Ctrl Delay											20.2	
HCM 6th LOS											C	

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

HCM 6th Signalized Intersection Summary
8: Mooney Boulevard & Ferguson Avenue

Existing AM Peak
01/14/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	259	127	70	188	39	91	199	59	97	318	38
Future Volume (veh/h)	46	259	127	70	188	39	91	199	59	97	318	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		0.99	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	58	324	159	88	235	49	114	249	74	121	398	48
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	91	394	193	114	645	545	146	361	303	155	632	76
Arrive On Green	0.05	0.34	0.34	0.06	0.35	0.35	0.08	0.19	0.19	0.09	0.20	0.20
Sat Flow, veh/h	1767	1174	576	1767	1856	1568	1767	1856	1556	1767	3168	380
Grp Volume(v), veh/h	58	0	483	88	235	49	114	249	74	121	220	226
Grp Sat Flow(s),veh/h/ln	1767	0	1751	1767	1856	1568	1767	1856	1556	1767	1763	1785
Q Serve(g_s), s	1.9	0.0	15.1	2.9	5.6	1.3	3.8	7.4	2.4	4.0	6.8	6.9
Cycle Q Clear(g_c), s	1.9	0.0	15.1	2.9	5.6	1.3	3.8	7.4	2.4	4.0	6.8	6.9
Prop In Lane	1.00		0.33	1.00		1.00	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	91	0	587	114	645	545	146	361	303	155	352	356
V/C Ratio(X)	0.63	0.00	0.82	0.77	0.36	0.09	0.78	0.69	0.24	0.78	0.63	0.63
Avail Cap(c_a), veh/h	216	0	939	172	961	812	204	808	678	213	789	799
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	0.00	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	27.7	0.0	18.2	27.5	14.5	13.1	26.8	22.4	20.3	26.7	21.9	21.9
Incr Delay (d2), s/veh	7.1	0.0	3.3	11.5	0.3	0.1	12.1	2.4	0.4	12.0	1.8	1.9
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	0.0	5.5	1.5	2.1	0.4	1.9	3.0	0.8	2.0	2.7	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.8	0.0	21.5	39.0	14.9	13.2	38.9	24.7	20.7	38.7	23.7	23.8
LnGrp LOS	C	A	C	D	B	B	D	C	C	D	C	C
Approach Vol, veh/h		541			372			437			567	
Approach Delay, s/veh		22.9			20.4			27.7			26.9	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.4	16.9	8.0	25.3	9.1	17.2	7.3	26.1				
Change Period (Y+Rc), s	*4.2	5.3	*4.2	5.3	*4.2	*5.3	*4.2	*5.3				
Max Green Setting (Gmax), s	*7.2	26.0	*5.8	32.0	*6.9	*27	*7.3	*31				
Max Q Clear Time (g_c+l1), s	6.0	9.4	4.9	17.1	5.8	8.9	3.9	7.6				
Green Ext Time (p_c), s	0.0	1.3	0.0	2.5	0.0	2.3	0.0	1.4				

Intersection Summary

HCM 6th Ctrl Delay	24.7
HCM 6th LOS	C

Notes

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

HCM 6th Signalized Intersection Summary
7: Giddings Street & Riggin Avenue

Existing PM Peak
01/14/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	462	30	56	435	12	23	58	60	13	56	48
Future Volume (veh/h)	90	462	30	56	435	12	23	58	60	13	56	48
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		0.94	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	94	481	31	58	453	12	24	60	62	14	58	50
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	139	586	38	103	574	15	51	125	129	32	132	114
Arrive On Green	0.08	0.34	0.34	0.06	0.32	0.32	0.03	0.15	0.15	0.02	0.14	0.14
Sat Flow, veh/h	1767	1724	111	1767	1799	48	1767	806	832	1767	920	793
Grp Volume(v), veh/h	94	0	512	58	0	465	24	0	122	14	0	108
Grp Sat Flow(s), veh/h/ln	1767	0	1836	1767	0	1847	1767	0	1638	1767	0	1713
Q Serve(g_s), s	2.2	0.0	10.9	1.4	0.0	9.8	0.6	0.0	2.9	0.3	0.0	2.5
Cycle Q Clear(g_c), s	2.2	0.0	10.9	1.4	0.0	9.8	0.6	0.0	2.9	0.3	0.0	2.5
Prop In Lane	1.00		0.06	1.00		0.03	1.00		0.51	1.00		0.46
Lane Grp Cap(c), veh/h	139	0	623	103	0	589	51	0	253	32	0	246
V/C Ratio(X)	0.68	0.00	0.82	0.56	0.00	0.79	0.47	0.00	0.48	0.44	0.00	0.44
Avail Cap(c_a), veh/h	216	0	831	207	0	828	207	0	692	207	0	699
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.1	0.0	12.9	19.5	0.0	13.2	20.4	0.0	16.4	20.7	0.0	16.7
Incr Delay (d2), s/veh	5.6	0.0	5.0	4.8	0.0	3.4	6.5	0.0	1.4	9.4	0.0	1.2
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	0.0	3.9	0.6	0.0	3.4	0.3	0.0	1.1	0.2	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.7	0.0	17.9	24.3	0.0	16.6	26.9	0.0	17.9	30.1	0.0	17.9
LnGrp LOS	C	A	B	C	A	B	C	A	B	C	A	B
Approach Vol, veh/h		606			523			146			122	
Approach Delay, s/veh		18.9			17.5			19.3			19.3	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.0	11.2	6.7	19.8	5.4	10.7	7.6	18.9				
Change Period (Y+Rc), s	* 4.2	* 4.6	* 4.2	5.3	* 4.2	4.6	* 4.2	5.3				
Max Green Setting (Gmax), s	* 5	* 18	* 5	19.3	* 5	17.4	* 5.2	19.1				
Max Q Clear Time (g_c+I1), s	2.3	4.9	3.4	12.9	2.6	4.5	4.2	11.8				
Green Ext Time (p_c), s	0.0	0.5	0.0	1.6	0.0	0.4	0.0	1.5				

Intersection Summary												
HCM 6th Ctrl Delay				18.5								
HCM 6th LOS				B								

Notes

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

HCM 6th Signalized Intersection Summary
8: Mooney Boulevard & Ferguson Avenue

Existing PM Peak
01/14/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	188	65	54	198	57	82	249	68	49	249	37
Future Volume (veh/h)	65	188	65	54	198	57	82	249	68	49	249	37
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		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	68	196	68	56	206	59	85	259	71	51	259	39
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	114	291	101	100	396	334	131	423	354	94	635	94
Arrive On Green	0.06	0.22	0.22	0.06	0.21	0.21	0.07	0.23	0.23	0.05	0.21	0.21
Sat Flow, veh/h	1767	1316	457	1767	1856	1569	1767	1856	1555	1767	3073	457
Grp Volume(v), veh/h	68	0	264	56	206	59	85	259	71	51	147	151
Grp Sat Flow(s),veh/h/ln	1767	0	1773	1767	1856	1569	1767	1856	1555	1767	1763	1767
Q Serve(g_s), s	1.6	0.0	5.9	1.3	4.2	1.3	2.0	5.4	1.6	1.2	3.1	3.2
Cycle Q Clear(g_c), s	1.6	0.0	5.9	1.3	4.2	1.3	2.0	5.4	1.6	1.2	3.1	3.2
Prop In Lane	1.00		0.26	1.00		1.00	1.00		1.00	1.00		0.26
Lane Grp Cap(c), veh/h	114	0	392	100	396	334	131	423	354	94	364	365
V/C Ratio(X)	0.60	0.00	0.67	0.56	0.52	0.18	0.65	0.61	0.20	0.54	0.40	0.41
Avail Cap(c_a), veh/h	374	0	1318	209	1224	1035	291	1164	976	283	1114	1116
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	0.00	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	19.6	0.0	15.3	19.8	15.0	13.8	19.4	14.9	13.4	19.9	14.8	14.8
Incr Delay (d2), s/veh	4.9	0.0	2.0	4.8	1.1	0.2	5.3	1.4	0.3	4.8	0.7	0.7
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	0.7	0.0	2.0	0.6	1.5	0.4	0.9	1.9	0.5	0.5	1.1	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.5	0.0	17.4	24.6	16.1	14.1	24.7	16.4	13.7	24.7	15.5	15.6
LnGrp LOS	C	A	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		332			321			415			349	
Approach Delay, s/veh		18.8			17.2			17.6			16.9	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.5	15.1	6.6	14.8	7.4	14.2	7.0	14.5				
Change Period (Y+Rc), s	*4.2	5.3	*4.2	5.3	*4.2	*5.3	*4.2	*5.3				
Max Green Setting (Gmax), s	*6.9	27.0	*5.1	32.0	*7.1	*27	*9.1	*28				
Max Q Clear Time (g_c+l1), s	3.2	7.4	3.3	7.9	4.0	5.2	3.6	6.2				
Green Ext Time (p_c), s	0.0	1.5	0.0	1.4	0.0	1.5	0.0	1.2				

Intersection Summary

HCM 6th Ctrl Delay	17.6
HCM 6th LOS	B

Notes

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

Intersection: 1: Mooney Boulevard & Project Driveway 1

Movement	EB	WB	NB	NB	NB	SB
Directions Served	LTR	LTR	L	T	TR	L
Maximum Queue (ft)	56	68	53	53	21	48
Average Queue (ft)	27	35	15	2	1	12
95th Queue (ft)	52	56	44	17	7	37
Link Distance (ft)	188	259		233	233	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			50			50
Storage Blk Time (%)			0	0		0
Queuing Penalty (veh)			0	0		0

Intersection: 2: County Center Street & Riggin Avenue

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	UL	T	TR	L	TR	L	T	R
Maximum Queue (ft)	24	87	112	74	121	111	72	136	68	95	75
Average Queue (ft)	14	42	43	34	60	74	36	54	26	45	32
95th Queue (ft)	32	69	73	62	95	108	58	98	53	72	61
Link Distance (ft)		2738	2738		2277	2277		874		1577	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	250			150			200		130		130
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 3: Mooney Boulevard & Riggin Avenue

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	UL	T	T	R	UL	T	T	R	L	T	TR	L
Maximum Queue (ft)	346	318	110	89	199	195	143	78	108	111	130	106
Average Queue (ft)	120	55	53	25	77	71	70	21	50	54	60	45
95th Queue (ft)	275	144	94	51	152	127	119	55	96	98	114	82
Link Distance (ft)		2277	2277			251	251			280	280	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300			100	125			125	160			150
Storage Blk Time (%)	6	0	1	0	8	0	1					
Queuing Penalty (veh)	9	0	1	0	12	0	0					

Intersection: 3: Mooney Boulevard & Riggin Avenue

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	169	42
Average Queue (ft)	73	21
95th Queue (ft)	133	42
Link Distance (ft)	233	233
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	1	
Queuing Penalty (veh)	1	

Intersection: 4: Riggin Avenue & Project Driveway 2

Movement	EB	EB	SB
Directions Served	T	T	R
Maximum Queue (ft)	38	45	48
Average Queue (ft)	2	3	24
95th Queue (ft)	14	20	43
Link Distance (ft)	251	251	148
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Riggin Avenue & Project Driveway 3

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 6: Dayton Street & Riggin Avenue

Movement

WB NB

Directions Served L LR
Maximum Queue (ft) 27 31
Average Queue (ft) 3 13
95th Queue (ft) 15 38
Link Distance (ft) 485
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft) 90
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 7: Giddings Street & Riggin Avenue

Movement

EB EB WB WB NB NB SB SB

Directions Served L TR L TR L TR L TR
Maximum Queue (ft) 204 268 98 275 96 158 74 198
Average Queue (ft) 42 131 36 121 34 83 35 93
95th Queue (ft) 96 216 75 217 64 126 61 158
Link Distance (ft) 1457 1019 2215 951
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft) 155 155 100 155
Storage Blk Time (%) 4 4 0 6 1
Queuing Penalty (veh) 2 2 0 3 0

Intersection: 8: Mooney Boulevard & Ferguson Avenue

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	T	R	L	T	TR
Maximum Queue (ft)	90	159	89	152	106	175	202	66	126	105	144
Average Queue (ft)	29	106	47	70	16	60	91	23	55	57	63
95th Queue (ft)	65	161	82	126	55	113	151	54	106	94	118
Link Distance (ft)		739		634			1454	1454		359	359
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	150		160		60	155			150		
Storage Blk Time (%)		1		10	0	0	1				
Queuing Penalty (veh)		1		11	1	0	1				

Network Summary

Network wide Queuing Penalty: 44

Intersection: 1: Mooney Boulevard & Project Driveway 1

Movement	EB	WB	NB
Directions Served	LTR	LTR	L
Maximum Queue (ft)	74	54	55
Average Queue (ft)	36	12	17
95th Queue (ft)	62	39	46
Link Distance (ft)	188	259	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			50
Storage Blk Time (%)			0
Queuing Penalty (veh)			0

Intersection: 2: County Center Street & Riggins Avenue

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	UL	T	TR	L	TR	L	T	R
Maximum Queue (ft)	105	132	185	120	124	123	32	91	55	79	55
Average Queue (ft)	27	57	62	46	58	70	24	54	28	40	24
95th Queue (ft)	58	102	116	83	93	108	45	82	49	62	47
Link Distance (ft)		2738	2738		2277	2277		874		1577	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	250			150			200		130		130
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 3: Mooney Boulevard & Riggin Avenue

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	UL	T	T	R	UL	T	T	R	L	T	TR	L
Maximum Queue (ft)	172	128	141	53	131	130	143	53	113	89	127	90
Average Queue (ft)	96	50	68	27	54	74	70	20	57	39	47	43
95th Queue (ft)	173	95	120	50	102	122	121	48	100	75	91	76
Link Distance (ft)		2277	2277			251	251			280	280	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300			100	125			125	160			150
Storage Blk Time (%)			2		1	0	2					
Queuing Penalty (veh)			2		1	0	1					

Intersection: 3: Mooney Boulevard & Riggin Avenue

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	102	42
Average Queue (ft)	59	11
95th Queue (ft)	101	32
Link Distance (ft)	233	233
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Riggin Avenue & Project Driveway 2

Movement	EB	EB	SB
Directions Served	T	T	R
Maximum Queue (ft)	76	67	49
Average Queue (ft)	13	11	21
95th Queue (ft)	50	45	41
Link Distance (ft)	251	251	148
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Riggin Avenue & Project Driveway 3

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 6: Dayton Street & Riggin Avenue

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	28	31
Average Queue (ft)	6	13
95th Queue (ft)	25	38
Link Distance (ft)	485	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	90	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Giddings Street & Riggin Avenue

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	135	268	94	235	31	97	52	76
Average Queue (ft)	51	123	33	112	16	36	8	36
95th Queue (ft)	98	220	69	200	40	70	32	63
Link Distance (ft)	1457		1019		2215		951	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	155		155		100		155	
Storage Blk Time (%)	0	4		3		0		
Queuing Penalty (veh)	0	3		1		0		

Intersection: 8: Mooney Boulevard & Ferguson Avenue

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	T	R	L	T	TR
Maximum Queue (ft)	93	144	111	195	110	115	161	55	89	102	104
Average Queue (ft)	36	81	41	78	35	48	81	25	24	36	43
95th Queue (ft)	69	130	81	157	99	88	140	52	55	78	86
Link Distance (ft)		739		634			1454	1454		359	359
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	150		160		60	155			150		
Storage Blk Time (%)		0		14	0		0				
Queuing Penalty (veh)		0		16	0		0				

Network Summary

Network wide Queuing Penalty: 26

Appendix G: Opening Year plus Project Traffic Conditions



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Intersection												
Int Delay, s/veh	5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↙	↕	↙	↕	↙	↕
Traffic Vol, veh/h	14	3	43	63	2	44	45	282	128	62	337	33
Future Vol, veh/h	14	3	43	63	2	44	45	282	128	62	337	33
Conflicting Peds, #/hr	0	0	4	4	0	0	2	0	12	12	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	17	4	52	77	2	54	55	344	156	76	411	40

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	868	1207	232	908	1149	262	453	0	0	512	0	0
Stage 1	585	585	-	544	544	-	-	-	-	-	-	-
Stage 2	283	622	-	364	605	-	-	-	-	-	-	-
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	245	181	767	229	196	734	1097	-	-	1043	-	-
Stage 1	462	493	-	488	515	-	-	-	-	-	-	-
Stage 2	697	475	-	625	483	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	203	157	763	187	170	726	1095	-	-	1031	-	-
Mov Cap-2 Maneuver	203	157	-	187	170	-	-	-	-	-	-	-
Stage 1	438	456	-	458	484	-	-	-	-	-	-	-
Stage 2	610	447	-	533	446	-	-	-	-	-	-	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	15.5			31.3			0.8			1.3		
HCM LOS	C			D								

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1095	-	-	415	266	1031	-	-
HCM Lane V/C Ratio	0.05	-	-	0.176	0.5	0.073	-	-
HCM Control Delay (s)	8.5	-	-	15.5	31.3	8.8	-	-
HCM Lane LOS	A	-	-	C	D	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.6	2.6	0.2	-	-

HCM Signalized Intersection Capacity Analysis
2: County Center Street & Riggan Avenue

Opening Year plus Project AM Peak
01/13/2020



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↙	↑↑			↘	↑↑		↙	↑		↙	↑
Traffic Volume (vph)	30	424	31	1	76	469	27	90	84	124	53	118
Future Volume (vph)	30	424	31	1	76	469	27	90	84	124	53	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	5.7			4.2	5.3		4.2	4.9		4.2	4.9
Lane Util. Factor	1.00	0.95			1.00	0.95		1.00	1.00		1.00	1.00
Frbp, ped/bikes	1.00	1.00			1.00	1.00		1.00	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00	1.00		1.00	1.00
Frt	1.00	0.99			1.00	0.99		1.00	0.91		1.00	1.00
Flt Protected	0.95	1.00			0.95	1.00		0.95	1.00		0.95	1.00
Satd. Flow (prot)	1752	3464			1752	3476		1752	1667		1752	1845
Flt Permitted	0.95	1.00			0.95	1.00		0.95	1.00		0.95	1.00
Satd. Flow (perm)	1752	3464			1752	3476		1752	1667		1752	1845
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	35	499	36	1	89	552	32	106	99	146	62	139
RTOR Reduction (vph)	0	6	0	0	0	4	0	0	68	0	0	0
Lane Group Flow (vph)	35	529	0	0	90	580	0	106	177	0	62	139
Confl. Peds. (#/hr)			3							1		
Turn Type	Prot	NA		Prot	Prot	NA		Prot	NA		Prot	NA
Protected Phases	7	4		3	3	8		5	2		1	6
Permitted Phases												
Actuated Green, G (s)	2.0	18.2			6.1	22.7		7.1	18.8		3.3	15.0
Effective Green, g (s)	2.0	18.2			6.1	22.7		7.1	18.8		3.3	15.0
Actuated g/C Ratio	0.03	0.28			0.09	0.35		0.11	0.29		0.05	0.23
Clearance Time (s)	4.2	5.7			4.2	5.3		4.2	4.9		4.2	4.9
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	53	963			163	1206		190	479		88	423
v/s Ratio Prot	0.02	0.15			c0.05	c0.17		c0.06	c0.11		0.04	0.08
v/s Ratio Perm												
v/c Ratio	0.66	0.55			0.55	0.48		0.56	0.37		0.70	0.33
Uniform Delay, d1	31.4	20.1			28.3	16.7		27.7	18.6		30.6	21.0
Progression Factor	1.00	1.00			1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	26.8	0.6			4.0	0.3		3.5	0.5		22.5	0.5
Delay (s)	58.1	20.8			32.3	17.0		31.2	19.1		53.1	21.5
Level of Service	E	C			C	B		C	B		D	C
Approach Delay (s)		23.0				19.1			22.7			27.6
Approach LOS		C				B			C			C

Intersection Summary

HCM 2000 Control Delay	22.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	65.4	Sum of lost time (s)	19.0
Intersection Capacity Utilization	50.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	7
Traffic Volume (vph)	77
Future Volume (vph)	77
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.9
Lane Util. Factor	1.00
Frbp, ped/bikes	0.99
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1548
Flt Permitted	1.00
Satd. Flow (perm)	1548
Peak-hour factor, PHF	0.85
Adj. Flow (vph)	91
RTOR Reduction (vph)	70
Lane Group Flow (vph)	21
Confl. Peds. (#/hr)	1
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	15.0
Effective Green, g (s)	15.0
Actuated g/C Ratio	0.23
Clearance Time (s)	4.9
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	355
v/s Ratio Prot	
v/s Ratio Perm	0.01
v/c Ratio	0.06
Uniform Delay, d1	19.7
Progression Factor	1.00
Incremental Delay, d2	0.1
Delay (s)	19.8
Level of Service	B
Approach Delay (s)	
Approach LOS	
Intersection Summary	

HCM Signalized Intersection Capacity Analysis
3: Mooney Boulevard & Riffin Avenue

Opening Year plus Project AM Peak
01/13/2020



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations		↔	↕	↗		↖	↕	↗	↖	↕		↗
Traffic Volume (vph)	23	117	350	108	31	99	340	48	93	231	88	95
Future Volume (vph)	23	117	350	108	31	99	340	48	93	231	88	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.2	5.3	5.3		4.2	5.3	5.3	4.2	4.9		4.2
Lane Util. Factor		1.00	0.95	1.00		1.00	0.95	1.00	1.00	0.95		1.00
Frbp, ped/bikes		1.00	1.00	0.98		1.00	1.00	0.98	1.00	1.00		1.00
Flpb, ped/bikes		1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	0.96		1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (prot)		1752	3505	1533		1752	3505	1542	1752	3347		1752
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (perm)		1752	3505	1533		1752	3505	1542	1752	3347		1752
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	26	134	402	124	36	114	391	55	107	266	101	109
RTOR Reduction (vph)	0	0	0	95	0	0	0	42	0	51	0	0
Lane Group Flow (vph)	0	160	402	29	0	150	391	13	107	316	0	109
Confl. Peds. (#/hr)				2				7			5	
Turn Type	Prot	Prot	NA	Perm	Prot	Prot	NA	Perm	Prot	NA		Prot
Protected Phases	7	7	4		3	3	8		5	2		1
Permitted Phases				4				8				
Actuated Green, G (s)		5.3	13.7	13.7		5.3	13.7	13.7	5.3	15.0		5.3
Effective Green, g (s)		5.3	13.7	13.7		5.3	13.7	13.7	5.3	15.0		5.3
Actuated g/C Ratio		0.09	0.24	0.24		0.09	0.24	0.24	0.09	0.26		0.09
Clearance Time (s)		4.2	5.3	5.3		4.2	5.3	5.3	4.2	4.9		4.2
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)		160	829	362		160	829	364	160	867		160
v/s Ratio Prot		c0.09	c0.11			0.09	0.11		0.06	0.09		c0.06
v/s Ratio Perm				0.02				0.01				
v/c Ratio		1.00	0.48	0.08		0.94	0.47	0.04	0.67	0.36		0.68
Uniform Delay, d1		26.3	19.1	17.2		26.1	19.0	17.0	25.5	17.5		25.5
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2		71.2	0.4	0.1		52.4	0.4	0.0	10.1	0.3		11.3
Delay (s)		97.5	19.5	17.3		78.5	19.4	17.1	35.6	17.8		36.8
Level of Service		F	B	B		E	B	B	D	B		D
Approach Delay (s)			37.3				34.1			21.8		
Approach LOS			D				C			C		
Intersection Summary												
HCM 2000 Control Delay			30.0				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.60									
Actuated Cycle Length (s)			57.9						18.6			
Intersection Capacity Utilization			53.4%							A		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 3: Mooney Boulevard & Riggin Avenue

Opening Year plus Project AM Peak
 01/13/2020



Movement	SBT	SBR
Lane Configurations	↑	↑
Traffic Volume (vph)	222	101
Future Volume (vph)	222	101
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.9	4.9
Lane Util. Factor	1.00	1.00
Frbp, ped/bikes	1.00	0.99
Fipb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	1845	1548
Flt Permitted	1.00	1.00
Satd. Flow (perm)	1845	1548
Peak-hour factor, PHF	0.87	0.87
Adj. Flow (vph)	255	116
RTOR Reduction (vph)	0	86
Lane Group Flow (vph)	255	30
Confl. Peds. (#/hr)		2
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	15.0	15.0
Effective Green, g (s)	15.0	15.0
Actuated g/C Ratio	0.26	0.26
Clearance Time (s)	4.9	4.9
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	477	401
v/s Ratio Prot	0.14	
v/s Ratio Perm		0.02
v/c Ratio	0.53	0.07
Uniform Delay, d1	18.4	16.2
Progression Factor	1.00	1.00
Incremental Delay, d2	1.2	0.1
Delay (s)	19.6	16.3
Level of Service	B	B
Approach Delay (s)	22.7	
Approach LOS	C	

Intersection Summary

Intersection

Int Delay, s/veh 1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↑		↑
Traffic Vol, veh/h	0	563	420	20	0	112
Future Vol, veh/h	0	563	420	20	0	112
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	100	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	633	472	22	0	126

Major/Minor

	Major1	Major2	Minor2
Conflicting Flow All	-	0	0
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
Stage 1	0	-	0
Stage 2	0	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	763
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach

	EB	WB	SB
HCM Control Delay, s	0	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt

	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	763
HCM Lane V/C Ratio	-	-	-	0.165
HCM Control Delay (s)	-	-	-	10.6
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.6

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑↑	↑↑			↗
Traffic Vol, veh/h	44	508	437	13	0	3
Future Vol, veh/h	44	508	437	13	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	49	571	491	15	0	3

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	506	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.16	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.23	-	-
Pot Cap-1 Maneuver	1048	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1048	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1048	-	-	-	743
HCM Lane V/C Ratio	0.047	-	-	-	0.005
HCM Control Delay (s)	8.6	-	-	-	9.9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↵		↵	↵				↵			↵
Traffic Vol, veh/h	1	470	1	5	442	1	0	0	14	0	0	5
Future Vol, veh/h	1	470	1	5	442	1	0	0	14	0	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	100	-	-	90	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	1	528	1	6	497	1	0	0	16	0	0	6

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	498	0	0	529	0	0	-	-	529	-	-	498
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.13	-	-	4.13	-	-	-	-	6.23	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	-	-	3.327	-	-	3.327
Pot Cap-1 Maneuver	1061	-	-	1033	-	-	0	0	548	0	0	570
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1061	-	-	1033	-	-	-	-	548	-	-	570
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	11.8	11.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	548	1061	-	-	1033	-	-	570
HCM Lane V/C Ratio	0.029	0.001	-	-	0.005	-	-	0.01
HCM Control Delay (s)	11.8	8.4	-	-	8.5	-	-	11.4
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

HCM 6th Signalized Intersection Summary
7: Giddings Street & Riggins Avenue

Opening Year plus Project AM Peak
01/13/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	56	426	52	44	328	37	49	163	51	43	153	58
Future Volume (veh/h)	56	426	52	44	328	37	49	163	51	43	153	58
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		0.98	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	64	484	59	50	373	42	56	185	58	49	174	66
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	103	568	69	88	560	63	95	262	82	87	243	92
Arrive On Green	0.06	0.35	0.35	0.05	0.34	0.34	0.05	0.19	0.19	0.05	0.19	0.19
Sat Flow, veh/h	1767	1622	198	1767	1638	184	1767	1349	423	1767	1282	486
Grp Volume(v), veh/h	64	0	543	50	0	415	56	0	243	49	0	240
Grp Sat Flow(s),veh/h/ln	1767	0	1820	1767	0	1822	1767	0	1772	1767	0	1768
Q Serve(g_s), s	1.8	0.0	14.2	1.4	0.0	10.0	1.6	0.0	6.6	1.4	0.0	6.5
Cycle Q Clear(g_c), s	1.8	0.0	14.2	1.4	0.0	10.0	1.6	0.0	6.6	1.4	0.0	6.5
Prop In Lane	1.00		0.11	1.00		0.10	1.00		0.24	1.00		0.28
Lane Grp Cap(c), veh/h	103	0	638	88	0	623	95	0	345	87	0	336
V/C Ratio(X)	0.62	0.00	0.85	0.57	0.00	0.67	0.59	0.00	0.71	0.57	0.00	0.71
Avail Cap(c_a), veh/h	176	0	819	176	0	820	227	0	656	176	0	582
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.6	0.0	15.4	23.9	0.0	14.4	23.7	0.0	19.3	23.9	0.0	19.5
Incr Delay (d2), s/veh	6.0	0.0	6.9	5.7	0.0	1.3	5.8	0.0	2.6	5.7	0.0	2.8
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	0.0	5.6	0.7	0.0	3.3	0.8	0.0	2.7	0.7	0.0	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.6	0.0	22.4	29.6	0.0	15.7	29.5	0.0	21.9	29.6	0.0	22.3
LnGrp LOS	C	A	C	C	A	B	C	A	C	C	A	C
Approach Vol, veh/h		607			465			299			289	
Approach Delay, s/veh		23.1			17.2			23.4			23.6	
Approach LOS		C			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.7	14.6	6.7	23.3	7.0	14.4	7.2	22.8				
Change Period (Y+Rc), s	4.2	* 4.6	* 4.2	5.3	* 4.2	4.6	* 4.2	5.3				
Max Green Setting (Gmax), s	19	* 19	* 5.1	23.1	* 6.6	16.9	* 5.1	23.1				
Max Q Clear Time (g_c+1), s	13.4	8.6	3.4	16.2	3.6	8.5	3.8	12.0				
Green Ext Time (p_c), s	0.0	1.0	0.0	1.8	0.0	0.8	0.0	1.7				

Intersection Summary

HCM 6th Ctrl Delay	21.6
HCM 6th LOS	C

Notes

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

Intersection												
Intersection Delay, s/veh	74.9											
Intersection LOS	F											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↘		↙	↑	↘	↙	↑	↘	↙	↕	
Traffic Vol, veh/h	50	264	130	71	192	43	93	214	60	100	333	40
Future Vol, veh/h	50	264	130	71	192	43	93	214	60	100	333	40
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	63	330	163	89	240	54	116	268	75	125	416	50
Number of Lanes	1	1	0	1	1	1	1	1	1	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	2
HCM Control Delay	184.8	30.4	33.5	32.5
HCM LOS	F	D	D	D

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	0%	67%	0%	100%	0%	0%	100%	74%
Vol Right, %	0%	0%	100%	0%	33%	0%	0%	100%	0%	0%	26%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	93	214	60	50	394	71	192	43	100	222	151
LT Vol	93	0	0	50	0	71	0	0	100	0	0
Through Vol	0	214	0	0	264	0	192	0	0	222	111
RT Vol	0	0	60	0	130	0	0	43	0	0	40
Lane Flow Rate	116	268	75	62	492	89	240	54	125	278	189
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.352	0.773	0.202	0.185	1.36	0.274	0.709	0.149	0.366	0.776	0.518
Departure Headway (Hd)	11.872	11.348	10.614	10.674	9.943	12.01	11.491	10.764	11.526	11.003	10.809
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	305	321	341	337	369	301	317	335	314	330	336
Service Time	9.572	9.048	8.314	8.423	7.692	9.71	9.191	8.464	9.226	8.703	8.509
HCM Lane V/C Ratio	0.38	0.835	0.22	0.184	1.333	0.296	0.757	0.161	0.398	0.842	0.563
HCM Control Delay	20.9	43.9	16	15.8	206.3	19.2	37.9	15.3	20.7	43.2	24.6
HCM Lane LOS	C	E	C	C	F	C	E	C	C	E	C
HCM 95th-tile Q	1.5	6.1	0.7	0.7	23.9	1.1	5.1	0.5	1.6	6.2	2.8

Intersection

Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕	↕		↕	↕	
Traffic Vol, veh/h	18	3	77	30	3	27	80	201	44	30	165	25
Future Vol, veh/h	18	3	77	30	3	27	80	201	44	30	165	25
Conflicting Peds, #/hr	0	0	0	0	0	0	2	0	2	2	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	20	3	85	33	3	30	88	221	48	33	181	27

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	551	710	106	581	699	137	210	0	0	271	0	0
Stage 1	263	263	-	423	423	-	-	-	-	-	-	-
Stage 2	288	447	-	158	276	-	-	-	-	-	-	-
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	415	355	925	395	360	883	1351	-	-	1282	-	-
Stage 1	716	687	-	576	584	-	-	-	-	-	-	-
Stage 2	693	569	-	825	678	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	370	322	923	331	327	881	1348	-	-	1280	-	-
Mov Cap-2 Maneuver	370	322	-	331	327	-	-	-	-	-	-	-
Stage 1	668	668	-	537	545	-	-	-	-	-	-	-
Stage 2	622	531	-	726	659	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.1	14.1	1.9	1.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1348	-	-	693	460	1280	-	-
HCM Lane V/C Ratio	0.065	-	-	0.155	0.143	0.026	-	-
HCM Control Delay (s)	7.9	-	-	11.1	14.1	7.9	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.5	0.5	0.1	-	-

HCM Signalized Intersection Capacity Analysis
 2: County Center Street & Riggan Avenue

Opening Year plus Project PM Peak
 01/13/2020



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↙	↑↑			↘	↑↑		↙	↑		↙	↑
Traffic Volume (vph)	70	589	100	2	111	419	59	57	95	101	50	76
Future Volume (vph)	70	589	100	2	111	419	59	57	95	101	50	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	5.7			4.2	5.3		4.2	4.9		4.2	4.9
Lane Util. Factor	1.00	0.95			1.00	0.95		1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00			1.00	1.00		1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00	1.00		1.00	1.00
Fr _t	1.00	0.98			1.00	0.98		1.00	0.92		1.00	1.00
Fl _t Protected	0.95	1.00			0.95	1.00		0.95	1.00		0.95	1.00
Satd. Flow (prot)	1752	3414			1752	3440		1752	1702		1752	1845
Fl _t Permitted	0.95	1.00			0.95	1.00		0.95	1.00		0.95	1.00
Satd. Flow (perm)	1752	3414			1752	3440		1752	1702		1752	1845
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	73	614	104	2	116	436	61	59	99	105	52	79
RTOR Reduction (vph)	0	14	0	0	0	11	0	0	53	0	0	0
Lane Group Flow (vph)	73	704	0	0	118	486	0	59	151	0	52	79
Confl. Peds. (#/hr)			8									
Turn Type	Prot	NA		Prot	Prot	NA		Prot	NA		Prot	NA
Protected Phases	7	4		3	3	8		5	2		1	6
Permitted Phases												
Actuated Green, G (s)	5.0	19.7			8.3	23.4		2.6	13.1		2.6	13.1
Effective Green, g (s)	5.0	19.7			8.3	23.4		2.6	13.1		2.6	13.1
Actuated g/C Ratio	0.08	0.31			0.13	0.37		0.04	0.21		0.04	0.21
Clearance Time (s)	4.2	5.7			4.2	5.3		4.2	4.9		4.2	4.9
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	139	1072			231	1283		72	355		72	385
v/s Ratio Prot	0.04	c0.21			c0.07	c0.14		c0.03	c0.09		0.03	0.04
v/s Ratio Perm												
v/c Ratio	0.53	0.66			0.51	0.38		0.82	0.43		0.72	0.21
Uniform Delay, d1	27.7	18.6			25.3	14.3		29.8	21.5		29.7	20.5
Progression Factor	1.00	1.00			1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	3.6	1.5			1.9	0.2		49.2	0.8		29.8	0.3
Delay (s)	31.3	20.0			27.2	14.5		79.0	22.4		59.5	20.8
Level of Service	C	C			C	B		E	C		E	C
Approach Delay (s)		21.1				17.0			35.1			32.6
Approach LOS		C				B			D			C

Intersection Summary

HCM 2000 Control Delay	22.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	62.7	Sum of lost time (s)	19.0
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBR
Lane Configurations	7
Traffic Volume (vph)	35
Future Volume (vph)	35
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.9
Lane Util. Factor	1.00
Frbp, ped/bikes	0.99
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1547
Flt Permitted	1.00
Satd. Flow (perm)	1547
Peak-hour factor, PHF	0.96
Adj. Flow (vph)	36
RTOR Reduction (vph)	28
Lane Group Flow (vph)	8
Confl. Peds. (#/hr)	3
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	13.1
Effective Green, g (s)	13.1
Actuated g/C Ratio	0.21
Clearance Time (s)	4.9
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	323
v/s Ratio Prot	
v/s Ratio Perm	0.00
v/c Ratio	0.02
Uniform Delay, d1	19.7
Progression Factor	1.00
Incremental Delay, d2	0.0
Delay (s)	19.7
Level of Service	B
Approach Delay (s)	
Approach LOS	
Intersection Summary	

HCM Signalized Intersection Capacity Analysis
 3: Mooney Boulevard & Riggin Avenue

Opening Year plus Project PM Peak
 01/13/2020

												
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	28	109	471	115	23	86	417	54	92	164	83	74
Future Volume (vph)	28	109	471	115	23	86	417	54	92	164	83	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.2	5.3	5.3		4.2	5.3	5.3	4.2	4.9		4.2
Lane Util. Factor		1.00	0.95	1.00		1.00	0.95	1.00	1.00	0.95		1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	0.95		1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (prot)		1752	3505	1568		1752	3505	1568	1752	3328		1752
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (perm)		1752	3505	1568		1752	3505	1568	1752	3328		1752
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	29	112	486	119	24	89	430	56	95	169	86	76
RTOR Reduction (vph)	0	0	0	87	0	0	0	41	0	67	0	0
Lane Group Flow (vph)	0	141	486	32	0	113	430	15	95	188	0	76
Turn Type	Prot	Prot	NA	Perm	Prot	Prot	NA	Perm	Prot	NA		Prot
Protected Phases	7	7	4		3	3	8		5	2		1
Permitted Phases				4				8				
Actuated Green, G (s)		5.5	14.7	14.7		5.5	14.7	14.7	6.0	12.4		3.9
Effective Green, g (s)		5.5	14.7	14.7		5.5	14.7	14.7	6.0	12.4		3.9
Actuated g/C Ratio		0.10	0.27	0.27		0.10	0.27	0.27	0.11	0.23		0.07
Clearance Time (s)		4.2	5.3	5.3		4.2	5.3	5.3	4.2	4.9		4.2
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)		174	935	418		174	935	418	190	748		124
v/s Ratio Prot		c0.08	c0.14			0.06	0.12		c0.05	0.06		0.04
v/s Ratio Perm				0.02				0.01				
v/c Ratio		0.81	0.52	0.08		0.65	0.46	0.04	0.50	0.25		0.61
Uniform Delay, d1		24.3	17.2	15.1		23.9	16.9	15.0	23.1	17.5		24.9
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2		24.0	0.5	0.1		8.1	0.4	0.0	2.1	0.2		8.7
Delay (s)		48.3	17.7	15.2		32.0	17.2	15.0	25.2	17.7		33.5
Level of Service		D	B	B		C	B	B	C	B		C
Approach Delay (s)			23.1				19.8			19.7		
Approach LOS			C				B			B		
Intersection Summary												
HCM 2000 Control Delay			21.6				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.53									
Actuated Cycle Length (s)			55.1						18.6			
Intersection Capacity Utilization			47.2%									A
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 3: Mooney Boulevard & Riggin Avenue

Opening Year plus Project PM Peak
 01/13/2020



Movement	SBT	SBR
Lane Configurations	↑	↗
Traffic Volume (vph)	142	44
Future Volume (vph)	142	44
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.9	4.9
Lane Util. Factor	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	1845	1568
Flt Permitted	1.00	1.00
Satd. Flow (perm)	1845	1568
Peak-hour factor, PHF	0.97	0.97
Adj. Flow (vph)	146	45
RTOR Reduction (vph)	0	37
Lane Group Flow (vph)	146	8
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	10.3	10.3
Effective Green, g (s)	10.3	10.3
Actuated g/C Ratio	0.19	0.19
Clearance Time (s)	4.9	4.9
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	344	293
v/s Ratio Prot	0.08	
v/s Ratio Perm		0.01
v/c Ratio	0.42	0.03
Uniform Delay, d1	19.8	18.3
Progression Factor	1.00	1.00
Incremental Delay, d2	0.8	0.0
Delay (s)	20.6	18.4
Level of Service	C	B
Approach Delay (s)	23.9	
Approach LOS	C	
Intersection Summary		

Intersection

Int Delay, s/veh 0.8

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations		↑↑	↑↑	↑		↑
Traffic Vol, veh/h	0	652	499	38	0	92
Future Vol, veh/h	0	652	499	38	0	92
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	100	-	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	709	542	41	0	100

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	-	0	-	0	-	271
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	724
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	724
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach EB WB SB

HCM Control Delay, s	0	0	10.8
HCM LOS			B

Minor Lane/Major Mvmt EBT WBT WBR SBLn1

Capacity (veh/h)	-	-	-	724
HCM Lane V/C Ratio	-	-	-	0.138
HCM Control Delay (s)	-	-	-	10.8
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.5

Intersection

Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑	↑↑			↗
Traffic Vol, veh/h	34	611	524	10	0	8
Future Vol, veh/h	34	611	524	10	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	-	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	37	664	570	11	0	9

Major/Minor

	Major1	Major2	Minor2	
Conflicting Flow All	581	0	0	291
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.16	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.23	-	-	3.33
Pot Cap-1 Maneuver	982	-	-	703
Stage 1	-	-	-	0
Stage 2	-	-	-	0
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	982	-	-	703
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach

	EB	WB	SB
HCM Control Delay, s	0.5	0	10.2
HCM LOS			B

Minor Lane/Major Mvmt

	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	982	-	-	-	703
HCM Lane V/C Ratio	0.038	-	-	-	0.012
HCM Control Delay (s)	8.8	-	-	-	10.2
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔				↔			↔
Traffic Vol, veh/h	3	584	5	11	511	2	0	0	13	0	0	3
Future Vol, veh/h	3	584	5	11	511	2	0	0	13	0	0	3
Conflicting Peds, #/hr	0	0	6	6	0	0	0	0	1	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	100	-	-	90	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	3	596	5	11	521	2	0	0	13	0	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	523	0	0	607	0	0	-	-	606	-	-	522
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.13	-	-	4.13	-	-	-	-	6.23	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	-	-	3.327	-	-	3.327
Pot Cap-1 Maneuver	1038	-	-	966	-	-	0	0	495	0	0	553
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1038	-	-	960	-	-	-	-	492	-	-	553
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.2			12.5			11.5		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	492	1038	-	-	960	-	-	553
HCM Lane V/C Ratio	0.027	0.003	-	-	0.012	-	-	0.006
HCM Control Delay (s)	12.5	8.5	-	-	8.8	-	-	11.5
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

HCM 6th Signalized Intersection Summary
7: Giddings Street & Riggins Avenue

Opening Year plus Project PM Peak
01/13/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	484	43	57	450	12	30	59	61	13	57	49
Future Volume (veh/h)	92	484	43	57	450	12	30	59	61	13	57	49
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		0.94	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	96	504	45	59	469	12	31	61	64	14	59	51
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	137	611	55	102	621	16	63	125	132	32	128	111
Arrive On Green	0.08	0.36	0.36	0.06	0.34	0.34	0.04	0.16	0.16	0.02	0.14	0.14
Sat Flow, veh/h	1767	1679	150	1767	1801	46	1767	799	838	1767	919	794
Grp Volume(v), veh/h	96	0	549	59	0	481	31	0	125	14	0	110
Grp Sat Flow(s),veh/h/ln	1767	0	1829	1767	0	1847	1767	0	1637	1767	0	1713
Q Serve(g_s), s	2.4	0.0	12.4	1.5	0.0	10.5	0.8	0.0	3.2	0.4	0.0	2.7
Cycle Q Clear(g_c), s	2.4	0.0	12.4	1.5	0.0	10.5	0.8	0.0	3.2	0.4	0.0	2.7
Prop In Lane	1.00		0.08	1.00		0.02	1.00		0.51	1.00		0.46
Lane Grp Cap(c), veh/h	137	0	666	102	0	636	63	0	257	32	0	238
V/C Ratio(X)	0.70	0.00	0.82	0.58	0.00	0.76	0.49	0.00	0.49	0.44	0.00	0.46
Avail Cap(c_a), veh/h	210	0	935	199	0	932	218	0	686	195	0	672
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.4	0.0	13.1	20.8	0.0	13.2	21.5	0.0	17.5	22.1	0.0	18.0
Incr Delay (d2), s/veh	6.4	0.0	4.3	5.1	0.0	2.1	5.8	0.0	1.4	9.5	0.0	1.4
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	1.1	0.0	4.3	0.7	0.0	3.4	0.4	0.0	1.2	0.2	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.8	0.0	17.4	25.9	0.0	15.2	27.3	0.0	18.9	31.6	0.0	19.4
LnGrp LOS	C	A	B	C	A	B	C	A	B	C	A	B
Approach Vol, veh/h		645			540			156			124	
Approach Delay, s/veh		18.8			16.4			20.6			20.7	
Approach LOS		B			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.0	11.7	6.8	21.8	5.8	10.9	7.7	20.9				
Change Period (Y+Rc), s	* 4.2	* 4.6	* 4.2	5.3	* 4.2	4.6	* 4.2	5.3				
Max Green Setting (Gmax), s	* 5	* 19	* 5.1	23.2	* 5.6	17.8	* 5.4	22.9				
Max Q Clear Time (g_c+I1), s	2.4	5.2	3.5	14.4	2.8	4.7	4.4	12.5				
Green Ext Time (p_c), s	0.0	0.5	0.0	2.1	0.0	0.4	0.0	2.0				

Intersection Summary

HCM 6th Ctrl Delay	18.3
HCM 6th LOS	B

Notes

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

Intersection

Intersection Delay, s/veh 19.5
Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑		↙	↑	↗	↙	↑	↗	↙	↑↑	
Traffic Vol, veh/h	68	192	66	55	202	60	84	263	69	52	261	40
Future Vol, veh/h	68	192	66	55	202	60	84	263	69	52	261	40
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	71	200	69	57	210	63	88	274	72	54	272	42
Number of Lanes	1	1	0	1	1	1	1	1	1	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	3	3
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	3	2	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	3	3	3	2
HCM Control Delay	21.9	17.8	21.4	16.5
HCM LOS	C	C	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	0%	74%	0%	100%	0%	0%	100%	69%
Vol Right, %	0%	0%	100%	0%	26%	0%	0%	100%	0%	0%	31%
Sign Control	Stop										
Traffic Vol by Lane	84	263	69	68	258	55	202	60	52	174	127
LT Vol	84	0	0	68	0	55	0	0	52	0	0
Through Vol	0	263	0	0	192	0	202	0	0	174	87
RT Vol	0	0	69	0	66	0	0	60	0	0	40
Lane Flow Rate	88	274	72	71	269	57	210	62	54	181	132
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.221	0.652	0.157	0.178	0.624	0.148	0.515	0.141	0.14	0.441	0.314
Departure Headway (Hd)	9.074	8.562	7.845	9.038	8.359	9.326	8.818	8.106	9.275	8.762	8.536
Convergence, Y/N	Yes										
Cap	396	422	457	397	433	384	408	442	387	411	421
Service Time	6.824	6.312	5.594	6.788	6.108	7.081	6.572	5.86	7.029	6.516	6.289
HCM Lane V/C Ratio	0.222	0.649	0.158	0.179	0.621	0.148	0.515	0.14	0.14	0.44	0.314
HCM Control Delay	14.4	26.1	12.1	13.7	24.1	13.7	20.6	12.2	13.5	18.3	15.2
HCM Lane LOS	B	D	B	B	C	B	C	B	B	C	C
HCM 95th-tile Q	0.8	4.5	0.6	0.6	4.1	0.5	2.9	0.5	0.5	2.2	1.3

HCM 6th Signalized Intersection Summary
8: Mooney Boulevard & Ferguson Avenue

Opening Year plus Project AM Peak
01/13/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	264	130	71	192	43	93	214	60	100	333	40
Future Volume (veh/h)	50	264	130	71	192	43	93	214	60	100	333	40
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		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	62	330	162	89	240	54	116	268	75	125	416	50
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	93	396	194	114	647	547	148	377	317	159	664	79
Arrive On Green	0.05	0.34	0.34	0.06	0.35	0.35	0.08	0.20	0.20	0.09	0.21	0.21
Sat Flow, veh/h	1767	1174	576	1767	1856	1568	1767	1856	1557	1767	3167	378
Grp Volume(v), veh/h	62	0	492	89	240	54	116	268	75	125	230	236
Grp Sat Flow(s),veh/h/ln	1767	0	1751	1767	1856	1568	1767	1856	1557	1767	1763	1783
Q Serve(g_s), s	2.1	0.0	16.1	3.1	6.0	1.4	4.0	8.4	2.5	4.3	7.4	7.5
Cycle Q Clear(g_c), s	2.1	0.0	16.1	3.1	6.0	1.4	4.0	8.4	2.5	4.3	7.4	7.5
Prop In Lane	1.00		0.33	1.00		1.00	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	93	0	590	114	647	547	148	377	317	159	370	374
V/C Ratio(X)	0.66	0.00	0.83	0.78	0.37	0.10	0.78	0.71	0.24	0.78	0.62	0.63
Avail Cap(c_a), veh/h	252	0	899	165	873	738	199	757	635	221	753	761
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(l)	1.00	0.00	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	29.0	0.0	19.0	28.7	15.2	13.7	28.0	23.1	20.8	27.7	22.4	22.4
Incr Delay (d2), s/veh	7.8	0.0	4.2	14.0	0.4	0.1	13.4	2.5	0.4	11.6	1.7	1.8
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	1.0	0.0	6.1	1.6	2.2	0.5	2.1	3.5	0.9	2.2	2.9	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.8	0.0	23.2	42.7	15.5	13.8	41.4	25.6	21.2	39.3	24.1	24.2
LnGrp LOS	D	A	C	D	B	B	D	C	C	D	C	C
Approach Vol, veh/h		554			383			459			591	
Approach Delay, s/veh		24.8			21.6			28.9			27.4	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.8	18.0	8.2	26.3	9.4	18.4	7.5	27.0				
Change Period (Y+Rc), s	* 4.2	5.3	* 4.2	5.3	* 4.2	* 5.3	* 4.2	* 5.3				
Max Green Setting (Gmax), s	* 7.8	25.4	* 5.8	32.0	* 7	* 27	* 8.9	* 29				
Max Q Clear Time (g_c+I1), s	6.3	10.4	5.1	18.1	6.0	9.5	4.1	8.0				
Green Ext Time (p_c), s	0.0	1.4	0.0	2.5	0.0	2.3	0.0	1.4				

Intersection Summary												
HCM 6th Ctrl Delay			25.9									
HCM 6th LOS			C									

Notes

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

HCM 6th Signalized Intersection Summary
8: Mooney Boulevard & Ferguson Avenue

Opening Year plus Project PM Peak
01/13/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↘		↙	↑	↗	↙	↑	↗	↙	↕	
Traffic Volume (veh/h)	68	192	66	55	202	60	84	263	69	52	261	40
Future Volume (veh/h)	68	192	66	55	202	60	84	263	69	52	261	40
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		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	71	200	69	57	210	62	88	274	72	54	272	42
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	116	293	101	101	397	335	132	435	364	97	656	100
Arrive On Green	0.07	0.22	0.22	0.06	0.21	0.21	0.07	0.23	0.23	0.05	0.21	0.21
Sat Flow, veh/h	1767	1318	455	1767	1856	1569	1767	1856	1556	1767	3061	467
Grp Volume(v), veh/h	71	0	269	57	210	62	88	274	72	54	155	159
Grp Sat Flow(s), veh/h/ln	1767	0	1773	1767	1856	1569	1767	1856	1556	1767	1763	1765
Q Serve(g_s), s	1.7	0.0	6.1	1.4	4.4	1.4	2.1	5.8	1.6	1.3	3.3	3.4
Cycle Q Clear(g_c), s	1.7	0.0	6.1	1.4	4.4	1.4	2.1	5.8	1.6	1.3	3.3	3.4
Prop In Lane	1.00		0.26	1.00		1.00	1.00		1.00	1.00		0.26
Lane Grp Cap(c), veh/h	116	0	395	101	397	335	132	435	364	97	378	378
V/C Ratio(X)	0.61	0.00	0.68	0.57	0.53	0.18	0.67	0.63	0.20	0.56	0.41	0.42
Avail Cap(c_a), veh/h	373	0	1288	209	1192	1008	313	1125	943	285	1056	1058
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	0.00	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	20.0	0.0	15.7	20.2	15.4	14.2	19.8	15.2	13.5	20.3	14.9	14.9
Incr Delay (d2), s/veh	5.1	0.0	2.1	4.9	1.1	0.3	5.6	1.5	0.3	4.9	0.7	0.7
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	0.7	0.0	2.1	0.6	1.6	0.4	0.9	2.0	0.5	0.6	1.1	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.1	0.0	17.8	25.1	16.5	14.4	25.5	16.7	13.8	25.2	15.6	15.7
LnGrp LOS	C	A	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		340			329			434			368	
Approach Delay, s/veh		19.3			17.6			18.0			17.1	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.6	15.6	6.7	15.1	7.5	14.7	7.1	14.7				
Change Period (Y+Rc), s	* 4.2	5.3	* 4.2	5.3	* 4.2	* 5.3	* 4.2	* 5.3				
Max Green Setting (Gmax), s	* 7.1	26.7	* 5.2	32.0	* 7.8	* 26	* 9.3	* 28				
Max Q Clear Time (g_c+I1), s	3.3	7.8	3.4	8.1	4.1	5.4	3.7	6.4				
Green Ext Time (p_c), s	0.0	1.5	0.0	1.4	0.1	1.6	0.1	1.2				

Intersection Summary

HCM 6th Ctrl Delay	18.0
HCM 6th LOS	B

Notes

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

Intersection: 1: Mooney Boulevard & Project Driveway 1

Movement	EB	WB	NB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	T	TR	L	TR
Maximum Queue (ft)	74	80	52	31	31	79	29
Average Queue (ft)	35	45	17	1	2	18	2
95th Queue (ft)	64	73	44	10	13	51	14
Link Distance (ft)	188	259		234	234		127
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			50			50	
Storage Blk Time (%)			0	0		0	
Queuing Penalty (veh)			0	0		1	

Intersection: 2: County Center Street & Riggin Avenue

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	UL	T	TR	L	TR	L	T	R
Maximum Queue (ft)	46	131	130	97	164	202	97	158	151	160	54
Average Queue (ft)	16	62	56	44	61	86	52	69	42	42	30
95th Queue (ft)	41	115	107	87	124	142	90	117	105	96	56
Link Distance (ft)		2738	2738		2277	2277		874		1577	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	250			150			200		130		130
Storage Blk Time (%)						0			2	0	
Queuing Penalty (veh)						0			3	0	

Intersection: 3: Mooney Boulevard & Riggin Avenue

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	UL	T	T	R	UL	T	T	R	L	T	TR	L
Maximum Queue (ft)	240	124	88	69	174	186	160	54	155	112	187	106
Average Queue (ft)	97	55	62	29	78	71	75	24	58	49	82	48
95th Queue (ft)	195	96	90	56	132	139	131	53	111	94	154	84
Link Distance (ft)		2277	2277			251	251			279	279	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300			100	125			125	160			150
Storage Blk Time (%)			0		3	0	1		1			
Queuing Penalty (veh)			0		5	0	1		1			

Intersection: 3: Mooney Boulevard & Riggin Avenue

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	150	62
Average Queue (ft)	77	25
95th Queue (ft)	134	47
Link Distance (ft)	234	234
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 4: Riggin Avenue & Project Driveway 2

Movement	SB
Directions Served	R
Maximum Queue (ft)	118
Average Queue (ft)	43
95th Queue (ft)	80
Link Distance (ft)	160
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Riggin Avenue & Project Driveway 3

Movement	EB	SB
Directions Served	L	R
Maximum Queue (ft)	75	31
Average Queue (ft)	12	1
95th Queue (ft)	44	10
Link Distance (ft)	173	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Dayton Street/Project Dirveway 4 & Riggin Avenue

Movement	NB	SB
Directions Served	R	R
Maximum Queue (ft)	31	28
Average Queue (ft)	12	6
95th Queue (ft)	36	24
Link Distance (ft)	485	174
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Giddings Street & Riggin Avenue

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	204	267	96	181	96	138	96	200
Average Queue (ft)	40	134	32	94	32	74	34	73
95th Queue (ft)	99	217	66	159	72	117	68	145
Link Distance (ft)	843		1019		2215		951	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	155		155		100		155	
Storage Blk Time (%)	4		1		0		2	
Queuing Penalty (veh)	2		0		1		1	

Intersection: 8: Mooney Boulevard & Ferguson Avenue

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	T	R	L	T	TR
Maximum Queue (ft)	96	246	135	148	110	214	220	100	134	136	140
Average Queue (ft)	36	146	56	78	19	60	92	27	55	64	62
95th Queue (ft)	79	237	112	141	66	132	164	60	103	109	115
Link Distance (ft)		739		634			1454	1454		359	359
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	150		160		60	155			150		
Storage Blk Time (%)		6		11	0	0	1		0	0	
Queuing Penalty (veh)		3		12	0	0	1		0	0	

Network Summary

Network wide Queuing Penalty: 33

Intersection: 1: Mooney Boulevard & Project Driveway 1

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	L	L
Maximum Queue (ft)	105	74	56	30
Average Queue (ft)	38	27	11	6
95th Queue (ft)	66	55	37	25
Link Distance (ft)	188	259		
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			50	50
Storage Blk Time (%)			0	0
Queuing Penalty (veh)			0	0

Intersection: 2: County Center Street & Riggins Avenue

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	UL	T	TR	L	TR	L	T	R
Maximum Queue (ft)	113	145	151	122	135	188	94	200	98	113	31
Average Queue (ft)	42	74	82	63	60	83	36	81	29	37	15
95th Queue (ft)	86	121	140	109	122	148	76	150	71	82	38
Link Distance (ft)		2738	2738		2277	2277		874		1577	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	250			150			200		130		130
Storage Blk Time (%)					0			0		0	
Queuing Penalty (veh)					0			0		0	

Intersection: 3: Mooney Boulevard & Riggin Avenue

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	UL	T	T	R	UL	T	T	R	L	T	TR	L
Maximum Queue (ft)	261	127	133	79	237	181	140	54	106	92	108	86
Average Queue (ft)	103	61	74	22	79	65	71	23	53	33	42	41
95th Queue (ft)	214	109	122	56	156	130	121	51	98	65	87	74
Link Distance (ft)		2277	2277			251	251			279	279	
Upstream Blk Time (%)					0							
Queuing Penalty (veh)					0							
Storage Bay Dist (ft)	300			100	125			125	160			150
Storage Blk Time (%)			4		9	1	1					
Queuing Penalty (veh)			5		19	1	1					

Intersection: 3: Mooney Boulevard & Riggin Avenue

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	90	40
Average Queue (ft)	50	14
95th Queue (ft)	87	29
Link Distance (ft)	234	234
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Riggin Avenue & Project Driveway 2

Movement	SB
Directions Served	R
Maximum Queue (ft)	74
Average Queue (ft)	39
95th Queue (ft)	62
Link Distance (ft)	160
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Riggin Avenue & Project Driveway 3

Movement	EB	EB	EB	SB
Directions Served	L	T	T	R
Maximum Queue (ft)	51	31	66	56
Average Queue (ft)	10	3	3	9
95th Queue (ft)	35	17	25	34
Link Distance (ft)		191	191	173
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	100			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: Dayton Street/Project Dirveway 4 & Riggin Avenue

Movement	EB	WB	NB	SB
Directions Served	L	L	R	R
Maximum Queue (ft)	26	28	53	28
Average Queue (ft)	1	3	8	4
95th Queue (ft)	9	16	32	18
Link Distance (ft)			485	174
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	100	90		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 7: Giddings Street & Riggin Avenue

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	204	314	76	183	106	114	51	148
Average Queue (ft)	63	122	33	98	25	51	13	46
95th Queue (ft)	133	226	64	162	64	88	41	88
Link Distance (ft)		843		1019		2215		951
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	155		155		100		155	
Storage Blk Time (%)		3		1	0	1		0
Queuing Penalty (veh)		3		1	0	0		0

Intersection: 8: Mooney Boulevard & Ferguson Avenue

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	T	R	L	T	TR
Maximum Queue (ft)	92	240	89	196	110	91	228	71	89	114	84
Average Queue (ft)	49	104	37	77	21	51	93	28	33	45	36
95th Queue (ft)	79	171	69	146	66	84	171	56	65	82	71
Link Distance (ft)		739		634			1454	1454		359	359
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	150		160		60	155			150		
Storage Blk Time (%)		2		12	0		1				
Queuing Penalty (veh)		1		13	0		1				

Network Summary

Network wide Queuing Penalty: 45

Appendix H: Cumulative Five (5) Years plus Project Traffic Conditions



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Intersection												
Int Delay, s/veh	5.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕		↕		↕	
Traffic Vol, veh/h	16	3	48	68	2	47	50	314	139	66	376	36
Future Vol, veh/h	16	3	48	68	2	47	50	314	139	66	376	36
Conflicting Peds, #/hr	0	0	4	4	0	0	2	0	12	12	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	18	3	55	77	2	53	57	357	158	75	427	41

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	894	1241	240	931	1182	270	470	0	0	527	0	0
Stage 1	600	600	-	562	562	-	-	-	-	-	-	-
Stage 2	294	641	-	369	620	-	-	-	-	-	-	-
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	234	172	758	220	187	725	1081	-	-	1029	-	-
Stage 1	452	486	-	476	505	-	-	-	-	-	-	-
Stage 2	687	465	-	620	476	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	194	149	754	179	162	717	1079	-	-	1017	-	-
Mov Cap-2 Maneuver	194	149	-	179	162	-	-	-	-	-	-	-
Stage 1	427	449	-	446	473	-	-	-	-	-	-	-
Stage 2	599	436	-	527	440	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16	33.3	0.8	1.2
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1079	-	-	403	256	1017	-	-
HCM Lane V/C Ratio	0.053	-	-	0.189	0.519	0.074	-	-
HCM Control Delay (s)	8.5	-	-	16	33.3	8.8	-	-
HCM Lane LOS	A	-	-	C	D	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.7	2.8	0.2	-	-

HCM Signalized Intersection Capacity Analysis Cumulative Five (5) Years plus Project AM Peak
 2: County Center Street & Riggin Avenue 01/13/2020



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↙	↕			↘	↕		↙	↕		↘	↕
Traffic Volume (vph)	33	507	34	1	111	596	36	100	93	152	63	131
Future Volume (vph)	33	507	34	1	111	596	36	100	93	152	63	131
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	5.7			4.2	5.3		4.2	4.9		4.2	4.9
Lane Util. Factor	1.00	0.95			1.00	0.95		1.00	1.00		1.00	1.00
Frbp, ped/bikes	1.00	1.00			1.00	1.00		1.00	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00	1.00		1.00	1.00
Frt	1.00	0.99			1.00	0.99		1.00	0.91		1.00	1.00
Flt Protected	0.95	1.00			0.95	1.00		0.95	1.00		0.95	1.00
Satd. Flow (prot)	1752	3466			1752	3475		1752	1660		1752	1845
Flt Permitted	0.95	1.00			0.95	1.00		0.95	1.00		0.95	1.00
Satd. Flow (perm)	1752	3466			1752	3475		1752	1660		1752	1845
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	38	576	39	1	126	677	41	114	106	173	72	149
RTOR Reduction (vph)	0	4	0	0	0	3	0	0	70	0	0	0
Lane Group Flow (vph)	38	611	0	0	127	715	0	114	209	0	72	149
Confl. Peds. (#/hr)			3							1		
Turn Type	Prot	NA		Prot	Prot	NA		Prot	NA		Prot	NA
Protected Phases	7	4		3	3	8		5	2		1	6
Permitted Phases												
Actuated Green, G (s)	5.2	41.5			10.8	47.5		9.9	21.1		7.6	18.8
Effective Green, g (s)	5.2	41.5			10.8	47.5		9.9	21.1		7.6	18.8
Actuated g/C Ratio	0.05	0.42			0.11	0.48		0.10	0.21		0.08	0.19
Clearance Time (s)	4.2	5.7			4.2	5.3		4.2	4.9		4.2	4.9
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	91	1438			189	1650		173	350		133	346
v/s Ratio Prot	0.02	c0.18			c0.07	c0.21		0.07	c0.13		c0.04	0.08
v/s Ratio Perm												
v/c Ratio	0.42	0.42			0.67	0.43		0.66	0.60		0.54	0.43
Uniform Delay, d1	45.9	20.8			42.9	17.4		43.4	35.6		44.5	35.9
Progression Factor	1.00	1.00			1.01	0.38		1.00	1.00		1.00	1.00
Incremental Delay, d2	3.1	0.9			8.3	0.8		8.7	2.7		4.4	0.9
Delay (s)	49.0	21.7			51.6	7.3		52.2	38.3		49.0	36.7
Level of Service	D	C			D	A		D	D		D	D
Approach Delay (s)		23.3			13.9			42.3				38.5
Approach LOS		C			B			D				D

Intersection Summary			
HCM 2000 Control Delay	25.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis Cumulative Five (5) Years plus Project AM Peak
 2: County Center Street & Riggan Avenue 01/13/2020

Movement	SBR
Lane Configurations	7
Traffic Volume (vph)	85
Future Volume (vph)	85
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.9
Lane Util. Factor	1.00
Frpb, ped/bikes	0.99
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1548
Flt Permitted	1.00
Satd. Flow (perm)	1548
Peak-hour factor, PHF	0.88
Adj. Flow (vph)	97
RTOR Reduction (vph)	79
Lane Group Flow (vph)	18
Confl. Peds. (#/hr)	1
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	18.8
Effective Green, g (s)	18.8
Actuated g/C Ratio	0.19
Clearance Time (s)	4.9
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	291
v/s Ratio Prot	
v/s Ratio Perm	0.01
v/c Ratio	0.06
Uniform Delay, d1	33.4
Progression Factor	1.00
Incremental Delay, d2	0.1
Delay (s)	33.5
Level of Service	C
Approach Delay (s)	
Approach LOS	
Intersection Summary	

HCM Signalized Intersection Capacity Analysis Cumulative Five (5) Years plus Project AM Peak
 3: Mooney Boulevard & Riggin Avenue 01/13/2020

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	
Lane Configurations		↔	↕	↗		↔	↕	↗	↖	↕	↖	↗	
Traffic Volume (vph)	26	129	463	120	35	133	503	71	103	255	110	115	
Future Volume (vph)	26	129	463	120	35	133	503	71	103	255	110	115	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.2	5.3	5.3		4.2	5.3	5.3	4.2	4.9		4.2	
Lane Util. Factor		1.00	0.95	1.00		1.00	0.95	1.00	1.00	0.95		1.00	
Frbp, ped/bikes		1.00	1.00	0.98		1.00	1.00	0.98	1.00	1.00		1.00	
Flpb, ped/bikes		1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	
Frt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	0.95		1.00	
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95	
Satd. Flow (prot)		1752	3505	1531		1752	3505	1538	1752	3330		1752	
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95	
Satd. Flow (perm)		1752	3505	1531		1752	3505	1538	1752	3330		1752	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	
Adj. Flow (vph)	30	147	526	136	40	151	572	81	117	290	125	131	
RTOR Reduction (vph)	0	0	0	75	0	0	0	48	0	59	0	0	
Lane Group Flow (vph)	0	177	526	61	0	191	572	33	117	356	0	131	
Confl. Peds. (#/hr)				2				7			5		
Turn Type	Prot	Prot	NA	Perm	Prot	Prot	NA	Perm	Prot	NA		Prot	
Protected Phases	7	7	4		3	3	8		5	2		1	
Permitted Phases				4			8						
Actuated Green, G (s)		11.1	39.7	39.7		12.0	40.6	40.6	8.0	18.4		11.3	
Effective Green, g (s)		11.1	39.7	39.7		12.0	40.6	40.6	8.0	18.4		11.3	
Actuated g/C Ratio		0.11	0.40	0.40		0.12	0.41	0.41	0.08	0.18		0.11	
Clearance Time (s)		4.2	5.3	5.3		4.2	5.3	5.3	4.2	4.9		4.2	
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		194	1391	607		210	1423	624	140	612		197	
v/s Ratio Prot		c0.10	0.15			c0.11	c0.16		0.07	0.11		c0.07	
v/s Ratio Perm				0.04				0.02					
v/c Ratio		0.91	0.38	0.10		0.91	0.40	0.05	0.84	0.58		0.66	
Uniform Delay, d1		44.0	21.4	18.9		43.5	21.1	18.0	45.4	37.3		42.5	
Progression Factor		0.87	0.61	0.18		0.97	0.92	1.82	1.00	1.00		1.00	
Incremental Delay, d2		38.7	0.7	0.3		32.4	0.7	0.1	32.9	1.4		8.2	
Delay (s)		77.0	13.7	3.6		74.7	20.0	33.0	78.3	38.7		50.7	
Level of Service		E	B	A		E	B	C	E	D		D	
Approach Delay (s)			25.4				33.6			47.4			
Approach LOS			C				C			D			
Intersection Summary													
HCM 2000 Control Delay			35.3									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.66										
Actuated Cycle Length (s)			100.0									Sum of lost time (s)	18.6
Intersection Capacity Utilization			67.1%									ICU Level of Service	C
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis Cumulative Five (5) Years plus Project AM Peak
 3: Mooney Boulevard & Riggan Avenue

01/13/2020



Movement	SBT	SBR
Lane Configurations	↑	↑
Traffic Volume (vph)	246	112
Future Volume (vph)	246	112
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.9	4.9
Lane Util. Factor	1.00	1.00
Frbp, ped/bikes	1.00	0.99
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	1845	1546
Flt Permitted	1.00	1.00
Satd. Flow (perm)	1845	1546
Peak-hour factor, PHF	0.88	0.88
Adj. Flow (vph)	280	127
RTOR Reduction (vph)	0	99
Lane Group Flow (vph)	280	28
Confl. Peds. (#/hr)		2
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	21.7	21.7
Effective Green, g (s)	21.7	21.7
Actuated g/C Ratio	0.22	0.22
Clearance Time (s)	4.9	4.9
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	400	335
v/s Ratio Prot	0.15	
v/s Ratio Perm		0.02
v/c Ratio	0.70	0.08
Uniform Delay, d1	36.1	31.2
Progression Factor	1.00	1.00
Incremental Delay, d2	5.3	0.1
Delay (s)	41.4	31.3
Level of Service	D	C
Approach Delay (s)	41.3	
Approach LOS	D	

Intersection Summary

Intersection

Int Delay, s/veh 1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↔		↔
Traffic Vol, veh/h	0	717	629	29	0	121
Future Vol, veh/h	0	717	629	29	0	121
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	100	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	806	707	33	0	136

Major/Minor

	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	- 354
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	-	-	-	0 639
Stage 1	0	-	-	-	0 -
Stage 2	0	-	-	-	0 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	- 639
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach

	EB	WB	SB
HCM Control Delay, s	0	0	12.2
HCM LOS			B

Minor Lane/Major Mvmt

	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	639
HCM Lane V/C Ratio	-	-	-	0.213
HCM Control Delay (s)	-	-	-	12.2
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.8

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↑↑	↑↑			↵
Traffic Vol, veh/h	44	662	654	13	0	4
Future Vol, veh/h	44	662	654	13	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	49	744	735	15	0	4

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	750	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.16	-	6.96
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.23	-	3.33
Pot Cap-1 Maneuver	848	-	0
Stage 1	-	-	0
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	848	-	620
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	10.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	848	-	-	-	620
HCM Lane V/C Ratio	0.058	-	-	-	0.007
HCM Control Delay (s)	9.5	-	-	-	10.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗				↖			↖
Traffic Vol, veh/h	1	625	1	6	659	1	0	0	16	0	0	5
Future Vol, veh/h	1	625	1	6	659	1	0	0	16	0	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	100	-	-	90	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	1	702	1	7	740	1	0	0	18	0	0	6

Major/Minor	Major1		Major2		Minor1			Minor2				
Conflicting Flow All	741	0	0	703	0	0	-	-	703	-	-	741
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.13	-	-	4.13	-	-	-	-	6.23	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	-	-	3.327	-	-	3.327
Pot Cap-1 Maneuver	861	-	-	890	-	-	0	0	436	0	0	415
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	861	-	-	890	-	-	-	-	436	-	-	415
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	13.6	13.8
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	436	861	-	-	890	-	-	415
HCM Lane V/C Ratio	0.041	0.001	-	-	0.008	-	-	0.014
HCM Control Delay (s)	13.6	9.2	-	-	9.1	-	-	13.8
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

HCM 6th Signalized Intersection Summary
7: Giddings Street & Riggan Avenue

Cumulative Five (5) Years plus Project AM Peak
01/13/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	69	586	56	59	520	62	56	181	69	104	189	100
Future Volume (veh/h)	69	586	56	59	520	62	56	181	69	104	189	100
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		0.98	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	78	666	64	67	591	70	64	206	78	118	215	114
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	100	714	69	202	809	96	82	231	87	146	248	131
Arrive On Green	0.06	0.43	0.43	0.11	0.50	0.50	0.05	0.18	0.18	0.08	0.22	0.22
Sat Flow, veh/h	1767	1667	160	1767	1628	193	1767	1276	483	1767	1141	605
Grp Volume(v), veh/h	78	0	730	67	0	661	64	0	284	118	0	329
Grp Sat Flow(s), veh/h/ln	1767	0	1827	1767	0	1821	1767	0	1759	1767	0	1747
Q Serve(g_s), s	4.4	0.0	38.1	3.5	0.0	28.7	3.6	0.0	15.8	6.6	0.0	18.2
Cycle Q Clear(g_c), s	4.4	0.0	38.1	3.5	0.0	28.7	3.6	0.0	15.8	6.6	0.0	18.2
Prop In Lane	1.00		0.09	1.00		0.11	1.00		0.27	1.00		0.35
Lane Grp Cap(c), veh/h	100	0	782	202	0	905	82	0	318	146	0	379
V/C Ratio(X)	0.78	0.00	0.93	0.33	0.00	0.73	0.78	0.00	0.89	0.81	0.00	0.87
Avail Cap(c_a), veh/h	131	0	871	202	0	905	102	0	334	173	0	391
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(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.6	0.0	27.2	40.8	0.0	19.8	47.2	0.0	40.0	45.1	0.0	37.8
Incr Delay (d2), s/veh	19.8	0.0	19.5	1.0	0.0	5.2	25.5	0.0	24.2	20.8	0.0	18.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	19.2	1.5	0.0	12.1	2.2	0.0	8.9	3.7	0.0	9.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.4	0.0	46.7	41.7	0.0	25.0	72.7	0.0	64.2	65.9	0.0	55.8
LnGrp LOS	E	A	D	D	A	C	E	A	E	E	A	E
Approach Vol, veh/h		808			728			348			447	
Approach Delay, s/veh		48.6			26.5			65.7			58.5	
Approach LOS		D			C			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.5	22.7	16.7	48.1	8.8	26.3	9.8	55.0				
Change Period (Y+Rc), s	*4.2	*4.6	5.3	*5.3	*4.2	4.6	*4.2	5.3				
Max Green Setting (Gmax), s	*9.8	*19	5.8	*48	*5.8	22.4	*7.4	46.1				
Max Q Clear Time (g_c+l1), s	8.6	17.8	5.5	40.1	5.6	20.2	6.4	30.7				
Green Ext Time (p_c), s	0.0	0.2	0.0	2.8	0.0	0.4	0.0	3.7				

Intersection Summary												
HCM 6th Ctrl Delay				46.2								
HCM 6th LOS				D								

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

Intersection

Intersection Delay, s/veh77.1
Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↔		↙	↑	↗	↙	↑	↗	↙	↕	
Traffic Vol, veh/h	55	293	144	79	213	47	103	236	67	111	368	44
Future Vol, veh/h	55	293	144	79	213	47	103	236	67	111	368	44
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	63	333	164	90	242	53	117	268	76	126	418	50
Number of Lanes	1	1	0	1	1	1	1	1	1	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	3	3
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	3	2	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	3	3	3	2
HCM Control Delay	191.3	31	33.9	33
HCM LOS	F	D	D	D

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	0%	67%	0%	100%	0%	0%	100%	74%
Vol Right, %	0%	0%	100%	0%	33%	0%	0%	100%	0%	0%	26%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	103	236	67	55	437	79	213	47	111	245	167
LT Vol	103	0	0	55	0	79	0	0	111	0	0
Through Vol	0	236	0	0	293	0	213	0	0	245	123
RT Vol	0	0	67	0	144	0	0	47	0	0	44
Lane Flow Rate	117	268	76	62	497	90	242	53	126	279	189
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.355	0.777	0.206	0.186	1.377	0.278	0.717	0.148	0.371	0.782	0.521
Departure Headway (Hd)	11.936	11.412	10.677	10.713	9.983	12.069	11.55	10.823	11.588	11.064	10.87
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	303	319	338	336	367	300	315	333	313	329	333
Service Time	9.636	9.112	8.377	8.464	7.734	9.769	9.25	8.523	9.288	8.764	8.57
HCM Lane V/C Ratio	0.386	0.84	0.225	0.185	1.354	0.3	0.768	0.159	0.403	0.848	0.568
HCM Control Delay	21.1	44.6	16.1	15.9	213.4	19.4	38.8	15.4	21	44.1	24.8
HCM Lane LOS	C	E	C	C	F	C	E	C	C	E	C
HCM 95th-tile Q	1.6	6.2	0.8	0.7	24.5	1.1	5.2	0.5	1.7	6.3	2.9

Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↕	↕↕		↕	↕↕	
Traffic Vol, veh/h	20	3	81	36	3	30	84	248	57	35	210	28
Future Vol, veh/h	20	3	81	36	3	30	84	248	57	35	210	28
Conflicting Peds, #/hr	0	0	0	0	0	0	2	0	2	2	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	22	3	89	40	3	33	92	273	63	38	231	31

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	647	847	133	684	831	170	264	0	0	338	0	0
Stage 1	325	325	-	491	491	-	-	-	-	-	-	-
Stage 2	322	522	-	193	340	-	-	-	-	-	-	-
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	354	295	888	333	302	841	1290	-	-	1211	-	-
Stage 1	659	645	-	525	544	-	-	-	-	-	-	-
Stage 2	661	527	-	787	635	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	310	265	886	273	271	839	1288	-	-	1209	-	-
Mov Cap-2 Maneuver	310	265	-	273	271	-	-	-	-	-	-	-
Stage 1	611	624	-	487	504	-	-	-	-	-	-	-
Stage 2	586	489	-	682	614	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.1	16.6	1.7	1
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1288	-	-	622	386	1209	-	-
HCM Lane V/C Ratio	0.072	-	-	0.184	0.196	0.032	-	-
HCM Control Delay (s)	8	-	-	12.1	16.6	8.1	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.7	0.7	0.1	-	-

HCM Signalized Intersection Capacity Analysis Cumulative Five (5) Years plus Project PM Peak
 2: County Center Street & Riggin Avenue 01/13/2020

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	73	761	110	2	150	565	71	68	104	136	61	89
Future Volume (vph)	73	761	110	2	150	565	71	68	104	136	61	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	5.7			4.2	5.3		4.2	4.9		4.2	4.9
Lane Util. Factor	1.00	0.95			1.00	0.95		1.00	1.00		1.00	1.00
Frbp, ped/bikes	1.00	1.00			1.00	1.00		1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00	1.00		1.00	1.00		1.00	1.00
Frt	1.00	0.98			1.00	0.98		1.00	0.91		1.00	1.00
Flt Protected	0.95	1.00			0.95	1.00		0.95	1.00		0.95	1.00
Satd. Flow (prot)	1752	3422			1752	3446		1752	1687		1752	1845
Flt Permitted	0.95	1.00			0.95	1.00		0.95	1.00		0.95	1.00
Satd. Flow (perm)	1752	3422			1752	3446		1752	1687		1752	1845
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	76	793	115	2	156	589	74	71	108	142	64	93
RTOR Reduction (vph)	0	9	0	0	0	7	0	0	53	0	0	0
Lane Group Flow (vph)	76	899	0	0	158	656	0	71	197	0	64	93
Confl. Peds. (#/hr)			8									
Turn Type	Prot	NA		Prot	Prot	NA		Prot	NA		Prot	NA
Protected Phases	7	4		3	3	8		5	2		1	6
Permitted Phases												
Actuated Green, G (s)	7.7	48.8			13.6	55.1		5.8	19.0		5.6	18.8
Effective Green, g (s)	7.7	48.8			13.6	55.1		5.8	19.0		5.6	18.8
Actuated g/C Ratio	0.07	0.46			0.13	0.52		0.05	0.18		0.05	0.18
Clearance Time (s)	4.2	5.7			4.2	5.3		4.2	4.9		4.2	4.9
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	127	1575			224	1791		95	302		92	327
v/s Ratio Prot	0.04	c0.26			c0.09	0.19		0.04	c0.12		c0.04	0.05
v/s Ratio Perm												
v/c Ratio	0.60	0.57			0.71	0.37		0.75	0.65		0.70	0.28
Uniform Delay, d1	47.7	20.9			44.3	15.1		49.4	40.4		49.4	37.8
Progression Factor	1.00	1.00			0.62	0.37		1.00	1.00		1.00	1.00
Incremental Delay, d2	7.4	1.5			9.0	0.5		27.0	5.0		20.4	0.5
Delay (s)	55.0	22.4			36.4	6.2		76.4	45.4		69.8	38.3
Level of Service	E	C			D	A		E	D		E	D
Approach Delay (s)		25.0			12.0			52.2				47.7
Approach LOS		C			B			D				D
Intersection Summary												
HCM 2000 Control Delay			26.1			HCM 2000 Level of Service					C	
HCM 2000 Volume to Capacity ratio			0.62									
Actuated Cycle Length (s)			106.0			Sum of lost time (s)			19.0			
Intersection Capacity Utilization			66.9%			ICU Level of Service					C	
Analysis Period (min)			15									
c Critical Lane Group												

Movement	SBR
Lane Configurations	7
Traffic Volume (vph)	44
Future Volume (vph)	44
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.9
Lane Util. Factor	1.00
Frpb, ped/bikes	0.99
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1545
Flt Permitted	1.00
Satd. Flow (perm)	1545
Peak-hour factor, PHF	0.96
Adj. Flow (vph)	46
RTOR Reduction (vph)	38
Lane Group Flow (vph)	8
Conf. Peds. (#/hr)	3
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	18.8
Effective Green, g (s)	18.8
Actuated g/C Ratio	0.18
Clearance Time (s)	4.9
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	274
v/s Ratio Prot	
v/s Ratio Perm	0.01
v/c Ratio	0.03
Uniform Delay, d1	36.1
Progression Factor	1.00
Incremental Delay, d2	0.0
Delay (s)	36.1
Level of Service	D
Approach Delay (s)	
Approach LOS	
Intersection Summary	

HCM Signalized Intersection Capacity Analysis Cumulative Five (5) Years plus Project PM Peak
 3: Mooney Boulevard & Riggin Avenue 01/13/2020



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations		↔	↑↑	↗		↔	↑↑	↗	↖	↑↑		↖
Traffic Volume (vph)	30	123	670	127	27	117	598	78	102	190	121	106
Future Volume (vph)	30	123	670	127	27	117	598	78	102	190	121	106
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.2	5.3	5.3		4.2	5.3	5.3	4.2	4.9		4.2
Lane Util. Factor		1.00	0.95	1.00		1.00	0.95	1.00	1.00	0.95		1.00
Flt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	0.94		1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (prot)		1752	3505	1568		1752	3505	1568	1752	3300		1752
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (perm)		1752	3505	1568		1752	3505	1568	1752	3300		1752
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	31	127	691	131	28	121	616	80	105	196	125	109
RTOR Reduction (vph)	0	0	0	73	0	0	0	46	0	104	0	0
Lane Group Flow (vph)	0	158	691	58	0	149	616	34	105	217	0	109
Turn Type	Prot	Prot	NA	Perm	Prot	Prot	NA	Perm	Prot	NA		Prot
Protected Phases	7	7	4		3	3	8		5	2		1
Permitted Phases				4				8				
Actuated Green, G (s)		15.2	47.3	47.3		12.5	44.6	44.6	9.9	17.6		10.0
Effective Green, g (s)		15.2	47.3	47.3		12.5	44.6	44.6	9.9	17.6		10.0
Actuated g/C Ratio		0.14	0.45	0.45		0.12	0.42	0.42	0.09	0.17		0.09
Clearance Time (s)		4.2	5.3	5.3		4.2	5.3	5.3	4.2	4.9		4.2
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)		251	1564	699		206	1474	659	163	547		165
v/s Ratio Prot		c0.09	c0.20			c0.09	0.18		c0.06	0.07		c0.06
v/s Ratio Perm				0.04				0.02				
v/c Ratio		0.63	0.44	0.08		0.72	0.42	0.05	0.64	0.40		0.66
Uniform Delay, d1		42.7	20.2	16.9		45.1	21.6	18.2	46.4	39.5		46.4
Progression Factor		0.87	0.95	2.60		0.95	0.58	1.00	1.00	1.00		1.00
Incremental Delay, d2		4.2	0.8	0.2		10.0	0.7	0.1	8.4	0.5		9.5
Delay (s)		41.3	20.0	44.2		52.8	13.2	18.3	54.8	39.9		55.9
Level of Service		D	B	D		D	B	B	D	D		E
Approach Delay (s)			26.7				20.7			43.6		
Approach LOS			C				C			D		

Intersection Summary			
HCM 2000 Control Delay	30.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	106.0	Sum of lost time (s)	18.6
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis Cumulative Five (5) Years plus Project PM Peak
 3: Mooney Boulevard & Riggins Avenue 01/13/2020



Movement	SBT	SBR
Lane Configurations	↑	↖
Traffic Volume (vph)	168	56
Future Volume (vph)	168	56
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.9	4.9
Lane Util. Factor	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	1845	1568
Flt Permitted	1.00	1.00
Satd. Flow (perm)	1845	1568
Peak-hour factor, PHF	0.97	0.97
Adj. Flow (vph)	173	58
RTOR Reduction (vph)	0	48
Lane Group Flow (vph)	173	10
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	17.7	17.7
Effective Green, g (s)	17.7	17.7
Actuated g/C Ratio	0.17	0.17
Clearance Time (s)	4.9	4.9
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	308	261
v/s Ratio Prot	0.09	
v/s Ratio Perm		0.01
v/c Ratio	0.56	0.04
Uniform Delay, d1	40.6	37.0
Progression Factor	1.00	1.00
Incremental Delay, d2	2.3	0.1
Delay (s)	42.9	37.1
Level of Service	D	D
Approach Delay (s)	46.1	
Approach LOS	D	
Intersection Summary		

Intersection

Int Delay, s/veh 0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↑		↑
Traffic Vol, veh/h	0	917	719	47	0	105
Future Vol, veh/h	0	917	719	47	0	105
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	100	-	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	997	782	51	0	114

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	- 391
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	-	-	-	0 605
Stage 1	0	-	-	-	0 -
Stage 2	0	-	-	-	0 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	- 605
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12.3
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	605
HCM Lane V/C Ratio	-	-	-	0.189
HCM Control Delay (s)	-	-	-	12.3
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.7

Intersection

Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↑↑	↑↵			↵
Traffic Vol, veh/h	34	876	751	10	0	9
Future Vol, veh/h	34	876	751	10	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	-	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	37	952	816	11	0	10

Major/Minor

	Major1	Major2	Minor2
Conflicting Flow All	827	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.16	-	6.96
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.23	-	3.33
Pot Cap-1 Maneuver	793	-	584
Stage 1	-	-	0
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	793	-	584
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach

	EB	WB	SB
HCM Control Delay, s	0.4	0	11.3
HCM LOS			B

Minor Lane/Major Mvmt

	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	793	-	-	-	584
HCM Lane V/C Ratio	0.047	-	-	-	0.017
HCM Control Delay (s)	9.8	-	-	-	11.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔				↔			↔
Traffic Vol, veh/h	3	849	5	12	739	2	0	0	15	0	0	3
Future Vol, veh/h	3	849	5	12	739	2	0	0	15	0	0	3
Conflicting Peds, #/hr	0	0	6	6	0	0	0	0	1	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	100	-	-	90	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	3	866	5	12	754	2	0	0	15	0	0	3

Major/Minor	Major1		Major2		Minor1			Minor2				
Conflicting Flow All	756	0	0	877	0	0	-	-	876	-	-	755
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.13	-	-	4.13	-	-	-	-	6.23	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	-	-	3.327	-	-	3.327
Pot Cap-1 Maneuver	850	-	-	766	-	-	0	0	347	0	0	407
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	850	-	-	762	-	-	-	-	345	-	-	407
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB			SB		
HCM Control Delay, s	0		0.2		15.9			13.9		
HCM LOS					C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	345	850	-	-	762	-	-	407
HCM Lane V/C Ratio	0.044	0.004	-	-	0.016	-	-	0.008
HCM Control Delay (s)	15.9	9.3	-	-	9.8	-	-	13.9
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

HCM 6th Signalized Intersection Summary
7: Giddings Street & Riggin Avenue

Cumulative Five (5) Years plus Project PM Peak
01/13/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↘		↙	↘		↙	↘		↙	↘	
Traffic Volume (veh/h)	139	708	57	77	665	93	43	102	79	61	82	76
Future Volume (veh/h)	139	708	57	77	665	93	43	102	79	61	82	76
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		0.93	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	145	738	59	80	693	97	45	106	82	64	85	79
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	317	792	63	306	734	103	125	135	105	82	103	96
Arrive On Green	0.18	0.47	0.47	0.17	0.46	0.46	0.07	0.14	0.14	0.05	0.12	0.12
Sat Flow, veh/h	1767	1696	136	1767	1593	223	1767	937	725	1767	885	823
Grp Volume(v), veh/h	145	0	797	80	0	790	45	0	188	64	0	164
Grp Sat Flow(s),veh/h/ln	1767	0	1831	1767	0	1815	1767	0	1662	1767	0	1707
Q Serve(g_s), s	7.8	0.0	43.5	4.2	0.0	44.0	2.6	0.0	11.6	3.8	0.0	10.0
Cycle Q Clear(g_c), s	7.8	0.0	43.5	4.2	0.0	44.0	2.6	0.0	11.6	3.8	0.0	10.0
Prop In Lane	1.00		0.07	1.00		0.12	1.00		0.44	1.00		0.48
Lane Grp Cap(c), veh/h	317	0	855	306	0	836	125	0	240	82	0	199
V/C Ratio(X)	0.46	0.00	0.93	0.26	0.00	0.94	0.36	0.00	0.78	0.78	0.00	0.83
Avail Cap(c_a), veh/h	317	0	978	306	0	903	125	0	298	97	0	287
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.9	0.0	26.7	37.9	0.0	27.3	46.9	0.0	43.7	50.0	0.0	45.8
Incr Delay (d2), s/veh	1.0	0.0	18.1	0.4	0.0	20.3	1.7	0.0	10.3	28.5	0.0	12.3
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	3.3	0.0	21.4	1.8	0.0	21.9	1.2	0.0	5.5	2.3	0.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.9	0.0	44.8	38.4	0.0	47.5	48.7	0.0	54.0	78.5	0.0	58.0
LnGrp LOS	D	A	D	D	A	D	D	A	D	E	A	E
Approach Vol, veh/h		942			870			233			228	
Approach Delay, s/veh		44.1			46.7			53.0			63.8	
Approach LOS		D			D			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.1	19.5	22.6	54.8	11.7	16.9	23.2	54.1				
Change Period (Y+Rc), s	*4.2	*4.2	4.2	*5.3	4.2	*4.6	4.2	*5.3				
Max Green Setting (Gmax), s	*5.8	*19	6.9	*57	6.4	*18	10.8	*53				
Max Q Clear Time (g_c+11), s	5.8	13.6	6.2	45.5	4.6	12.0	9.8	46.0				
Green Ext Time (p_c), s	0.0	0.5	0.0	3.9	0.0	0.4	0.0	2.8				

Intersection Summary

HCM 6th Ctrl Delay	48.0
HCM 6th LOS	D

Notes

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

Intersection	
Intersection Delay, s/veh	29.8
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	73	222	82	63	223	64	94	305	76	64	298	44
Future Vol, veh/h	73	222	82	63	223	64	94	305	76	64	298	44
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	76	231	85	66	232	67	98	318	79	67	310	46
Number of Lanes	1	1	0	1	1	1	1	1	1	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	3	3
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	3	2	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	3	3	3	2
HCM Control Delay	37.2	23.8	35.8	21.1
HCM LOS	E	C	E	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	0%	73%	0%	100%	0%	0%	100%	69%
Vol Right, %	0%	0%	100%	0%	27%	0%	0%	100%	0%	0%	31%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	94	305	76	73	304	63	223	64	64	199	143
LT Vol	94	0	0	73	0	63	0	0	64	0	0
Through Vol	0	305	0	0	222	0	223	0	0	199	99
RT Vol	0	0	76	0	82	0	0	64	0	0	44
Lane Flow Rate	98	318	79	76	317	66	232	67	67	207	149
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.275	0.845	0.195	0.211	0.817	0.19	0.641	0.171	0.192	0.565	0.399
Departure Headway (Hd)	10.096	9.58	8.857	9.977	9.288	10.44	9.927	9.209	10.354	9.837	9.614
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	356	378	406	360	390	344	365	389	347	368	375
Service Time	7.831	7.314	6.591	7.71	7.022	8.194	7.681	6.963	8.091	7.574	7.351
HCM Lane V/C Ratio	0.275	0.841	0.195	0.211	0.813	0.192	0.636	0.172	0.193	0.563	0.397
HCM Control Delay	16.6	47.2	13.7	15.4	42.4	15.6	28.9	13.9	15.5	24.7	18.6
HCM Lane LOS	C	E	B	C	E	C	D	B	C	C	C
HCM 95th-tile Q	1.1	7.9	0.7	0.8	7.3	0.7	4.2	0.6	0.7	3.3	1.9

HCM 6th Signalized Intersection Summary
8: Mooney Boulevard & Ferguson Avenue

Cumulative Five (5) Years plus Project AM Peak

01/14/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↖	↖	↗	↖	↖	↗	↗
Traffic Volume (veh/h)	55	293	144	79	213	47	103	236	67	111	368	44
Future Volume (veh/h)	55	293	144	79	213	47	103	236	67	111	368	44
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		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	62	333	164	90	242	53	117	268	76	126	418	50
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	80	360	177	114	626	529	440	637	537	155	557	66
Arrive On Green	0.05	0.31	0.31	0.06	0.34	0.34	0.25	0.34	0.34	0.09	0.18	0.18
Sat Flow, veh/h	1767	1173	578	1767	1856	1568	1767	1856	1563	1767	3171	377
Grp Volume(v), veh/h	62	0	497	90	242	53	117	268	76	126	231	237
Grp Sat Flow(s),veh/h/ln	1767	0	1750	1767	1856	1568	1767	1856	1563	1767	1763	1785
Q Serve(g_s), s	3.5	0.0	27.5	5.0	9.9	2.3	5.3	11.1	2.5	7.0	12.5	12.6
Cycle Q Clear(g_c), s	3.5	0.0	27.5	5.0	9.9	2.3	5.3	11.1	2.5	7.0	12.5	12.6
Prop In Lane	1.00		0.33	1.00		1.00	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	80	0	537	114	626	529	440	637	537	155	310	313
V/C Ratio(X)	0.78	0.00	0.92	0.79	0.39	0.10	0.27	0.42	0.14	0.81	0.75	0.76
Avail Cap(c_a), veh/h	163	0	590	156	626	529	440	637	537	191	513	519
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(l)	1.00	0.00	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	47.2	0.0	33.5	46.1	25.2	22.7	30.2	25.2	12.6	44.8	39.1	39.2
Incr Delay (d2), s/veh	14.8	0.0	19.7	16.8	0.4	0.1	0.3	2.0	0.6	19.1	15.2	15.5
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	1.8	0.0	13.8	2.7	4.3	0.8	2.2	5.0	1.3	3.8	6.5	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.0	0.0	53.2	62.9	25.6	22.8	30.5	27.2	13.2	63.9	54.3	54.7
LnGrp LOS	E	A	D	E	C	C	C	C	B	E	D	D
Approach Vol, veh/h		559			385			461			594	
Approach Delay, s/veh		54.2			34.0			25.7			56.5	
Approach LOS		D			C			C			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	39.7	11.4	36.0	30.2	22.5	8.7	38.6				
Change Period (Y+Rc), s	* 4.2	5.3	4.9	* 5.3	5.3	* 4.9	* 4.2	4.9				
Max Green Setting (Gmax), s	* 11	27.7	8.8	* 34	9.8	* 29	* 9.2	33.7				
Max Q Clear Time (g_c+I1), s	9.0	13.1	7.0	29.5	7.3	14.6	5.5	11.9				
Green Ext Time (p_c), s	0.0	1.4	0.0	1.1	0.1	2.2	0.0	1.4				

Intersection Summary

HCM 6th Ctrl Delay	44.4
HCM 6th LOS	D

Notes

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

HCM 6th Signalized Intersection Summary
8: Mooney Boulevard & Ferguson Avenue

Cumulative Five (5) Years plus Project PM Peak

01/14/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	222	82	63	223	64	94	305	76	64	298	44
Future Volume (veh/h)	73	222	82	63	223	64	94	305	76	64	298	44
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		0.98
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	76	231	85	66	232	67	98	318	79	67	310	46
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	167	270	99	85	288	243	524	751	633	86	461	68
Arrive On Green	0.09	0.21	0.21	0.05	0.16	0.16	0.30	0.40	0.40	0.05	0.15	0.15
Sat Flow, veh/h	1767	1293	476	1767	1856	1567	1767	1856	1563	1767	3077	451
Grp Volume(v), veh/h	76	0	316	66	232	67	98	318	79	67	176	180
Grp Sat Flow(s),veh/h/ln	1767	0	1769	1767	1856	1567	1767	1856	1563	1767	1763	1765
Q Serve(g_s), s	4.1	0.0	17.2	3.7	12.1	2.9	4.1	12.3	3.2	3.7	9.4	9.6
Cycle Q Clear(g_c), s	4.1	0.0	17.2	3.7	12.1	2.9	4.1	12.3	3.2	3.7	9.4	9.6
Prop In Lane	1.00		0.27	1.00		1.00	1.00		1.00	1.00		0.26
Lane Grp Cap(c), veh/h	167	0	369	85	288	243	524	751	633	86	264	264
V/C Ratio(X)	0.46	0.00	0.86	0.78	0.81	0.28	0.19	0.42	0.12	0.78	0.67	0.68
Avail Cap(c_a), veh/h	177	0	566	94	514	434	524	751	633	115	472	473
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	0.00	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	42.9	0.0	38.1	47.1	40.8	22.4	26.2	21.4	18.7	47.0	40.2	40.3
Incr Delay (d2), s/veh	1.9	0.0	7.9	31.0	5.3	0.6	0.2	1.7	0.4	21.2	12.6	13.3
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	1.8	0.0	7.9	2.3	5.8	1.4	1.7	5.3	1.2	2.1	4.9	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.8	0.0	46.0	78.1	46.0	23.0	26.4	23.1	19.1	68.2	52.8	53.6
LnGrp LOS	D	A	D	E	D	C	C	C	B	E	D	D
Approach Vol, veh/h		392			365			495			423	
Approach Delay, s/veh		45.8			47.6			23.1			55.6	
Approach LOS		D			D			C			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.6	48.3	11.5	28.7	37.5	22.4	17.2	22.9				
Change Period (Y+Rc), s	* 6.7	7.8	* 6.7	7.8	7.8	* 7.4	7.8	* 7.4				
Max Green Setting (Gmax), s	* 6.5	27.2	* 5.3	32.0	7.3	* 27	10.0	* 28				
Max Q Clear Time (g_c+I1), s	5.7	14.3	5.7	19.2	6.1	11.6	6.1	14.1				
Green Ext Time (p_c), s	0.0	1.6	0.0	1.3	0.0	1.6	0.0	1.2				

Intersection Summary

HCM 6th Ctrl Delay	42.0
HCM 6th LOS	D

Notes

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

Intersection: 1: Mooney Boulevard & Project Driveway 1

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	L	T
Maximum Queue (ft)	74	101	54	22	53	50
Average Queue (ft)	34	42	15	1	20	3
95th Queue (ft)	63	74	42	7	50	20
Link Distance (ft)	188	259		234		127
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			50		50	
Storage Blk Time (%)			0		1	1
Queuing Penalty (veh)			0		2	0

Intersection: 2: County Center Street & Rigin Avenue

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	UL	T	TR	L	TR	L	T	R
Maximum Queue (ft)	128	161	210	116	235	254	140	263	136	142	77
Average Queue (ft)	26	89	92	61	81	99	78	130	57	78	37
95th Queue (ft)	71	144	170	106	191	211	132	226	114	132	64
Link Distance (ft)		2738	2738		2277	2277		874		1577	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	250			150			200		130		130
Storage Blk Time (%)					3			3	2		1
Queuing Penalty (veh)					3			3	4		2

Intersection: 3: Mooney Boulevard & Riggin Avenue

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	UL	T	T	R	UL	T	T	R	L	T	TR	L
Maximum Queue (ft)	198	191	196	64	179	159	161	74	139	133	214	199
Average Queue (ft)	108	69	70	24	102	92	107	30	81	62	103	85
95th Queue (ft)	178	125	131	54	167	149	173	63	124	112	173	148
Link Distance (ft)		2277	2277			251	251			279	279	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300			100	125			125	160			150
Storage Blk Time (%)			5		4	2	5					0
Queuing Penalty (veh)			5		9	3	4					0

Intersection: 3: Mooney Boulevard & Riggin Avenue

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	238	63
Average Queue (ft)	137	28
95th Queue (ft)	230	50
Link Distance (ft)	234	234
Upstream Blk Time (%)	1	
Queuing Penalty (veh)	3	
Storage Bay Dist (ft)		
Storage Blk Time (%)	11	
Queuing Penalty (veh)	12	

Intersection: 4: Riggin Avenue & Project Driveway 2

Movement	SB
Directions Served	R
Maximum Queue (ft)	80
Average Queue (ft)	48
95th Queue (ft)	75
Link Distance (ft)	160
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Riggin Avenue & Project Driveway 3

Movement	EB	EB	EB	SB
Directions Served	L	T	T	R
Maximum Queue (ft)	55	46	55	31
Average Queue (ft)	15	3	2	6
95th Queue (ft)	44	18	18	27
Link Distance (ft)		191	191	173
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	100			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: Dayton Street/Project Dirveway 4 & Riggin Avenue

Movement	WB	NB	SB
Directions Served	L	R	R
Maximum Queue (ft)	27	31	28
Average Queue (ft)	2	10	4
95th Queue (ft)	12	34	18
Link Distance (ft)		485	174
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	90		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Giddings Street & Riggin Avenue

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	204	589	204	552	159	483	159	374
Average Queue (ft)	80	227	79	227	62	172	90	154
95th Queue (ft)	183	384	169	410	154	325	149	271
Link Distance (ft)		843		1019		2215		951
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	155		155		100		155	
Storage Blk Time (%)	0	16	4	15	8	33	2	9
Queuing Penalty (veh)	3	11	21	9	19	19	5	10

Intersection: 8: Mooney Boulevard & Ferguson Avenue

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	T	R	L	T	TR
Maximum Queue (ft)	269	485	209	297	110	186	184	71	137	129	229
Average Queue (ft)	72	245	61	117	26	88	92	27	79	63	73
95th Queue (ft)	187	411	142	239	75	152	168	59	130	118	151
Link Distance (ft)		739		634			1454	1454		359	359
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	150		160		60	155			150		
Storage Blk Time (%)		28	1	25	0	1	2		0		
Queuing Penalty (veh)		15	3	31	1	3	2		0		

Network Summary

Network wide Queuing Penalty: 201

Intersection: 1: Mooney Boulevard & Project Driveway 1

Movement	EB	WB	NB	NB	NB	SB
Directions Served	LTR	LTR	L	T	TR	L
Maximum Queue (ft)	109	79	67	90	41	31
Average Queue (ft)	38	35	18	3	3	9
95th Queue (ft)	76	66	51	30	17	31
Link Distance (ft)	188	259		234	234	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			50			50
Storage Blk Time (%)			0	0		0
Queuing Penalty (veh)			1	0		0

Intersection: 2: County Center Street & Rigin Avenue

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	UL	T	TR	L	TR	L	T	R
Maximum Queue (ft)	111	261	255	246	225	263	138	319	103	204	71
Average Queue (ft)	47	133	140	114	82	108	50	134	54	67	24
95th Queue (ft)	96	208	230	185	193	223	107	241	96	139	57
Link Distance (ft)		2738	2738		2277	2277		874		1577	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	250			150			200		130		130
Storage Blk Time (%)		0		4	4			2		1	
Queuing Penalty (veh)		0		12	6			2		1	

Intersection: 3: Mooney Boulevard & Riggan Avenue

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	UL	T	T	R	UL	T	T	R	L	T	TR	L
Maximum Queue (ft)	241	288	347	91	180	191	218	67	194	211	282	199
Average Queue (ft)	108	97	108	20	92	125	131	20	71	61	91	91
95th Queue (ft)	184	216	239	55	154	188	191	51	131	138	208	164
Link Distance (ft)		2277	2277			251	251			279	279	
Upstream Blk Time (%)												0
Queuing Penalty (veh)												0
Storage Bay Dist (ft)	300			100	125			125	160			150
Storage Blk Time (%)		0	9	0	5	7	10		1	1		3
Queuing Penalty (veh)		0	11	0	13	10	7		1	1		5

Intersection: 3: Mooney Boulevard & Riggan Avenue

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	234	65
Average Queue (ft)	101	15
95th Queue (ft)	194	35
Link Distance (ft)	234	234
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	1	
Storage Bay Dist (ft)		
Storage Blk Time (%)	5	
Queuing Penalty (veh)	5	

Intersection: 4: Riggan Avenue & Project Driveway 2

Movement	SB
Directions Served	R
Maximum Queue (ft)	84
Average Queue (ft)	36
95th Queue (ft)	65
Link Distance (ft)	148
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Riggin Avenue & Project Driveway 3

Movement	EB	EB	EB	SB
Directions Served	L	T	T	R
Maximum Queue (ft)	77	114	152	32
Average Queue (ft)	17	33	26	7
95th Queue (ft)	49	90	91	28
Link Distance (ft)		191	191	173
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	100			
Storage Blk Time (%)		0		
Queuing Penalty (veh)		0		

Intersection: 6: Dayton Street/Project Dirveway 4 & Riggin Avenue

Movement	WB	NB
Directions Served	L	R
Maximum Queue (ft)	31	31
Average Queue (ft)	6	10
95th Queue (ft)	25	33
Link Distance (ft)		485
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	90	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Giddings Street & Riggin Avenue

Movement	EB	EB	WB	WB	B26	B16	NB	NB	SB	SB
Directions Served	L	TR	L	TR	T	T	L	TR	L	TR
Maximum Queue (ft)	205	476	205	1119	273	258	159	226	94	238
Average Queue (ft)	119	225	84	764	43	21	35	116	50	99
95th Queue (ft)	193	408	180	1324	183	129	85	179	80	187
Link Distance (ft)		843		1019	185	1169		2215		951
Upstream Blk Time (%)				16	6					
Queuing Penalty (veh)				0	0					
Storage Bay Dist (ft)	155		155				100		155	
Storage Blk Time (%)	2	16	0	40				21		2
Queuing Penalty (veh)	13	22	1	31				9		1

Intersection: 8: Mooney Boulevard & Ferguson Avenue

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R	L	T	R	L	T	TR
Maximum Queue (ft)	256	377	209	258	110	214	287	55	91	151	169
Average Queue (ft)	66	181	66	112	49	73	143	28	44	59	72
95th Queue (ft)	144	314	139	218	122	147	252	50	79	116	140
Link Distance (ft)		739		634			1454	1454		359	359
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	150		160		60	155			150		
Storage Blk Time (%)	1	14		29	0	2	7			0	
Queuing Penalty (veh)	2	10		37	0	6	6			0	

Network Summary

Network wide Queuing Penalty: 211

Appendix I: Signal Warrants



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516 W. Shaw Ave., Ste. 103
Fresno, CA 93704
(559) 570-8991

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet

006	TULARE	n/a	n/a	COUNT DATE	10/08/2019
DIST	CO	RTE	KPM	CALC	MM DATE 11/06/2019
				CHK	MA DATE 11/06/2019

Major St: Riggin Avenue Critical Approach Speed 50 MPH
 Minor St: County Center Drive Critical Approach Speed 40 MPH

Critical speed of major street traffic > 64 km/h (40 mph).....

In built up area of isolated community of < 10,000 population

or } RURAL (R)
 } URBAN (U)

WARRANT 1 - Eight Hour Vehicular Volume

(Condition A or Condition B or combination of A and B must be satisfied)

Condition A - Minimum Vehicle Volume

100% SATISFIED YES NO

80% SATISFIED YES NO

APPROACH	LANES	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)												Hour
		U	R	U	R	7:00 a.m.	8:00 a.m.	1:00 p.m.	2:00 p.m.	3:00 p.m.	4:00 p.m.	5:00 p.m.	6:00 p.m.	
Both Approaches	1	500	350	600	420	859	801	820	964	1148	1120	1275	956	
Major Street		(400)	(280)	(480)	(336)	859	801	820	964	1148	1120	1275	956	
Highest Approach	2 or More	150	105	200	140	250	170	163	204	175	168	231	180	
Minor Street		(120)	(84)	(160)	(112)	250	170	163	204	175	168	231	180	

Condition B - Interruption of Continuous Traffic

100% SATISFIED YES NO

80% SATISFIED YES NO

APPROACH	LANES	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)												Hour
		U	R	U	R	7:00 a.m.	8:00 a.m.	1:00 p.m.	2:00 p.m.	3:00 p.m.	4:00 p.m.	5:00 p.m.	6:00 p.m.	
Both Approaches	1	750	525	900	630	859	801	820	964	1148	1120	1275	956	
Major Street		(600)	(420)	(720)	(504)	859	801	820	964	1148	1120	1275	956	
Highest Approach	2 or More	75	53	100	70	250	170	163	204	175	168	231	180	
Minor Street		(60)	(42)	(80)	(56)	250	170	163	204	175	168	231	180	

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Combination of Conditions A & B

SATISFIED YES NO

REQUIREMENT	WARRANT	FULFILLED
TWO WARRANTS SATISFIED 80%	1. MINIMUM VEHICULAR VOLUME 2. INTERRUPTION OF CONTINUOUS TRAFFIC	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>



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 Fresno, CA 93704
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Figure 4C-101 (CA). Traffic Signal Warrants Worksheet

006	TULARE	n/a	n/a		COUNT DATE	10/08/2019
DIST	CO	RTE	KPM		CALC	MM DATE 11/06/2019
					CHK	MA DATE 11/06/2019

Major St: Riggin Avenue	Critical Approach Speed	45	MPH
Minor St: Giddings Street	Critical Approach Speed	35	MPH

Critical speed of major street traffic > 64 km/h (40 mph).....

In built up area of isolated community of < 10,000 population

or

} RURAL (R)
 } URBAN (U)

WARRANT 1 - Eight Hour Vehicular Volume

(Condition A or Condition B or combination of A and B must be satisfied)

Condition A - Minimum Vehicle Volume

100% SATISFIED YES NO

80 % SATISFIED YES NO

APPROACH	LANES	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)												Hour
		1		2 or More										
		U	R	U	R	7:00 a.m.	8:00 a.m.	1:00 p.m.	2:00 p.m.	3:00 p.m.	4:00 p.m.	5:00 p.m.	6:00 p.m.	
Both Approaches		500	350	600	420	767	746	869	919	969	1060	1092	893	
Major Street		(400)	(280)	(480)	(336)	767	746	869	919	969	1060	1092	893	
Highest Approach		150	105	200	140	178	133	129	153	135	98	145	111	
Minor Street		(120)	(84)	(160)	(112)	178	133	129	153	135	98	145	111	

Condition B - Interruption of Continuous Traffic

100% SATISFIED YES NO

80 % SATISFIED YES NO

APPROACH	LANES	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)												Hour
		1		2 or More										
		U	R	U	R	7:00 a.m.	8:00 a.m.	1:00 p.m.	2:00 p.m.	3:00 p.m.	4:00 p.m.	5:00 p.m.	6:00 p.m.	
Both Approaches		750	525	900	630	767	746	869	919	969	1060	1092	893	
Major Street		(600)	(420)	(720)	(504)	767	746	869	919	969	1060	1092	893	
Highest Approach		75	53	100	70	178	133	129	153	135	98	145	111	
Minor Street		(60)	(42)	(80)	(56)	178	133	129	153	135	98	145	111	

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Combination of Conditions A & B

SATISFIED YES NO

REQUIREMENT	WARRANT	FULFILLED
TWO WARRANTS SATISFIED 80%	1. MINIMUM VEHICULAR VOLUME	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
	2. INTERRUPTION OF CONTINUOUS TRAFFIC	



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Figure 4C-101 (CA). Traffic Signal Warrants Worksheet

006	TULARE	n/a	n/a	COUNT DATE	10/08/2019
DIST	CO	RTE	KPM	CALC	MM DATE 11/06/2019
				CHK	MA DATE 11/06/2019

Major St: **Mooney Boulevard** Critical Approach Speed 45 MPH
 Minor St: **Ferguson Avenue** Critical Approach Speed 45 MPH

Critical speed of major street traffic > 64 km/h (40 mph).....

In built up area of isolated community of < 10,000 population

}
 or } RURAL (R)
 }
 } URBAN (U)

WARRANT 1 - Eight Hour Vehicular Volume

(Condition A or Condition B or combination of A and B must be satisfied)

Condition A - Minimum Vehicle Volume

100% SATISFIED YES NO

80 % SATISFIED YES NO

APPROACH	LANES	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)												Hour
		U	R	U	R	7:00 a.m.	8:00 a.m.	12:00 p.m.	2:00 p.m.	3:00 p.m.	4:00 p.m.	5:00 p.m.	6:00 p.m.	
Both Approaches	1	500	350	600	420	684	575	466	557	737	625	724	624	
Major Street	1	(400)	(280)	(480)	(336)	684	575	466	557	737	625	724	624	
Highest Approach	2 or More	150	105	200	140	344	276	208	236	369	271	326	270	
Minor Street	2 or More	(120)	(84)	(160)	(112)	344	276	208	236	369	271	326	270	

Condition B - Interruption of Continuous Traffic

100% SATISFIED YES NO

80 % SATISFIED YES NO

APPROACH	LANES	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)												Hour
		U	R	U	R	7:00 a.m.	8:00 a.m.	12:00 p.m.	2:00 p.m.	3:00 p.m.	4:00 p.m.	5:00 p.m.	6:00 p.m.	
Both Approaches	1	750	525	900	630	684	575	466	557	737	625	724	624	
Major Street	1	(600)	(420)	(720)	(504)	684	575	466	557	737	625	724	624	
Highest Approach	2 or More	75	53	100	70	344	276	208	236	369	271	326	270	
Minor Street	2 or More	(60)	(42)	(80)	(56)	344	276	208	236	369	271	326	270	

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Combination of Conditions A & B

SATISFIED YES NO

REQUIREMENT	WARRANT	FULFILLED
TWO WARRANTS SATISFIED 80%	1. MINIMUM VEHICULAR VOLUME	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
	2. INTERRUPTION OF CONTINUOUS TRAFFIC	



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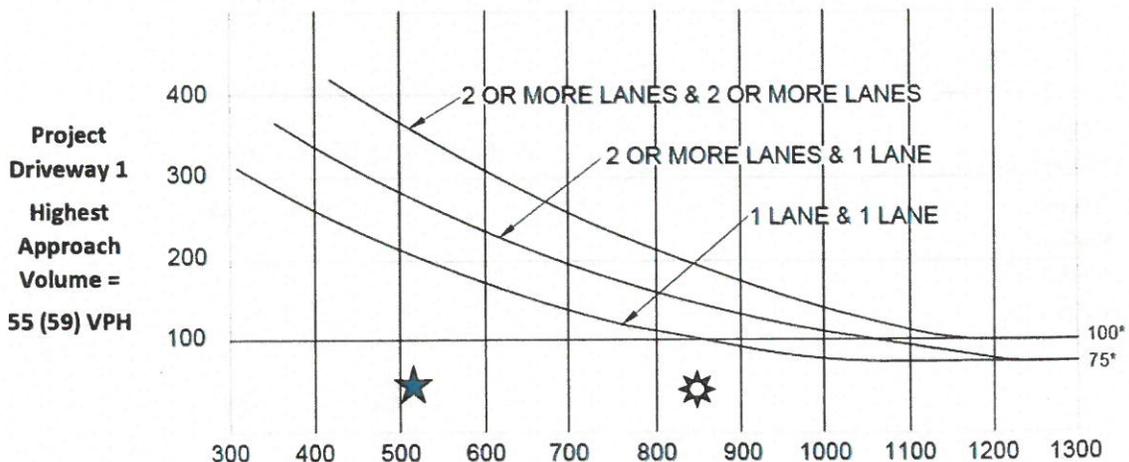
Warrant 3: Peak Hour (Rural)

Existing Traffic Conditions

1. Mooney Boulevard / Project Driveway 1

AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



Mooney Boulevard Total of Both Approaches =

845 (516) VPH

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.

- ☀ AM Peak Hour – Signal Warrant is Not Met
- ★ PM Peak Hour – Signal Warrant is Not Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
Part 4: Highway Traffic Signals
November 7, 2014

JLB TRAFFIC
ENGINEERING, INC.

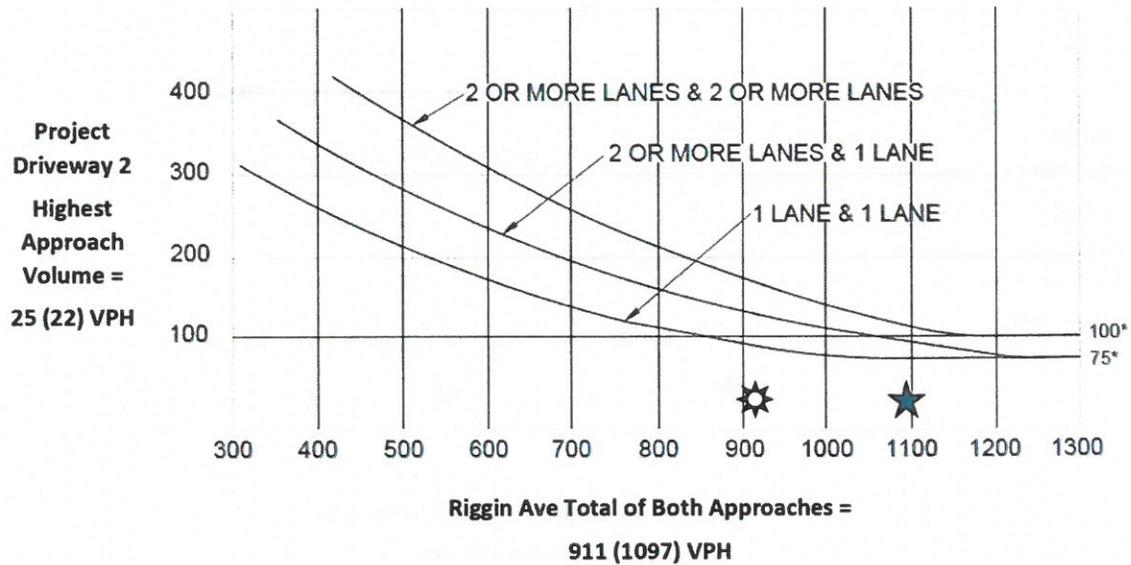
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info@JLBtraffic.com

516 W. Shaw Ave., Ste. 103
Fresno, CA 93704
(559) 570-8991

Warrant 3: Peak Hour (Rural)

Existing Traffic Conditions 4. Project Driveway 2 / Riggin Avenue AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.

-  AM Peak Hour – Signal Warrant is Not Met
-  PM Peak Hour – Signal Warrant is Not Met

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Chapter 4C: Traffic Control Signal Needs Studies
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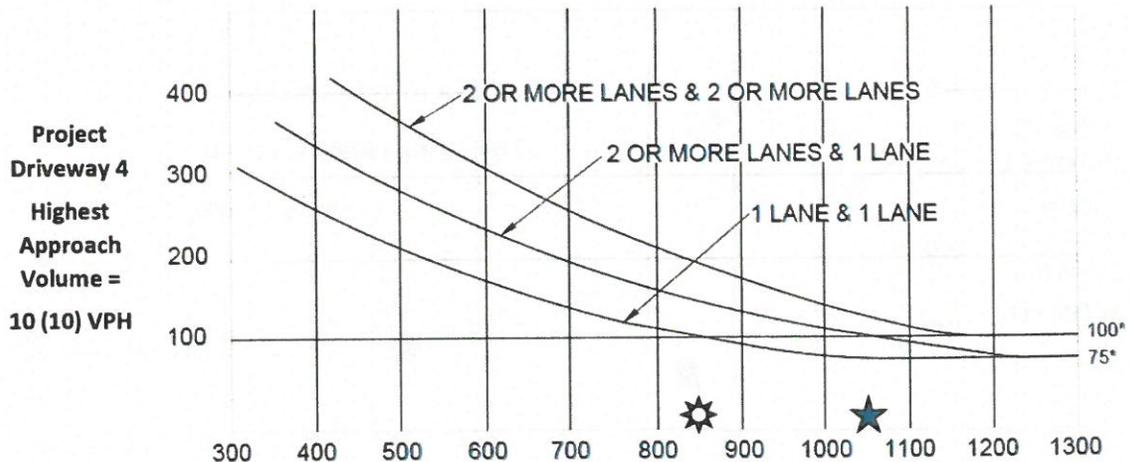
Fresno, CA 93704

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Warrant 3: Peak Hour (Rural)

Existing Traffic Conditions 6. Project Driveway 4 / Riggin Avenue AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



Riggin Ave Total of Both Approaches =
864 (1054) VPH

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.

- ☀ AM Peak Hour – Signal Warrant is Not Met
- ★ PM Peak Hour – Signal Warrant is Not Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
Part 4: Highway Traffic Signals
November 7, 2014

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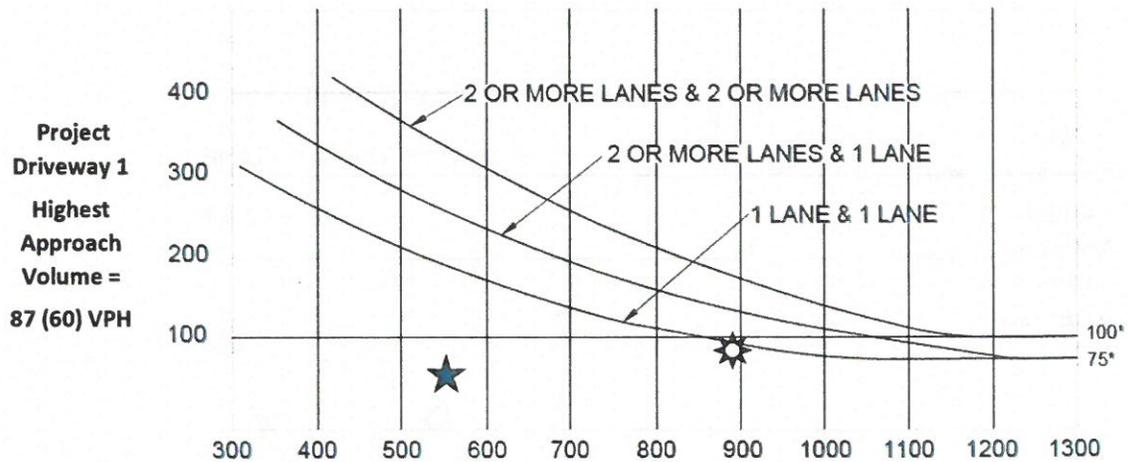
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Warrant 3: Peak Hour (Rural)

Opening Year 2020 plus Project Traffic Conditions
1. Mooney Boulevard / Project Driveway 1
AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



Mooney Boulevard Total of Both Approaches =
887 (545) VPH

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.

- ☀ AM Peak Hour – Signal Warrant is Not Met
- ★ PM Peak Hour – Signal Warrant is Not Met

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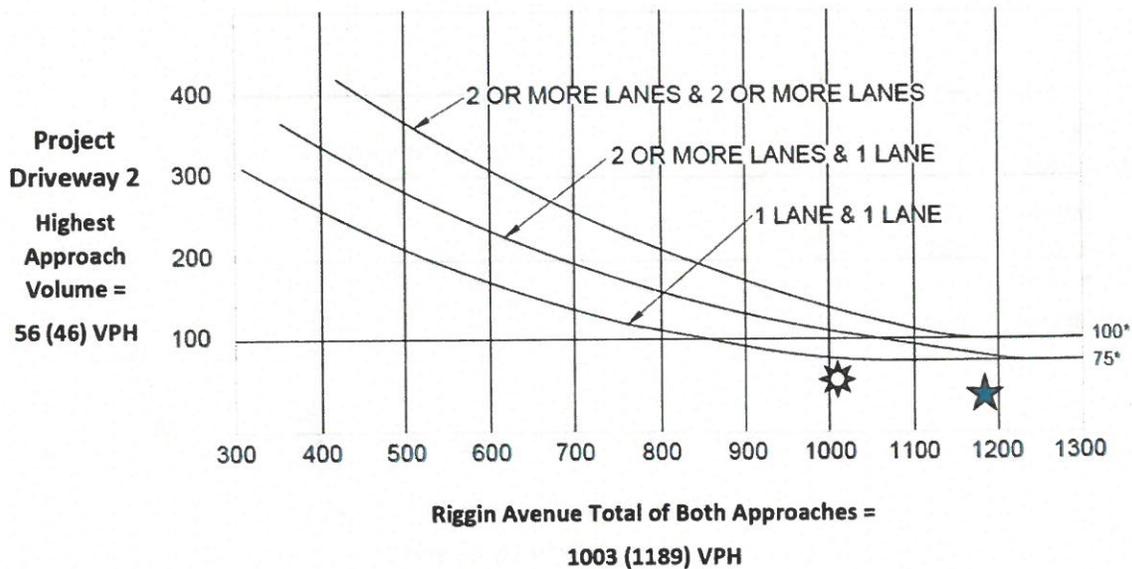
Fresno, CA 93704

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Warrant 3: Peak Hour (Rural)

Opening Year 2020 plus Project Traffic Conditions
4. Project Driveway 2 / Riggin Avenue
AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.

- ☀ AM Peak Hour – Signal Warrant is Not Met
- ★ PM Peak Hour – Signal Warrant is Not Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
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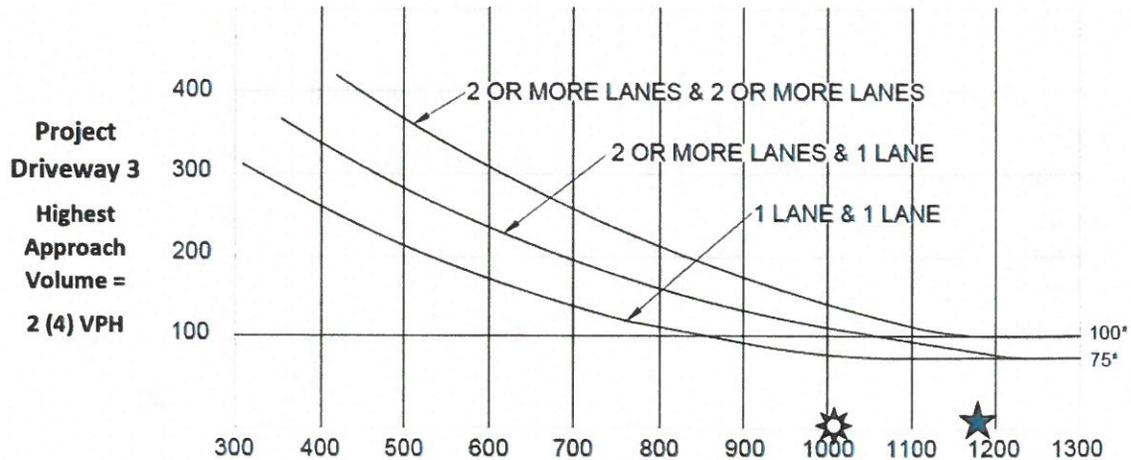
Fresno, CA 93704

(559) 570-8991

Warrant 3: Peak Hour (Rural)

Opening Year 2020 plus Project Traffic Conditions
5. Project Driveway 3 / Riggin Avenue
AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



Riggin Avenue Total of Both Approaches =
1002 (1179) VPH

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.

- ☼ AM Peak Hour – Signal Warrant is Not Met
- ★ PM Peak Hour – Signal Warrant is Not Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
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November 7, 2014



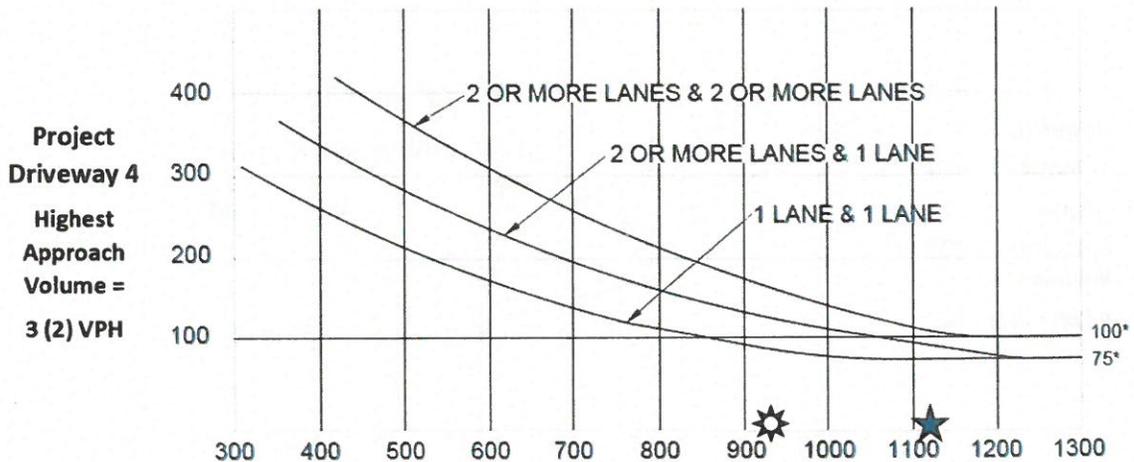
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(559) 570-8991

Warrant 3: Peak Hour (Rural)

Opening Year 2020 plus Project Traffic Conditions
6. Project Driveway 4 / Riggin Avenue
AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



Riggin Avenue Total of Both Approaches =
920 (1116) VPH

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.

- AM Peak Hour – Signal Warrant is Not Met**
- PM Peak Hour – Signal Warrant is Not Met**

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
 Chapter 4C: Traffic Control Signal Needs Studies
 Part 4: Highway Traffic Signals
 November 7, 2014



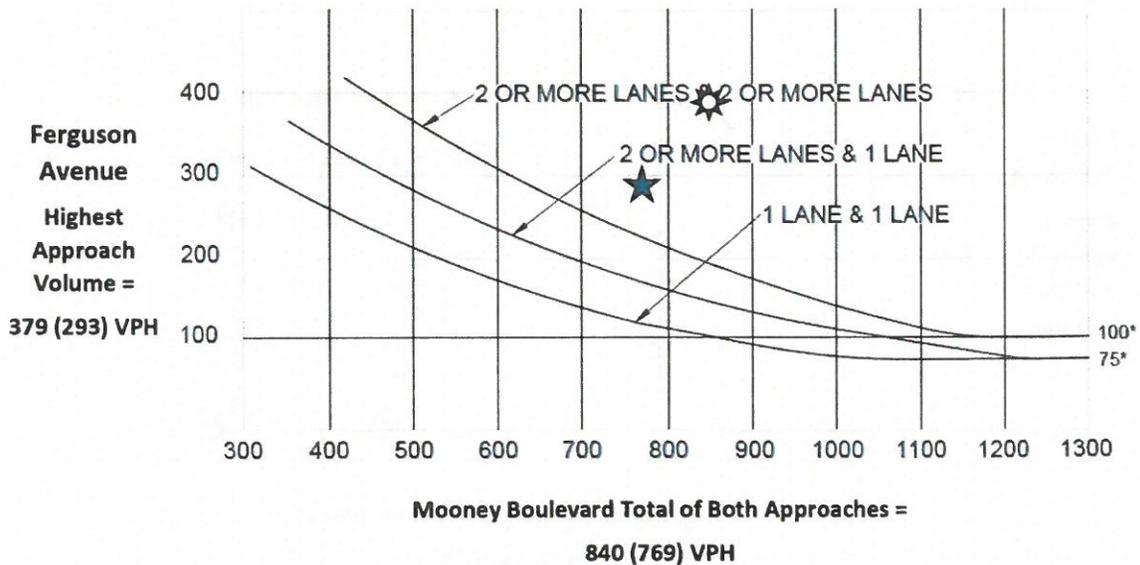
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 info@JLBtraffic.com

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 Fresno, CA 93704
 (559) 570-8991

Warrant 3: Peak Hour (Rural)

Opening Year 2020 plus Project Traffic Conditions
8. Mooney Boulevard / Ferguson Avenue
AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.

- ☀ AM Peak Hour – Signal Warrant is Met
- ★ PM Peak Hour – Signal Warrant is Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
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November 7, 2014



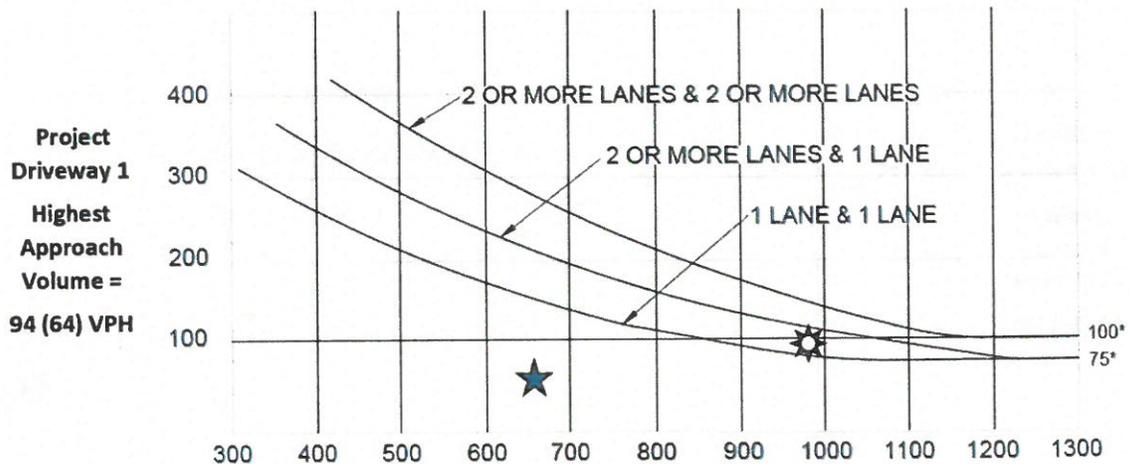
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(559) 570-8991

Warrant 3: Peak Hour (Rural)

Cumulative Five (5) Year plus Project Traffic Conditions
1. Mooney Boulevard / Project Driveway 1
AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



Mooney Boulevard Total of Both Approaches =
981 (662) VPH

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.

-  **AM Peak Hour – Signal Warrant is Not Met**
-  **PM Peak Hour – Signal Warrant is Not Met**

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
Chapter 4C: Traffic Control Signal Needs Studies
Part 4: Highway Traffic Signals
November 7, 2014



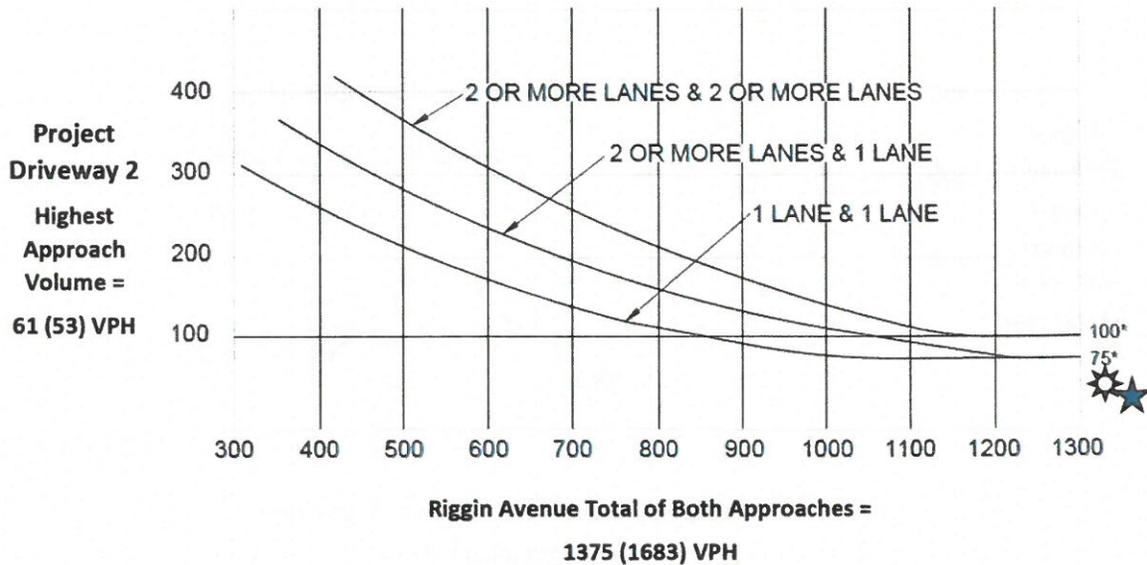
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(559) 570-8991

Warrant 3: Peak Hour (Rural)

Cumulative Five (5) Year plus Project Traffic Conditions
4. Project Driveway 2 / Riggin Avenue
AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.

- ☀ **AM Peak Hour – Signal Warrant is Not Met**
- ★ **PM Peak Hour – Signal Warrant is Not Met**

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
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November 7, 2014



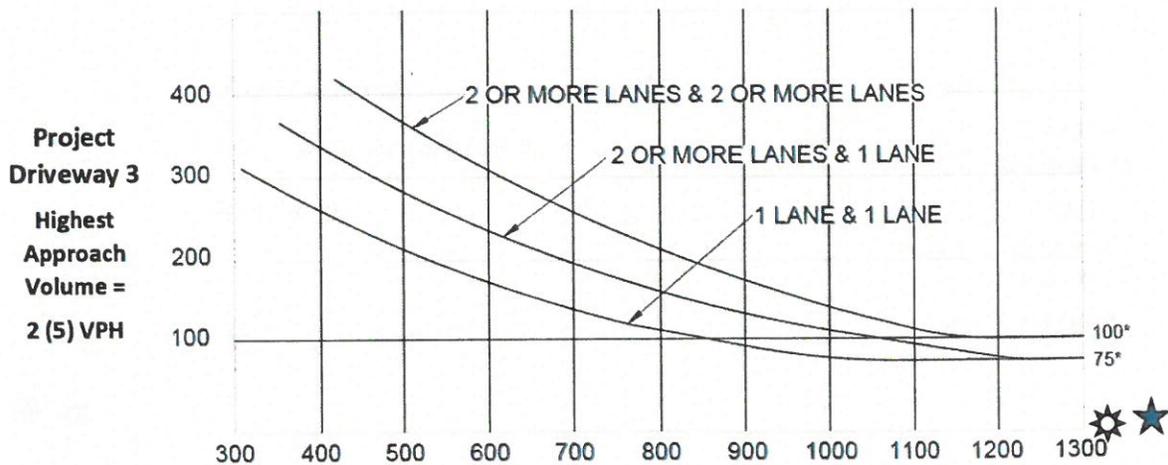
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(559) 570-8991

Warrant 3: Peak Hour (Rural)

Cumulative Five (5) Year plus Project Traffic Conditions
5. Project Driveway 3 / Riggins Avenue
AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.

- ☼ AM Peak Hour – Signal Warrant is Not Met
- ★ PM Peak Hour – Signal Warrant is Not Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
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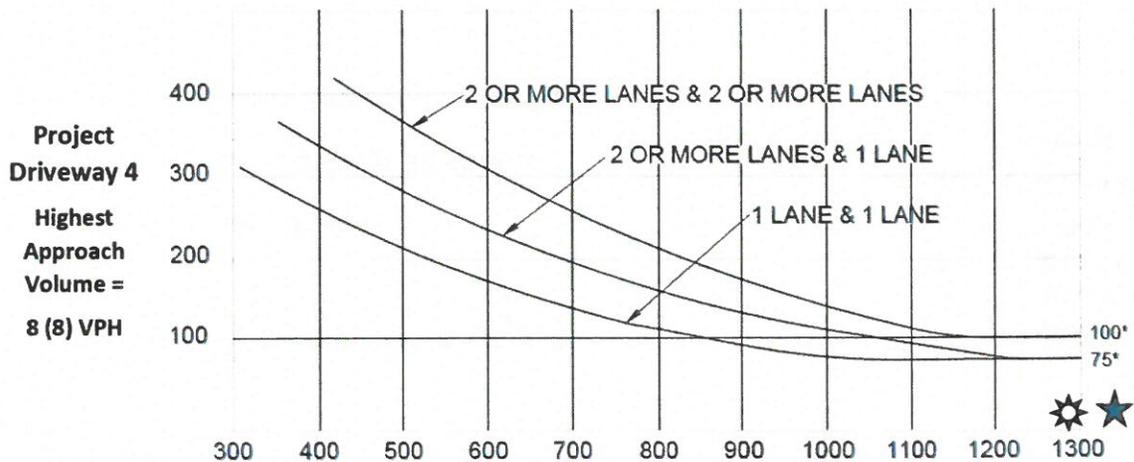
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(559) 570-8991

Warrant 3: Peak Hour (Rural)

Cumulative Five (5) Year plus Project Traffic Conditions
6. Project Driveway 4 / Riggin Avenue
AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



Riggin Avenue Total of Both Approaches =
1293 (1610) VPH

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.

- ☀ AM Peak Hour – Signal Warrant is Not Met
- ★ PM Peak Hour – Signal Warrant is Not Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
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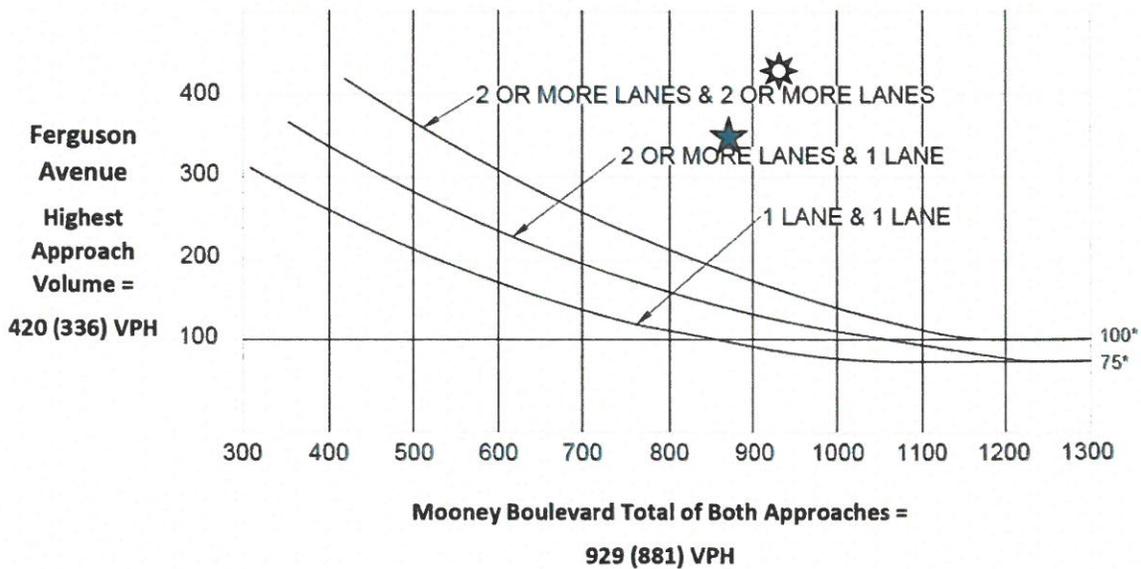
Fresno, CA 93704

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Warrant 3: Peak Hour (Rural)

Cumulative Five (5) Year plus Project Traffic Conditions
8. Mooney Boulevard / Ferguson Avenue
AM (PM) Peak Hour

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.



AM Peak Hour – Signal Warrant is Met



PM Peak Hour – Signal Warrant is Met

Source: California Manual of Uniform Traffic Control Devices (CA MUTCD 2014 Edition)
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Part 4: Highway Traffic Signals
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Appendix J: Corner Sight Distance & Offsite Roadway Improvements



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Page | J



LEGEND



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

MOONEY BLVD:

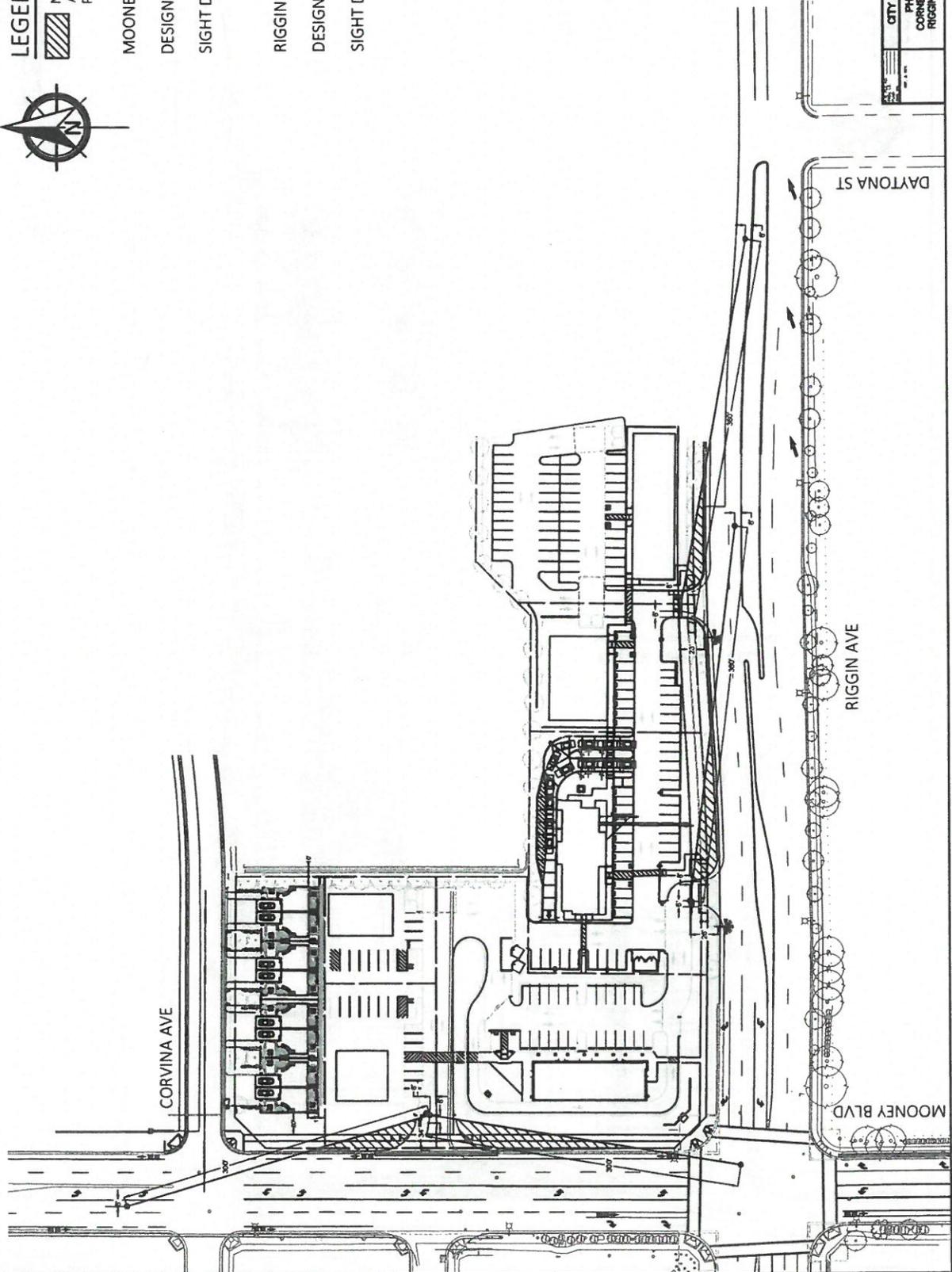
DESIGN SPEED: 40 MPH

SIGHT DISTANCE: 300 FT

RIGGIN AVE:

DESIGN SPEED: 45 MPH

SIGHT DISTANCE: 360 FT



CITY OF VESALIA		DEPARTMENT OF PUBLIC WORKS	
PROJECT:	PHASES 2, 5 AND 6	DATE:	01-3-2009
BY:	J. J. [unreadable]	SCALE:	
CHECKED BY:	[unreadable]	PROJECT NO.:	
APPROVED BY:	[unreadable]	DATE:	
CORNER SIGHT DISTANCE & RIGGIN AVE IMPROVEMENTS			



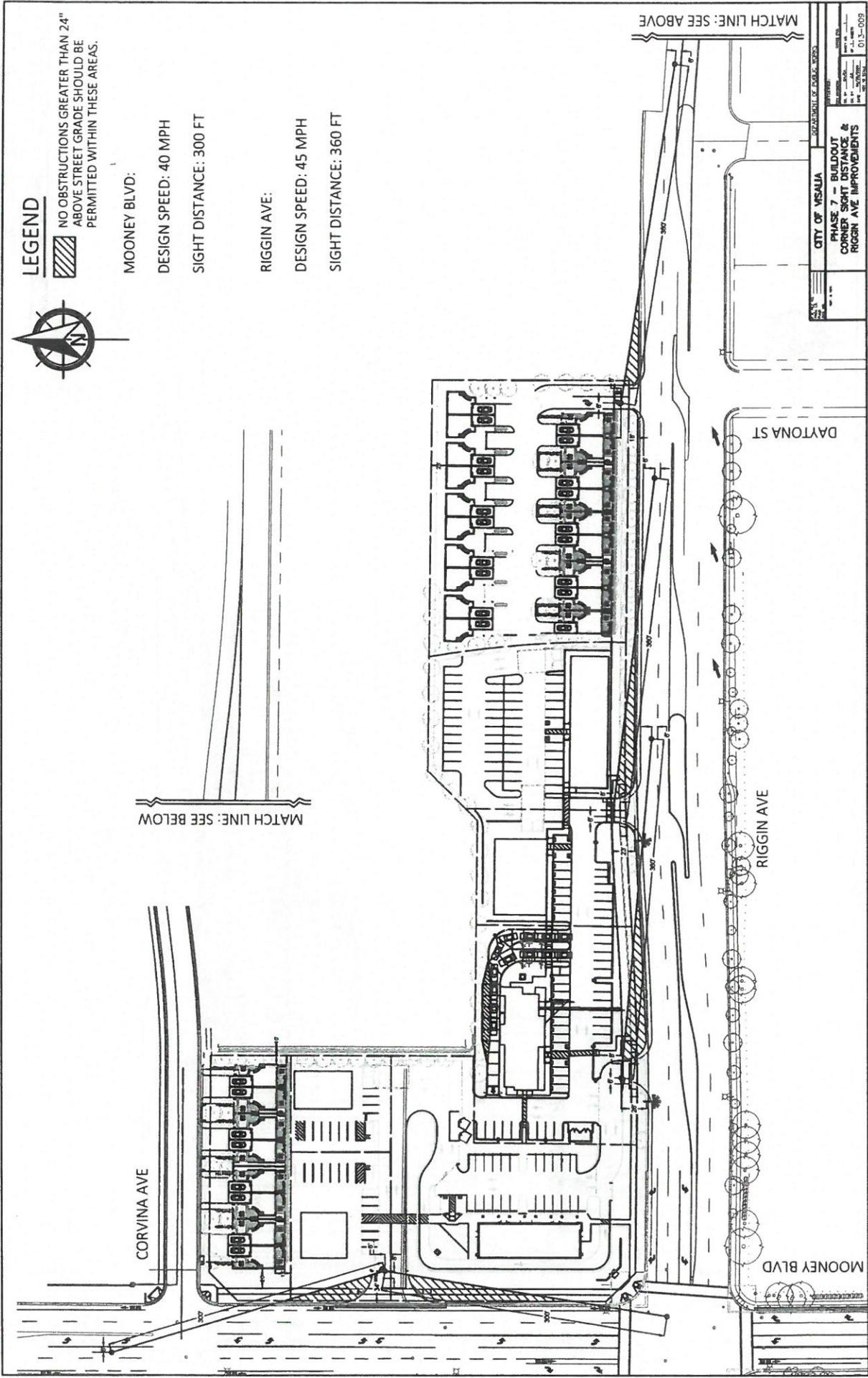
LEGEND

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

MATCH LINE: SEE BELOW



CITY OF MSALUA		DEPARTMENT OF PUBLIC WORKS
PHASE 7 - BUILDOUT		
CORNER SIGHT DISTANCE & RIGGIN AVE IMPROVEMENTS		
DATE:	BY:	SCALE:
01-1-09		

**BUILDING/DEVELOPMENT PLAN
REQUIREMENTS
ENGINEERING DIVISION**

Adrian Rubalcaba 713-4271
 Diego Corvera 713-4209
 Lupe Garcia 713-4197

ITEM NO: 5 DATE: July 24, 2019

SITE PLAN NO.: 19-013 2nd RESUBMITTAL
PROJECT TITLE: PROPOSED FAST FOOD RESTAURANT
DESCRIPTION: NEW 4110 SF FAST FOOD RESTAURANT,
PLAYLAND, AND DRIVE-THRU
APPLICANT: TRICON BUILDING SOLUTIONS
PROP OWNER: LOVE IN AN ELEVATOR
LOCATION: 2050 W RIGGIN AVE
APN: 078-120-034

SITE PLAN REVIEW COMMENTS

- REQUIREMENTS (indicated by checked boxes)
- Install curb return with ramp, with _____ radius;
- Install curb; gutter **RIGGIN AVE**
- Drive approach size: Use radius return; **SEE ADDITIONAL COMMENTS**
- Sidewalk: _____ width; _____ parkway width at **MATCH EXISTING**
- Repair and/or replace any sidewalk across the public street frontage(s) of the subject site that has become uneven, cracked or damaged and may constitute a tripping hazard.
- Replace any curb and gutter across the public street frontage(s) of the subject site that has become uneven and has created areas where water can stand.
- Right-of-way dedication required. A title report is required for verification of ownership.
- Deed required prior to issuing building permit;
- City Encroachment Permit Required. FOR ALL WORK IN THE PUBLIC RIGHT-OF-WAY**
Insurance certificate with general & auto liability (\$1 million each) and workers compensation (\$1 million), valid business license, and appropriate contractor's license must be on file with the City, and valid Underground Service Alert # provided prior to issuing the permit. Contact Encroachment Tech. at 713-4414.
- CalTrans Encroachment Permit required. CalTrans comments required prior to issuing building permit. Contacts: David Deel (Planning) 488-4088;
- Landscape & Lighting District/Home Owners Association required prior to approval of Final Map. Landscape & Lighting District will maintain common area landscaping, street lights, street trees and local streets as applicable. Submit completed Landscape and Lighting District application and filing fee a min. of 75 days before approval of Final Map.
- Landscape & irrigation improvement plans to be submitted for each phase. Landscape plans will need to comply with the City's street tree ordinance. The locations of street trees near intersections will need to comply with Plate SD-1 of the City improvement standards. A street tree and landscape master plan for all phases of the subdivision will need to be submitted with the initial phase to assist City staff in the formation of the landscape and lighting assessment district.
- Grading & Drainage plan required. If the project is phased, then a master plan is required for the entire project area that shall include pipe network sizing and grades and street grades. Prepared by registered civil engineer or project architect. All elevations shall be based on the City's benchmark network. Storm run-off from the project shall be handled as follows: a) directed to the City's existing storm drainage system; b) directed to a permanent on-site basin; or c) directed to a temporary on-site basin is required until a connection with adequate capacity is available to the City's storm drainage system. On-site basin: _____ : _____ maximum side slopes, perimeter fencing required, provide access ramp to bottom for maintenance.
- Grading permit is required for clearing and earthwork performed prior to issuance of the building permit.
- Show finish elevations. (Minimum slopes: A.C. pavement = 1%, Concrete pavement = 0.25%. Curb & Gutter = .020%, V-gutter = 0.25%)
- Show adjacent property grade elevations. A retaining wall will be required for grade differences greater than 0.5 feet at the property line.
- All public streets within the project limits and across the project frontage shall be improved to their full width, subject to available right of way, in accordance with City policies, standards and specifications. **RIGGIN**
- Traffic indexes per city standards: **ARTERIAL STANDARDS**

- Install street striping as required by the City Engineer. **TBD BY TRAFFIC SAFETY DEPT.**
- Install landscape curbing (typical at parking lot planters).
- Minimum paving section for parking: 2" asphalt concrete paving over 4" Class 2 Agg. Base, or 4" concrete pavement over 2" sand.
- Design Paving section to traffic index of 5.0 min. for solid waste truck travel path.
- Provide "R" value tests: **1** each at **300' INTERVALS**
- Written comments required from ditch company Contacts: James Silva 747-1177 for Modoc, Persian, Watson, Oakes, Flemming, Evans Ditch and Peoples Ditch; Jerry Hill 686-3425 for Tulare Irrigation Canal, Packwood and Cameron Creeks; Bruce George 747-5601 for Mill Creek and St. John's River.
- Access required on ditch bank, 15' minimum Provide wide riparian dedication from top of bank.
- Show Valley Oak trees with drip lines and adjacent grade elevations. Protect Valley Oak trees during construction in accordance with City requirements.
- A permit is required to remove Valley Oak trees. Contact Public Works Admin at 713-4428 for a Valley Oak tree evaluation or permit to remove. A pre-construction conference is required.
- Relocate existing utility poles and/or facilities. **TRANSMISSION POLES ON RIGGIN AVE**
- Underground all existing overhead utilities within the project limits. Existing overhead electrical lines over 50kV shall be exempt from undergrounding.
- Subject to existing Reimbursement Agreement to reimburse prior developer:
- Fugitive dust will be controlled in accordance with the applicable rules of San Joaquin Valley Air District's Regulation VIII. Copies of any required permits will be provided to the City.
- If the project requires discretionary approval from the City, it may be subject to the San Joaquin Valley Air District's Rule 9510 Indirect Source Review per the rule's applicability criteria. A copy of the approved AIA application will be provided to the City.
- If the project meets the one acre of disturbance criteria of the State's Storm Water Program, then coverage under General Permit Order 2009-0009-DWQ is required and a Storm Water Pollution Prevention Plan (SWPPP) is needed. A copy of the approved permit and the SWPPP will be provided to the City.
- Comply with prior comments. Resubmit with additional information. Redesign required.

Additional Comments:

- 1. Proposed fast food restaurant will incur impact fees associated with the development of land and new building construction. Refer to page 3 for applicable fees and summary.**
- 2. The proposed Riggin design does not meet City min. distance standards of 500' from the existing approach. It is recommended this project utilize the existing approach for ingress/egress. A Traffic Impact Analysis will be required to further determine proper access points, circulation, and min. road improvements (decel lane, etc.) Refer to further conditions by the Traffic Safety Dept.**
- 3. Street frontage improvements along Riggin will be required and likely span across entire parcel frontage to the east. Public improvements will include, but not limited to, curb, gutter, sidewalk, parkway landscaping, street lighting, pole relocations, median improvements, pavement, street striping, etc. Additional coordination with City Engineer is required.**
- 4. Meet solid waste department requirements for trash enclosure location.**
- 5. Comply with parking lot standards and site accessibility.**
- 6. A building permit is required. Standard plan check and inspection fees will apply.**
- 7. Refer to Planning Dept. additional requirements.**

SUMMARY OF APPLICABLE DEVELOPMENT IMPACT FEES

Site Plan No: **19-013 2nd RESUBMITTAL**

Date: **07-24-2019**

Summary of applicable Development Impact Fees to be collected at the time of building permit:

(Preliminary estimate only! Final fees will be based on the development fee schedule in effect at the time of building permit issuance.)

(Fee Schedule Date:**8/3/2018**)

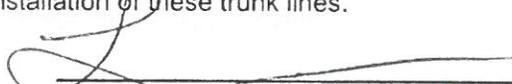
(Project type for fee rates:**FAST FOOD**)

Existing uses may qualify for credits on Development Impact Fees.

FEE ITEM	FEE RATE
<input checked="" type="checkbox"/> Groundwater Overdraft Mitigation Fee	\$1,293/AC X 0.91 = \$1,177
<input checked="" type="checkbox"/> Transportation Impact Fee	\$14,579/1KSF X 4.1 = \$59,774
<input checked="" type="checkbox"/> Trunk Line Capacity Fee	\$4,535/EACH X 1 TREATMENT PLANT FEE: \$19,888/EACH X 1
<input type="checkbox"/> Sewer Front Foot Fee	
<input checked="" type="checkbox"/> Storm Drain Acq/Dev Fee	\$6,912/AC X 0.91 = \$6,290
<input type="checkbox"/> Park Acq/Dev Fee	
<input type="checkbox"/> Northeast Specific Plan Fees	
<input checked="" type="checkbox"/> Waterways Acquisition Fee	\$5,074/AC X 0.91 = \$4,617
<input checked="" type="checkbox"/> Public Safety Impact Fee: Police	\$8,671/AC X 0.91 = \$7,891
<input checked="" type="checkbox"/> Public Safety Impact Fee: Fire	\$556/1KSF X 4.1 = \$2,280
<input type="checkbox"/> Public Facility Impact Fee	
<input type="checkbox"/> Parking In-Lieu	

Reimbursement:

- 1.) No reimbursement shall be made except as provided in a written reimbursement agreement between the City and the developer entered into prior to commencement of construction of the subject facilities.
- 2.) Reimbursement is available for the development of arterial/collector streets as shown in the City's Circulation Element and funded in the City's transportation impact fee program. The developer will be reimbursed for construction costs and right of way dedications as outlined in Municipal Code Section 16.44. Reimbursement unit costs will be subject to those unit costs utilized as the basis for the transportation impact fee.
- 3.) Reimbursement is available for the construction of storm drain trunk lines and sanitary sewer trunk lines shown in the City's Storm Water Master Plan and Sanitary Sewer System Master Plan. The developer will be reimbursed for construction costs associated with the installation of these trunk lines.



Lupe Garcia

SITE PLAN REVIEW COMMENTS

CITY OF VISALIA TRAFFIC SAFETY DIVISION

July 24, 2019

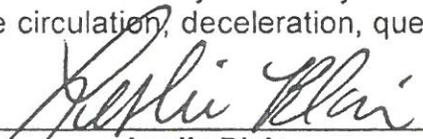
ITEM NO. 5	RESUBMITTAL
SITE PLAN NO.	SPR19-013
PROJECT TITLE	Proposed Fast Food Restaurant
DESCRIPTION	A New Fast Food Restaurant, Playland and Drive-Thru
APPLICANT	Tricon Building Solutions
OWNER	Big Bidness
APN	078-120-034
LOCATION	2050 W. Riggan Avenue

THE TRAFFIC DIVISION WILL PROHIBIT ON-STREET PARKING AS DEEMED NECESSARY

- No Comments
- See Previous Site Plan Comments
- Install Street Light(s) per City Standards.
- Install Street Name Blades at _____ Locations.
- Install Stop Signs at _____ Locations.
- Construct parking per City Standards PK-1 through PK-4.
- Construct drive approach per City Standards.
- Traffic Impact Analysis required (CUP)
 - Provide more traffic information such as _____ . Depending on development size, characteristics, etc., a TIA may be required.
- Additional traffic information required (Non Discretionary)
 - Trip Generation - Provide documentation as to concurrence with General Plan.
 - Site Specific - Evaluate access points and provide documentation of conformance with COV standards. If noncomplying, provide explanation.
 - Traffic Impact Fee (TIF) Program - Identify improvements needed in concurrence with TIF.

Additional Comments:

- Per COV Design and Improvement Standard C-32 Drive Approach Locations, minimum distance between driveways for an arterial status roadway is 500-ft. Riggan is an arterial status roadway. Per COV conversations with 4Creeks, most westerly driveway on Riggan to be eliminated. Driveway access points, onsite and offsite circulation, deceleration, queuing, etc. to be vetted out in Traffic Impact Analysis.



Leslie Blair

SITE PLAN REVIEW COMMENTS

Paul Scheibel, Planning Division, 559-713-4369

Date: July 24, 2019

SITE PLAN NO: 2019-013 - C
PROJECT TITLE: Proposed Fast Food Restaurant
DESCRIPTION: A new fast food restaurant, playland, and drive-thru
APPLICANT: Tricon Building Solutions
PROP. OWNER: Big Bidness
LOCATION TITLE: 2050 W. Riggan Avenue
APN TITLE: 078-120-034
GENERAL PLAN: Commercial Mixed Use
ZONING: C-MU – Commercial Mixed Use

Planning Division Recommendation:

- Revise and Proceed
 Resubmit

Rule 9510 – This project may be subject to the Rule 9510 requirements of the San Joaquin Valley Air Pollution Control District – see District web-site for information.

Project Requirements

- Restaurant is a permitted use in the CMU zone.
- Conditional Use Permit (CUP) required for drive-thru.
- Master plan for entire project site.
- Additional Information as Needed

PROJECT SPECIFIC INFORMATION: July 24, 2019

- A. New Comment- Extend plan view to show conceptual multi-family and Corvina street beyond, and conceptual multi-family and multi-family parking area to the east.
 - B. Parking stall line along south building requires mid-point landscape island.
 - C. The trees shown at the Riggan entrance must be outside of the clear-site triangle.
 - D. Why is the oblique right turn at the northern entrance/exit necessary?
 - E. Noise study to demonstrate adequacy of the drive-thru needs to include sound attenuation tests to be conducted at the two identified multi-family units.
1. Drive-thru does not appear to meet standards (Stacking, separation from R zoned property). As such a CUP will be required based upon proximity to residential.
 2. Staff may condition CUP to limit lighting and signage which may illuminate or be visible from the residential area to the south.
 3. Provide a tree well every 10 contiguous parking stalls – see stalls along south side of building.
 4. See Engineering Comments for confirmation of access point locations and any related improvements.
 5. Use Permit application should include building elevations.
 6. Residential at Mooney and Corvina is considered conceptual unless additional details are reviewed through Site Plan Review to then include with fast food CUP.
 7. Show Phase One street improvements.
 8. Meet all other codes and ordinances.

PROJECT SPECIFIC INFORMATION: February 20, 2019

1. Drive-thru does not appear to meet standards (Stacking, separation from R zoned property). As such a CUP will be required based upon proximity to residential.
2. Staff may condition CUP to limit lighting and signage which may illuminate or be visible from the residential area to the south.
3. Provide a tree well every 10 contiguous parking stalls – see stalls along south side of building.
4. See Engineering Comments for confirmation of access point locations and any related improvements.
5. Use Permit application should include building elevations.

6. Residential at Mooney and Corvina is considered conceptual unless additional details are reviewed through Site Plan Review to then include with fast food CUP.
7. What is the access point transition for the parking lot for the exiting building, it appears to be an open area along the north side of the second access drive from Riggins?
8. Show Phase One street improvements.
9. Meet all other codes and ordinances.

PROJECT SPECIFIC INFORMATION: January 23, 2019

1. Drive-thru does not appear to meet standards (Stacking, separation from R zoned property). As such a CUP will be required.
2. A Master Site Plan shall be provided showing the entire property and comprehensive circulation pattern and building layouts.
3. The drive-thru queue starts on an access point from Riggins into the larger parking and circulation area. This may not be sufficient at peak periods to keep traffic from standing in the right-of-way on Riggins due to the odd configuration of the access drive from Riggins. The access point may need to be moved further to the east.
4. Provide a tree well every 10 contiguous parking stalls – see stalls along south side of building.
5. Meet all other codes and ordinances.

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

Parking:

1. Provide parking spaces based Zoning Ordinance Section 17.34.020
2. 30% of the required parking stalls may be compact and shall be evenly distributed in the lot.
3. Provide handicapped space(s).
4. An 80 sq. ft. minimum landscape well is required every 10 contiguous parking.
5. A planter is required every other row. (5-9 feet in width containing trees on twenty (20) foot centers.

6. No repair work or vehicle servicing allowed in a parking area.
7. It is highly recommended that bicycle rack(s) be provided on site plan.
8. No parking shall be permitted in a required front/rear/side yard.
9. Design/locate parking lot lighting to deflect any glare away from abutting residential areas.
10. Parking lot to be screened from view by a 3-foot tall solid wall or shrubs when located adjacent to a public street or when across from residential property.
11. Provide off-street loading facility.
12. The project should provide preferential parking spaces for carpools and vanpools to decrease the number of single occupant vehicle work trips. The preferential treatment could include covered parking spaces or close-in parking spaces, or designated free parking, or a guaranteed space for the vehicle.
13. Provide a "No Parking" (dead-head) stall at the end of the parking row (for rows over 6 stalls deep with no outlet) to allow vehicles to turn around rather than backing out if no stalls are available.

Fencing and Screening:

1. Provide screening for roof mounted equipment (Zoning Ordinance Section 17.30.130.F).
2. Provide screened trash enclosure with solid screening gates (Zoning Ordinance Section 17.30.130.F).
3. Provide solid screening of all outdoor storage areas. Outdoor storage to be screened from public view with solid material (Zoning Ordinance Section 17.30.130.F).
4. Outdoor retail sales prohibited.
5. Cross Sections need to be provided for site Plan Review if there is greater than an 18-inch difference between the elevation of the subject site and the adjacent properties, and the sections would be required for the public hearing process also.
6. All outdoor storage areas are to be identified on the site plan and they are to be shown with screening (fencing). No materials may be stored above the storage area fence heights (Zoning Ordinance Section 17.30.130.F).

Landscaping:

1. The City has adopted the State Water Efficient Landscape Ordinance. The ordinance applies to projects installing 2,500 square feet or more of landscaping. It requires that landscaping and irrigation plans be certified by a qualified entity (i.e., Landscape Architect) as meeting the State water conservation requirements. The City's implementation of this new State law will be accomplished by self-certification of the final landscape and irrigation plans by a California licensed landscape architect or other qualified entity with sections signed by appropriately licensed or certified persons as required by the ordinance. **NOTE: Prior to a final for the project, a signed Certificate of Compliance for the MWELO standards is required indicating that the landscaping has been installed to MWELO standards.**
2. Provide street trees at an average of 20-feet on center along street frontages. All trees to be 15-gallon minimum size (Zoning Ordinance Section 17.30.015-2).
3. In the P(R-M) multi-family residential zone, all multiple family developments shall have landscaping including plants, and ground cover to be consistent with surrounding landscaping in the vicinity. Landscape plans to be approved by city staff prior to installation and occupancy of use and such landscaping to be permanently maintained. (Zoning Ordinance Section 17.16.180)
4. All landscape areas to be protected with 6-inch concrete curbs (Zoning Ordinance Section 17.30.130.F).
5. All parking lots to be designed to provide a tree canopy to provide shade in the hot seasons and sunlight in the winter months.
6. Provide a detailed landscape and irrigation plan as a part of the building permit package (Zoning Ordinance Section 17.34.040).
7. An 80 sq. ft. minimum landscape well is required every 10 contiguous parking stalls (Zoning Ordinance Section 17.30.130.C).
8. Provide a detailed landscape and irrigation plan for review prior to issuance of building permits. Please review Zoning Ordinance section 17.30.130-C for current landscaping and irrigation requirements.

9. Provide a conceptual landscape plan for resubmittal or planning commission review.
10. Locate existing oak trees on site and provide protection for all oak trees greater than 2" diameter (see Oak Tree Preservation Ordinance).
11. Maintenance of landscaped areas. - A landscaped area provided in compliance with the regulations prescribed in this title or as a condition of a use permit or variance shall be planted with materials suitable for screening or ornamenting the site, whichever is appropriate, and plant materials shall be maintained and replaced as needed, to screen or ornament the site. (Prior code § 7484)

Lighting:

1. All lighting is to be designed and installed so as to prevent any significant direct or indirect light or glare from falling upon any adjacent residential property. This will need to be demonstrated in the building plans and prior to final on the site.
2. Parking lot and drive aisle lighting adjacent to residential units or designated property should consider the use of 15-foot high light poles, with the light element to be completely recessed into the can. A reduction in the height of the light pole will assist in the reduction/elimination of direct and indirect light and glare which may adversely impact adjacent residential areas.
3. Building and security lights need to be shielded so that the light element is not visible from the adjacent residential properties, if any new lights are added or existing lights relocated.
4. NOTE: Failure to meet these lighting standards in the field will result in no occupancy for the building until the standards are met.
5. In no case shall more than 0.5 lumens be exceeded at any property line, and in cases where the adjacent residential unit is very close to the property line, 0.5 lumens may not be acceptable.

Drive-thru Performance Standards (Section 17.32.162)

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 associate with 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 250 feet from the nearest residence or residentially zoned property.
2. Stacking: The drive-thru lane shall contain no less than ten vehicle stacking, measured from the pickup window to the designated entrance to the drive-thru lane. There shall be no less than three vehicles 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 on-site 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 60db 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.

Noise: NOISE ORDINANCE (Municipal Code Chapter 8.36)

The City's Noise Ordinance has standards for maximum noise levels near sensitive land uses. The project, as with all other uses in the City, will be required to meet the standards of the Noise Ordinance during construction of the project and during operation of the use on the site. It is the property owner's responsibility to ensure that the Ordinance is being met. Copies of the Noise Ordinance are available at the Community Development Department front counter or online at www.ci.visalia.ca.us. (Click on Municipal Code and then go to Chapter 8.36.)

NOTE: Staff recommendations contained in this document are not to be considered support for a particular action or project unless otherwise stated in the comments. The comments found on this document pertain to the site plan submitted for review on the above referenced date. Any changes made to the plan submitted must be submitted for additional review.

Signature _____



19-013

City of Visalia
Building: Site Plan
Review Comments

Fast Food Restaurant

NOTE: These are general comments and DO NOT constitute a complete plan check for your specific project. Please refer to the applicable California Code & local ordinance for additional requirements.

- A building permit will be required. *For information call (559) 713-4444*
- Submit 1 digital set of professionally prepared plans and 1 set of calculations. (Small Tenant Improvements)
- Submit 1 digital set of plans prepared by an architect or engineer. Must comply with 2016 California Building Cod Sec. 2308 for conventional light-frame construction or submit 1 digital set of engineered calculations.
- Indicate abandoned wells, septic systems and excavations on construction plans.
- You are responsible to ensure compliance with the following checked items:**
- Meet State and Federal requirements for accessibility for persons with disabilities.
- A path of travel, parking and common area must comply with requirements for access for persons with disabilities.
- All accessible units required to be adaptable for persons with disabilities.
- Maintain sound transmission control between units minimum of 50 STC.
- Maintain fire-resistive requirements at property lines.
- A demolition permit & deposit is required. *For information call (559) 713-4444*
- Obtain required permits from San Joaquin Valley Air Pollution Board. *For information call (661) 392-5500*
- Plans must be approved by the Tulare County Health Department. *For information call (559) 624-8011*
- Project is located in flood zone _____ • Hazardous materials report.
- Arrange for an on-site inspection. (Fee for inspection \$157.00) *For information call (559) 713-4444*
- School Development fees. Commercial \$0.61 per square foot. Residential \$3.79 per square foot.
- Park Development fee \$ _____, per unit collected with building permits.
- Existing address must be changed to be consistent with city address. *For information call (559) 713-4320*
- Acceptable as submitted
- No comments at this time

Additional comments: *landscape shall meet MWELo Requirement*

See Previous Comments

Melinda Jones
Signature



Site Plan Review Comments For:
Visalia Fire Department
Corbin Reed, Fire Marshal
420 N. Burke
Visalia, CA 93292
559-713-4272 Office
559-713-4808 Fax

Date: 07/22/2019
Item # 5
Site Plan # 19-013 Resub
APN: 078120034
Location:

The following comments are applicable when checked:

- The Site Plan Review comments are issued as general overview of your project. With further details, additional requirements will be enforced at the Plan Review stage. Please refer to the 2016 California Fire Code (CFC), 2016 California Building Codes (CBC) and City of Visalia Municipal Codes.
- All fire detection, alarm, and extinguishing systems in existing buildings shall be maintained in an operative condition at all times and shall be replaced or repaired where defective. If building has been vacant for a significant amount of time, the fire detection, alarm, and or extinguishing systems may need to be evaluated by a licensed professional. *2016 CFC 901.6*
- No fire protection items required for parcel map or lot line adjustment; however, any future projects will be subject to fire & life safety requirements including fire protection systems and fire hydrants in accordance with all applicable sections of the California Fire Code.
- Construction and demolition sites prior to and during construction shall comply with the following:
- Water Supply for fire protection, either temporary or permanent, shall be made available as soon as combustible materials arrive on the site. *2016 CFC 3312*
 - An all-weather, 20 feet width Construction Access Road capable of holding a 75,000 pound fire apparatus. Fire apparatus access shall be provided within 100 feet of temporary or permanent fire department connections. *2016 CFC 3310*
- More information is needed before a Site Plan Review can be conducted. Please submit plans with more detail. Please include information on

General:

- Address numbers must be placed on the exterior of the building in such a position as to be clearly and plainly visible from the street. Numbers will be at least four inches (4") high and shall be of a color to contrast with their background. If multiple addresses served are by a common driveway, the range of numbers shall be posted at the roadway/driveway. *2016 CFC 505.1*
- All hardware on exit doors, illuminated exit signs and emergency lighting shall comply with the 2016 California Fire Code. This includes all locks, latches, bolt locks, panic hardware, fire exit hardware and gates.
- Commercial dumpsters with 1.5 cubic yards or more shall not be stored or placed within 5 feet of combustible walls, openings, or a combustible roof eave line except when protected by a fire sprinkler system. *2016 CFC 304.3.3*

- A Knox Box key lock system is required. Where access to or within a structure or area is restricted because of secured openings (doors and/or gates), a key box is to be installed in an approved location. The key box shall be ordered using an approved Knox Authorization Order Form. The forms are located at the fire department administration office located at 420 N Burke, Visalia, CA 93292. Please allow adequate time for shipping and installation. *2016 CFC 506.1*

Water Supply for Residential, Commercial & Industrial:

Commercial & Industrial

- Where a portion of the facility or building is more than 400 feet from a hydrant on a fire apparatus access road, on-site fire hydrant(s) shall be provided. *2016 CFC 507.5.1*
- Due to insufficient building information, the number and distance between fire hydrants cannot be determined by the Site Plan Review process. The number of fire hydrants and distance between required fire hydrants shall be determined by utilizing type of construction and square footage in accordance with *CFC 2016 Appendix C102 & C103 & CFC 507.5.1*
- To determine fire hydrant location(s) and distribution the following information was provided to the Site Plan Review committee: **Type of construction** _____ **Square footage** _____

Emergency Access

- A fire apparatus access roads shall be provided and must comply with the 2016 CFC and extend within 150 feet of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet. Minimum turning radius for emergency fire apparatus shall be 20 feet inside radius and 43 feet outside radius. *2016 CFC 503.1.1*
- Approved No PARKING – FIRE LANE signs shall be provided for fire apparatus access roads to identify such roads or prohibit the obstruction thereof. Signs shall have a minimum dimension of 12 inches wide by 18 inches high and have red letters on a white reflective background. *2013 CFC 503.3/ D103.6*
- On site Fire Apparatus Access Roads shall be provided and have an unobstructed width of not less than the following;
- 20 feet width, exclusive of shoulders (No Parking)
 - More than 26 feet width, exclusive of shoulders (No Parking one side)
 - More than 32 feet wide, exclusive of shoulders (Parking permitted on both sides)
- Marking- approved signs, other approved notices or marking that include the words “NO PARKING-FIRE LANE shall be provided for fire apparatus access roads to identify such roads or prohibit the obstruction thereof. *CFC 503.3*

Fire Protection Systems

- An automatic fire sprinkler system will be required for this building. Also, a fire hydrant is required within 50 feet of the Fire Department Connection (FDC). Where an existing building is retrofitted with a sprinkler system (NFPA 13 or NFPA 13R) a fire hydrant shall be provided within 75 feet of the FDC. An additional 25 feet of distance between a fire hydrant and FDC may be granted when a fire sprinkler Density is designed with an additional 25%. *2016 CFC 912 and Visalia Municipal Code 8.20.010 subsection C103.4*
- Locking fire department connection (FDC) caps are required. The caps shall be ordered using an approved Knox Authorization Order Form. The forms are located at the fire department administration office located at 420 N Burke, Visalia, CA 93292. *2016 CFC 912.4.1*
- Commercial cooking appliances and domestic cooking appliances used for commercial purposes that produces grease laden vapors shall be provided with a Type 1 Hood, in accordance with the California Mechanical Code, and an automatic fire extinguishing system. *2016 CFC 904.12 & 609.2*

Special Comments:

- SEE PREVIOUS COMMENTS*



Corbin Reed
Fire Marshal

SPR A-013

City of Visalia
Police Department
303 S. Johnson St.
Visalia, Ca. 93292
(559) 713-4370

Site Plan Review Comments



No Comment at this time.



Request opportunity to comment or make recommendations as to safety issues as plans are developed.



Public Safety Impact fee:
Ordinance No. 2001-11 Chapter 16.48 of Title 16 of the Visalia Municipal Code
Effective date - August 17, 2001

Impact fees shall be imposed by the City pursuant to this Ordinance as a condition of or in conjunction with the approval of a development project. "New Development or Development Project" means any new building, structure or improvement of any parcels of land, upon which no like building, structure of improvement previously existed. *Refer to Engineering Site Plan comments for fee estimation.



Not enough information provided. Please provide additional information pertaining to:



Territorial Reinforcement: Define property lines (private/public space).



Access Controlled / Restricted etc:



Lighting Concerns:



Landscaping Concerns:



Traffic Concerns:



Surveillance Issues:



Line of Sight Issues:



Other Concerns:

[Handwritten signature]

Visalia Police Department

Site Plan Review Comments For:

California Water Service
Stuart Skoglund, Superintendent
216 N. Valley Oaks Dr.
Salina, CA 93292
559-624-1662 Office
559-735-3189 Fax

Date: 07/24/2019

Item # 5

Site Plan # 19-013

Project:

Description: new fast-food restaurants

Applicant:

Location: 2050 W Riggin

APN:

The following comments are applicable when checked:

- No Comments at this time

- Fire Hydrants
Comments-

- Services
Comments- services can be installed off of existing water main on Riggin

- Mains
Comments- existing 8" water main on Riggin

- Back flow requirements
Comments- all domestic, irrigation, and fire services will require backflow devices

Additional Comments:

Stuart Skoglund
Superintendent

19013

COMMERCIAL BIN SERVICE

- No comments.
- See comments below
- Revisions required prior to submitting final plans. See comments below.
- Resubmittal required. See comments below.
- Customer responsible for all cardboard and other bulky recyclables to be broken down before disposing of in recycle containers
- ALL refuse enclosures must be R-3 OR R-4
- Customer must provide combination or keys for access to locked gates/bins
- Type of refuse service not indicated.
- Location of bin enclosure not acceptable. See comments below.
- Bin enclosure not to city standards double.
- Inadequate number of bins to provide sufficient service. See comments below.
- Drive approach too narrow for refuse trucks access. See comments below.
- Area not adequate for allowing refuse truck turning radius of : Commercial 50 ft. outside 36 ft. Inside; Residential 35 ft. outside, 20 ft. inside.
- Paved areas should be engineered to withstand a 55,000 lb. refuse truck.
- Bin enclosure gates are required
- Hammerhead turnaround must be built per city standards.
- Cul - de - sac must be built per city standards.
- Bin enclosures are for city refuse containers only. Grease drums or any other items are not allowed to be stored inside bin enclosures.
- Area in front of refuse enclosure must be marked off indicating no parking
- Enclosure will have to be designed and located for a STAB service (DIRECT ACCESS) with no less than 38' clear space in front of the bin, included the front concrete pad.
- Customer will be required to roll container out to curb for service.
- Must be a concrete slab in front of enclosure as per city standards, the width of the enclosure by ten(10) feet, minimum of six(6) inches in depth.
- Roll off compactor's must have a clearance of 3 feet from any wall on both sides and there must be a minimum of 53 feet clearance in front of the compactor to allow the truck enough room to provide service.
- City ordinance 8.28.120-130 (effective 07/19/18) requires contractor to contract with City for removal of construction debris unless transported in equipment owned by contractor or unless contracting with a franchise permittee for removal of debris utilizing roll-off boxes.
- Comment Same as previous comments.

Jim Ross, Solid Waste Manager, 559-713-4533

Edward Zuniga, Solid Waste Supervisor, 559-713-4338





#9

MEETING DATE: May 22, 2019

SITE PLAN NO. 19-093

PARCEL MAP NO.

SUBDIVISION:

LOT LINE ADJUSTMENT NO.

Enclosed for your review are the comments and decisions of the Site Plan Review committee. Please review all comments since they may impact your project.

RESUBMIT Major changes to your plans are required. Prior to accepting construction drawings for building permit, your project must return to the Site Plan Review Committee for review of the revised plans.

During site plan design/policy concerns were identified, schedule a meeting with
 Planning Engineering prior to resubmittal plans for Site Plan Review.

Solid Waste Parks and Recreation Fire Dept.

REVISE AND PROCEED (see below)

A revised plan addressing the Committee comments and revisions must be submitted for Off-Agenda Review and approval prior to submitting for building permits or discretionary actions.

Submit plans for a building permit between the hours of 9:00 a.m. and 4:00 p.m., Monday through Friday.

Your plans must be reviewed by:

CITY COUNCIL REDEVELOPMENT

PLANNING COMMISSION PARK/RECREATION

CUP + TPM

HISTORIC PRESERVATION OTHER: _____

ADDITIONAL COMMENTS :

If you have any questions or comments, please call (559) 713-4444.

Site Plan Review Committee



**BUILDING/DEVELOPMENT PLAN
REQUIREMENTS
ENGINEERING DIVISION**

Adrian Rubalcaba 713-4271
 Diego Corvera 713-4209

ITEM NO: 9 DATE: MAY 22, 2019

SITE PLAN NO.: 19-093
PROJECT TITLE: SHANNON VILLAGE EAST MASTER CUP
DESCRIPTION: PROPOSING FOR THE APPLICATION OF A MASTER CUP FOR SHANNON VILLAGE EAST

APPLICANT: CRS FARMING
PROP OWNER: CRS FARMING INC
LOCATION: 078-120-034
APN: MOONEY AT RIGGIN NEC

SITE PLAN REVIEW COMMENTS

- REQUIREMENTS (indicated by checked boxes)
- Install curb return with ramp, with _____ radius;
- Install curb; gutter
- Drive approach size: Use radius return;
- Sidewalk: _____ width; parkway width at _____
- Repair and/or replace any sidewalk across the public street frontage(s) of the subject site that has become uneven, cracked or damaged and may constitute a tripping hazard.
- Replace any curb and gutter across the public street frontage(s) of the subject site that has become uneven and has created areas where water can stand.
- Right-of-way dedication required. A title report is required for verification of ownership.
- Deed required prior to issuing building permit; **ADDL ROW/EASEMENTS MAY BE REQUIRED.**
- City Encroachment Permit Required.
 - Insurance certificate with general & auto liability (\$1 million each) and workers compensation (\$1 million), valid business license, and appropriate contractor's license must be on file with the City, and valid Underground Service Alert # provided prior to issuing the permit. Contact Encroachment Tech. at 713-4414
 - CalTrans Encroachment Permit required. CalTrans comments required prior to issuing building permit. Contacts: David Deel (Planning) 488-4088;
 - Landscape & Lighting District/Home Owners Association required prior to approval of Final Map. Landscape & Lighting District will maintain common area landscaping, street lights, street trees and local streets as applicable. Submit completed Landscape and Lighting District application and filing fee a min. of 75 days before approval of Final Map.
 - Landscape & irrigation improvement plans to be submitted for each phase. Landscape plans will need to comply with the City's street tree ordinance. The locations of street trees near intersections will need to comply with Plate SD-1 of the City improvement standards. A street tree and landscape master plan for all phases of the subdivision will need to be submitted with the initial phase to assist City staff in the formation of the landscape and lighting assessment district.
 - Grading & Drainage plan required. If the project is phased, then a master plan is required for the entire project area that shall include pipe network sizing and grades and street grades. Prepared by registered civil engineer or project architect. All elevations shall be based on the City's benchmark network. Storm run-off from the project shall be handled as follows: a) directed to the City's existing storm drainage system; b) directed to a permanent on-site basin; or c) directed to a temporary on-site basin is required until a connection with adequate capacity is available to the City's storm drainage system. On-site basin: _____ : _____ maximum side slopes, perimeter fencing required, provide access ramp to bottom for maintenance.
 - Grading permit is required for clearing and earthwork performed prior to issuance of the building permit.
 - Show finish elevations. (Minimum slopes: A.C. pavement = 1%, Concrete pavement = 0.25%. Curb & Gutter = .020%, V-gutter = 0.25%)
 - Show adjacent property grade elevations. A retaining wall will be required for grade differences greater than 0.5 feet at the property line.
 - All public streets within the project limits and across the project frontage shall be improved to their full width subject to available right of way, in accordance with City policies, standards and specifications. **RIGGIN**
 - Traffic indexes per city standards: **ARTERIAL STREET**

- Install street striping as required by the City Engineer.
- Install landscape curbing (typical at parking lot planters).
- Minimum paving section for parking: 2" asphalt concrete paving over 4" Class 2 Agg. Base, or 4" concrete pavement over 2" sand.
- Design Paving section to traffic index of 5.0 min. for solid waste truck travel path.
- Provide "R" value tests: **1** each at **300' INTERVALS**
- Written comments required from ditch company Contacts: James Silva 747-1177 for Modoc, Persian, Watson, Oakes, Flemming, Evans Ditch and Peoples Ditch; Jerry Hill 686-3425 for Tulare Irrigation Canal, Packwood and Cameron Creeks; Bruce George 747-5601 for Mill Creek and St. John's River.
- Access required on ditch bank, 15' minimum Provide wide riparian dedication from top of bank.
- Show Valley Oak trees with drip lines and adjacent grade elevations. Protect Valley Oak trees during construction in accordance with City requirements.
- A permit is required to remove Valley Oak trees. Contact Public Works Admin at 713-4428 for a Valley Oak tree evaluation or permit to remove. A pre-construction conference is required.
- Relocate existing utility poles and/or facilities. **RELOCATE POLES ON RIGGIN TO ULTIMATE ROW**
- Underground all existing overhead utilities within the project limits. Existing overhead electrical lines over 50kV shall be exempt from undergrounding.
- Subject to existing Reimbursement Agreement to reimburse prior developer:
- Fugitive dust will be controlled in accordance with the applicable rules of San Joaquin Valley Air District's Regulation VIII. Copies of any required permits will be provided to the City.
- If the project requires discretionary approval from the City, it may be subject to the San Joaquin Valley Air District's Rule 9510 Indirect Source Review per the rule's applicability criteria. A copy of the approved AIA application will be provided to the City.
- If the project meets the one acre of disturbance criteria of the State's Storm Water Program, then coverage under General Permit Order 2009-0009-DWQ is required and a Storm Water Pollution Prevention Plan (SWPPP) is needed. A copy of the approved permit and the SWPPP will be provided to the City.
- Comply with prior comments. Resubmit with additional information. Redesign required.

Additional Comments:

- 1. Proposed master planned project will be required to provide a traffic impact study. Location of access points on Riggin do not meet City min. distant standards on an arterial roadway.**
 - 2. The phasing plan for required road improvements on Riggin is not supported by staff. Phase one parcel development is complete and did not include, nor approve, the easterly drive approach access as shown (nor median improvements). It is likely the road widening along full length of master plan frontage will be necessary for Phase 2 to accommodate entering/exiting traffic. Further coordinate with City Traffic Safety Dept. for desired phasing plan and incorporation into TIS.**
 - 3. Riggin Ave. improvements, as shown on site plan, will require additional revisions to median designs, pocket lengths, striping, sidewalk location & width, etc. Comply with City arterial standards. Access points should be vetted per TIS or a revised master plan will need to be resubmitted.**
 - 4. Additional right-of-way or easements may be necessary for public improvements due to changes in City development standards. Right-of-way has been previously granted for Riggin, Mooney, & Corvina based on older design standards and may be insufficient.**
 - 5. All refuse enclosure locations and positioning may need to be revised based on final design layout for future developments. 24' refuse enclosure standards shall be utilized, to include concrete apron and metal gates, and must be positioned for a direct stab by Solid Waste vehicle.**
 - 6. Master utility plan shall be submitted for future services/stubs to proposed development phases.**
- . Public street frontage shall be improved accordingly per the current City standards.**

8. Development impact fees will apply to each parcel development or phase, refer to page 4 for applicable fees.

9. Extend storm main in Riggan Ave. with widening improvements.

10. Refer to previous SPR conditions for proposed phase 2 development of a fast food restaurant.

11. Riggan Ave. is a funded arterial in the City's Circulation Element therefore portions of required road widening improvements are reimbursable in fee credits to developer. Further coordinate with City Engineer.

SUMMARY OF APPLICABLE DEVELOPMENT IMPACT FEES

Site Plan No: **19-093**
Date: **5/22/2019**

Summary of applicable Development Impact Fees to be collected at the time of building permit:
(Preliminary estimate only! Final fees will be based on the development fee schedule in effect at the time of building permit issuance.)

(Fee Schedule Date: **8/3/2018**)
(Project type for fee rates: **COMMERCIAL, MULTI-FAM**)

Existing uses may qualify for credits on Development Impact Fees.

FEE ITEM	FEE RATE
<input checked="" type="checkbox"/> Groundwater Overdraft Mitigation Fee	\$1,293/AC
<input checked="" type="checkbox"/> Transportation Impact Fee	\$14,579/1000SF, \$4148/MFD
<input checked="" type="checkbox"/> Trunk Line Capacity Fee	\$VARIES
<input checked="" type="checkbox"/> Sewer Front Foot Fee	\$43/LF X RIGGIN & MOONEY
<input checked="" type="checkbox"/> Storm Drain Acq/Dev Fee	\$7,318/AC
<input checked="" type="checkbox"/> Park Acq/Dev Fee	\$3,224/MFD
<input type="checkbox"/> Northeast Specific Plan Fees	
<input checked="" type="checkbox"/> Waterways Acquisition Fee	\$5,373/AC
<input checked="" type="checkbox"/> Public Safety Impact Fee: Police	\$8,671/AC
<input checked="" type="checkbox"/> Public Safety Impact Fee: Fire	\$1,897/AC
<input checked="" type="checkbox"/> Public Facility Impact Fee	\$556/1000SF, \$508/MFD
<input type="checkbox"/> Parking In-Lieu	

Reimbursement:

- 1.) No reimbursement shall be made except as provided in a written reimbursement agreement between the City and the developer entered into prior to commencement of construction of the subject facilities.
- 2.) Reimbursement is available for the development of arterial/collector streets as shown in the City's Circulation Element and funded in the City's transportation impact fee program. The developer will be reimbursed for construction costs and right of way dedications as outlined in Municipal Code Section 16.44. Reimbursement unit costs will be subject to those unit costs utilized as the basis for the transportation impact fee.
- 3.) Reimbursement is available for the construction of storm drain trunk lines and sanitary sewer trunk lines shown in the City's Storm Water Master Plan and Sanitary Sewer System Master Plan. The developer will be reimbursed for construction costs associated with the installation of these trunk lines.



Adrian Rubalcaba

SITE PLAN REVIEW COMMENTS

Paul Scheibel, Planning Division, 559-713-4369

Date: May 22, 2019

SITE PLAN NO: 2019-093
PROJECT TITLE: Shannon Village East Master CUP
DESCRIPTION: Proposing for the Application of a Master CUP for Shannon Village East
APPLICANT: CRS Farming
PROP. OWNER: CRS Farming INC.
LOCATION TITLE: Mooney at Riggins NEC
APN TITLE: 078-120-034
GENERAL PLAN: Commercial Mixed Use, Medium Density Residential
ZONING: C-MU – Commercial Mixed Use, R-M-2 – Multi-Family Residential, 3,000 sq. ft. minimum site area

Planning Division Recommendation:

- Revise and Proceed
- Off-Agenda
- Resubmit

Project Requirements

- Conditional Use Permit (Accompanying Tent Parcel Map)
- Additional Information as Needed

PROJECT SPECIFIC INFORMATION: May 22, 2019

1. Ensure all setbacks are met for C-MU zone district.
2. Master Conditional Use Permit is required for creation of lots less than 5 acres in the C-MU Zone District.
3. Meet General Plan Noise Element standards for residential interior and exterior noise levels.
4. Eastern residential development requires .25 guest parking spaces per unit. Driveway apron cannot be counted as suitable guest parking.
5. Multi-family residential will be evaluated pursuant to Chapter 17.26 Multi-family Residential Zones, R-M-2 Zone District.
6. Provide common area maintenance (CAM) agreement and reciprocal access agreement among all commercial parcels
7. Multi-family residential units will be subject to the Model Good Neighbor Policies (VMC 17.16.190).
8. Meet all other codes and ordinances.

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

DEVELOPMENT STANDARDS - R-M-2 [17.16]

Maximum Building Height: 35 Feet

Minimum Setbacks:

	Building	Landscaping
➤ Front	15 Feet	15 Feet
➤ Side	5 Feet	5 Feet*
➤ Street side on corner lot	10 Feet	10 Feet
➤ Rear	25 Feet	25 Feet

Minimum Site Area: 3,000 square feet per unit

- Common open space
- Screen 2nd story windows when adjacent to an R-1 Site, Single-Family Residential
- Conditional Use Permit for 80 or more units
- Alley exception for rear setback to parking structure, open space still needed
- Minimum site area 2 acres, unless CUP, zoning action, or Master Plan approved by SPR
- Screen all parking areas adjacent to public streets. Parking subject to Chapter 17.34.
- See Zoning Ordinance Section 17.16 for complete standards and requirements.

Parking:

1. Provide parking spaces based Zoning Ordinance Section 17.34.020
2. 30% of the required parking stalls may be compact and shall be evenly distributed in the lot.
3. Provide handicapped space(s).
4. An 80 sq. ft. minimum landscape well is required every 10 contiguous parking.
5. A planter is required every other row. (5-9 feet in width containing trees on twenty (20) foot centers.
6. No repair work or vehicle servicing allowed in a parking area.
7. It is highly recommended that bicycle rack(s) be provided on site plan.
8. No parking shall be permitted in a required front/rear/side yard.
9. Design/locate parking lot lighting to deflect any glare away from abutting residential areas.
10. Parking lot to be screened from view by a 3-foot tall solid wall or shrubs when located adjacent to a public street or when across from residential property.
11. Front carport area to have a 3 to 6-foot tall screening wall.
12. Provide shopping cart storage areas on site plan.
13. Provide transit facilities on site plan.
14. Provide shared parking/access agreements
15. Provide off-street loading facility.
16. The project should provide preferential parking spaces for carpools and vanpools to decrease the number of single occupant vehicle work trips. The preferential treatment could include

covered parking spaces or close-in parking spaces, or designated free parking, or a guaranteed space for the vehicle.

17. Provide a "No Parking" (dead-head) stall at the end of the parking row (for rows over 6 stalls deep with no outlet) to allow vehicles to turn around rather than backing out if no stalls are available.

Fencing and Screening:

1. Provide screening for roof mounted equipment (Zoning Ordinance Section 17.30.130.F).
2. Provide second-story screening for all windows that may intrude into adjacent residential properties. Details and cross-sections will be required to be reviewed and approved prior to issuance of building permits (Zoning Ordinance Section 17.30.130.F).
3. Provide screened trash enclosure with solid screening gates (Zoning Ordinance Section 17.30.130.F).
4. Provide solid screening of all outdoor storage areas. Outdoor storage to be screened from public view with solid material (Zoning Ordinance Section 17.30.130.F).
5. Outdoor retail sales prohibited.
6. Cross Sections need to be provided for site Plan Review if there is greater than an 18-inch difference between the elevation of the subject site and the adjacent properties, and the sections would be required for the public hearing process also.
7. All outdoor storage areas are to be identified on the site plan and they are to be shown with screening (fencing). No materials may be stored above the storage area fence heights (Zoning Ordinance Section 17.30.130.F).
8. Provide minimum of ____-foot high concrete block wall or masonry wall along/around the following: _____
9. Provide minimum of ____-foot high solid wooden residential fence along/around the following: _____
10. Provide minimum of ____-foot high chain-link fence ____ with ____ without slats along/around the following: _____
11. If there is an anticipated grade difference of more than 12-inches between this site and the adjacent sites, a cross section of the difference and the walls must be provided as a part of the Subdivision and/or CUP application package.
12. NOTE: The maximum height of block walls and fences is 7-feet in the appropriate areas; this height is measured on the tallest side of the fence. If the height difference is such that the fence on the inside of the project site is not of sufficient height, the fence height should be discussed with Planning Staff prior to the filing of applications to determine if an Exception to fence/wall height should also be submitted.

Landscaping:

1. The City has adopted the State Water Efficient Landscape Ordinance. The ordinance applies to projects installing 2,500 square feet or more of landscaping. It requires that landscaping and irrigation plans be certified by a qualified entity (i.e., Landscape Architect) as meeting the State water conservation requirements. The City's implementation of this new State law will be accomplished by self-certification of the final landscape and irrigation plans by a California licensed landscape architect or other qualified entity with sections signed by appropriately licensed or certified persons as required by the ordinance. **NOTE: Prior to a final for the project, a signed Certificate of Compliance for the MWELO standards is required indicating that the landscaping has been installed to MWELO standards.**
2. Provide street trees at an average of 20-feet on center along street frontages. All trees to be 15-gallon minimum size (Zoning Ordinance Section 17.30.015-2).
3. In the P(R-M) multi-family residential zone, all multiple family developments shall have landscaping including plants, and ground cover to be consistent with surrounding landscaping in the vicinity. Landscape plans to be approved by city staff prior to installation and occupancy

- of use and such landscaping to be permanently maintained. (Zoning Ordinance Section 17.16.180)
4. All landscape areas to be protected with 6-inch concrete curbs (Zoning Ordinance Section 17.30.130.F).
 5. All parking lots to be designed to provide a tree canopy to provide shade in the hot seasons and sunlight in the winter months.
 6. Provide a detailed landscape and irrigation plan as a part of the building permit package (Zoning Ordinance Section 17.34.040).
 7. An 80 sq. ft. minimum landscape well is required every 10 contiguous parking stalls (Zoning Ordinance Section 17.30.130.C).
 8. Provide a detailed landscape and irrigation plan for review prior to issuance of building permits. Please review Zoning Ordinance section 17.30.130-C for current landscaping and irrigation requirements.
 9. Provide a conceptual landscape plan for resubmittal or planning commission review.
 10. Locate existing oak trees on site and provide protection for all oak trees greater than 2" diameter (see Oak Tree Preservation Ordinance).
 11. Maintenance of landscaped areas. - A landscaped area provided in compliance with the regulations prescribed in this title or as a condition of a use permit or variance shall be planted with materials suitable for screening or ornamenting the site, whichever is appropriate, and plant materials shall be maintained and replaced as needed, to screen or ornament the site. (Prior code § 7484)

Lighting:

1. All lighting is to be designed and installed so as to prevent any significant direct or indirect light or glare from falling upon any adjacent residential property. This will need to be demonstrated in the building plans and prior to final on the site.
2. Parking lot and drive aisle lighting adjacent to residential units or designated property should consider the use of 15-foot high light poles, with the light element to be completely recessed into the can. A reduction in the height of the light pole will assist in the reduction/elimination of direct and indirect light and glare which may adversely impact adjacent residential areas.
3. Building and security lights need to be shielded so that the light element is not visible from the adjacent residential properties, if any new lights are added or existing lights relocated.
4. NOTE: Failure to meet these lighting standards in the field will result in no occupancy for the building until the standards are met.
5. In no case shall more than 0.5 lumens be exceeded at any property line, and in cases where the adjacent residential unit is very close to the property line, 0.5 lumens may not be acceptable.

17.16.190 Model Good Neighbor Policies.

Before issuance of building permits, project proponents of multi-family residential developments in the R-M zones that are subject to approval by the Site Plan Review Committee or the Planning Commission, shall enter into an operational management plan (Plan), in a form approved by the City for the long term maintenance and management of the development. The Plan shall include but not be limited to: The maintenance of landscaping for the associated properties; the maintenance of private drives and open space parking; the maintenance of the fences, on-site lighting and other improvements that are not along the public street frontages; enforcing all provisions covered by covenants, conditions and restrictions that are placed on the property; and, enforcing all provisions of the model Good Neighbor Policies as specified by Resolution of the Planning Commission, and as may be amended by resolution.

Visalia Municipal Code Section 17.16.190: Model Good Neighbor Policies.

Before issuance of building permits, project proponents of multi-family residential developments in the R-M zones that are subject to approval by the Site Plan Review Committee or the Planning Commission, shall enter into an operational management plan (Plan), in a form approved by the City for the long term maintenance and management of the development. The Plan shall include but not be limited to:

- The maintenance of landscaping for the associated properties;
- the maintenance of private drives and open space parking;
- the maintenance of the fences, on-site lighting and other improvements that are not along the public street frontages;
- enforcing all provisions covered by covenants, conditions and restrictions that are placed on the property;
- and, enforcing all provisions of the model Good Neighbor Policies as specified by Resolution of the Planning Commission [see below], and as may be amended by resolution.

A statement referencing the applicability of the Plan to the project, and noting the Plan's availability at the City Community Development Department shall be recorded with the Tulare County Recorder. This Section shall be enforceable on a continuous basis pursuant to Chapter 17.46. (Ord. 2006-11 § 1, 2006)

The model Good Neighbor Policies are adopted by Resolution 2006-60 to read as follows:

1. That the owner/operator(s) of all multiple family residential units shall be subject to the following conditions:

A. Operational Management Plan Required

Before issuance of a building permit for any unit, an operational management plan (Plan) shall be established for the long term maintenance and management of the project. The Plan shall include but not be limited to the following:

- a. The maintenance of landscaping for the associated properties;
- b. The maintenance of private drives and open space parking;
- c. The maintenance of the fences, on-site lighting and other improvements that are not along the public street frontages;
- d. Enforcing all provisions covered by covenants, conditions and restrictions that are placed on the property; and
- e. Enforcing all provisions of the model Good Neighbor Policies as specified by Resolution of the Planning Commission.

B. Plan Shall Be Recorded

Before issuance of a building permit for the project, applicant shall record with the Tulare County Recorder the form of the Good Neighbor Policies incorporated into the Plan that has been reviewed and approved by the City Planner.

C. Maintenance and Operations

1. All development standards, City codes, and ordinances shall be continuously met for this apartment/residential complex. Buildings and premises, including paint/siding, roofs, windows, fences, parking lots, and landscaping shall be kept in good repair. Premises shall be kept free of junk, debris.
2. Provide a regular program for the control of infestation by insects, rodents, and other pests at the initiation of the tenancy and control infestation during the tenancy.
3. Where the condition is attributable to normal wear and tear, make repairs and arrangements necessary to put and keep the premise in as good condition as it by law or rental agreement should have been at the commencement of tenant occupation.
4. Maintain all electrical, plumbing, heating, and other facilities in good working order.
5. Maintain all dwelling units in reasonably weather tight condition and good exterior appearance.
6. Remove graffiti within 24 hours of it having been observed.
7. Recreation facilities shall be for tenant use only.
8. Provide 24 hour access for Visalia Police Department to Maintenance and/or Management Staff. Maintenance and/or Management Staff shall be available by telephone or pager at all times, with phone numbers to be provided to the Police Department dispatch center and kept current at all times.
9. Establish and conduct a regular program of routine maintenance for the apartment/residential complex. Such a program shall include, but not necessarily be limited to: regular inspections of common areas and scheduled re-paintings, re-plantings, and other similar activities that typically require attention at periodic intervals but not necessarily continuously.
10. The name and phone number of the management company shall be posted in a prominent location at the front of the property.

D. Landscape Care and Maintenance

1. Automatic irrigation systems shall be maintained.
2. All plant materials (trees, shrubs, and groundcover) shall be maintained so that harm from physical damage or injury arising from vehicle damage, lack of water, chemical damage, insects, and other pests is minimized.
3. It is the responsibility of the property owners to seek professional advice and spray and treat trees, shrubs, and groundcover for diseases which can be successfully controlled if such untreated diseases are capable of destroying an infected tree or other trees within a project.
4. Maintain decorative planting so as not to obstruct or diminish lighting level throughout the apartment/residential complex. Landscaping shall not obscure common areas.

E. Parking - The parking of inoperative vehicles on-site, and boats, trucks (one-ton capacity and over), trailers, and/or recreational vehicles in the apartment/residential complex is not allowed.

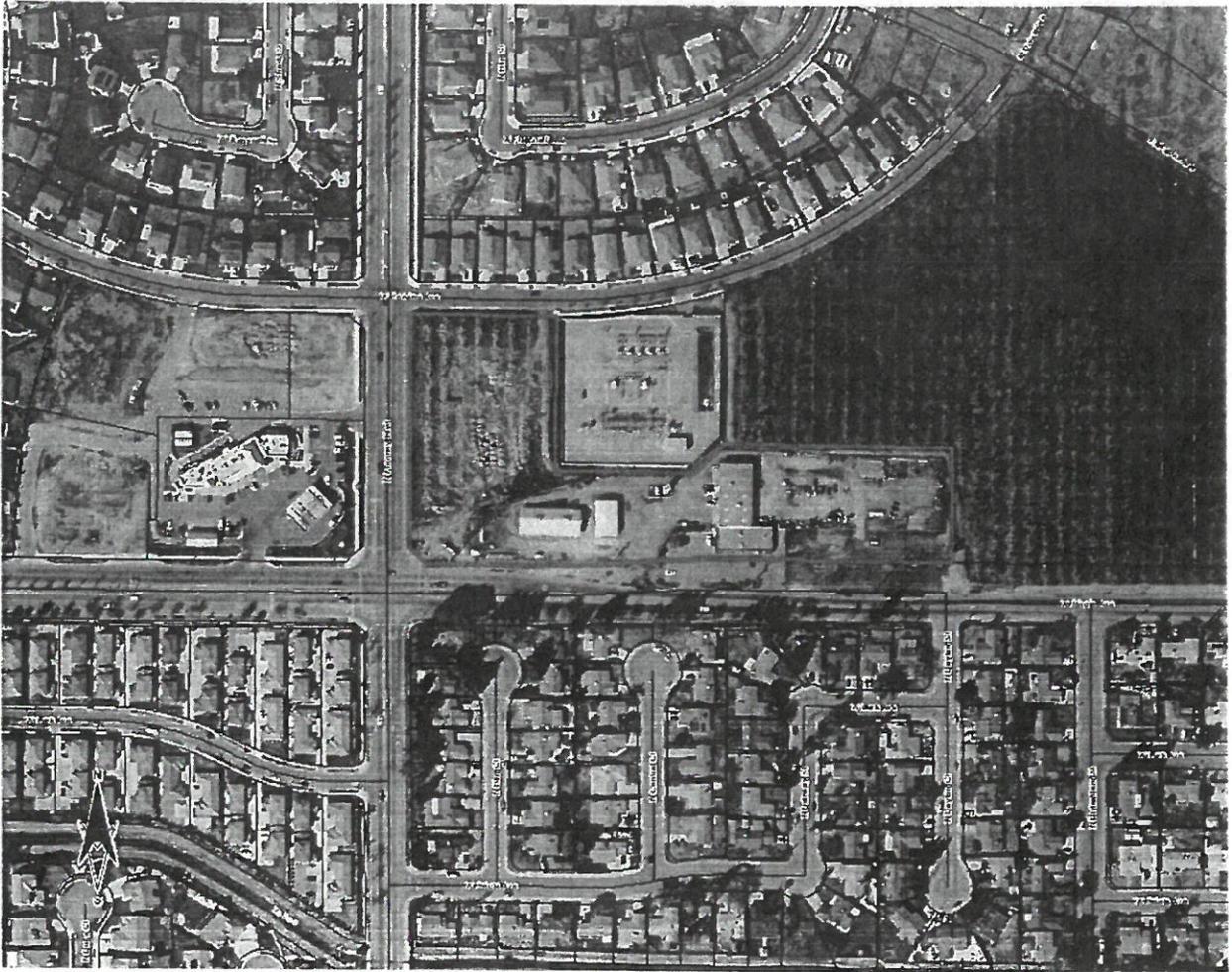
F. Tenant Agreement - The tenant agreement for the complex must contain the following:

1. Standards of aesthetics for renters in regard to the use and conditions of the areas of the units visible from the outside (patios, entryways).
2. Hours when noise is not acceptable, based upon Community Noise Standards, additional standards may be applied within the apartment/residential complex.
3. Rules for use of open areas/recreational areas of the site in regard to drinking, congregating, or public nuisance activities.
4. Prohibition on inoperable vehicles on-site, and boats, trucks (one-ton capacity and over), trailers and/or recreational vehicles.
5. Standards of behavior for tenants that could lead to eviction.
6. All tenants shall read and receive a copy of the Tenant Agreement.

NOTE: Staff recommendations contained in this document are not to be considered support for a particular action or project unless otherwise stated in the comments. The comments found on this document pertain to the site plan submitted for review on the above referenced date. Any changes made to the plan submitted must be submitted for additional review.

Signature _____

A handwritten signature in black ink, consisting of several stylized, connected strokes, positioned above a horizontal line.



PR 17093
MASTER CUP
MOONEY AT REEDN NEC

City of Visalia
Building: Site Plan
Review Comments

NOTE: These are general comments and DO NOT constitute a complete plan check for your specific project
Please refer to the applicable California Code & local ordinance for additional requirements.

- A building permit will be required. *For information call (559) 713-4444*
- Submit 1 digital set of professionally prepared plans and 1 set of calculations. (Small Tenant Improvements)
- Submit 1 digital set of plans prepared by an architect or engineer. Must comply with 2016 California Building Cod Sec. 2308 for conventional light-frame construction or submit 1 digital set of engineered calculations.
- Indicate abandoned wells, septic systems and excavations on construction plans.
- You are responsible to ensure compliance with the following checked items:**
- Meet State and Federal requirements for accessibility for persons with disabilities.
- A path of travel, parking and common area must comply with requirements for access for persons with disabilities.
- All accessible units required to be adaptable for persons with disabilities.
- Maintain sound transmission control between units minimum of 50 STC.
- Maintain fire-resistive requirements at property lines.
- A demolition permit & deposit is required. *For information call (559) 713-4444*
- Obtain required permits from San Joaquin Valley Air Pollution Board. *For information call (661) 392-5500*
- Plans must be approved by the Tulare County Health Department. *For information call (559) 624-8011*
- Project is located in flood zone _____ * Hazardous materials report.
- Arrange for an on-site inspection. (Fee for inspection \$157.00) *For information call (559) 713-4444*
- School Development fees. Commercial \$0.61 per square foot. Residential \$3.79 per square foot.
- Park Development fee \$ _____, per unit collected with building permits.
- Existing address must be changed to be consistent with city address. *For information call (559) 713-4320*
- Acceptable as submitted
- No comments at this time

Additional comments: _____

VAL GARCIA 5/22/19
Signature



Site Plan Review Comments For:
Visalia Fire Department
Corbin Reed, Fire Marshal
420 N. Burke
Visalia, CA 93292
559-713-4272 Office
559-713-4808 Fax

Date: 05/20/2019
Item # 9
Site Plan # 19-093
APN: 078120034
Location:

The following comments are applicable when checked:

- The Site Plan Review comments are issued as general overview of your project. With further details, additional requirements will be enforced at the Plan Review stage. Please refer to the 2016 California Fire Code (CFC), 2016 California Building Codes (CBC) and City of Visalia Municipal Codes.
- All fire detection, alarm, and extinguishing systems in existing buildings shall be maintained in an operative condition at all times and shall be replaced or repaired where defective. If building has been vacant for a significant amount of time, the fire detection, alarm, and or extinguishing systems may need to be evaluated by a licensed professional. *2016 CFC 901.6*
- No fire protection items required for parcel map or lot line adjustment; however, any future projects will be subject to fire & life safety requirements including fire protection systems and fire hydrants in accordance with all applicable sections of the California Fire Code.
- Construction and demolition sites prior to and during construction shall comply with the following:
 - Water Supply for fire protection, either temporary or permanent, shall be made available as soon as combustible materials arrive on the site. *2016 CFC 3312*
 - An all-weather, 20 feet width Construction Access Road capable of holding a 75,000 pound fire apparatus. Fire apparatus access shall be provided within 100 feet of temporary or permanent fire department connections. *2016 CFC 3310*
- More information is needed before a Site Plan Review can be conducted. Please submit plans with more detail. Please include information on

General:

- Address numbers must be placed on the exterior of the building in such a position as to be clearly and plainly visible from the street. Numbers will be at least four inches (4") high and shall be of a color to contrast with their background. If multiple addresses served are by a common driveway, the range of numbers shall be posted at the roadway/driveway. *2016 CFC 505.1*
- All hardware on exit doors, illuminated exit signs and emergency lighting shall comply with the 2016 California Fire Code. This includes all locks, latches, bolt locks, panic hardware, fire exit hardware and gates.
- Commercial dumpsters with 1.5 cubic yards or more shall not be stored or placed within 5 feet of combustible walls, openings, or a combustible roof eave line except when protected by a fire sprinkler system. *2016 CFC 304.3.3*

A Knox Box key lock system is required. Where access to or within a structure or area is restricted because of secured openings (doors and/or gates), a key box is to be installed in an approved location. The key box shall be ordered using an approved Knox Authorization Order Form. The forms are located at the fire department administration office located at 420 N Burke, Visalia, CA 93292. Please allow adequate time for shipping and installation. *2016 CFC 506.1*

If your business handles hazardous material in amounts that exceed the Maximum Allowable Quantities listed on *Table 5003.1.1(1), 5003.1.1(2), 5003.1.1(3) and 5003.1.1(4) of the 2016 California Fire Code*, you are required to submit an emergency response plan to the Tulare County Health Department. Also you shall indicate the quantities on your building plans and prior to the building final inspection a copy of your emergency response plan and Safety Data Sheets shall be submitted to the Visalia Fire Department.

Water Supply for Residential, Commercial & Industrial:

Residential

- Fire hydrant spacing and location shall comply with the following requirements:
The exact location and number of fire hydrants shall be at the discretion of the fire marshal, fire chief and/or their designee. *Visalia Municipal Code 16.36.120(5)*
- Single-family residential developments shall be provided with fire hydrants every six hundred (600) lineal feet of residential frontage. In isolated developments, no less than two (2) fire hydrants shall be provided.
 - Multi-family, zero lot line clearance, mobile home park or condominium developments shall be provided with fire hydrants every four hundred (400) lineal feet of frontage. In isolated developments, no less than two (2) fire hydrants shall be provided.
 - Multi-family or condominium developments with one hundred (100) percent coverage fire sprinkler systems shall be provided with fire hydrants every six (600) lineal feet of frontage. In isolated developments, no less than two (2) fire hydrants shall be provided.

Commercial & Industrial

- Where a portion of the facility or building is more than 400 feet from a hydrant on a fire apparatus access road, on-site fire hydrant(s) shall be provided. *2016 CFC 507.5.1*
- Due to insufficient building information, the number and distance between fire hydrants cannot be determined by the Site Plan Review process. The number of fire hydrants and distance between required fire hydrants shall be determined by utilizing type of construction and square footage in accordance with *CFC 2016 Appendix C102 & C103 & CFC 507.5.1*
- To determine fire hydrant location(s) and distribution the following information was provided to the Site Plan Review committee: **Type of construction** _____ **Square footage** _____

Emergency Access

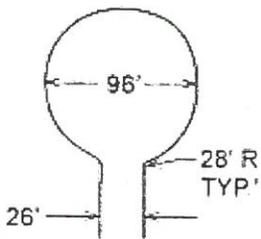
- A fire apparatus access roads shall be provided and must comply with the 2016 CFC and extend within 150 feet of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility. Fire apparatus

access roads shall have an unobstructed width of not less than 20 feet. Minimum turning radius for emergency fire apparatus shall be 20 feet inside radius and 43 feet outside radius. 2016 CFC 503.1.1

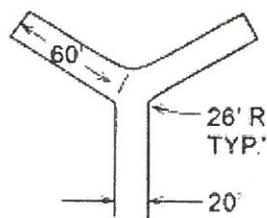
Buildings or portions of buildings or facilities with a vertical distance between the grade plan and the highest roof surface that exceed 30 feet shall provide an approved fire apparatus access roads capable of accommodating fire department aerial apparatus.

- Access roads shall have a minimum unobstructed width of 26 feet, exclusive of shoulders.
- Access routes shall be located within a minimum of 15 feet and maximum of 30 feet from the building, and shall be positioned parallel to one entire side of the building.
- Overhead utility and power lines shall not be located over the aerial fire apparatus access road or between the aerial fire apparatus road and the building.

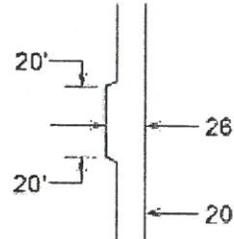
Fire apparatus access roads in excess of 150 feet and dead end shall be provided with a turnaround. Fire apparatus access roads with a length of 151-500 feet shall be a minimum of 20 feet in width. Length of 501-750 feet shall be 26 feet in width. 2016 CFC Table D103.4



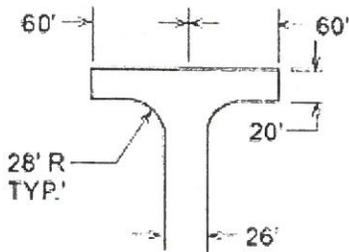
96' DIAMETER CUL-DE-SAC



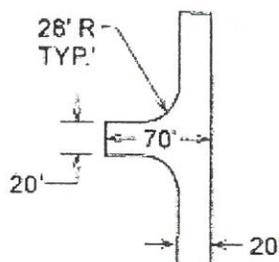
60' "Y"



MINIMUM CLEARANCE AROUND A FIRE HYDRANT



120' HAMMERHEAD



ACCEPTABLE ALTERNATIVE TO 120' HAMMERHEAD

Approved No PARKING – FIRE LANE signs shall be provided for fire apparatus access roads to identify such roads or prohibit the obstruction thereof. Signs shall have a minimum dimension of 12 inches wide by 18 inches high and have red letters on a white reflective background. 2013 CFC 503.3/D103.6

SIGN TYPE "A"



SIGN TYPE "C"



SIGN TYPE "D"



- On site Fire Apparatus Access Roads shall be provided and have an unobstructed width of not less than the following:
 - 20 feet width, exclusive of shoulders (No Parking)
 - More than 26 feet width, exclusive of shoulders (No Parking one side)
 - More than 32 feet wide, exclusive of shoulders (Parking permitted on both sides)

- Marking- approved signs, other approved notices or marking that include the words "NO PARKING-FIRE LANE shall be provided for fire apparatus access roads to identify such roads or prohibit the obstruction thereof. *CFC 503.3*

- Gates on access roads shall be a minimum width of 20 feet and shall comply with the following: *2016 CFC D103.5*
 - Gates shall be of the swinging or sliding type.
 - Gates shall allow manual operation by one person (power outages).
 - Gates shall be maintained in an operative condition at all times.
 - Electric gates shall be equipped with a means of opening the gate by fire department personnel for emergency access. (Note: Knox boxes shall be ordered using an approved Knox Authorization Order Form. The forms are located at the fire department administration office located at 420 N Burke, Visalia, CA 93292. Please allow adequate time for shipping and installation.)

- Streets shall meet the City of Visalia's Design & Improvement Standards for streets to ensure that fire apparatus can make access to all structures in the event of an emergency.

Fire Protection Systems

- An automatic fire sprinkler system will be required for this building. Also, a fire hydrant is required within 50 feet of the Fire Department Connection (FDC). Where an existing building is retrofitted with a sprinkler system (NFPA 13 or NFPA 13R) a fire hydrant shall be provided within 75 feet of the FDC. An additional 25 feet of distance between a fire hydrant and FDC may be granted when a fire sprinkler Density is designed with an additional 25%. *2016 CFC 912 and Visalia Municipal Code 8.20.010 subsection C103.4*

- Locking fire department connection (FDC) caps are required. The caps shall be ordered using an approved Knox Authorization Order Form. The forms are located at the fire department administration office located at 420 N Burke, Visalia, CA 93292. *2016 CFC 912.4.1*

- Commercial cooking appliances and domestic cooking appliances used for commercial purposes that produces grease laden vapors shall be provided with a Type 1 Hood, in accordance with the California Mechanical Code, and an automatic fire extinguishing system. *2016 CFC 904.12 & 609.2*

Special Comments:



Corbin Reed
Fire Marshal

19-093

City of Visalia
Police Department
303 S. Johnson St.
Visalia, Ca. 93292
(559) 713-4370

Site Plan Review Comments

- No Comment at this time.
- Request opportunity to comment or make recommendations as to safety issues as plans are developed.
- Public Safety Impact fee:
Ordinance No. 2001-11 Chapter 16.48 of Title 16 of the Visalia Municipal Code
Effective date - August 17, 2001

Impact fees shall be imposed by the City pursuant to this Ordinance as a condition of or in conjunction with the approval of a development project. "New Development or Development Project" means any new building, structure or improvement of any parcels of land, upon which no like building, structure of improvement previously existed. *Refer to Engineering Site Plan comments for fee estimation.

Not enough information provided. Please provide additional information pertaining to:

Territorial Reinforcement: Define property lines (private/public space).

Access Controlled / Restricted etc:

Lighting Concerns: lots of lights

Landscaping Concerns: MINIMAL SHRUB

Traffic Concerns:

Surveillance Issues:

Line of Sight Issues:

Other Concerns:

Visalia Police Department

SITE PLAN REVIEW COMMENTS

CITY OF VISALIA TRAFFIC SAFETY DIVISION

May 22, 2019

ITEM NO.9

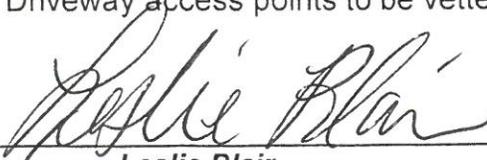
SITE PLAN NO:	SPR19-093
PROJECT TITLE:	Shannon Village East Master CUP
DESCRIPTION:	Proposing for the Application of a Master CUP for Shannon Village East
APPLICANT:	CRS Farming
OWNER:	CRS Farming Inc
APN:	078-120-034
LOCATION:	Mooney at Riggins NEC

THE TRAFFIC DIVISION WILL PROHIBIT ON-STREET PARKING AS DEEMED NECESSARY

- No Comments
- See Previous Site Plan Comments
- Install Street Light(s) per City Standards.
- Install Street Name Blades at _____ Locations.
- Install Stop Signs at **driveway exit** Locations.
- Construct parking per City Standards PK-1 through PK-4.
- Construct drive approach per City Standards.
- Traffic Impact Analysis required (CUP)
- Provide more traffic information such as _____. Depending on development size, characteristics, etc., a TIA may be required.
- Additional traffic information required (Non Discretionary)
- Trip Generation - Provide documentation as to concurrence with General Plan.
- Site Specific - Evaluate access points and provide documentation of conformance with COV standards. If noncomplying, provide explanation.
- Traffic Impact Fee (TIF) Program - Identify improvements needed in concurrence with TIF.

Additional Comments:

- Riggins is an arterial status roadway. Minimum distance between driveways is 500-ft per COV Design & Improvement Standard C-32. Driveway access points to be vetted out in TIA.



Leslie Blair

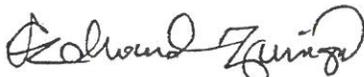
CITY OF VISALIA
SOLID WASTE DIVISION
336 N. BEN MADDOX
VISALIA CA. 93291
713 - 4500

19093

COMMERCIAL BIN SERVICE

- No comments.
- See comments below
- Revisions required prior to submitting final plans. See comments below.
- Resubmittal required. See comments below.
- Customer responsible for all cardboard and other bulky recyclables to be broken down before disposing of in recycle containers
- ALL refuse enclosures must be R-3 OR R-4
- Customer must provide combination or keys for access to locked gates/bins
- Type of refuse service not indicated.
- Location of bin enclosure not acceptable. See comments below.
- Bin enclosure not to city standards double.
- Inadequate number of bins to provide sufficient service. See comments below.
- Drive approach too narrow for refuse trucks access. See comments below.
- Area not adequate for allowing refuse truck turning radius of : Commercial (X) 50 ft. outside 36 ft. inside; Residential () 35 ft. outside, 20 ft. inside.
- Paved areas should be engineered to withstand a 55,000 lb. refuse truck.
- Bin enclosure gates are required
- Hammerhead turnaround must be built per city standards.
- Cul - de - sac must be built per city standards.
- Bin enclosures are for city refuse containers only. Grease drums or any other items are not allowed to be stored inside bin enclosures.
- Area in front of refuse enclosure must be marked off indicating no parking
- Enclosure will have to be designed and located for a STAB service (DIRECT ACCESS) with no less than 38' clear space in front of the bin, included the front concrete pad.
- Customer will be required to roll container out to curb for service.
- Must be a concrete slab in front of enclosure as per city standards, the width of the enclosure by ten(10) feet, minimum of six(6) inches in depth.
- Roll off compactor's must have a clearance of 3 feet from any wall on both sides and there must be a minimum of 53 feet clearance in front of the compactor to allow the truck enough room to provide service.
- City ordinance 8.28.120-130 (effective 07/19/18) requires contractor to contract with City for removal of construction debris unless transported in equipment owned by contractor or unless contracting with a franchise permittee for removal of debris utilizing roll-off boxes.
- Comment** Enclosures for phase 5 and 7 appear to be in a good location. Enclosure for phase 4 should be located in a central area near restaurant and set up for direct access. Be sure to have enclosure gates open 180 degrees. All gates must be equipped with chain bolts to secure them from closing. Phase 3 shall be residential service. 1000 gal. grease trap may be required for restaurants.

Jim Ross, Solid Waste Manager, 559-713-4533
Edward Zuniga, Solid Waste Supervisor, 559-713-4338



Item No. 7: Site Plan No: SPR19-091 1706 S. Central St
Edison has existing electrical service at this property address.

Item No. 8: Site Plan No: SPR19-092 400 W. Mineral King Ave
Edison has existing electrical service at this property address.

Item No. 9: Site Plan No: SPR19-093 Mooney and Riggan
Edison has several Stub outs + capability to provide electrical service in this area.

Item No. 10: Site Plan No: SPR19-094 Mooney and Riggan
Edison has several Stub outs + capability to provide electrical service in this area.

Item No. 11: Site Plan No: SPR19-095 1950 W. Walnut
Edison has existing electrical service at this property address.

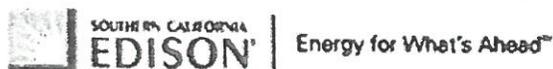
Item No. 12: Site Plan No: SPR19-096 Plaza Business Park - 337 N. Plaza
Dr
Edison has completed a design (Oct. 2018) for electrical services for a building that is currently built for this same address at this location.

Item No. 13: Site Plan No: SPR19-097 Docs Drive In - 105 S. Willis
Edison has a design for electrical service at this location.

Thank you
Chris

Chris Bright

Planning, Senior Specialist
Southern California Edison
San Joaquin Service Center
2425 S Blackstone Ave
Tulare, CA 93274
Office: (559) 684-3527 / PAX: 73527
Cell: (559) 753-4211
Christian.bright@sce.com



Site Plan Review Comments For:

California Water Service Co.
Mike Morton, Superintendent
216 N. Valley Oaks Dr.
Salina, CA 93292
559-624-1663 Office
559-735-3189 Fax

Date: 05/22/2019

Item # Choose an item.

Site Plan # 19-093

Project: Shannon Village East Master CUP

Description:

Applicant:

Location: Mooney @ Riggin NEC

APN:

The following comments are applicable when checked:

- No Comments at this time

- Fire Hydrants
Comments- To be installed per CWS Spec and locations approved by CWS and VFD

- Service's
Comments- To be installed per CWS Spec. Location to be determined by owner

- Main's
Comments- Mains to be installed per Cal Water Specs. To comply with all DDW requirements

- Back flow requirements
Comments- Back flow devices may be required. Contact Cal Water for location and inspections prior to installation

Additional Comments:

- Additional information required. When decided on project submit request to Cal Water if additional services are requested

Mike Morton
Superintendent



#10

MEETING DATE: May 22, 2019

SITE PLAN NO. 19-094

PARCEL MAP NO.

SUBDIVISION:

LOT LINE ADJUSTMENT NO.

Enclosed for your review are the comments and decisions of the Site Plan Review committee. Please review all comments since they may impact your project.

RESUBMIT Major changes to your plans are required. Prior to accepting construction drawings for building permit, your project must return to the Site Plan Review Committee for review of the revised plans.

During site plan design/policy concerns were identified, schedule a meeting with

Planning Engineering prior to resubmittal plans for Site Plan Review.

Solid Waste Parks and Recreation Fire Dept.

REVISE AND PROCEED (see below)

A revised plan addressing the Committee comments and revisions must be submitted for Off-Agenda Review and approval prior to submitting for building permits or discretionary actions.

Submit plans for a building permit between the hours of 9:00 a.m. and 4:00 p.m., Monday through Friday.

Your plans must be reviewed by:

CITY COUNCIL

REDEVELOPMENT

PLANNING COMMISSION

PARK/RECREATION

TPM w/ MASTER CUP

HISTORIC PRESERVATION

OTHER: _____

ADDITIONAL COMMENTS :

If you have any questions or comments, please call (559) 713-4444.

Site Plan Review Committee



**SUBDIVISION & PARCEL MAP
REQUIREMENTS
ENGINEERING DIVISION**

Adrian Rubalcaba 713-4271
 Diego Corvera 713-4209

ITEM NO: 10 DATE: MAY 22, 2019

SITE PLAN NO.: 19-094
PROJECT TITLE: SHANNON VILLAGE EAST
DESCRIPTION: TENTATIVE PARCEL MAP
APPLICANT: CRS FARMING
PROP. OWNER: CRS FARMING INC
LOCATION: MOONEY AT RIGGIN NEC
APN: 078-120-034

SITE PLAN REVIEW COMMENTS

- REQUIREMENTS (Indicated by checked boxes)
- Submit improvements plans detailing all proposed work; Subdivision Agreement will detail fees & bonding requirements
- Bonds, certificate of insurance, cash payment of fees/inspection, and approved map & plan required prior to approval of Final Map.
- The Final Map & Improvements shall conform to the Subdivision Map Act, the City's Subdivision Ordinance and Standard Improvements.
- A preconstruction conference is required prior to the start of any construction.
- Right-of-way dedication required. A title report is required for verification of ownership. by map by deed
TO BE DETERMINED
- City Encroachment Permit Required which shall include an approved traffic control plan.
- CalTrans Encroachment Permit Required. CalTrans comments required prior to tentative parcel map approval. CalTrans contacts: David Deel (Planning) 488-4088
- Landscape & Lighting District/Home Owners Association required prior to approval of Final Map. Landscape & Lighting District will maintain common area landscaping, street lights, street trees and local streets as applicable. Submit completed Landscape and Lighting District application and filing fee a min. of 75 days before approval of Final Map.
- Landscape & irrigation improvement plans to be submitted for each phase. Landscape plans will need to comply with the City's street tree ordinance. The locations of street trees near intersections will need to comply with Plate SD-1 of the City improvement standards. A street tree and landscape master plan for all phases of the subdivision will need to be submitted with the initial phase to assist City staff in the formation of the landscape and lighting assessment district.
- Dedicate landscape lots to the City that are to be maintained by the Landscape & Lighting District.
- Northeast Specific Plan Area: Application for annexation into Northeast District required 75 days prior to Final Map approval.
- Written comments required from ditch company. Contacts: James Silva 747-1177 for Modoc, Persian, Watson, Oakes, Flemming, Evans Ditch and Peoples Ditches; Paul Hendrix 686-3425 for Tulare Irrigation Canal, Packwood and Cameron Creeks; Bruce George 747-5601 for Mill Creek and St. John's River.
- Final Map & Improvements shall conform to the City's Waterways Policy. Access required on ditch bank, 12' minimum. Provide wide riparian dedication from top of bank.
- Sanitary Sewer master plan for the entire development shall be submitted for approval prior to approval of any portion of the system. The sewer system will need to be extended to the boundaries of the development where future connection and extension is anticipated. The sewer system will need to be sized to serve any future developments that are anticipated to connect to the system.
- Grading & Drainage plan required. If the project is phased, then a master plan is required for the entire project area that shall include pipe network sizing and grades and street grades. Prepared by registered civil engineer or project architect. All elevations shall be based on the City's benchmark network. Storm run-off from the project shall be handled as follows: a) directed to the City's existing storm drainage system; b) directed to a permanent on-site basin; or c) directed to a temporary on-site basin is required until a connection with adequate capacity is available to the City's storm drainage system. On-site

- basin: : maximum side slopes, perimeter fencing required, provide access ramp to bottom for maintenance.
- Show Valley Oak trees with drip lines and adjacent grade elevations. Protect Valley Oak trees during construction in accordance with City requirements. A permit is required to remove Valley Oak trees. Contact Public Works Admin at (559)713-4428 for a Valley Oak tree evaluation or permit to remove. Valley Oak tree evaluations by a certified arborist are required to be submitted to the City in conjunction with the tentative map application. A pre-construction conference is required.
 - Show adjacent property grade elevations on improvement plans. A retaining wall will be required for grade differences greater than 0.5 feet at the property line.
 - Relocate existing utility poles and/or facilities.
 - Underground all existing overhead utilities within the project limits. Existing overhead electrical lines over 50kV shall be exempt from undergrounding.
 - Provide "R" value tests: each at
 - Traffic indexes per city standards:
 - All public streets within the project limits and across the project frontage shall be improved to their full width, subject to available right of way, in accordance with City policies, standards and specifications.
 - All lots shall have separate drive approaches constructed to City Standards.
 - Install street striping as required by the City Engineer.
 - Install sidewalk: ft. wide, with ft. wide parkway on
 - Cluster mailbox supports required at 1 per 2 lots, or use postal unit (contact the Postmaster at 732-8073).
 - Subject to existing Reimbursement Agreement to reimburse prior developer:
 - Abandon existing wells per City of Visalia Code. A building permit is required.
 - Remove existing irrigation lines & dispose off-site. Remove existing leach fields and septic tanks.
 - Fugitive dust will be controlled in accordance with the applicable rules of San Joaquin Valley Air District's Regulation VIII. Copies of any required permits will be provided to the City.
 - If the project requires discretionary approval from the City, it may be subject to the San Joaquin Valley Air District's Rule 9510 Indirect Source Review per the rule's applicability criteria. A copy of the approved AIA application will be provided to the City.
 - If the project meets the one acre of disturbance criteria of the State's Storm Water Program, then coverage under General Permit Order 2009-0009-DWQ is required and a Storm Water Pollution Prevention Plan (SWPPP) is needed. A copy of the approved permit and the SWPPP will be provided to the City.
- Comply with prior comments Resubmit with additional information Redesign required

Additional Comments:

- 1. Proposed tentative parcel map will be subject to the underlying master plan development conditions of approval, including any conditions set forth in Site Plan for previously proposed individual parcel developments.***
- 2. Tentative parcel map filing and plan check fees will apply.***
- 3. As shown on Site Plan, common access and utility easements for each parcel will be necessary.***

SUMMARY OF APPLICABLE DEVELOPMENT IMPACT FEES

Site Plan No: **19-094**
Date: **5/22/2019**

Summary of applicable Development Impact Fees to be collected at the time of final/parcel map recordation:

(Preliminary estimate only! Final fees will be based on approved subdivision map & improvements plans and the fee schedule in effect at the time of recordation.)

(Fee Schedule Date:**8/3/2018**)
(Project type for fee rates:**TENTATIVE PARCEL MAP**)

Existing uses may qualify for credits on Development Impact Fees.

FEE ITEM	FEE RATE
<input checked="" type="checkbox"/> Trunk Line Capacity Fee	*DEFERRED UNTIL DEVELOPMENT
<input checked="" type="checkbox"/> Sewer Front Foot Fee	*
<input checked="" type="checkbox"/> Storm Drainage Acquisition Fee	*
<input checked="" type="checkbox"/> Park Acquisition Fee	*
<input type="checkbox"/> Northeast Acquisition Fee Total Storm Drainage Block Walls Parkway Landscaping Bike Paths	
<input checked="" type="checkbox"/> Waterways Acquisition Fee	*

Additional Development Impact Fees will be collected at the time of issuance of building permits.

City Reimbursement:

- 1.) No reimbursement shall be made except as provided in a written reimbursement agreement between the City and the developer entered into prior to commencement of construction of the subject planned facilities.
- 2.) Reimbursement is available for the development of arterial/collector streets as shown in the City's Circulation Element and funded in the City's transportation impact fee program. The developer will be reimbursed for construction costs and right of way dedications as outlined in Municipal Code Section 16.44. Reimbursement unit costs will be subject to those unit costs utilized as the basis for the transportation impact fee.
- 3.) Reimbursement is available for the construction of storm drain trunk lines and sanitary sewer trunk lines shown in the City's Storm Water Master Plan and Sanitary Sewer System Master Plan. The developer will be reimbursed for construction costs associated with the installation of these trunk lines.



Adrian Rubalcaba

SITE PLAN REVIEW COMMENTS

Paul Scheibel, Planning Division, 559-713-4369

Date: May 22, 2019

SITE PLAN NO: 2019-094
PROJECT TITLE: Shannon Village East
DESCRIPTION: Tentative Parcel Map
APPLICANT: CRS Farming
PROP. OWNER: CRS Farming INC.
LOCATION TITLE: Mooney at Riggan NEC
APN TITLE: 078-120-034
GENERAL PLAN: Commercial Mixed Use, Medium Density Residential
ZONING: C-MU – Commercial Mixed Use, R-M-2 – Multi-Family Residential, 3,000 sq. ft. minimum site area

Planning Division Recommendation:

- Revise and Proceed
- Off-Agenda
- Resubmit

Project Requirements

- Tentative Parcel Map
- Additional Information as Needed

PROJECT SPECIFIC INFORMATION: May 22, 2019

1. Tentative Parcel Map
2. Provide evidence of reciprocal access agreement and common area maintenance (CAM) agreement among all properties.
3. Meet all other codes and ordinances.

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

DEVELOPMENT STANDARDS - **R-M-2 [17.16]**

Maximum Building Height: 35 Feet

Minimum Setbacks:

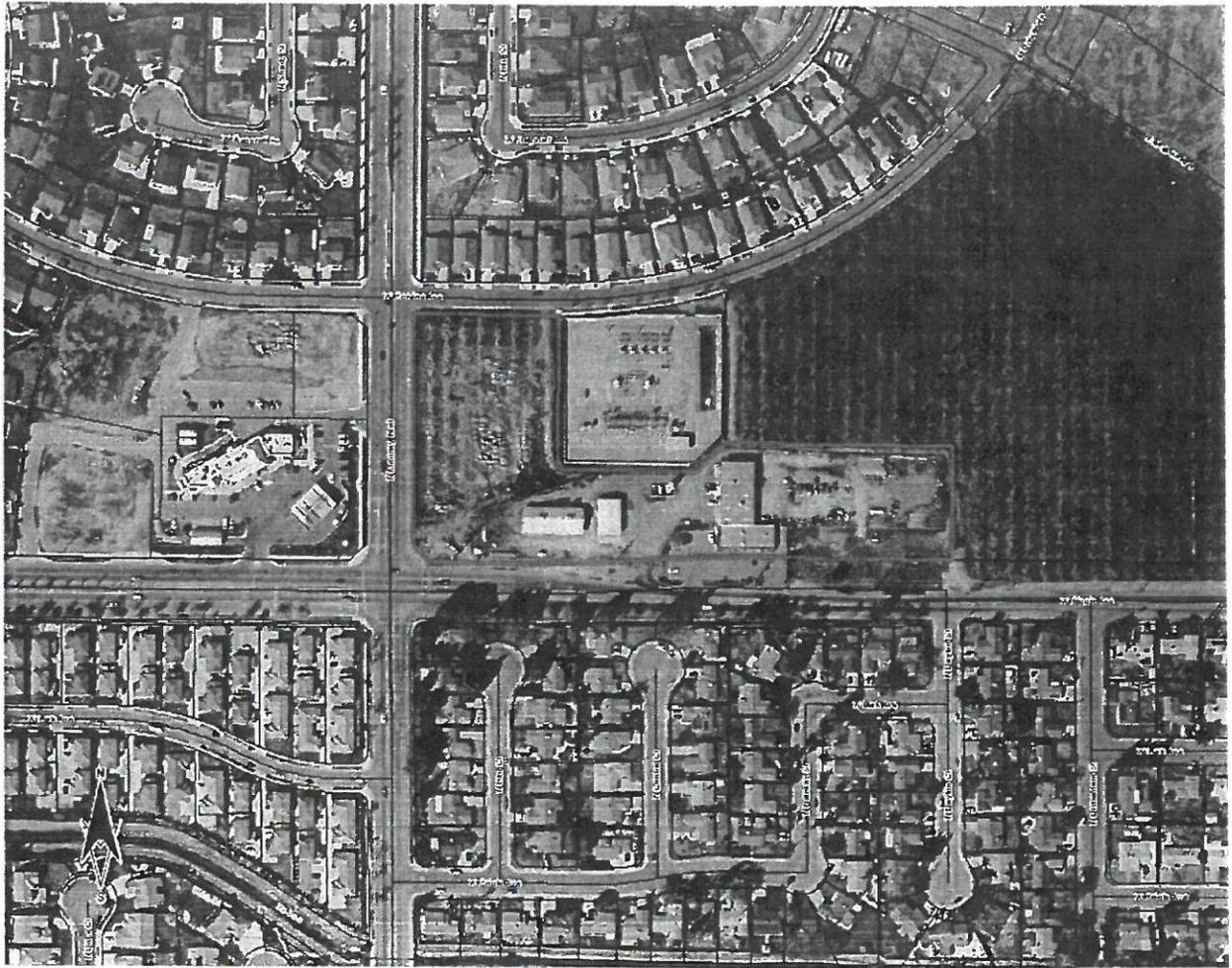
	Building	Landscaping
➤ Front	15 Feet	15 Feet
➤ Side	5 Feet	5 Feet*
➤ Street side on corner lot	10 Feet	10 Feet
➤ Rear	25 Feet	25 Feet

Minimum Site Area: 3,000 square feet per unit

- Common open space
- Screen 2nd story windows when adjacent to an R-1 Site, Single-Family Residential
- Conditional Use Permit for 80 or more units
- Alley exception for rear setback to parking structure, open space still needed
- Minimum site area 2 acres, unless CUP, zoning action, or Master Plan approved by SPR
- Screen all parking areas adjacent to public streets. Parking subject to Chapter 17.34.
- See Zoning Ordinance Section 17.16 for complete standards and requirements.

NOTE: Staff recommendations contained in this document are not to be considered support for a particular action or project unless otherwise stated in the comments. The comments found on this document pertain to the site plan submitted for review on the above referenced date. Any changes made to the plan submitted must be submitted for additional review.

Signature 



City of Visalia
Building: Site Plan
Review Comments

TR 14074
TENTATIVE PARCEL
MAP
MOONEY AT RICHIN
NEC

NOTE: These are general comments and DO NOT constitute a complete plan check for your specific project
Please refer to the applicable California Code & local ordinance for additional requirements.

- A building permit will be required. *For information call (559) 713-4444*
- Submit 1 digital set of professionally prepared plans and 1 set of calculations. (Small Tenant Improvements)
- Submit 1 digital set of plans prepared by an architect or engineer. Must comply with 2016 California Building Cod Sec. 2308 for conventional light-frame construction or submit 1 digital set of engineered calculations.
- Indicate abandoned wells, septic systems and excavations on construction plans.
- You are responsible to ensure compliance with the following checked items:**
- Meet State and Federal requirements for accessibility for persons with disabilities.
- A path of travel, parking and common area must comply with requirements for access for persons with disabilities.
- All accessible units required to be adaptable for persons with disabilities.
- Maintain sound transmission control between units minimum of 50 STC.
- Maintain fire-resistive requirements at property lines.
- A demolition permit & deposit is required. *For information call (559) 713-4444*
- Obtain required permits from San Joaquin Valley Air Pollution Board. *For information call (661) 392-5500*
- Plans must be approved by the Tulare County Health Department. *For information call (559) 624-8011*
- Project is located in flood zone _____ * Hazardous materials report.
- Arrange for an on-site inspection. (Fee for inspection \$157.00) *For information call (559) 713-4444*
- School Development fees. Commercial \$0.61 per square foot. Residential \$3.79 per square foot.
- Park Development fee \$ _____, per unit collected with building permits.
- Existing address must be changed to be consistent with city address. *For information call (559) 713-4320*
- Acceptable as submitted
- No comments at this time

Additional comments: _____

VAL GARCIA 5/22/19
Signature



Site Plan Review Comments For:
Visalia Fire Department
Corbin Reed, Fire Marshal
420 N. Burke
Visalia, CA 93292
559-713-4272 Office
559-713-4808 Fax

Date: 05/21/2019
Item # 10
Site Plan # 19-094
APN: 078-120-034
Location: NEC Mooney & Riggan

The following comments are applicable when checked:

- The Site Plan Review comments are issued as general overview of your project. With further details, additional requirements will be enforced at the Plan Review stage. Please refer to the 2016 California Fire Code (CFC), 2016 California Building Codes (CBC) and City of Visalia Municipal Codes.
- All fire detection, alarm, and extinguishing systems in existing buildings shall be maintained in an operative condition at all times and shall be replaced or repaired where defective. If building has been vacant for a significant amount of time, the fire detection, alarm, and or extinguishing systems may need to be evaluated by a licensed professional. *2016 CFC 901.6*
- No fire protection items required for parcel map or lot line adjustment; however, any future projects will be subject to fire & life safety requirements including fire protection systems and fire hydrants in accordance with all applicable sections of the California Fire Code.
- Construction and demolition sites prior to and during construction shall comply with the following:
 - Water Supply for fire protection, either temporary or permanent, shall be made available as soon as combustible materials arrive on the site. *2016 CFC 3312*
 - An all-weather, 20 feet width Construction Access Road capable of holding a 75,000 pound fire apparatus. Fire apparatus access shall be provided within 100 feet of temporary or permanent fire department connections. *2016 CFC 3310*
- More information is needed before a Site Plan Review can be conducted. Please submit plans with more detail. Please include information on

General:

- Address numbers must be placed on the exterior of the building in such a position as to be clearly and plainly visible from the street. Numbers will be at least four inches (4") high and shall be of a color to contrast with their background. If multiple addresses served are by a common driveway, the range of numbers shall be posted at the roadway/driveway. *2016 CFC 505.1*
- All hardware on exit doors, illuminated exit signs and emergency lighting shall comply with the 2016 California Fire Code. This includes all locks, latches, bolt locks, panic hardware, fire exit hardware and gates.
- Commercial dumpsters with 1.5 cubic yards or more shall not be stored or placed within 5 feet of combustible walls, openings, or a combustible roof eave line except when protected by a fire sprinkler system. *2016 CFC 304.3.3*

A Knox Box key lock system is required. Where access to or within a structure or area is restricted because of secured openings (doors and/or gates), a key box is to be installed in an approved location. The key box shall be ordered using an approved Knox Authorization Order Form. The forms are located at the fire department administration office located at 420 N Burke, Visalia, CA 93292. Please allow adequate time for shipping and installation. *2016 CFC 506.1*

If your business handles hazardous material in amounts that exceed the Maximum Allowable Quantities listed on *Table 5003.1.1(1), 5003.1.1(2), 5003.1.1(3) and 5003.1.1(4) of the 2016 California Fire Code*, you are required to submit an emergency response plan to the Tulare County Health Department. Also you shall indicate the quantities on your building plans and prior to the building final inspection a copy of your emergency response plan and Safety Data Sheets shall be submitted to the Visalia Fire Department.

Water Supply for Residential, Commercial & Industrial:

Residential

Fire hydrant spacing and location shall comply with the following requirements:
The exact location and number of fire hydrants shall be at the discretion of the fire marshal, fire chief and/or their designee. *Visalia Municipal Code 16.36.120(5)*

Single-family residential developments shall be provided with fire hydrants every six hundred (600) lineal feet of residential frontage. In isolated developments, no less than two (2) fire hydrants shall be provided.

Multi-family, zero lot line clearance, mobile home park or condominium developments shall be provided with fire hydrants every four hundred (400) lineal feet of frontage. In isolated developments, no less than two (2) fire hydrants shall be provided.

Multi-family or condominium developments with one hundred (100) percent coverage fire sprinkler systems shall be provided with fire hydrants every six (600) lineal feet of frontage. In isolated developments, no less than two (2) fire hydrants shall be provided.

Commercial & Industrial

Where a portion of the facility or building is more than 400 feet from a hydrant on a fire apparatus access road, on-site fire hydrant(s) shall be provided. *2016 CFC 507.5.1*

Due to insufficient building information, the number and distance between fire hydrants cannot be determined by the Site Plan Review process. The number of fire hydrants and distance between required fire hydrants shall be determined by utilizing type of construction and square footage in accordance with *CFC 2016 Appendix C102 & C103 & CFC 507.5.1*

To determine fire hydrant location(s) and distribution the following information was provided to the Site Plan Review committee: **Type of construction** _____ **Square footage** _____

Emergency Access

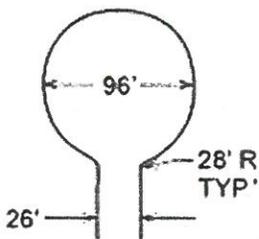
A fire apparatus access roads shall be provided and must comply with the 2016 CFC and extend within 150 feet of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility. Fire apparatus

access roads shall have an unobstructed width of not less than 20 feet. Minimum turning radius for emergency fire apparatus shall be 20 feet inside radius and 43 feet outside radius. 2016 CFC 503.1.1

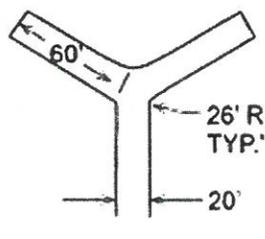
□ Buildings or portions of buildings or facilities with a vertical distance between the grade plan and the highest roof surface that exceed 30 feet shall provide an approved fire apparatus access roads capable of accommodating fire department aerial apparatus.

- Access roads shall have a minimum unobstructed width of 26 feet, exclusive of shoulders.
- Access routes shall be located within a minimum of 15 feet and maximum of 30 feet from the building, and shall be positioned parallel to one entire side of the building.
- Overhead utility and power lines shall not be located over the aerial fire apparatus access road or between the aerial fire apparatus road and the building.

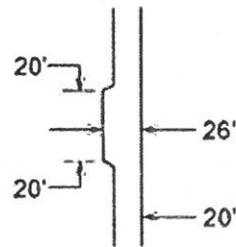
□ Fire apparatus access roads in excess of 150 feet and dead end shall be provided with a turnaround. Fire apparatus access roads with a length of 151-500 feet shall be a minimum of 20 feet in width. Length of 501-750 feet shall be 26 feet in width. 2016 CFC Table D103.4



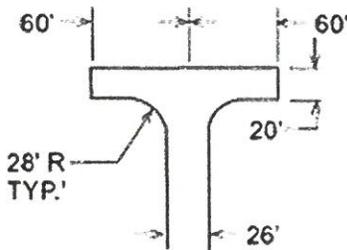
96' DIAMETER
CUL-DE-SAC



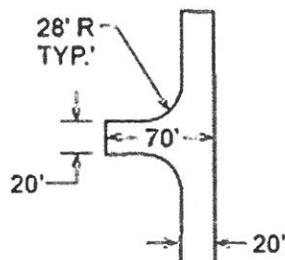
60' "Y"



MINIMUM CLEARANCE
AROUND A FIRE
HYDRANT



120' HAMMERHEAD



ACCEPTABLE ALTERNATIVE
TO 120' HAMMERHEAD

□ Approved No PARKING – FIRE LANE signs shall be provided for fire apparatus access roads to identify such roads or prohibit the obstruction thereof. Signs shall have a minimum dimension of 12 inches wide by 18 inches high and have red letters on a white reflective background. 2013 CFC 503.3/D103.6

SIGN TYPE "A"



12"

SIGN TYPE "C"



12"

SIGN TYPE "D"



12"

18"

- On site Fire Apparatus Access Roads shall be provided and have an unobstructed width of not less than the following;
 - 20 feet width, exclusive of shoulders (No Parking)
 - More than 26 feet width, exclusive of shoulders (No Parking one side)
 - More than 32 feet wide, exclusive of shoulders (Parking permitted on both sides)

- Marking- approved signs, other approved notices or marking that include the words "NO PARKING-FIRE LANE shall be provided for fire apparatus access roads to identify such roads or prohibit the obstruction thereof. *CFC 503.3*

- Gates on access roads shall be a minimum width of 20 feet and shall comply with the following: *2016 CFC D103.5*
 - Gates shall be of the swinging or sliding type.
 - Gates shall allow manual operation by one person (power outages).
 - Gates shall be maintained in an operative condition at all times.
 - Electric gates shall be equipped with a means of opening the gate by fire department personnel for emergency access. (Note: Knox boxes shall be ordered using an approved Knox Authorization Order Form. The forms are located at the fire department administration office located at 420 N Burke, Visalia, CA 93292. Please allow adequate time for shipping and installation.)

- Streets shall meet the City of Visalia's Design & Improvement Standards for streets to ensure that fire apparatus can make access to all structures in the event of an emergency.

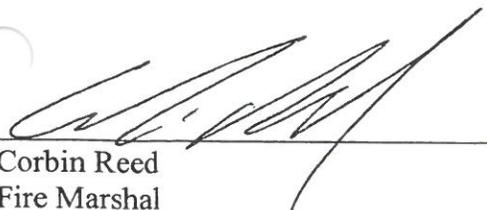
Fire Protection Systems

- An automatic fire sprinkler system will be required for this building. Also, a fire hydrant is required within 50 feet of the Fire Department Connection (FDC). Where an existing building is retrofitted with a sprinkler system (NFPA 13 or NFPA 13R) a fire hydrant shall be provided within 75 feet of the FDC. An additional 25 feet of distance between a fire hydrant and FDC may be granted when a fire sprinkler Density is designed with an additional 25%. *2016 CFC 912 and Visalia Municipal Code 8.20.010 subsection C103.4*

- Locking fire department connection (FDC) caps are required. The caps shall be ordered using an approved Knox Authorization Order Form. The forms are located at the fire department administration office located at 420 N Burke, Visalia, CA 93292. *2016 CFC 912.4.1*

- Commercial cooking appliances and domestic cooking appliances used for commercial purposes that produces grease laden vapors shall be provided with a Type 1 Hood, in accordance with the California Mechanical Code, and an automatic fire extinguishing system. *2016 CFC 904.12 & 609.2*

Special Comments:



 Corbin Reed
 Fire Marshal

19-094

City of Visalia
Police Department
303 S. Johnson St.
Visalia, Ca. 93292
(559) 713-4370

Site Plan Review Comments

- No Comment at this time.
- Request opportunity to comment or make recommendations as to safety issues as plans are developed.
- Public Safety Impact fee:
Ordinance No. 2001-11 Chapter 16.48 of Title 16 of the Visalia Municipal Code
Effective date - August 17, 2001

Impact fees shall be imposed by the City pursuant to this Ordinance as a condition of or in conjunction with the approval of a development project. "New Development or Development Project" means any new building, structure or improvement of any parcels of land, upon which no like building, structure of improvement previously existed. *Refer to Engineering Site Plan comments for fee estimation.

- Not enough information provided. Please provide additional information pertaining to:

- Territorial Reinforcement: Define property lines (private/public space).

- Access Controlled / Restricted etc:

- Lighting Concerns: MAX
- Landscaping Concerns: MINIMUM
- Traffic Concerns:

- Surveillance Issues:

- Line of Sight Issues:

- Other Concerns: M. Whaley VPD

Visalia Police Department

SITE PLAN REVIEW COMMENTS

CITY OF VISALIA TRAFFIC SAFETY DIVISION

May 22, 2019

ITEM NO.10

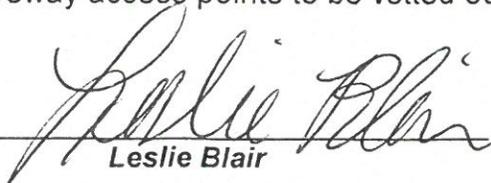
SITE PLAN NO: SPR19-094
PROJECT TITLE: Shannon Village East
DESCRIPTION: Tentative Parcel Map
APPLICANT: CRS Farming
OWNER: CRS Farming Inc
APN: 078-120-034
LOCATION: Mooney at Rigg:n NEC

THE TRAFFIC DIVISION WILL PROHIBIT ON-STREET PARKING AS DEEMED NECESSARY

- No Comments
- See Previous Site Plan Comments
- Install Street Light(s) per City Standards.
- Install Street Name Blades at Locations.
- Install Stop Signs at Locations.
- Construct parking per City Standards PK-1 through PK-4.
- Construct drive approach per City Standards.
- Traffic Impact Analysis required (CUP)
 - Provide more traffic information such as . Depending on development size, characteristics, etc., a TIA may be required.
- Additional traffic information required (Non Discretionary)
 - Trip Generation - Provide documentation as to concurrence with General Plan.
 - Site Specific - Evaluate access points and provide documentation of conformance with COV standards. If noncomplying, provide explanation.
 - Traffic Impact Fee (TIF) Program - Identify improvements needed in concurrence with TIF.

Additional Comments:

- Rigg:n is an arterial status roadway. Minimum distance between driveways is 500-ft per COV Design & Improvement Standard C-32. Driveway access points to be vetted out in TIA.


Leslie Blair

Site Plan Review Comments For:

California Water Service Co.
Mike Morton, Superintendent
216 N. Valley Oaks Dr.
Visalia, CA 93292
559-624-1663 Office
559-735-3189 Fax

Date: 05/22/2019

Item # Choose an item.

Site Plan # 19-094

Project: Shannon Village East

Description:

Applicant:

Location: Mooney @ Riggin NEC

APN:

The following comments are applicable when checked:

- No Comments at this time

- Fire Hydrants
Comments- To be installed per CWS Spec and locations approved by CWS and VFD

- Service's
Comments- To be installed per CWS Spec. Location to be determined by owner

- Main's
Comments- Mains to be installed per Cal Water Specs. To comply with all DDW requirements

- Back flow requirements
Comments- Back flow devices may be required. Contact Cal Water for location and inspections prior to installation

Additional Comments:

- Additional information required. When decided on project submit request to Cal Water if additional services are requested

Mike Morton
Superintendent

Item No. 7: Site Plan No: SPR19-091 1706 S. Central St
Edison has existing electrical service at this property address.

Item No. 8: Site Plan No: SPR19-092 400 W. Mineral King Ave
Edison has existing electrical service at this property address.

Item No. 9: Site Plan No: SPR19-093 Mooney and Riggin
Edison has several Stub outs + capability to provide electrical service in this area.

Item No. 10: Site Plan No: SPR19-094 Mooney and Riggin
Edison has several Stub outs + capability to provide electrical service in this area.

Item No. 11: Site Plan No: SPR19-095 1950 W. Walnut
Edison has existing electrical service at this property address.

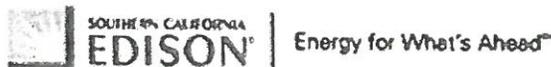
Item No. 12: Site Plan No: SPR19-096 Plaza Business Park - 337 N. Plaza
Dr
Edison has completed a design (Oct. 2018) for electrical services for a building that is currently built for this same address at this location.

Item No. 13: Site Plan No: SPR19-097 Docs Drive In - 105 S. Willis
Edison has a design for electrical service at this location.

Thank you
Chris

Chris Bright

Planning, Senior Specialist
Southern California Edison
San Joaquin Service Center
2425 S Blackstone Ave
Tulare, CA 93274
Office: (559) 684-3527 / PAX: 73527
Cell: (559) 753-4211
Christian.bright@sce.com



TPM No.2019-08 & CUP No. 2019-26

APN: 078-120-034

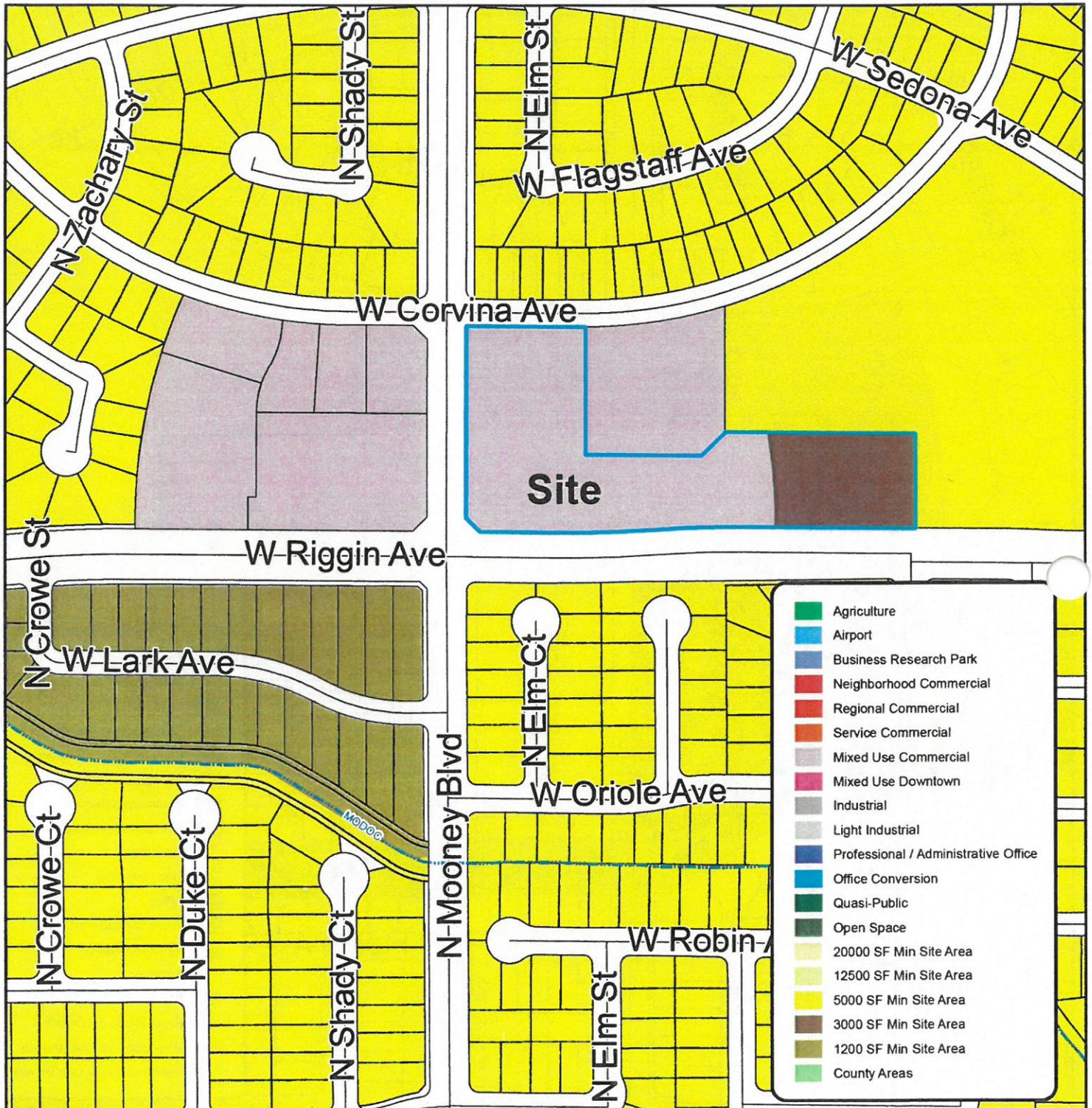


General Plan Land Use Map



TPM No.2019-08 & CUP No. 2019-26

APN: 078-120-034

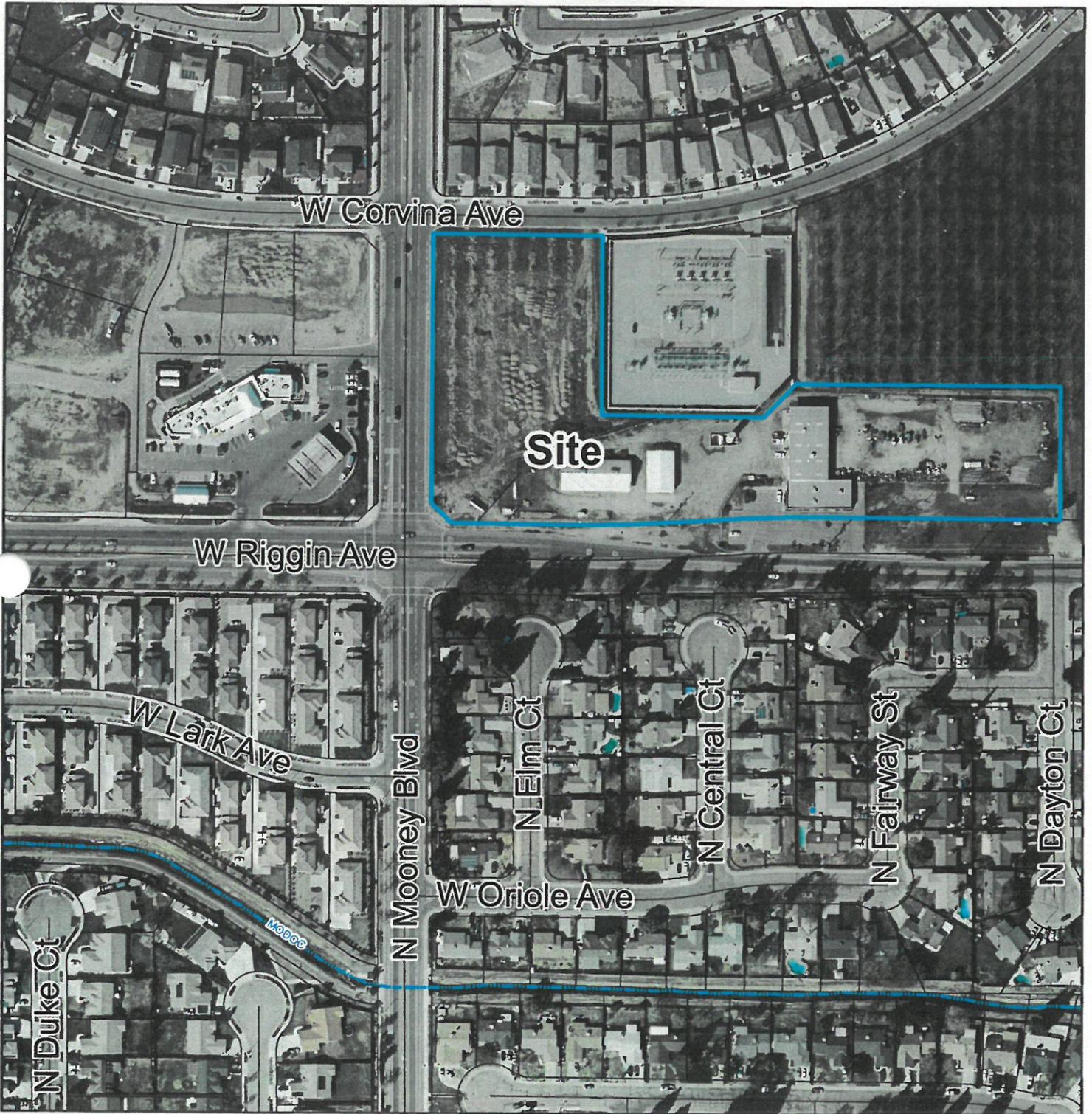


Zoning Map



TPM No.2019-08 & CUP No. 2019-26

APN: 078-120-034



Site

W Corvina Ave

W Riggan Ave

W Lark Ave

N Mooney Blvd

N Elm Ct

N Central Ct

N Fairway St

N Dayton Ct

W Oriole Ave

N Duke Ct

Moore



Aerial Map



TPM No.2019-08 & CUP No. 2019-26

APN: 078-120-034



Vicinity Map

