APPENDIX A

PROJECT PLANS

GRAPHIC SCALES: 1/16" = 1'-0" (0, 5', 50') | 1/8" = 1'-0" (0, 5', 25') | 1/4" = 1'-0" (0, 1', 12') | 1/2" = 1'-0" (0, 1', 6') | 3/4" = 1'-0" (0, 4') | 1" = 1'-0" (0, 1', 3') | 1 1/2" = 1'-0" (0, 2') | 3" = 1'-0" (0, 1')

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SAN BENITO COUNTY RESOURCE MANAGEMENT AGENCY

NEW BEHAVIORAL HEALTH CENTER

1131 SAN FELIPE RD, HOLLISTER, CA 95023

PLANNING REVIEW

SITE MAP

N

INDEX OF DRAWINGS

1	TITLE SHEET
2	SITE PLAN
3	BUILDING ELEVATIONS
4	FLOOR PLAN
5	ROOF PLAN
6	GRADING AND DRAINAGE
7	LANDSCAPE PLAN
8	DETAILS
9	DETAILS
10	EXISTING SITE IMAGES
11	PROPOSED BUILDING IMAGES

APPLICANT / PROPERTY OWNER

SAN BENITO COUNTY RESOURCE MANAGEMENT AGENCY
2301 TECHNOLOGY PKWY.
HOLLISTER, CA 95023
CONTACT: ADAM GOLDSTONE
TEL. (831) 902-2207
AGOLDSTONE@COSB.US

PROPOSED USE

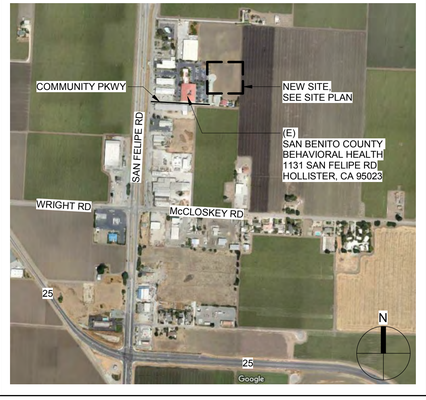
17,212 SF BEHAVIORAL HEALTH CENTER

OCCUPANCY: B

CONSTRUCTION TYPE: V-B

NUMBER OF FLOORS: 1

VICINITY MAP



Revisions

Revisions	By	Date	Appr.

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Architect/Engineer Of Record:

LICENSED ARCHITECT
HEIN YAMAUCHI
C-26566
02-28-2019
RENEWAL DATE
STATE OF CALIFORNIA

HIBSER YAMAUCHI Architects, Inc.
4602 2nd Street, Suite 3
Davis, CA 95618
530.758.1270 tel | 530.758.4789 fax

HY Architects Project number: 4452.010

Facility

SAN BENITO COUNTY RESOURCE MANAGEMENT AGENCY
1131 SAN FELIPE RD, HOLLISTER, CA 95023

Project

NEW BEHAVIORAL HEALTH CENTER

Sheet Title

TITLE SHEET

Client Project Number: Client Proj. #

Scale:

Drawn By: Author

Checked By: Checker

Issue Date: Issue Date

Revit Version: 2017

Sheet 1

Sheet of 200

10/30/2018 11:06:51 AM C:_REVIT_LOCALS\4452.010 San Benito Behav Health R17_sreitz@hy-arch.com.rvt

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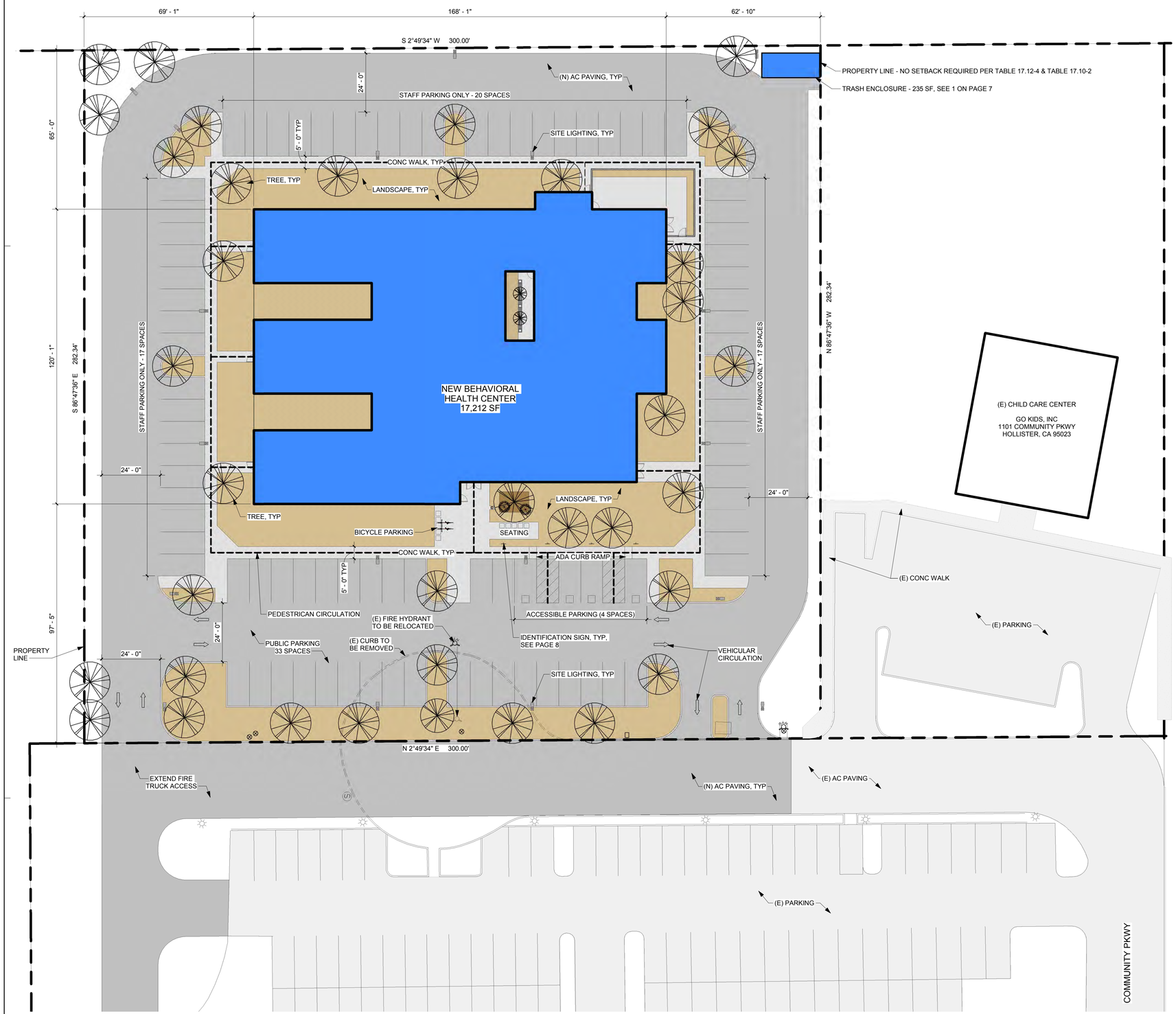

1 **SITE PLAN**
1" = 20'-0"

DATA TABLE

ASSESSORS PARCEL NUMBER: 051-110-029-000
PARCEL SIZE: 84,700 SF
ZONING DESIGNATION: PF (PUBLIC FACILITY / INSTITUTIONAL)
GENERAL PLAN DESIGNATION: P (PUBLIC)
PROPOSED STRUCTURE SQUARE FOOTAGE: 17,212 SF
EXISTING STRUCTURES ON THE PARCEL SQUARE FOOTAGE: N/A
PROPOSED LOT COVERAGE CALCULATION: 17,212+200 / 84,700 = 21%
NUMBER OF DWELLING UNITS/BUILDINGS: 1
TOTAL NUMBER OF OF EXISTING AND PROPOSED PARKING AND LOADING SPACES:
EXISTING: 0
PROPOSED: 87
PARKING & LOADING SPACES DIMENSIONS: 9'-0" X 18'-0"
TOTAL NUMBER OF ADA PARKING SPACES: 4
PERCENTAGE OF LANDSCAPING ON THE PROJECT SITE: 17%
PERCENTAGE OF OPEN SPACE ON THE PROJECT: 79%
COMMERCIAL & INDUSTRIAL PROJECTS: N/A
FLOOD ZONE: NO - ZONE X
SEISMIC SPECIAL STUDIES ZONE: NO

NOTE:
1. ALL PAVED SURFACES SHALL PROVIDE A CONTINUOUS SMOOTH, VIBRATION-FREE SURFACE THAT COMPLIES WITH ADA REQUIREMENT AND ENSURES SAFE ACCESS FOR BICYCLES.

Revisions

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Architect/Engineer Of Record: _____

HIBSER YAMAUCHI Architects, Inc.
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510.446.2222 tel ; 510.446.2211 fax

HY Architects Project number: 4452.010

Facility
SAN BENITO COUNTY RESOURCE MANAGEMENT AGENCY
1131 SAN FELIPE RD, HOLLISTER, CA 95023

Project
NEW BEHAVIORAL HEALTH CENTER

Sheet Title
SITE PLAN

Client Project Number: Client Proj. #

Scale: 1" = 20'-0"
Drawn By: Author
Checked By: Checker
Issue Date: Issue Date
Revit Version: 2017

Sheet
2
Sheet of 200

10/30/2018 11:06:59 AM C:_REVIT_LOCAL\S4452.010 San Benito Behav Health R17_seeitz@hy-arch.com.rvt

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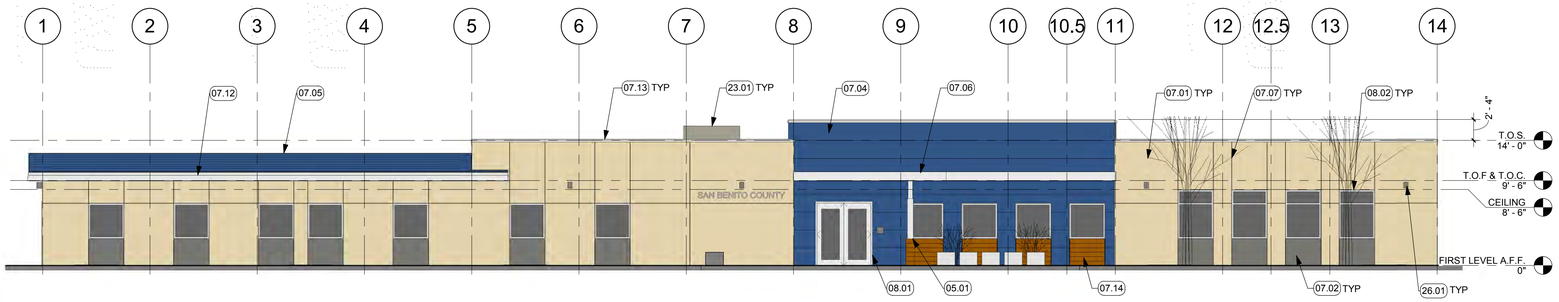
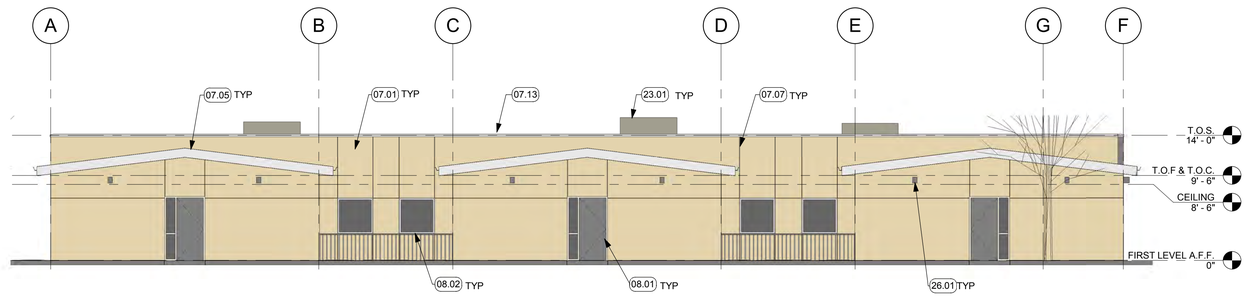


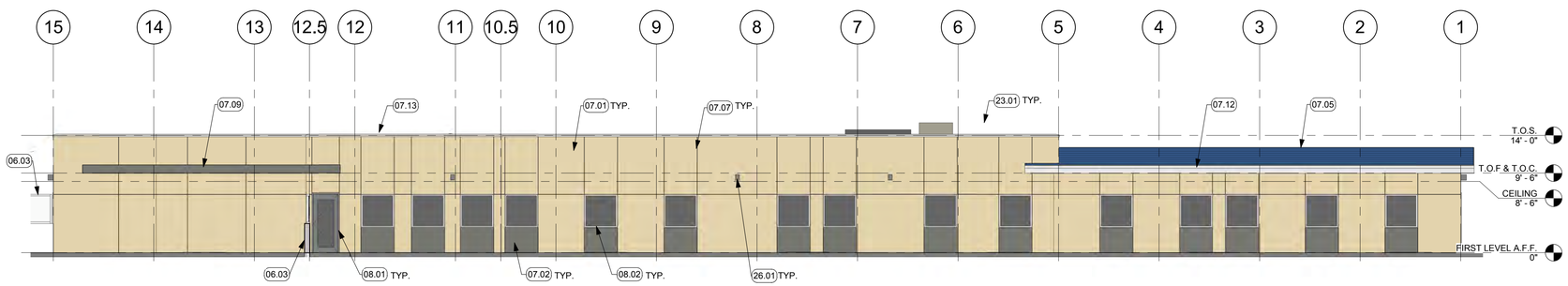
1 EXTERIOR ELEVATION - WEST - MAIN ENTRANCE

1/8" = 1'-0"



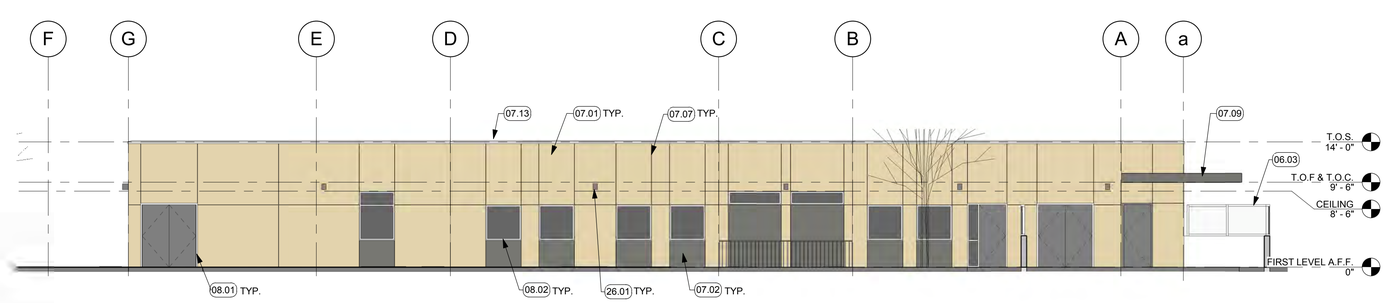
2 EXTERIOR ELEVATION - NORTH

1/8" = 1'-0"



3 EXTERIOR ELEVATION - EAST

1/8" = 1'-0"



4 EXTERIOR ELEVATION - SOUTH

1/8" = 1'-0"

COLOR / MATERIALS

METAL	METAL	METAL PANEL	CEMENT PLASTER	CEMENT PLASTER	CEMENT PLASTER
	WOOD VENEER	PAINT - ENTRY	PAINT - FIELD	PAINT - ACCENT	PAINT - ACCENT

KEYNOTES

05.01	STL COL @ CANOPY
06.03	PRIVACY WALL, NOT BY MODULAR BLDG MFR
07.01	CEMENT PLASTER W/ PAINT FINISH P1
07.02	CEMENT PLASTER W/ PAINT FINISH P2 UNDER WINDOWS
07.04	ALUCOBOND METAL SIDING
07.05	STANDING-SEAM METAL ROOFING
07.06	ENTRANCE CANOPY BY MODULAR BUILDING MFR
07.07	CEMENT PLASTER CONTROL JOINT, SEE 13/A9.2
07.09	PATIO CANOPY BY MODULAR BUILDING MFR
07.12	GUTTER
07.13	PARAPET CAP W/ PAINT FINISH P3
07.14	HARDIE BOARD SIDING UNDER WDW, TYP OF 4
08.01	DR & FRAME, SEE PLAN & DR SCHED ON SHEET A9.1
08.02	WDW & FRAME, SEE PLAN & WDW TYPES ON SHEET A9.1
23.01	HVAC UNIT, SMD
26.01	WALL-MOUNTED EXTERIOR LIGHT FIXTURE, SED

Revisions

Revisions	By	Date	Appr.

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Architect/Engineer Of Record: _____

HIBSER YAMAUCHI Architects, Inc.
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Oakland, CA 94612
510.446.2222 tel ; 510.446.2211 fax

HY Architects Project number: 4452.010

Facility

SAN BENITO COUNTY RESOURCE MANAGEMENT AGENCY
1131 SAN FELIPE RD, HOLLISTER, CA 95023

Project

NEW BEHAVIORAL HEALTH CENTER

Sheet Title

BUILDING ELEVATIONS

Client Project Number: Client Proj. #

Scale: 1/8" = 1'-0"
Drawn By: Author
Checked By: Checker
Issue Date: Issue Date
Revit Version: 2017

Sheet 3

Sheet of 200

10/30/2018 11:13:04 AM C:_REVIT_LOCAL\S4452.010 San Benito Behav Health R17_seitz@hy-arch.com.rvt

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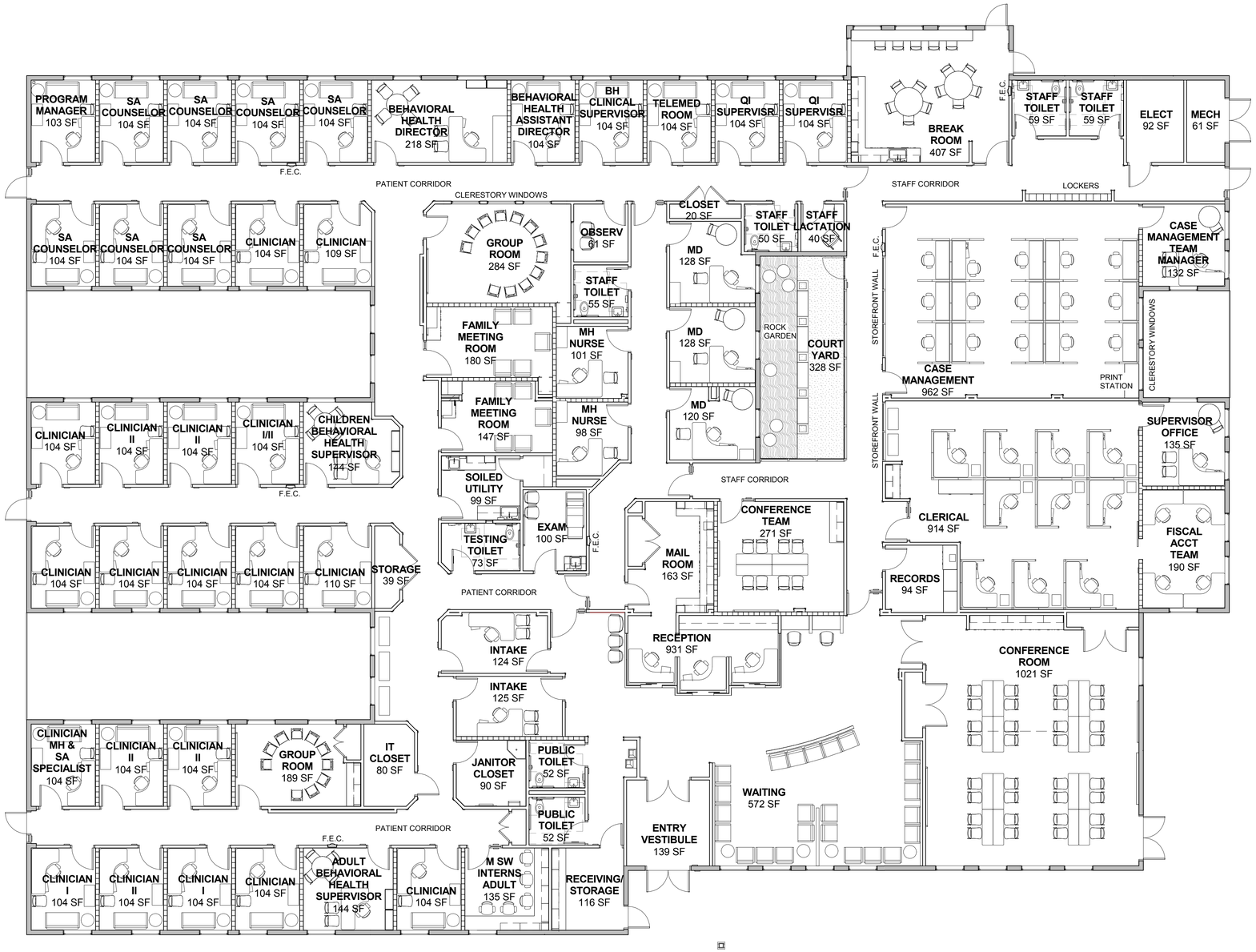

1 **FLOOR PLAN - TOTAL FLOOR AREA: 17,212 SF**
1/8" = 1'-0"

Revisions

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HIBSER YAMAUCHI Architects, Inc.
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HY Architects Project number: 4452.010

Facility
SAN BENITO COUNTY RESOURCE MANAGEMENT AGENCY
1131 SAN FELIPE RD, HOLLISTER, CA 95023

Project
NEW BEHAVIORAL HEALTH CENTER

Sheet Title
FLOOR PLAN

Client Project Number: Client Proj. #

Scale: 1/8" = 1'-0"
Drawn By: Author
Checked By: Checker
Issue Date: Issue Date
Revit Version: 2017

Sheet 4
Sheet of 200

10/30/2018 11:07:30 AM C:_REVIT_LOCALS\4452.010 San Benito Behav Health R17_sreitz@hy-arch.com.rvt

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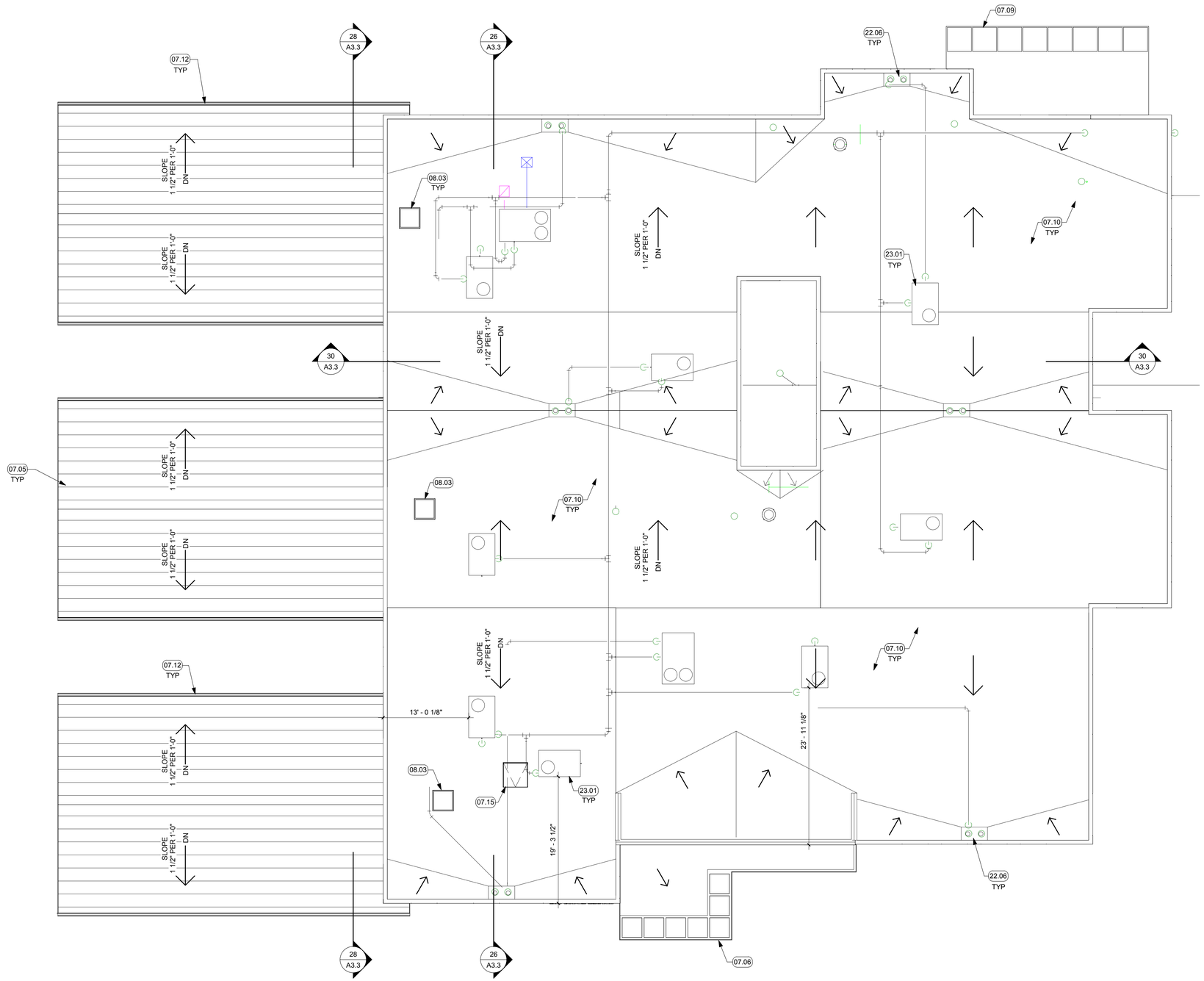

1 **ROOF PLAN**
1/8" = 1'-0"

KEYNOTES

07.05	STANDING-SEAM METAL ROOFING
07.06	ENTRANCE CANOPY BY MODULAR BUILDING MFR
07.09	PATIO CANOPY BY MODULAR BUILDING MFR
07.10	TPO ROOFING
07.12	GUTTER
07.15	ROOFTOP ACCESS HATCH
08.03	SKYLIGHT
22.06	ROOF DRAIN WITH INTERNAL DRAIN PIPE
23.01	HVAC UNIT, SMD

Revisions

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HY Architects Project number: 4452.010

Facility
SAN BENITO COUNTY RESOURCE MANAGEMENT AGENCY
1131 SAN FELIPE RD, HOLLISTER, CA 95023

Project
NEW BEHAVIORAL HEALTH CENTER

Sheet Title
ROOF PLAN

Client Project Number: Client Proj. #

Scale: 1/8" = 1'-0"
Drawn By: Author
Checked By: Checker
Issue Date: Issue Date
Revit Version: 2017

Sheet
5
Sheet of 200

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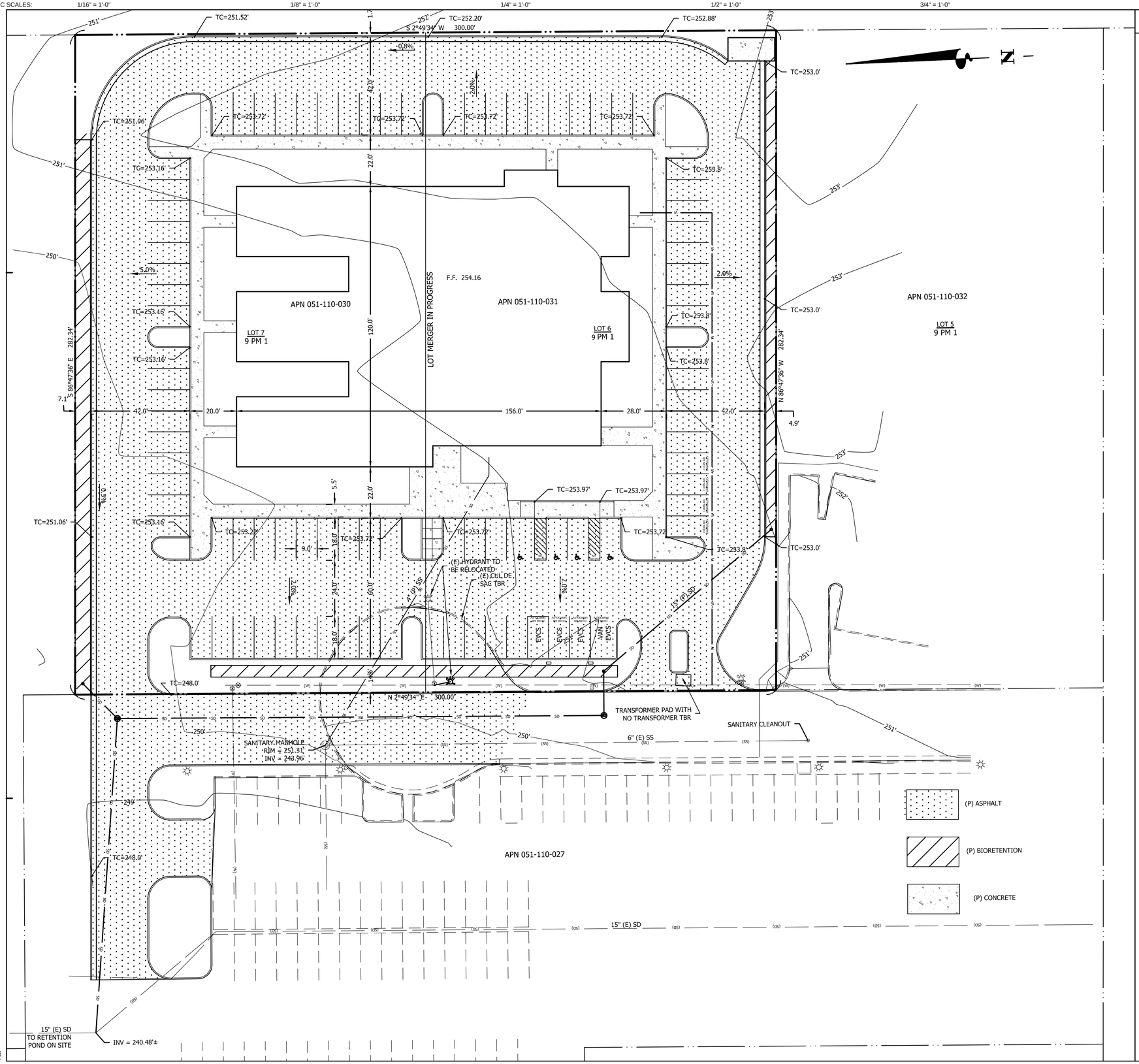

DATA TABLE

ASSESSORS PARCEL NUMBER: 051-110-030, 051-110-031
A LOT MERGER IS IN PROGRESS TO MAKE THE PROPERTIES ONE PARCEL - IT WILL BE COMPLETED PRIOR TO BUILDING OCCUPANCY.
THE SITE DRAINS TO A RETENTION POND LOCATED ON 051-110-034. THE RETENTION POND SERVES ALL THE COMMUNITY PARKWAY PROPERTIES. ON SITE BMPs WILL BE INSTALLED FOR TREATMENT AND INFILTRATION, AND OVERFLOW WILL BE DIRECTED TO THE RETENTION POND.

Revisions

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HIBSER YAMAUCHI Architects, Inc.
300 – 27th Street
Oakland, CA 94612
510.446.2222 tel | 510.446.2211 fax

HY Architects Project number: 4452.010

Facility
SAN BENITO COUNTY RESOURCE MANAGEMENT AGENCY
1131 SAN FELIPE RD, HOLLISTER, CA 95023

Project
NEW BEHAVIORAL HEALTH CENTER

Sheet Title
GRADING, DRAINAGE, & UTILITIES

Client Project Number: 118045

Scale:	1" = 20'-0"
Drawn By:	AEH
Checked By:	Checker
Issue Date:	10/30/18
Revit Version:	2017

Sheet 6 of 0

9/26/2018 10:52:40 AM C:_REVIT_LOCALS\4452.010 San Benito Behav Health R17_sreitz@hy-arch.com.rvt

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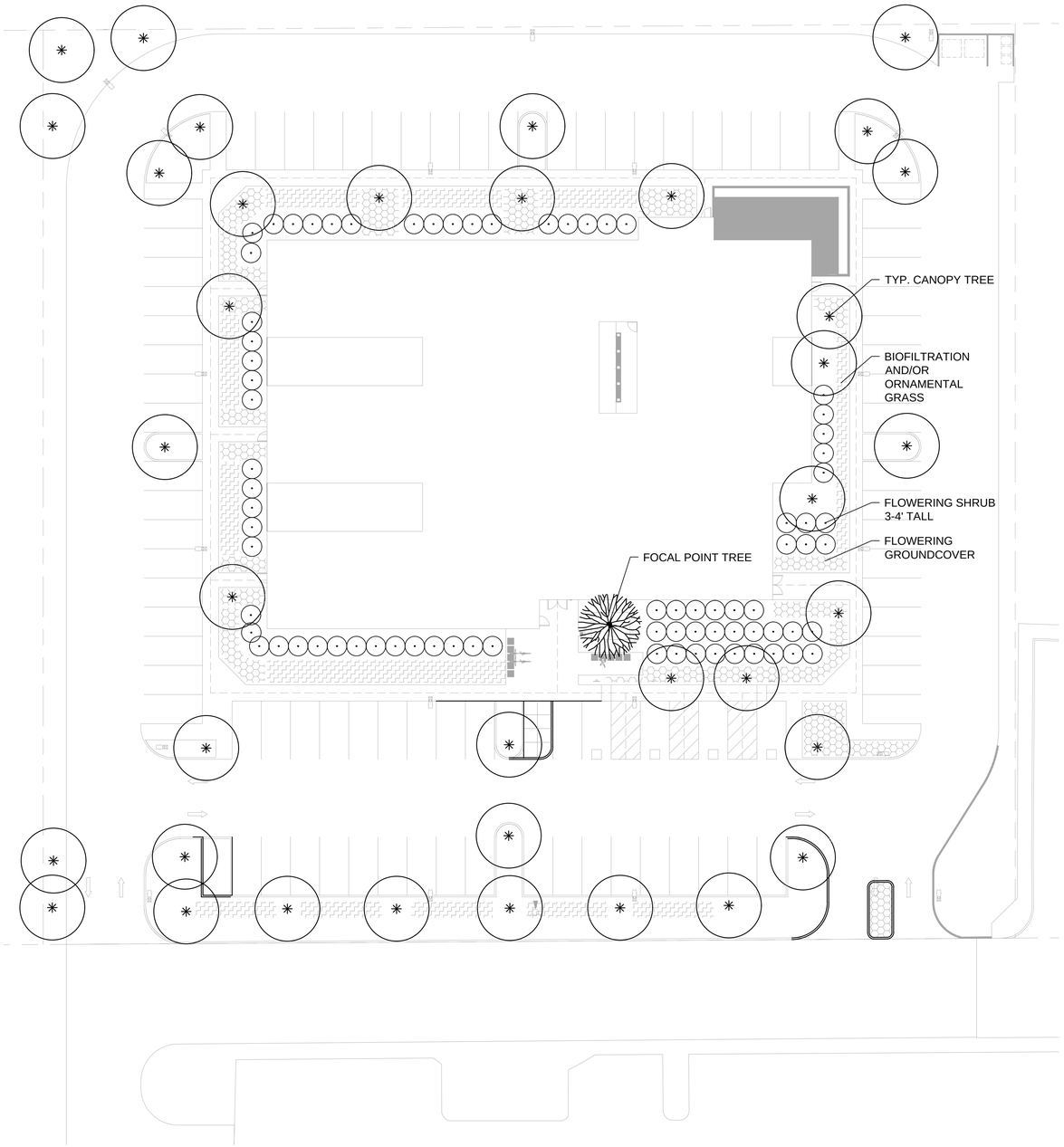

PLANT LEGEND

WUC*	CODE	BOTANICAL NAME	COMMON NAME	SIZE & SPACING	NOTES
	Trees				
		Fraxinus uhdei 'Orange County'	Evergreen Ash		semi-deciduous, 45'wide
		Geijera parviflora	Austrailian Willow		evergreen, 25'x25'
		Lagerstroemia x 'Tuscarora'	Tuscarora Crape Myrtle		deciduous, red flowers, 22'x18'
		Schinus molle	California Pepper		evergreen, 35x50
	Zone A- Entry Plants				
		Achillea millefolium 'Paprika'	Paprika Yarrow	1 Gal at 2' o.c.	2 ft tall by 2 ft wide, red flowers
		Cistus x pulverulentus 'Sunset'	Sunset Rockrose	1 Gal at 4' o.c.	12 in by 4 ft wide
		Cistus salvifolius	Sageleaf Rockrose	1 Gal at 5' o.c.	18 in by 5 ft wide
		Erigeron karvinskianus	Mexican Daisy	1 Gal at 2' o.c.	18" in tall by 2'ft wide
		Dietes grandiflora	Fortnight Lily	1 Gal at 3' o.c.	4 ft tall by 3 ft wide
		Salvia clevelandii 'Winifred Gilman'	Winifred Gilman Sage	1 Gal at 4' o.c.	3-5 ft tall and 4-5 ft wide
	Zone B- Swale Plants				
		Calamagrostis nutkaensis	Pacific Reed Grass	1 Gal at 3' o.c.	2 ft tall by 2ft wide
		Carex divulsa	Berkeley Sedge	1 Gal at 2' o.c.	18" in tall by 2' ft wide
		Chondropetalum tectorum	Cape Rush	5 Gal at 4' o.c.	4'x4'
		Festuca rubra	Creeping Red Fescue	1 Gal at 18" o.c.	18 in x 18 in
		Juncus effusus	Common Rush	1 Gal at 30" o.c.	2' tall by 30" wide
	Vines				
		Ficus pumila	Creeping Fig	15 Gal	
		Trachelospermum jasminoides	Star Jasmine	5 Gal.	

GENERAL NOTES

1. Landscape Architect to approve plant material BEFORE plant layout commences.
2. Landscape Architect to approve layout of all plants BEFORE planting commences.
3. Apply pre-emergent herbicide to all planting areas, excluding naturalized hydroseed areas/ See Specifications.
4. Apply post-emergent herbicide to all naturalized hydroseed areas. See Specifications.
5. Prepare, amend, and fertilize existing soil per Specifications. Import topsoil per Specifications.
6. Install weed mat under river rock, gravel, and mulch-only areas. See Specifications. See
7. Install weed mat in all planting areas. See Specifications. See
8. Install header board / edge restraint per detail. See Specifications.
9. Install root barrier panels at trees planted within 5' of foundations, walls, and curbs, and in all planters in paved areas. See Specifications. See .
10. Pre-mix amendments into soil before backfilling plant pits - do not mix inside pits. Break large clods into small pieces. See Specifications.
11. Plant shrubs and groundcovers per detail . See Spacing Diagram.
12. Plant and stake trees per detail .
13. Install mulch to all planting areas. See Specifications for thickness.
14. Install windscreen at all trees. See Specifications. See
15. Install vine mounting per detail
16. Apply deer repellent to all plants. See Specifications.
17. See Specifications for Maintenance Period.

20 0 20 40 N

Revisions

Revisions	By	Date	Appr.

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Architect/Engineer Of Record:_____

HIBSER YAMAUCHI Architects, Inc.
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Oakland, CA 94612
510.446.2222 tel ¦ 510.446.2211 fax

HY Architects Project number: 4452.010

BFS LANDSCAPE ARCHITECTS
425 PACIFIC STREET #201
MONTEREY, CALIFORNIA 93940
831.646.1383 • BFSLA.COM

Facility

SAN BENITO COUNTY RESOURCE MANAGEMENT AGENCY
1131 SAN FELIPE RD, HOLLISTER, CA 95023

Project

NEW BEHAVIORAL HEALTH CENTER

Sheet Title

PLANTING PLAN

Client Project Number: 18.092 Client Proj. #

Scale: As Shown
Drawn By: JL
Checked By: MB
Issue Date: 10/30/18
Revit Version:

Sheet 7 of 200

F:\PRODUCTION\Projects\2018\18.092\CAD\18092_L1-Planting Plan.dwg 10/30/2018

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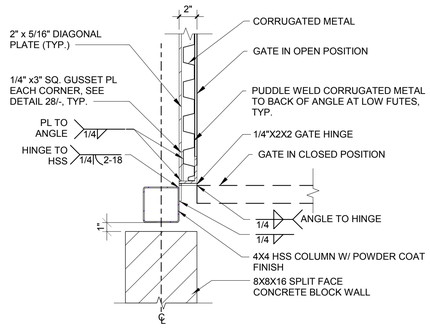
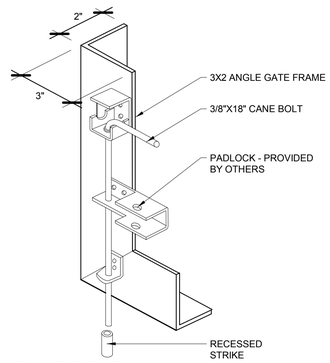
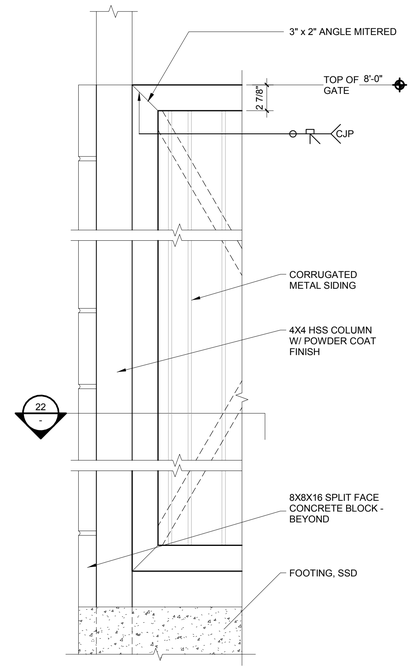


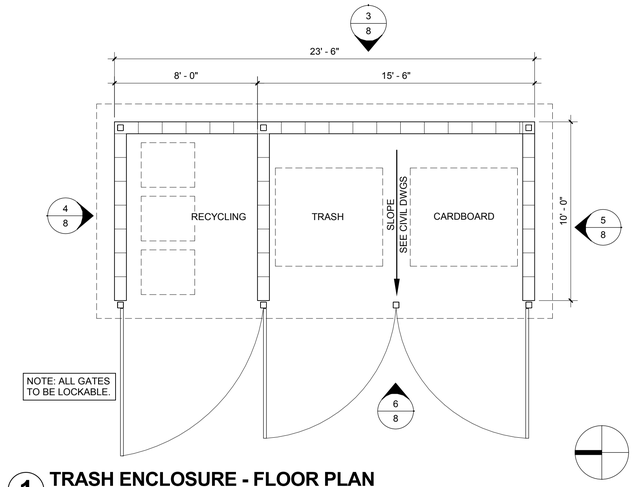
10 GATE PLAN VIEW DETAIL
1 1/2" = 1'-0"



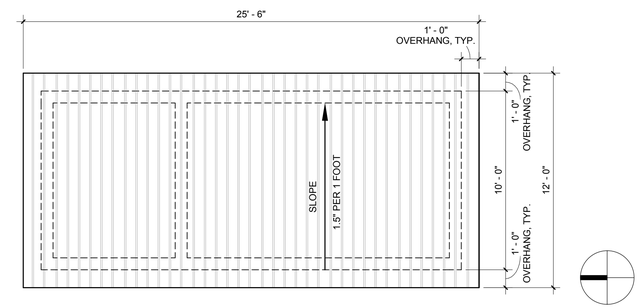
7 CANE BOLT
1 1/2" = 1'-0"



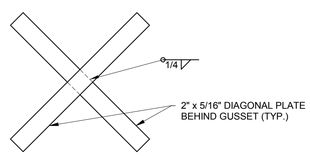
9 TRASH ENCLOSURE GATE ELEVATION
1 1/2" = 1'-0"



1 TRASH ENCLOSURE - FLOOR PLAN
1/4" = 1'-0"



2 TRASH ENCLOSURE - ROOF PLAN
1/4" = 1'-0"



8 BRACE CROSS DETAIL
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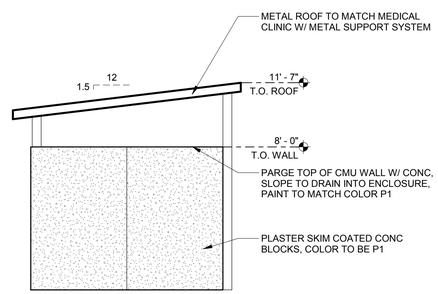

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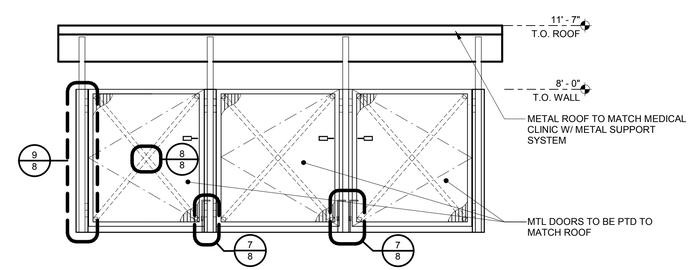

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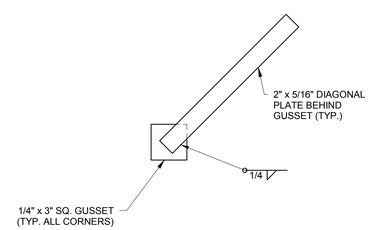

16 BRACE DETAIL AT GUSSET
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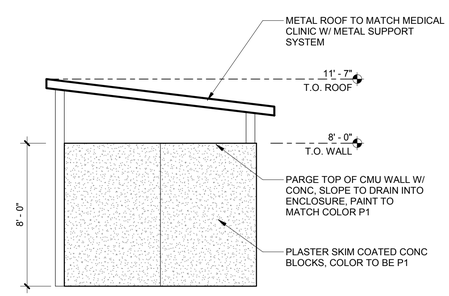

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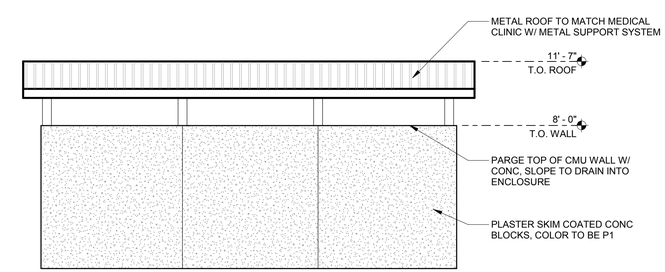

3 TRASH ENCLOSURE - EAST ELEVATION
1/4" = 1'-0"

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Facility
SAN BENITO COUNTY RESOURCE MANAGEMENT AGENCY
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Project
NEW BEHAVIORAL HEALTH CENTER

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8
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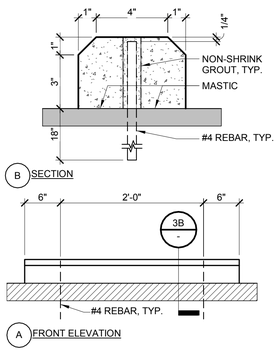
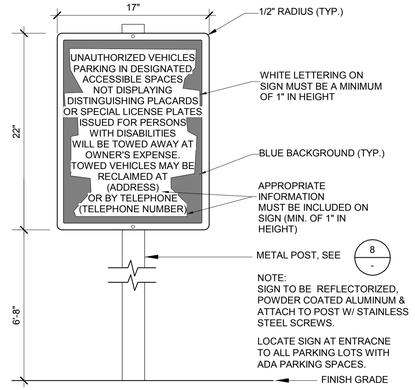


13 WHEEL STOP
3" = 1'-0"



9 ADA PARKING LOT SIGN
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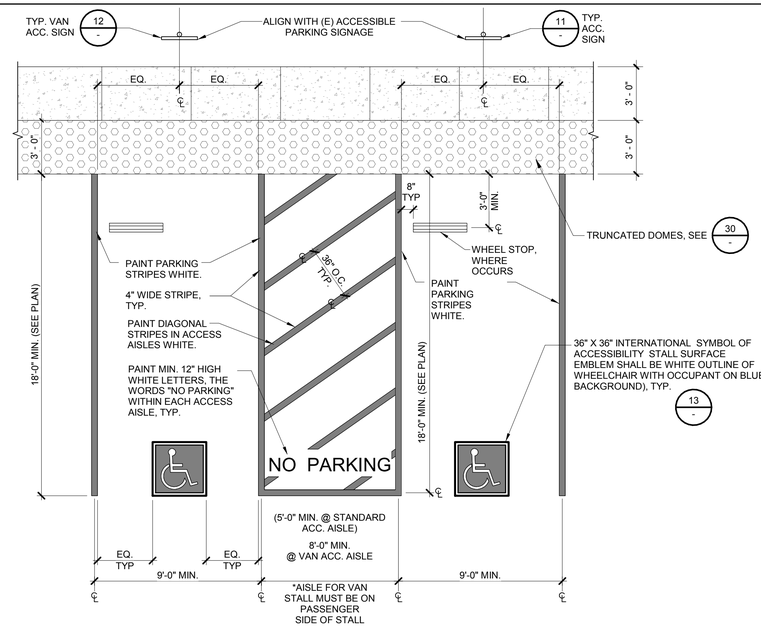

NOTE:

1. PAINT ALL STRIPING & SURFACE EMBLEM WITH BLUE & WHITE TRAFFIC PAINT.
2. MAX. SURFACE SLOPE OF PARKING SPACE(S) AND ACCESS AISLE(S) MAY NOT EXCEED 1:50 (2%) IN ANY DIRECTION.
3. CURB RAMPS, WHERE USED MAY NOT ENCROACH INTO REQUIRED DIMENSIONS OF DISABLE PARKING SPACES OR ADJACENT ACCESS AISLES.
4. MIN. 98" CLEARANCE SHALL BE PROVIDE AT VAN ACCESSIBLE PARKING SPACE AND ALONG AT LEAST ONE VEHICLE ACCESS ROUTE TO SUCH SPACES FROM SITE ENTRANCE(S) AND EXIT(S).

6 TYP. ACCESSIBLE PARKING SPACES
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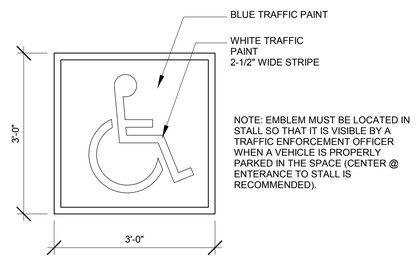

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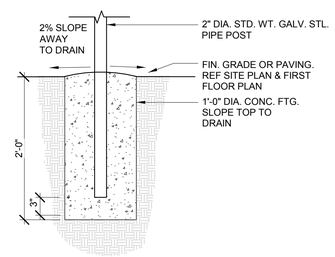

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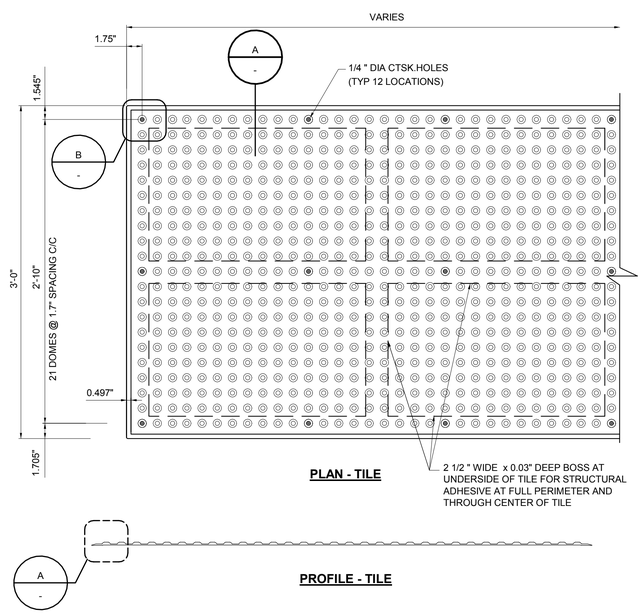

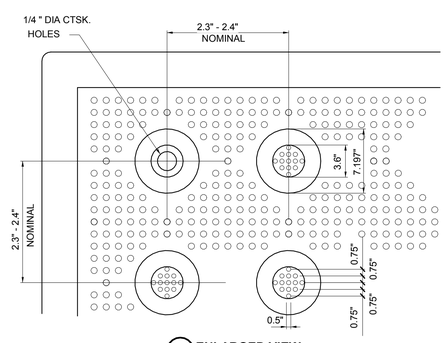

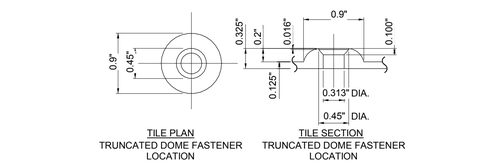

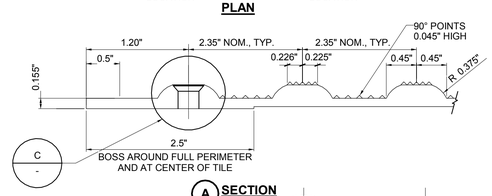

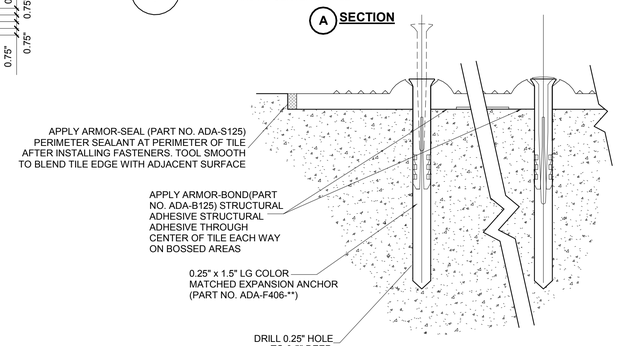

NOTE: SEE CIVIL DRAWINGS FOR ADDITIONAL INFORMATION

20 TRUNCATED DOMES
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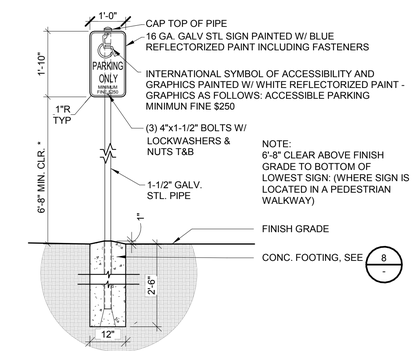

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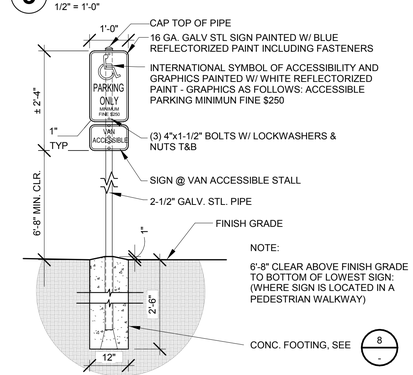

4 VAN ACCESSIBLE SIGN
1/2" = 1'-0"

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Facility
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1131 SAN FELIPE RD, HOLLISTER, CA 95023

Project
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Sheet
9
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10

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AERIAL

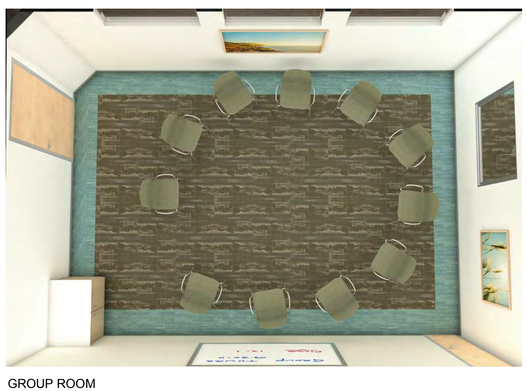
REAR ENTRANCE AT STAFF BREAK ROOM

MAIN ENTRANCE

PATIENT HALLWAY

PATIENT LOBBY / WAITING AREA

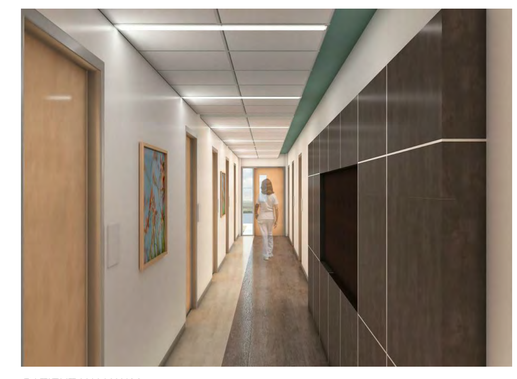
PATIENT LOBBY / WAITING AREA



GROUP ROOM

CLINICIAN OFFICE

STAFF CORRIDOR AT INTERIOR COURTYARD



PATIENT HALLWAY

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SAN BENITO COUNTY RESOURCE MANAGEMENT AGENCY
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Project

NEW BEHAVIORAL HEALTH CENTER

Sheet Title

PROPOSED BUILDING IMAGES

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APPENDIX B

GEOTECHNICAL STUDY

GEOTECHNICAL ENGINEERING STUDY
SAN BENITO COUNTY BEHAVIORAL HEALTH BUILDING
SAN FELIPE ROAD (APNs: 051-110-030 & 051-110-031)
HOLLISTER, CALIFORNIA

September 12, 2018

Prepared for

Mr. Adam Goldstone, R.A.
San Benito County Resource Management Agency
2301 Technology Parkway
Hollister, CA 95023

Prepared by

Earth Systems Pacific
500 Park Center Drive, Suite 1
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September 12, 2018 File No.: 302339-001

Mr. Adam Goldstone, R.A.
San Benito County Resource Management Agency
2301 Technology Parkway
Hollister, CA 95023

PROJECT: SAN BENITO COUNTY BEHAVIORAL HEALTH BUILDING
SAN FELIPE ROAD (APNs 051-110-030 & 051-110-031)
HOLLISTER, CALIFORNIA

SUBJECT: Geotechnical Engineering Study

REF.: Proposal for Geotechnical Engineering Study, San Benito County Behavioral Health Building, San Felipe Road (APNs 051-110-030 & 051-110-031), Hollister, California, by Earth Systems Pacific, August 7, 2018.

Dear Mr. Adam Goldstone:

In accordance with your authorization of the above referenced proposal, this geotechnical engineering study has been prepared by Earth Systems Pacific (Earth Systems) for use in the development of plans and specifications for the proposed building in Hollister, California. The conclusions and recommendations presented herein are based on our understanding of the currently proposed development, a review of the subsurface conditions revealed by the soil borings advanced as a part of this investigation, the results of laboratory tests and our engineering analysis.

We appreciate the opportunity to assist you on this project. Should you have any questions regarding the contents of this report, please contact the undersigned.

Sincerely,

Earth Systems Pacific

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TABLE OF CONTENTS

Page

1.0 INTRODUCTION 1
Site Setting 1
Site Description 1
Project Description 1
Scope of Services 1
2.0 GEOLOGIC SETTING 2
Regional Geology 2
Seismic Setting 2
3.0 FIELD INVESTIGATION 3
Subsurface Exploration 3
Subsurface Profile 4
4.0 DATA ANALYSIS 4
Subsurface Soil Classification 4
Seismic Design Parameters 4
5.0 CONCLUSIONS 5
General 5
Site Preparation and Grading 5
Soil Expansion Potential 6
Foundations 6
Groundwater 6
Seismicity 7
Soil Corrosivity 7
6.0 RECOMMENDATIONS 7
Site Preparation and Grading 7
Foundations 10
Retaining Walls 10
Exterior Flatwork 12
Flexible Pavement Sections 12
Rigid Pavement Sections 13
Utility Trench Backfills 14
Surfacewater Drainage Management and Finish Improvements 15
Geotechnical Observation and Testing 15
7.0 CLOSURE 17

TABLE OF CONTENTS
(Continued)

FIGURES

Figure 1 – Site Location Map
Figure 2 – Site Plan

APPENDIX A

Boring Logs

APPENDIX B

Laboratory Test Results

1.0 INTRODUCTION

This report presents the results of the geotechnical engineering study performed by Earth Systems Pacific (Earth System), for the proposed building to be constructed off San Felipe Road in Hollister, California. The attached Site Location Map Figure 1, shows the general location of the site and the attached Site Plan, Figure 2, shows the location of the borings advanced at the site as part of this investigation.

Site Setting

The subject property is trapezoidal-shaped and located at 1180 Riverside Road in Hollister, California (APNs 051-110-030 and 051-110-031). The middle portion of the site has a latitude of 36.8729°N and a longitude of 121.3979°W (See Figure 1).

Site Description

The site is located on the east side of San Felipe Road, approximately 600 feet east of the intersection of Park Center Drive and San Felipe Road in Hollister, California. The project site is currently a square-shaped vacant lot as shown on the attached Site Plan (Figure 2).

Project Description

Based on a review of the conceptual site plan prepared by Hibser Yammauchi Architects, Inc., it is our understanding that the planned construction will consist of a light-frame structure with a crawl space. The subgrade area below the structure will be covered with a thin concrete slab (rat slab). Other planned site improvements will include concrete flatwork, landscape areas, and parking spaces. The building will be served by municipal utilities.

Scope of Services

The scope of work for the geotechnical engineering study included general site reconnaissance, subsurface exploration, laboratory testing, engineering evaluation and analysis of the data collected by Earth Systems, and preparation of this report. The analysis and engineering recommendations presented in the following sections of this report are based on our understanding of the proposed development at the subject site and our experience with projects of a similar nature.

The report and recommendations are intended to comply with the considerations of Section 1803 of the California Building Code (CBC), 2016 Edition, and common geotechnical engineering practice in this area at this time under similar conditions.

Preliminary geotechnical recommendations for site preparation and grading, foundations, slabs-on-grade, exterior flatwork, utility trench backfill, site drainage management, and geotechnical observation and testing are presented to guide the development of project plans and specifications. It is our intent that this report be used by the client to form the geotechnical basis of the design of the project as described herein, and in the preparation of plans and specifications.

Detailed evaluation of the site geology and potential geologic hazards, and analyses of the soil for infiltration rates, mold or other microbial content, asbestos, radioisotopes, hydrocarbons, or other chemical properties are beyond the scope of this report. This report also does not address issues in the domain of contractors such as, but not limited to, site safety, loss of volume due to stripping of the site, shrinkage of soils during compaction, excavatability, shoring, temporary slope angles, and construction means and methods. Ancillary features such as temporary access roads, fences, light poles, and non-structural fills are not within our scope and are also not addressed.

To verify that pertinent issues have been addressed and to aid in conformance with the intent of this report, it is requested that final grading and foundation plans be submitted to this office for review. In the event that there are any changes in the nature, design, or locations of improvements, or if any assumptions used in the preparation of this update report prove to be incorrect, the conclusions and recommendations contained herein should not be considered valid unless the changes are reviewed and the conclusions of this update report are verified or modified in writing by the geotechnical engineer. The criteria presented in this update report are considered preliminary until such time as they are verified or modified in writing by the geotechnical engineer in the field during construction.

2.0 GEOLOGIC SETTING

Regional Geology

A review of the geologic literature indicates that the site is underlain by Holocene younger flood-plain deposits (Qyfm) (Rosenberg, 1998).

Seismic Setting

The city of Hollister is located in Hollister Valley, a broad lowland basin at the southern end of the greater Santa Clara Valley that extends to southern San Francisco Bay. Hollister Valley is surrounded by coastal mountains including the Gavilian Range to the southwest, the Quien Sabe Range (part of the greater Diablo Range) to the east, and the Lomerias Muertas (or Flint Hills) and the more distant Santa Cruz Mountains to the northwest. The city was built on the elevated

river terraces of the San Benito River floodplainThe site is located within a seismically active area, but outside of Alquist-Priolo Earthquake Fault Zones. The city of Hollister was built across the fault line traces of Calaveras Fault Zone with the nearest trace located approximately 0.9 miles west of the site. The Sargent Fault zone runs through the Lomerias Muetas and is located approximately 2.2 miles northwest of the site. The San Andreas fault runs along the southern side of the San Juan Valley, crosses through the Hollister Hills along the northeastern flank of the Gavilian Range, and is located approximately 6.7 miles southwest of the site. The Zayante-Vergeles fault is a major northwest-striking structural element of the Santa Cruz Mountains and is located approximately 7.8 miles southwest of the site. Movement along these faults are largely responsible for the shape of the landscape, with movement pushing up the hills and mountains while the Hollister and San Juan valleys are sinking and filling with alluvial sediments.

Using information from recent earthquakes, improved mapping of active faults, and a new model for estimating earthquake probabilities, the 2014 Working Group on California Earthquake Probabilities updated the 30 years earthquake forecast for California. They concluded that there is a 72 percent probability (or likelihood) of at least one earthquake of magnitude 6.7 greater striking somewhere in the San Francisco Bay region before 2043. A summary of the significant faults in the near vicinity of the site and their respective potential moment magnitudes are listed below.

Major Active Faults

Fault	Distance from Site (miles)	Probability of $M_w \geq 6.7$ within 30 Years[1]
Calaveras	0.9 (W)	26%
Sargent	2.2 (NW)	1.1%
San Andreas	6.7 (SW)	33%
Zayante-Vergeles	7.8 (SW)	0.15%

[1] Working Group on California Earthquake Probabilities, 2014

3.0 FIELD INVESTIGATION

Subsurface Exploration

Our subsurface exploration program consisted of drilling three exploratory borings at the site on August 22, 2018 at the approximate locations shown on the Site Plan, Figure 2. The borings were drilled using a truck-mounted drilling rig equipped with 6-inch diameter solid stem augers and sampled to depths ranging from 5 to 30 feet below the ground surface (bgs).

The drilling process consisted of augering to the desired depth and upon reaching that depth, the augers were retrieved from the hole and a standard sampler connected to steel rods was lowered into the hole. The samplers were driven with a 140-pound, safety hammer falling about 30 inches per drop using a rope and cathead. The samplers were driven up to 18 inches and the hammer blows required to drive the samplers were recorded every six inches and are presented on the boring logs.

Our staff geologist supervised the drilling program, logged the soil conditions encountered in the borehole and collected representative samples for laboratory testing. Subsurface conditions revealed by our borings were described by our staff engineer. The borings were backfilled with lean cement grout. The boring logs show soil description including: color, major and minor components, USCS classification, changes in soil conditions with depth, moisture content, consistency/density, plasticity, sampler type, and sampling depths and laboratory test results. Copies of the boring logs advanced for this investigation are presented in Appendix A.

Subsurface Profile

A review of the logs of borings drilled at the site by Earth Systems, indicates the near surface soils consist of medium stiff to stiff, moist, fat clay extending to approximately 1½ to 2½ feet below the ground surface (bgs). Below the upper fat clayey soil, the borings encountered alternating layers of medium stiff to stiff lean clay with varying sand contents and loose to medium dense sandy soil with varying fines content to the maximum depths explored of 30 feet bgs.

Groundwater was not encountered during our subsurface exploration with one of our boring extending to a maximum depth of 30 feet bgs. According to the San Benito County Water District 2017 Annual Groundwater Report, depth to groundwater in the area of the site is reported to be at an elevation of 190 feet, or 65 feet bgs. It should be noted, however, that fluctuations in the level of subsurface water can occur due to variations in rainfall, and temperature, and groundwater levels should not be considered constant.

4.0 DATA ANALYSIS

Subsurface Soil Classification

Based on the data acquired during our subsurface investigation (See Appendix A), the site is assigned to Site Class D ("stiff soil") as defined by Table 20.3-1 of the ASCE 7-10.

Seismic Design Parameters

The following seismic design parameters represent the general procedure as outlined in Section 1613 of the CBC and in ASCE 7. The values determined below are based on the 2009 National Earthquake Hazard Reduction Program (NEHRP) maps and were obtained using the United States Geological Survey's Design Maps Web Application.

Summary of Seismic Parameters - CBC 2016
(Site Coordinates 36.8729°N, 121.3979°W)

Parameter	Design Value
Site Class	D
Mapped Short Term Spectral Response Parameter, (S_s)	2.23g
Mapped 1-second Spectral Response Parameter, (S_1)	0.85g
Site Coefficient, (F_a)	1.0
Site Coefficient, (F_v)	1.5
Site Modified Short Term Response Parameter, (S_{Ms})	2.23g
Site Modified 1-second Response Parameter, (S_{M1})	1.28g
Design Short Term Response Parameter, (S_{Ds})	1.48g
Design 1-second Response Parameter, (S_{D1})	0.85g

5.0 CONCLUSIONS

General

Based on the results of the field investigation and the laboratory testing program, in our opinion, the site is geotechnically suitable for the proposed building provided that the recommendations contained herein are implemented in the design and construction. The primary geotechnical concerns are the presence of highly expansive surface soils at the site. To reduce the shrinkage and swelling potential, special provisions as those outlined in the following sections of the report will be necessary.

Site Preparation and Grading

Grading plans were not available during the preparation of this report; however, it is anticipated that cuts and fills required to achieve the final pad grade will be on the order of approximately 5 feet to accommodate for the proposed crawl space under the building. The near surface clayey soils encountered at the site could become unstable with the addition of excessive amounts of water should the grading occur during wet weather conditions. Unstable soils hinder compactive effort and are inappropriate for placement of additional fill. Alternatives to correct instability include aeration to dry the soils, lime treatment, and the use of gravel or geotextiles as stabilizing measures. Recommendations for stabilization should be provided by the geotechnical engineer as needed during construction. Grading operations are discussed in detail in the *Recommendations* section of this report.

Soil Expansion Potential

A plasticity index test performed on a sample of the upper soils from the site resulted in a liquid limit (LL) of 55 and a plasticity index of (PI) of 30. These values indicate that the sample tested has a very high expansion potential. Soils with high shrinkage-swelling potential undergo pronounced volume changes with moisture content fluctuations and when constrained they could exert significant uplift forces on the overlying structures.

In our experience, the commonly used engineering measures used to minimize post-construction distress to lightly loaded structures overlying expansive soils include one or a combination of the following:

- Increase the depth of footings to act as a moisture cutoff barrier and extend the footings to depths where moisture fluctuations are anticipated to be less pronounced;
- Pre-expand clays by compacting them at a high degree of saturation and relative compaction in the range of 88 to 92 percent;
- Add a layer of non-expansive soil on top of the expansive soils and place lightly loaded structures on top of the non-expansive soil layer;
- Keep the soils moist until they are covered with concrete; and
- Manage surface water runoff and irrigation water in such a way that it does not have a chance to penetrate into the areas around the structures and the hardscape areas where it could result in creating pronounced moisture content fluctuations in soil.

Foundations

The proposed loads of the building and the associated retaining walls may be adequately supported on a conventional spread/strip footings. Details of the foundation recommendations are included in the following sections of the report.

Groundwater

Groundwater was not encountered during the subsurface exploration to the maximum depths explored. According to the San Benito County Water District 2017 Annual Groundwater Report, depth to groundwater in the area of the site is reported to be at an elevation of 190 feet, or 65 feet bgs. Variations in rainfall, temperature, and other factors may affect water levels, and therefore groundwater levels should not be considered constant; however, groundwater is not expected to have an adverse effect on the construction of the proposed building.

Seismicity

The Hollister area is recognized by geologists and seismologists as one of the most seismically active regions in the United States. The significant earthquakes in this area are generally associated with crustal movement along well-defined, active fault zones which regionally trend in a northwesterly direction. Although research on earthquake prediction has greatly increased in recent years, seismologists cannot predict when and where an earthquake will occur. Nevertheless, based on current technology, it is reasonable to assume that the proposed development will be subjected to at least one moderate to severe earthquake during its lifetime. During such an earthquake, the danger from fault offset on the site is low, but strong shaking of the site is likely to occur and, therefore, the project should be designed in accordance with the seismic design provisions of the latest California Building Code. The California Building Code seismic design parameters are not intended to prevent structural damage during an earthquake, but to reduce damage and minimize loss of life.

Soil Corrosivity

The corrosivity analysis indicated that based on resistivity measurement, the two samples tested is classified as "moderately corrosive to corrosive", so measures should be taken to protect all buried iron or steel structures and metallic piping. The chloride ion concentrations were determined to be insufficient to attack steel embedded in concrete mortar coating or to damage concrete structures and cement mortar-coated steel. The pH of the samples tested were 8.19 and 8.47, which does not present a corrosion problem for buried iron, steel, mortar-coated steel and reinforced concrete structures. The redox potentials are indicative of aerobic soil conditions. Please refer to the Corrosivity Analysis by CERCO Analytical in the attached laboratory test results for the complete analysis.

6.0 RECOMMENDATIONS

Site Preparation and Grading

General Site Preparation

1. Site clearing, placement of fill, and grading operations at the site should be conducted in accordance with the recommendations provided in this report. Compaction recommendations for site grading can be found later in this section.

2. The site should be prepared for grading by removing vegetation, debris, and other potentially deleterious materials from areas to receive improvements. Existing utility lines that will not be serving the proposed project should be either removed or abandoned. The appropriate method of utility abandonment will depend upon the type and depth of the utility. Recommendations for abandonment can be made as necessary.

3. Due to potential ground disturbance from demolition activities, a program of over-excavation and backfilling may be required. Loose, disturbed soil within the building areas should be cleaned out (excavated) to competent, undisturbed soil. The exposed ground should be inspected by the geotechnical engineer to determine the need for additional excavation work.

4. Ruts or depressions resulting from the removal of utilities, fill soils, tree root systems, and abandoned and/or buried structures, buried debris, and remnants of the former use of the site that are discovered during site grading should be removed and properly cleaned out down to undisturbed native soil. The bottoms of the resulting depressions should be scarified and cross-scarified at least 8 inches in depth, moisture conditioned and recompacted. The depressions should then be backfilled with approved, compacted, moisture conditioned structural fill, as recommended in other sections of this report.

5. Site clearing and backfilling operations should be conducted under the field observation of the geotechnical engineer.

6. The geotechnical engineer should be notified at least 48 hours prior to commencement of grading operations.

Compaction Recommendations

1. In general, the underlying native soil should be scarified at least 8 inches, moisture conditioned and recompacted to the recommended relative compaction presented below, unless noted otherwise. This scarification operation should be performed at locations designated for proposed structural fill, exterior flatwork, foundations, and pavement areas.

2. Recompacted native soils should be compacted to between 88 and 92 percent of maximum dry density at a moisture content at least 3 percentage points above optimum.

3. In areas to be paved, the upper 8 inches of subgrade soil should be compacted to a minimum of 88 to 92 percent of maximum dry density at a moisture content at least 3 percentage points over optimum. The aggregate base courses should be compacted to a minimum 95 percent of maximum dry density at a moisture content that is slightly over optimum. The subgrade and base should be firm and unyielding when proof-rolled with heavy, rubber-tired equipment prior to paving. The pavement subgrade soils should be periodically moistened as necessary prior to placement of the aggregate base to maintain the soil moisture content near optimum.

Fill Recommendations

1. The on-site native and fill soils that are free of debris, excessive amounts of organics and other deleterious material, may be used as structural fill; however, because these soils are deemed to have high shrinkage/swelling potential, they should not be placed within the upper 18 inches of the subgrade beneath the exterior flatwork.

2. If fill is to be imported for general use at the site as non-expansive imported material, the soil should meet the following criteria:

   a. Be coarse grained and have a plasticity index of less than 15 and/or an expansion index less than 20;
   b. Be free of organics, debris or other deleterious material;
   c. Have a maximum rock size of 3 inches; and
   d. Contain sufficient clay binder to allow for stable foundation and utility trench excavations.

3. A representative sample of the proposed imported soils should be submitted at least three days before being transported to the site for evaluation by the geotechnical engineer. During importation to the site the material should be further reviewed on an intermittent basis.

Crawlspace Excavation/ Temporary Cuts

1. The proposed crawlspace excavation should be completed in accordance with CAL-OSHA requirements. Based on the soil profile identified in the boring log, the site soil is classified as Type C. Temporary construction slopes should not be graded steeper that 1½ to 1 (horizontal to vertical). Steeper slopes will require temporary shoring. If a construction ramp is excavated leading into the basement under the structural area, it should be backfilled in lifts compacted to a minimum of 90 percent relative compaction when it is later backfilled. Similarly, if the ramp is excavated in a planter area, that area should be backfilled in lifts with a sufficient amount of compaction effort to also achieve 90 percent compaction.

2. Vertical cut portions of excavations greater than 5 feet in height should be shored. Typical shoring systems include steel soldier beam and wood lagging, soil nailing and sheet piling. Soldier beam and lagging is the most common. Temporary shoring should be designed for an equivalent fluid pressure of 40 psf for the active case. A passive equivalent fluid pressure of 300 psf may be used for the shoring foundation.

Foundations

1. The proposed building may be supported by conventional strip/spread footings bearing on the stiff native or engineered fill material. The footings should have minimum depths of 24 inches below the lowest adjacent grade. The footing excavations should be observed by the geotechnical engineer prior to placement of formwork or reinforcement.

2. The footings should be designed using a maximum allowable bearing capacity of 1,500 psf dead plus live load. This value may be increased by one-third when transient loads such as wind or seismicity are included.

3. Resistance to lateral loads should be calculated based on a passive equivalent fluid pressure of 250 pcf and a friction factor of 0.30. Passive and frictional resistance can be combined in the calculations without reductions. These values are based on the assumption that backfill adjacent to foundations is properly compacted. The upper 12 inches of embedment should be disregarded.

4. In areas where moisture transmitted from the subgrade would be undesirable, a vapor retarder should be utilized beneath the ratslab. The vapor retarder should comply with ASTM Standard Specification E 1745-17 and the latest recommendations of ACI Committee 302. The vapor retarder should be installed in accordance with ASTM Standard Practice E 1643-18a. Care should be taken to properly lap and seal the vapor retarder, particularly around utilities, and to protect it from damage during construction.

Retaining Walls

1. The foundations of the retaining walls can be combined with the foundations of the building.

2. Design criteria for retaining walls to laterally retain the on-site soils are presented below:

   At-rest equivalent fluid pressure (level backfill).....70 pcf

   The above earth pressures are for level backfill conditions. For sloping backfill, the above pressures should be increased by 3 pcf per every 5 degree increase in the backfill slope angle. No surcharge loads are taken into consideration in the above provided equivalent fluid pressures.

3. Surcharge loads applied at the surface on the backfill should be considered to be a uniformly distributed horizontal load. This load would equal to approximately 1/2 of the uniform surcharge load for "at-rest" conditions, respectively.

4. If seismic forces are to be considered in the retaining wall design, the seismic loading on the retaining walls may be taken as a rectangular pressure distribution equal to 10H, where H is the height of the retained soil. The seismic pressure should be applied uniformly on the back of the wall along the height of the retained soil.

5. In order to provide proper drainage, an import drain rock blanket should be placed behind the retaining walls. The drain rock blanket should be at least 12 inches wide and extend along the entire length of the retaining wall. The drain rock blanket should extend from the top of the footing upward to within 2 feet of the top of the wall backfill. The upper 2 feet of backfill over the drainage medium should consist of native soil, compacted to at least 90 of maximum dry density, to reduce the flow of surface drainage into the wall drain system. The drain rock blanket should be separated from the backfill soil using a permeable synthetic fabric conforming to Caltrans Standard Specifications, Section 88-1.02B, Class A. Permeable material should conform to Section 68-2.02F(3), Class 2, of the Caltrans Standard Specifications. Manufactured synthetic drains such as Miradrain or Enkadrain may be used in lieu of drain rock and should be installed in accordance with the recommendations of the manufacturer. A 4-inch diameter, perforated/horizontal pipe should be placed at the bottom of the drain blanket/synthetic drains with perforations down. The pipe should discharge to an approved discharge point beyond and down slope of the wall. Provisions should be made to remove any surface water or water collected behind the retaining walls.

6. The architect/engineer should bear in mind that retaining walls by their nature are flexible structures, and the flexibility can often cause cracking in surface coatings. Where walls are to be plastered or will otherwise have a finish surface applied, this flexibility should be considered in determining the suitability of the surfacing material, spacing of horizontal and vertical joints, connections to structures, etc.

7. Retaining walls facing habitable areas, or areas where intrusion of moisture would be undesirable, should be waterproofed in accordance with the specifications of the architect/engineer.

8. Retaining walls should be backfilled with either native soil or clean imported granular material. The backfill material should be placed in thin, moisture conditioned lifts, compacted in accordance with the recommendations provided in the Site Preparation and Grading section of this report.

9. Long-term settlement of properly compacted sand or gravel retaining wall backfill should be assumed to be about ½ percent of the depth of the backfill. Long-term settlement of properly compacted clayey retaining wall backfill should be assumed to be about 1 percent of the depth of the backfill. Improvements constructed near the tops of retaining walls should be designed to accommodate the estimated settlement.

Exterior Flatwork

1. Exterior flatwork that will not experience vehicular traffic should have a minimum thickness of 4 full inches and should be underlain by a minimum of 12-inch layer of compacted non-expansive material such as clean sand or aggregate base.

2. Assuming that movement (i.e., 1/4-inch or more) of exterior flatwork beyond the structure is acceptable, the flatwork should be designed to be independent of the building foundations. The flatwork should not be doweled to foundations, and a separator should be placed between the two.

3. To reduce shrinkage cracks in concrete, the concrete aggregates should be of appropriate size and proportion, the water/cement ratio should be low, the concrete should be properly placed and finished, contraction joints should be installed, and the concrete should be properly cured. Concrete materials, placement and curing specifications should be at the direction of the designer; ACI 302.1R-04 and ACI 302.2R-04 are suggested as resources for the designer in preparing such specifications.

Flexible Pavement Sections

1. The asphalt pavement design sections were developed using the State of California Highway Design Manual, Chapter 630-Flexible Pavement. An R-Value of 10 was determined based upon laboratory testing. Determination of the appropriate Traffic Index (TI) for each area to be paved is the province of the design engineer. The calculated Asphalt Concrete (AC) and aggregate base (AB) thicknesses are for compacted subgrade material. Normal Caltrans construction tolerances should apply. The aggregate base should conform to Caltrans Class 2.

Summary of Pavement Sections
R-Value of 10

Traffic Index	Asphaltic Concrete (AC) inches	Class II Aggregate Base (AB) inches
4	3	6
4.5	3	7½
5.0	3½	8
5.5	3½	10
6.0	4	10½
6.5	4	12½
7.0	4½	13½

2. The upper 8 inches of subgrade soil and the aggregate base courses be compacted to a minimum 95 percent of maximum dry density. The subgrade and base should be firm and unyielding when proof-rolled with heavy, rubber-tired equipment prior to paving. The pavement subgrade soils should be periodically moistened as necessary prior to placement of the aggregate base to maintain the soil moisture content near optimum.

3. Pavement longevity will be enhanced if the surface grade drains away from the edges of the pavement. Finished AC surfaces should slope toward drainage facilities at 2 percent where practicable, but in no case, should water be allowed to pond.

4. Cutoff walls below curbs and around landscape islands may be used to extend the life of the pavement by reducing irrigation water and runoff that seeps into the aggregate base. Where utilized, cutoff walls should extend through the aggregate base to penetrate a minimum of 3 inches into the subgrade soils.

5. To reduce migration of surface drainage into the subgrade, maintenance of the paved areas is critical. Any cracks that develop in the AC should be promptly sealed.

Rigid Pavement Sections

1. Rigid Pavements should have a minimum thickness of 6 full inches with a minimum compressive strength of 3,400 psi and should be reinforced as directed by the architect/engineer. Rigid pavements should be cast on a minimum 12-inch layer of compacted Class 2 aggregate base conforming with Section 26-1.02B of the Caltrans Standard Specifications.

2. The upper 8 inches of subgrade soil and the aggregate base courses be compacted to a minimum 95 percent of maximum dry density. The subgrade and base should be firm and unyielding when proof-rolled with heavy, rubber-tired equipment prior to paving. The pavement subgrade soils should be periodically moistened as necessary prior to placement of the aggregate base to maintain the soil moisture content near optimum.

3. If the rigid pavements are to be subjected to traffic, such as where the rigid pavement is adjacent to flexible pavement, it is recommended that the thickness of the edges be increased by 20 percent and tapered back to normal slab thickness over a distance of 10 times the slab thickness.

Utility Trench Backfills

1. A select, noncorrosive, granular, easily compacted material should be used as bedding and shading immediately around utility pipes. The site soils may be used for trench backfill above the select material.

2. Trench backfill in the upper 8 inches of subgrade beneath pavement areas should be compacted to a minimum of 92 percent of maximum dry density at a moisture content at least 3 percentage points above optimum moisture content and the aggregate base courses should be compacted to a minimum 95 percent of maximum dry density at a moisture content slightly over optimum. Trench backfill in other areas should be compacted to a minimum of 90 percent of maximum dry density at a moisture content at least 3 percentage points above optimum moisture content. Jetting of utility trench backfill should not be allowed.

3. Where utility trenches extend under perimeter foundations, the trenches should be backfilled entirely with approved fill soil compacted to a minimum of 90 percent of maximum dry density at a moisture content at least 3 percentage points above optimum moisture content. The zone of approved fill soil should extend a minimum distance of 2 feet on both sides of the foundation. If utility pipes pass through sleeves cast into the perimeter foundations, the annulus between the pipes and sleeves should be completely sealed.

4. Parallel trenches excavated in the area under foundations defined by a plane radiating at a 45-degree angle downward from the bottom edge of the footing should be avoided, if possible. Trench backfill within this zone, if necessary, should consist of Controlled Density Fill (Flowable Fill).

Surfacewater Drainage Management and Finish Improvements

1. Unpaved ground surfaces should be finish graded to direct surface runoff away from site improvements at a minimum 5 percent grade for a minimum distance of 10 feet. If this is not practical due to the terrain or other site features, swales with improved surfaces should be provided to divert drainage away from improvements. The landscaping should be planned and installed to maintain proper surface drainage conditions.

2. Runoff from driveways, roof gutters, downspouts, planter drains and other improvements should be collected in a closed pipe system which discharge in a non-erosive manner away from foundations, pavements, and other improvements.

3. Stabilization of surface soils, particularly those disturbed during construction, by vegetation or other means during and following construction is essential to protect the site from erosion damage. Care should be taken to establish and maintain vegetation.

4. Raised planter beds adjacent to foundations should be provided with sealed sides and bottoms so that irrigation water is not allowed to penetrate the subsurface beneath foundations. Outlets should be provided in the planters to direct accumulated irrigation water away from foundations.

5. Open areas adjacent to exterior flatwork should be irrigated or otherwise maintained so that constant moisture conditions are created throughout the year. Irrigation systems should be controlled to the minimum levels that will sustain the vegetation without saturating the soil.

6. Bio-retention swales constructed within 10 feet or less from the building foundation should be lined with a 20-mil pond liner.

Geotechnical Observation and Testing

1. It must be recognized that the recommendations contained in this report are based on a limited number of borings and rely on continuity of the subsurface conditions encountered.

2. It is assumed that the geotechnical engineer will be retained to provide consultation during the design phase, to interpret this report during construction, and to provide construction monitoring in the form of testing and observation.

3. Unless otherwise stated, the terms "compacted" and "recompacted" refer to soils placed in level lifts not exceeding 8 inches in loose thickness and compacted to a minimum of 90 percent of maximum dry density. The standard tests used to define maximum dry density and field density should be ASTM D 1557-12 and ASTM D 6938-17, respectively, or other methods acceptable to the geotechnical engineer and jurisdiction.

4. "Moisture conditioning" refers to adjusting the soil moisture to at least 3 percentage points above optimum moisture content prior to application of compactive effort. If the soils are overly moist so that they become unstable, or if the recommended compaction cannot be readily achieved, drying the soil to optimum moisture content or just above may be necessary. Placement of gravel layers or geotextiles may also be necessary to help stabilize unstable soils. The geotechnical engineer should be contacted for recommendations for mitigating unstable soils.

5. At a minimum, the following should be provided by the geotechnical engineer:
   - Review of final grading and foundation plans,
   - Professional observation during site preparation, grading, and foundation excavation,
   - Oversight of soil compaction testing during grading,
   - Oversight of soil special inspection during grading.

6. Special inspection of grading should be provided as per Section 1705.6 and 1705.8 and Table 1705.6 and 1705.8 of the CBC; the soils special inspector should be under the direction of the geotechnical engineer. In our opinion, the following operations should be subject to *continuous* soils special inspection:
   - Scarification and recompaction,
   - Fill placement and compaction,
   - Foundation pier drilling,
   - Over-excavation to the recommended depth.

7. In our opinion, the following operations may be subject to *periodic* soils special inspection; subject to approval by the Building Official:
   - Site preparation,
   - Compaction of utility trench backfill,
   - Removal of existing development features,
   - Compaction of subgrade and aggregate base,

- Observation of foundation excavations,
- Building pad moisture conditioning.

8. It will be necessary to develop a program of quality control prior to beginning grading. It is the responsibility of the owner, contractor, or project manager to determine any additional inspection items required by the architect/engineer or the governing jurisdiction.

9. The locations and frequencies of compaction tests should be as per the recommendations of the geotechnical engineer at the time of construction. The recommended test locations and frequencies may be subject to modification by the geotechnical engineer based upon soil and moisture conditions encountered, the size and type of equipment used by the contractor, the general trend of the compaction test results, and other factors.

10. A preconstruction conference among a representative of the owner, the geotechnical engineer, soils special inspector, the architect/engineer, and contractors is recommended to discuss planned construction procedures and quality control requirements. Earth Systems should be notified at least 48 hours prior to beginning grading operations.

7.0 CLOSURE

This report is valid for conditions as they exist at this time for the type of project described herein. Our intent was to perform the investigation in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing in the locality of this project at this time under similar conditions. No representation, warranty, or guarantee is either expressed or implied. This report is intended for the exclusive use by the client as discussed in the Scope of Services section. Application beyond the stated intent is strictly at the user's risk.

If changes with respect to the project type or location become necessary, if items not addressed in this report are incorporated into plans, or if any of the assumptions stated in this report are not correct, Earth Systems should be notified for modifications to this report. Any items not specifically addressed in this report should comply with the California Building Code and the requirements of the governing jurisdiction.

The preliminary recommendations of this report are based upon the geotechnical conditions encountered during the investigation and may be augmented by additional requirements of the architect/engineer, or by additional recommendations provided by this firm based on conditions exposed at the time of construction.

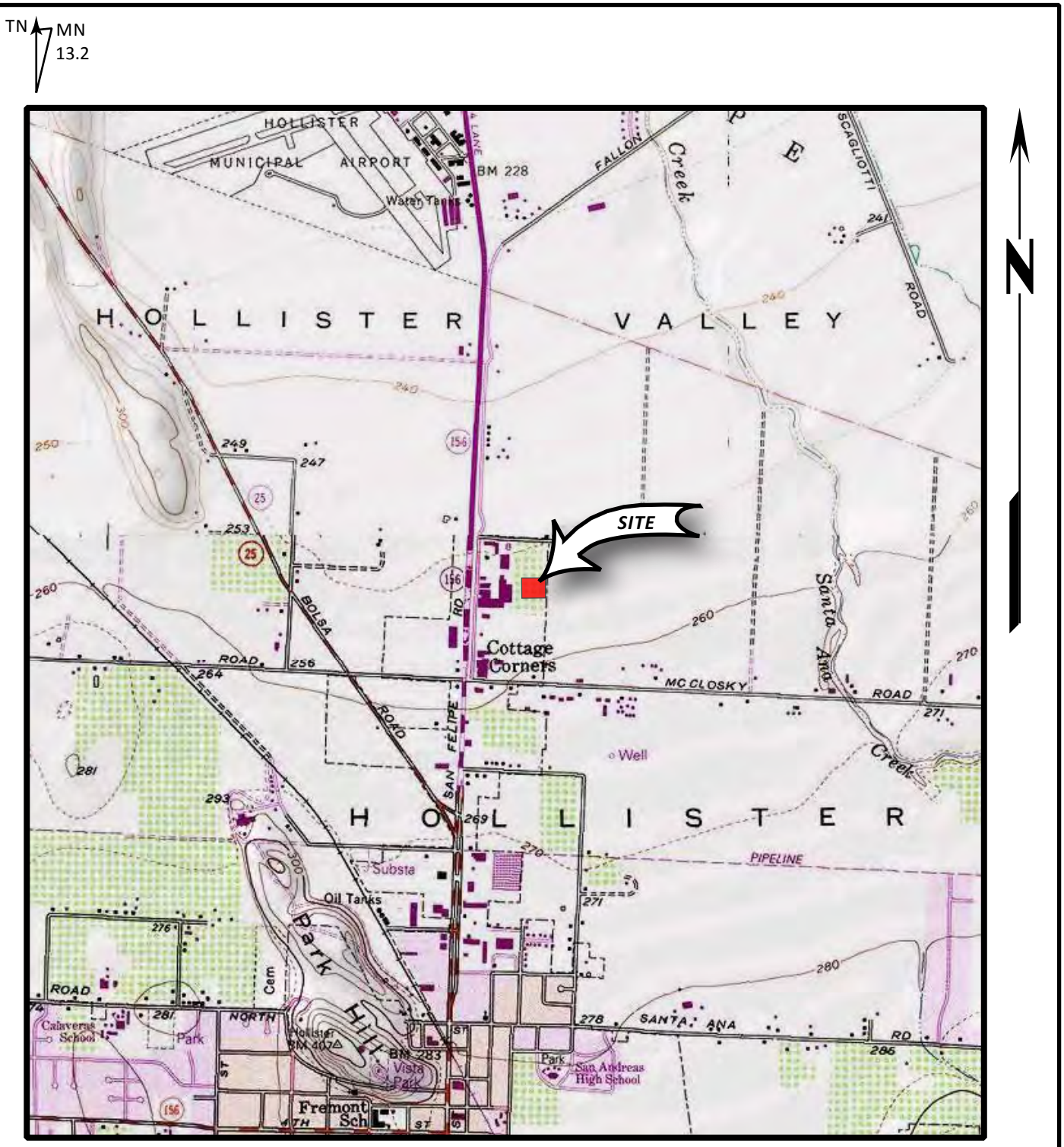
If Earth Systems is not retained to provide construction observation and testing services, it will not be responsible for the interpretation of the information by others or any consequences arising there from.

This document, the data, conclusions, and recommendations contained herein are the property of Earth Systems. This report should be used in its entirety, with no individual sections reproduced or used out of context. Copies may be made only by Earth Systems, the client, and his authorized agents for use exclusively on the subject project. Any other use is subject to federal copyright laws and the written approval of Earth Systems.

FIGURES

Figure 1 - Site Location Map
Figure 2 - Site Plan

Figure 1



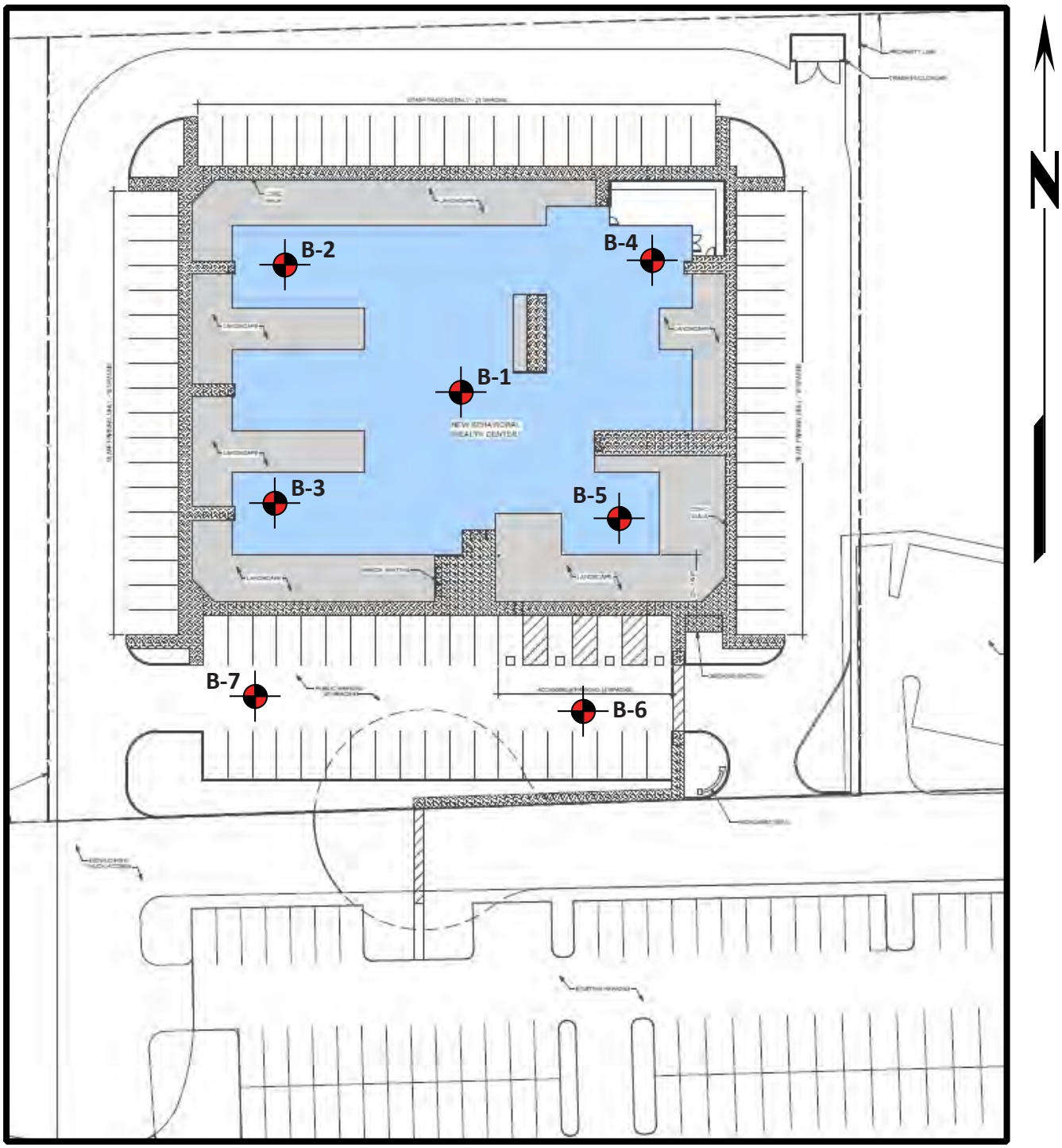
Approximate Scale 1:24,000

1 0 **Mile**

1 0 1 **Kilometer**

Earth Systems Pacific	Benito County Behavioral Health Building San Felipe Road (APNs: 051-110-030 & 051-110-031) Hollister, California	Site Locaon Map 302339-001

Figure 2



Approximate boring location

Base: HIBSER YAMAUCHI Architects, Inc. (2018)

Earth Systems Pacific	San Benito County Behavioral Health Building San Felipe Road (APNs 051-110-030 & 051-110-031) Hollister, California	Boring Locaon Map 302339-001

APPENDIX A

Boring Logs

Earth Systems Pacific

Boring No. 1

LOGGED BY: D. Teimoorian
DRILL RIG: Simco 2400 SK-1
AUGER TYPE: 6" Solid Stem

JOB NO.: 302339-001
DATE: 8/22/18

San Benito County Behavioral Health Building
San Felipe Road (APNs 051-110-030 & 051-110-031)
Hollister, California

DEPTH (feet)	USCS CLASS	SYMBOL	SOIL DESCRIPTION	SAMPLE DATA: INTERVAL (feet)	SAMPLE NUMBER	SAMPLE TYPE	DRY DENSITY (pcf)	MOISTURE (%)	BLOWS PER 6 IN.	POCKET PEN (t.s.f)
0	CH		FAT CLAY; stiff, dark brown, moist, few fine sand, desiccation cracks [recently disked]							
1										
2			[LL=55, PI=30]		1-1	■	100.0	13.8	7 6	
3	CL		LEAN CLAY with SAND; stiff, light brown, moist, fine sand, caliche stringers	1.5-3.0	1-2	■	106.6	11.8	11	
4									9 8	
5				3.5-5.0	1-3	■	99.4	8.5	10	
6	SM		SILTY SAND; loose, grayish brown, moist, fine sand							
7										
8										
9									4 4	
10			[%Sand=70, %Fines=30]	8.5-10.0	1-4	●			5	
11										
12										
13										
14									4 3	
	CL		LEAN CLAY; medium stiff, gray, brown, very moist							
15	SP-SM		POORLY graded SAND with SILT; loose, grayish brown, moist, fine sand	13.5-15.0	1-5	●			3	
16										
17	CL		LEAN CLAY with SAND; medium stiff, gray brown, moist, fine sand							
18										
19									4 4	
20				18.5-20.0	1-6	●			4	
21										
22	SP-SM		POORLY graded SAND with SILT; medium dense, grayish brown, moist, fine to medium sand							
23										
24									8 11	
25				23.5-25.0	1-7	●			11	
26										

LEGEND: ■ 2.5" Mod Cal Sample ○ Bulk Sample ▭ Shelby Tube ● SPT ▼ Groundwater

NOTE: This log of subsurface conditions is a simplification of actual conditions encountered. It applies at the location and time of drilling. Subsurface conditions may differ at other locations and times.

Earth Systems Pacific

Boring No. 1

LOGGED BY: D. Teimoorian
DRILL RIG: Simco 2400 SK-1
AUGER TYPE: 6" Solid Stem

JOB NO.: 302339-001
DATE: 8/22/18

San Benito County Behavioral Health Building
San Felipe Road (APNs 051-110-030 & 051-110-031)
Hollister, California

DEPTH (feet)	USCS CLASS	SYMBOL	SOIL DESCRIPTION	SAMPLE DATA: INTERVAL (feet)	SAMPLE NUMBER	SAMPLE TYPE	DRY DENSITY (pcf)	MOISTURE (%)	BLOWS PER 6 IN.	POCKET PEN (t.s.f)
27	SP-SM		POORLY graded SAND with SILT; medium dense, grayish brown, moist, fine to medium sand							
28										
29									6	
30									6	
				28.5-30.0	1-8	●			9	
31			Boring was terminated at 30 feet below the ground surface. Groundwater was not encountered.							
32										
33										
34										
35										
36										
37										
38										
39										
40										
41										
42										
43										
44										
45										
46										
47										
48										
49										
50										
51										
52										
53										

LEGEND: ▬ 2.5" Mod Cal Sample ◯ Bulk Sample ▭ 2.0" Mod Cal Sample ● SPT ▼ Groundwater

NOTE: This log of subsurface conditions is a simplification of actual conditions encountered. It applies at the location and time of drilling. Subsurface conditions may differ at other locations and times.

Earth Systems Pacific

Boring No. 2

LOGGED BY: D. Teimoorian
DRILL RIG: Simco 2400 SK-1
AUGER TYPE: 6" Solid Stem

JOB NO.: 302339-001
DATE: 8/22/18

San Benito County Behavioral Health Building
San Felipe Road (APNs 051-110-030 & 051-110-031)
Hollister, California

DEPTH (feet)	USCS CLASS	SYMBOL	SOIL DESCRIPTION	SAMPLE DATA: INTERVAL (feet)	SAMPLE NUMBER	SAMPLE TYPE	DRY DENSITY (pcf)	MOISTURE (%)	BLOWS PER 6 IN.	POCKET PEN (t.s.f)
0	CH		FAT CLAY; medium stiff, dark brown, moist, few fine sand, desiccation cracks [recently disked]	0.0-2.0	Bag A	○				
1										
2	CL		LEAN CLAY with SAND; medium stiff, gray brown, moist, fine sand, caliche stringers						4 5	
3				1.5-3.0	2-1	▬	93.5	12.7	5	
				2.0-5.0	Bag B	○			5 5	
4	SP-SM		POORL graded SAND with SILT; loose, grayish brown, moist, fine sand [Non-Plastic]	3.5-5.0	2-2	▬	99.0	10.5	5	
5										
6										
7										
8										
9									3 4	
10				8.5-10.0	2-3	●			4	
11										
12										
13										
14									3 3	
15	CL		LEAN CLAY; medium stiff, gray brown, very moist	13.5-15.0	2-4	●			2	1.50
16										
17										
18										
19	SM		SILTY SAND; medium dense, grayish brown, moist, fine sand [%Sand=66, %Fines=34]						4 5	
20				18.5-20.0	2-5	●			6	
21			Boring was terminated at 20 feet below the ground surface. Groundwater was not encountered.							
22										
23										
24										
25										
26										

LEGEND: ▬ 2.5" Mod Cal Sample ○ Bulk Sample ▭ Shelby Tube ● SPT ▼ Groundwater

NOTE: This log of subsurface conditions is a simplification of actual conditions encountered. It applies at the location and time of drilling. Subsurface conditions may differ at other locations and times.

Earth Systems Pacific

Boring No. 3

LOGGED BY: D. Teimoorian
DRILL RIG: Simco 2400 SK-1
AUGER TYPE: 6" Solid Stem

JOB NO.: 302339-001
DATE: 8/22/18

San Benito County Behavioral Health Building
San Felipe Road (APNs 051-110-030 & 051-110-031)
Hollister, California

DEPTH (feet)	USCS CLASS	SYMBOL	SOIL DESCRIPTION	SAMPLE DATA: INTERVAL (feet)	SAMPLE NUMBER	SAMPLE TYPE	DRY DENSITY (pcf)	MOISTURE (%)	BLOWS PER 6 IN.	POCKET PEN (t.s.f)
0	CH		FAT CLAY; medium stiff, dark brown, moist, few fine sand, desiccation cracks [recently disked]							
1										
2	CL		LEAN CLAY with SAND; medium stiff, gray brown, moist, fine sand, caliche stringers						7	
3				1.5-3.0	3-1	▬			9 9	
4									5 6	
5				3.5-5.0	3-2	▬	99.6	9.4	7	
6										
7	SP-SM		POORLY graded SAND with SILT; loose, grayish brown, moist, fine sand							
8										
9									3 3	
10				8.5-10.0	3-3	●			2	
11										
12										
13										
14			-few coarse sand						4 3	
15	CL		LEAN CLAY; medium stiff, gray brown, moist	13.5-15.0	3-4	●			3	
16			Boring was terminated at 15 feet below the ground surface. Groundwater was not encountered.							
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										

LEGEND: ▬ 2.5" Mod Cal Sample ◯ Bulk Sample ▭ Shelby Tube ● SPT ▼ Groundwater

NOTE: This log of subsurface conditions is a simplification of actual conditions encountered. It applies at the location and time of drilling. Subsurface conditions may differ at other locations and times.

Earth Systems Pacific

Boring No. 4

LOGGED BY: D. Teimoorian
DRILL RIG: Simco 2400 SK-1
AUGER TYPE: 6" Solid Stem

JOB NO.: 302339-001
DATE: 8/22/18

San Benito County Behavioral Health Building
San Felipe Road (APNs 051-110-030 & 051-110-031)
Hollister, California

DEPTH (feet)	USCS CLASS	SYMBOL	SOIL DESCRIPTION	SAMPLE DATA: INTERVAL (feet)	SAMPLE NUMBER	SAMPLE TYPE	DRY DENSITY (pcf)	MOISTURE (%)	BLOWS PER 6 IN.	POCKET PEN (t.s.f)
0	CH		FAT CLAY; medium stiff, dark brown, moist, few fine sand, desiccation cracks [recently disked]						5 7 10	
3	CL		LEAN CLAY with SAND; stiff, dark gray brown, moist, fine sand, caliche stringers	1.5-3.0	4-1	▬	98.8	16.7		
5				3.5-5.0	4-2	▬	112.7	7.8	5 9 9	
7	SP-SC		POORL graded SAND with CLAY; loose, grayish brown, moist, fine sand							
10				8.5-10.0	4-3	●			4 5 4	
13	CL		LEAN CLAY with SAND; medium stiff, gray brown, moist, fine sand							
15				13.5-15.0	4-4	●			3 4 3	
			Boring was terminated at 15 feet below the ground surface. Groundwater was not encountered							

LEGEND: ▬ 2.5" Mod Cal Sample ◯ Bulk Sample ▭ Shelby Tube ● SPT ▼ Groundwater

NOTE: This log of subsurface conditions is a simplification of actual conditions encountered. It applies at the location and time of drilling. Subsurface conditions may differ at other locations and times.

Earth Systems Pacific

Boring No. 5

LOGGED BY: D. Teimoorian
DRILL RIG: Simco 2400 SK-1
AUGER TYPE: 6" Solid Stem

JOB NO.: 302339-001
DATE: 8/22/18

San Benito County Behavioral Health Building
San Felipe Road (APNs 051-110-030 & 051-110-031)
Hollister, California

DEPTH (feet)	USCS CLASS	SYMBOL	SOIL DESCRIPTION	SAMPLE DATA: INTERVAL (feet)	SAMPLE NUMBER	SAMPLE TYPE	DRY DENSITY (pcf)	MOISTURE (%)	BLOWS PER 6 IN.	POCKET PEN (t.s.f)
0	CH		FAT CLAY; stiff, dark brown, moist, desiccation cracks [recently disked]						9 10	
3	CL		LEAN CLAY with SAND; stiff, gray brown, moist, fine sand, caliche stringers	1.5-3.0	5-1	▬	103.6	13.6	14	
5				3.5-5.0	5-2	▬	94.6	8.5	7 7 8	
7	SP-SC		POORLY graded SAND with CLAY; medium dense, grayish brown, moist, fine sand						5 5 7	
10	CL		LEAN CLAY; stiff, gray brown, moist	8.5-10.0	5-3	●				
14	SW-SM		WELL graded SAND with SILT; medium dense, gray brown, moist, fine to coarse sand [%Gravel=9, %Sand=84, %Fines=7]	13.5-15.0	5-4	●			7 6 10	
15			Boring was terminated at 15 feet below the ground surface. Groundwater was not encountered.							

LEGEND: ▬ 2.5" Mod Cal Sample ◯ Bulk Sample ▭ Shelby Tube ● SPT ▼ Groundwater

NOTE: This log of subsurface conditions is a simplification of actual conditions encountered. It applies at the location and time of drilling. Subsurface conditions may differ at other locations and times.

Earth Systems Pacific

Boring No. 6

LOGGED BY: D. Teimoorian
DRILL RIG: Simco 2400 SK-1
AUGER TYPE: 6" Solid Stem

JOB NO.: 302339-001
DATE: 8/22/18

San Benito County Behavioral Health Building
San Felipe Road (APNs 051-110-030 & 051-110-031)
Hollister, California

DEPTH (feet)	USCS CLASS	SYMBOL	SOIL DESCRIPTION	SAMPLE DATA: INTERVAL (feet)	SAMPLE NUMBER	SAMPLE TYPE	DRY DENSITY (pcf)	MOISTURE (%)	BLOWS PER 6 IN.	POCKET PEN (t.s.f)
0	CH		FAT CLAY; medium stiff, dark brown, moist, desiccation cracks [recently disked]	0.0-5.0	Bag C	○				
2	CL		LEAN CLAY with SAND; medium stiff to stiff, gray brown, moist, fine sand, caliche stringers							
5			Boring was terminated at 5 feet below the ground surface. Groundwater was not encountered.							

LEGEND: ■ 2.5" Mod Cal Sample ○ Bulk Sample ▭ Shelby Tube ● SPT ▼ Groundwater

NOTE: This log of subsurface conditions is a simplification of actual conditions encountered. It applies at the location and time of drilling. Subsurface conditions may differ at other locations and times.

Earth Systems Pacific

Boring No. 7

LOGGED BY: D. Teimoorian
DRILL RIG: Simco 2400 SK-1
AUGER TYPE: 6" Solid Stem

JOB NO.: 302339-001
DATE: 8/22/18

San Benito County Behavioral Health Building
San Felipe Road (APNs 051-110-030 & 051-110-031)
Hollister, California

DEPTH (feet)	USCS CLASS	SYMBOL	SOIL DESCRIPTION	SAMPLE DATA: INTERVAL (feet)	SAMPLE NUMBER	SAMPLE TYPE	DRY DENSITY (pcf)	MOISTURE (%)	BLOWS PER 6 IN.	POCKET PEN (t.s.f)
0	CH		FAT CLAY; stiff, dark brown, moist, desiccation cracks [recently disked]	0.0-5.0	Bag D	○				
2	CL		LEAN CLAY with SAND; stiff, dark gray brown, moist, fine sand, caliche stringers							
5			Boring was terminated at 5 feet below the ground surface. Groundwater was not encountered.							

LEGEND: ■ 2.5" Mod Cal Sample ○ Bulk Sample ▭ Shelby Tube ● SPT ▼ Groundwater

NOTE: This log of subsurface conditions is a simplification of actual conditions encountered. It applies at the location and time of drilling. Subsurface conditions may differ at other locations and times.

APPENDIX B

Laboratory Test Results

Earth Systems Pacific

San Benito County
Behavioral Health Building

302339-001

BULK DENSITY TEST RESULTS

ASTM D 2937-17 (modified for ring liners)

September 4, 2018

BORING NO.	DEPTH feet	MOISTURE CONTENT, %	WET DENSITY, pcf	DRY DENSITY, pcf
B1	2.0 - 2.5	13.8	113.9	100.0
B1	2.5 - 3.0	11.8	119.2	106.6
B1	4.5 - 5.0	8.5	107.8	99.4
B2	2.5 - 3.0	12.7	105.3	93.5
B2	4.5 - 5.0	10.5	109.4	99.0
B3	2.5 - 3.0	9.4	108.9	99.6
B4	2.5 - 3.0	16.7	115.3	98.8
B4	4.5 - 5.0	7.8	112.7	104.5
B5	2.5 - 3.0	13.6	117.7	103.6
B5	4.5 - 5.0	8.5	102.6	94.6

Earth Systems Pacific

San Benito County
Behavioral Health Building

302339-001

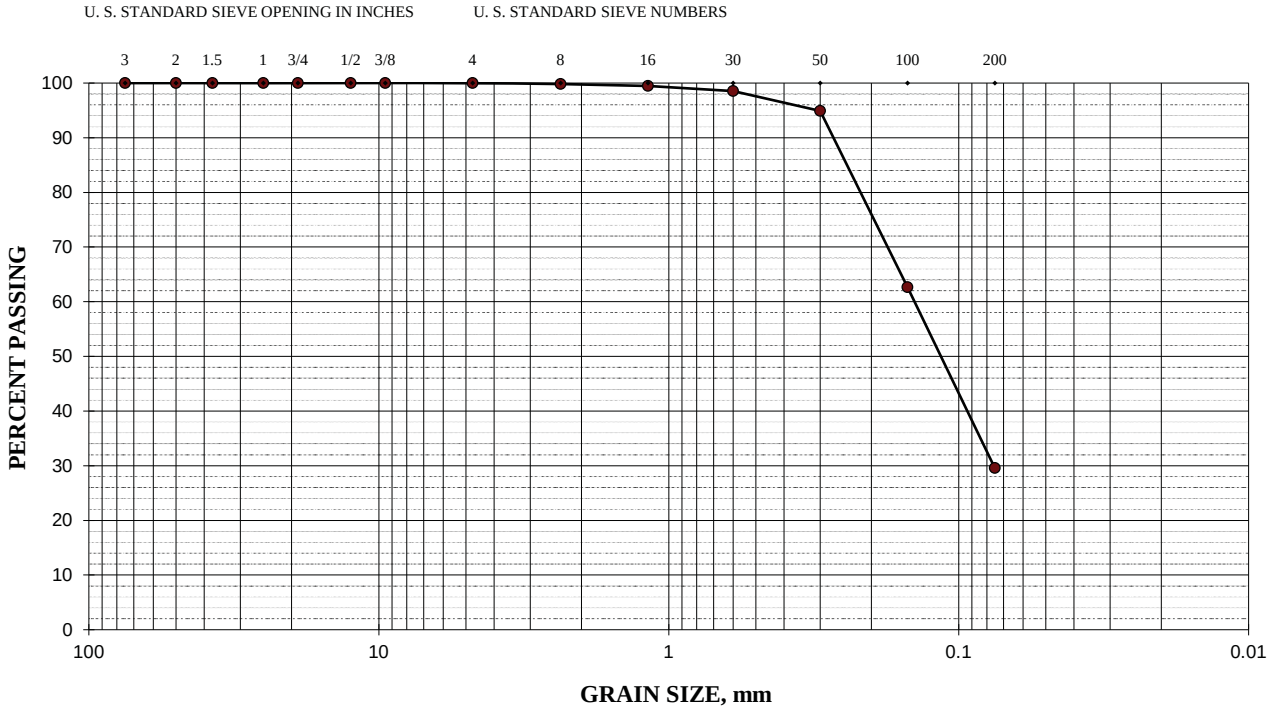
PARTICLE SIZE ANALYSIS

ASTM D 422-63/07; D 1140-17

Boring #B-1 @ 8.5 - 10.0'
Dark Gray Clayey Sand (SC)

September 4, 2018

Sieve size	% Retained	% Passing
3" (75-mm)	0	100
2" (50-mm)	0	100
1.5" (37.5-mm)	0	100
1" (25-mm)	0	100
3/4" (19-mm)	0	100
1/2" (12.5-mm)	0	100
3/8" (9.5-mm)	0	100
#4 (4.75-mm)	0	100
#8 (2.36-mm)	0	100
#16 (1.18-mm)	1	99
#30 (600-µm)	1	99
#50 (300-µm)	5	95
#100 (150-µm)	37	63
#200 (75-µm)	70	30



Earth Systems Pacific

San Benito County
Behavioral Health Building

302339-001

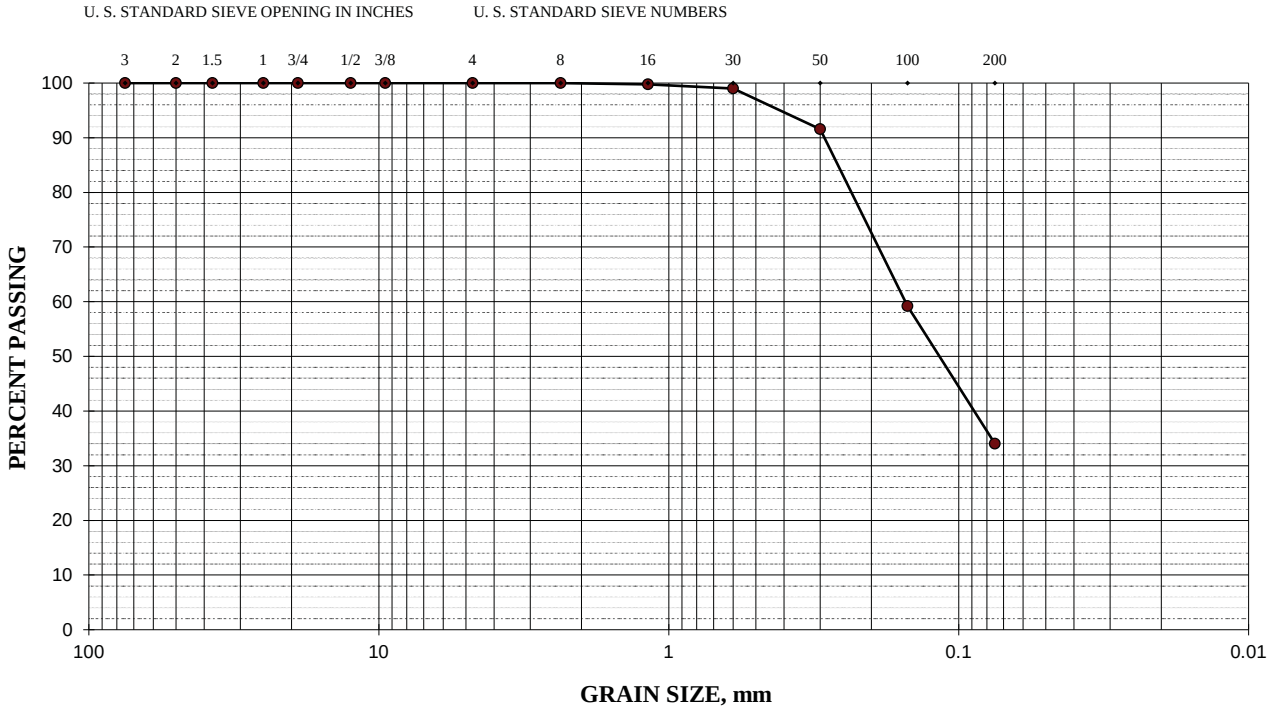
PARTICLE SIZE ANALYSIS

ASTM D 422-63/07; D 1140-14

Boring #B-2 @ 18.5 - 20.0'
Dark Gray Silty Sand (SM)

September 4, 2018

Sieve size	% Retained	% Passing
3" (75-mm)	0	100
2" (50-mm)	0	100
1.5" (37.5-mm)	0	100
1" (25-mm)	0	100
3/4" (19-mm)	0	100
1/2" (12.5-mm)	0	100
3/8" (9.5-mm)	0	100
#4 (4.75-mm)	0	100
#8 (2.36-mm)	0	100
#16 (1.18-mm)	0	100
#30 (600-µm)	1	99
#50 (300-µm)	8	92
#100 (150-µm)	41	59
#200 (75-µm)	66	34



Earth Systems Pacific

San Benito County
Behavioral Health Building

302339-001

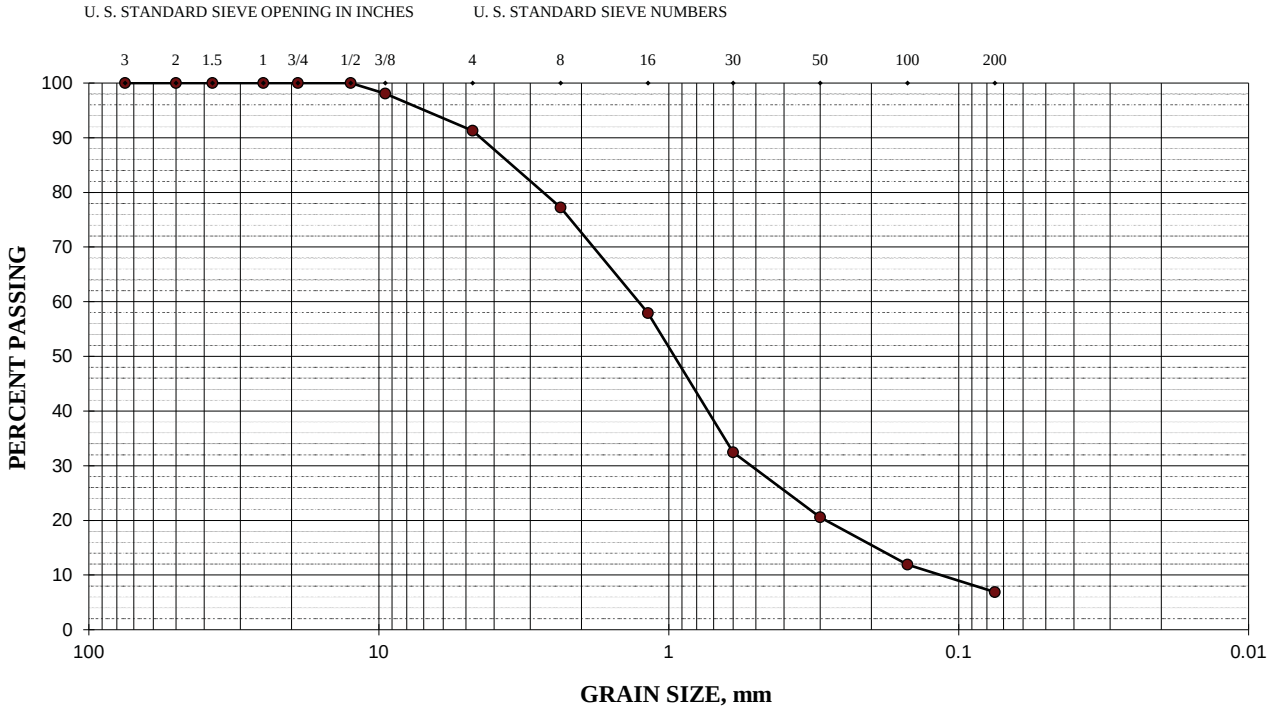
PARTICLE SIZE ANALYSIS

ASTM D 422-63/07; D 1140-17

Boring #B-5 @ 13.5 - 15.0'
Dark Gray Well Graded Sand (SW)
Cu = 11.0; Cc = 1.8

September 4, 2018

Sieve size	% Retained	% Passing
3" (75-mm)	0	100
2" (50-mm)	0	100
1.5" (37.5-mm)	0	100
1" (25-mm)	0	100
3/4" (19-mm)	0	100
1/2" (12.5-mm)	0	100
3/8" (9.5-mm)	2	98
#4 (4.75-mm)	9	91
#8 (2.36-mm)	23	77
#16 (1.18-mm)	42	58
#30 (600-µm)	68	32
#50 (300-µm)	79	21
#100 (150-µm)	88	12
#200 (75-µm)	93	7



Earth Systems Pacific

San Benito County
Behavioral Health Building

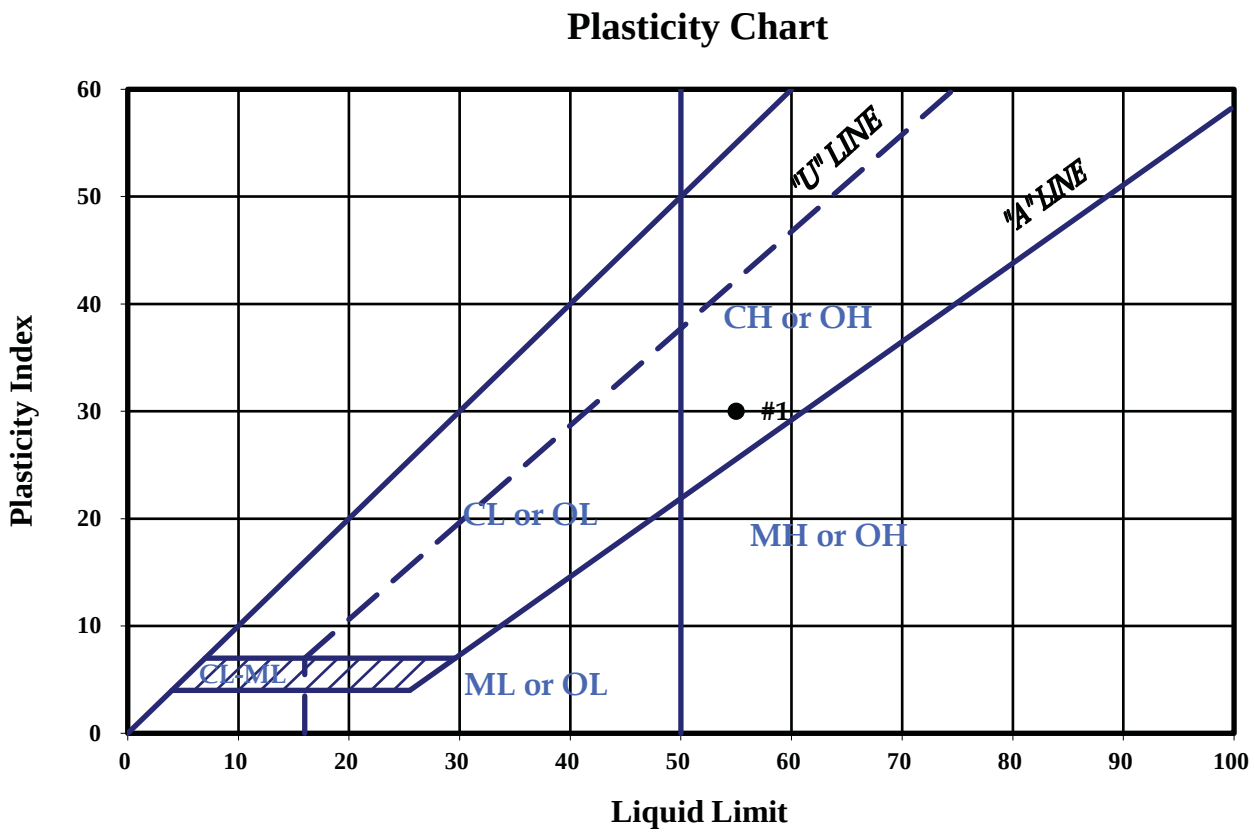
302339-001

PLASTICITY INDEX

ASTM D 4318-17

September 4, 2018

Test No.:	1	2	3	4	5
Boring No.:	B-1	B-2			
Sample Depth:	2.0 - 2.5'	4.5 - 5.0'			
Liquid Limit:	55				
Plastic Limit:	25				
Plasticity Index:	30	Non-Plastic			



Earth Systems Pacific

San Benito County
Behavioral Health Building

302339-001

UNCONFINED COMPRESSION ON COHESIVE SOIL

ASTM D 2166-16

September 4, 2018

Boring #3 @ 4.5 - 5'
Clayey Fine Grained Sand
Ring Sample
COMPRESSIVE STRENGTH: 11 psi (1,649 psf)

Dry Density: 104.2 pcf
Moisture Content: 6.6%
Degree Saturation: 29.8%
Specific Gravity: 2.65 (assumed)
H/D Ratio: 2.33

TIME (MINUTES)	DEFORM, in (X 1000)	AXIAL STRAIN	AREA (SQ. IN.)	APPLIED LOAD (LBS)	STRENGTH (PSI)	STRENGTH (PSF)
0.5	**20**	0.0036	4.50	4.2	1	134
1.0	**40**	0.0072	4.52	8.4	2	268
1.5	**60**	0.0108	4.54	23.1	5	733
2.0	**80**	0.0144	4.55	35.7	8	1,129
2.5	**100**	0.0180	4.57	46.2	10	1,456
3.0	**120**	0.0216	4.59	52.5	11	1,649
3.5	**140**	0.0252	4.60	31.5	7	986
4.0	**160**	0.0288	4.62	21	5	655
4.5						
5.0						
5.5						
6.0						
6.5						
7.0						
7.5						
8.0						
8.5						
9.0						
9.5						
10.0						
10.5						
11.0						
11.5						
12.0						
12.5						
13.0						
13.5						
14.0						
14.5						

Earth Systems Pacific

San Benito County
Behavioral Health Building

302339-001

RESISTANCE '*R*' VALUE AND EXPANSION PRESSURE

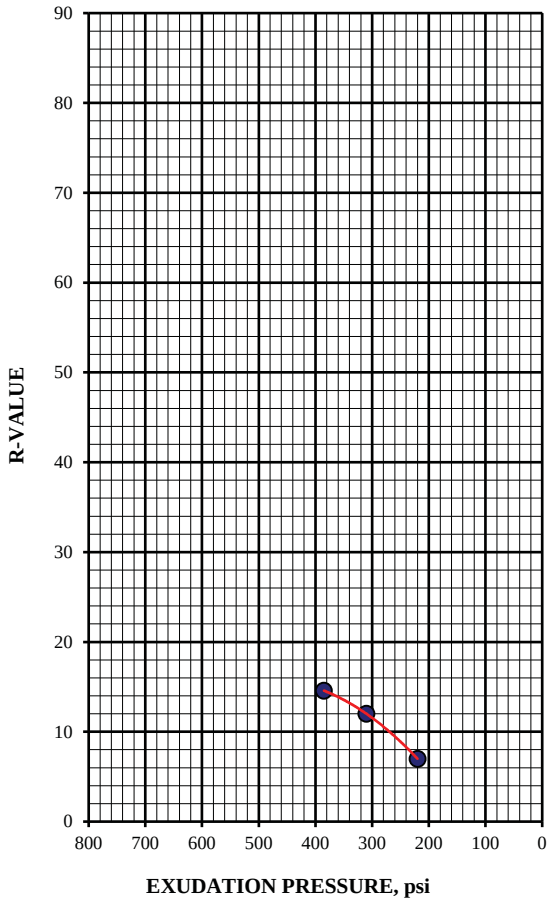
ASTM D 2844/D2844M-13

September 11, 2018

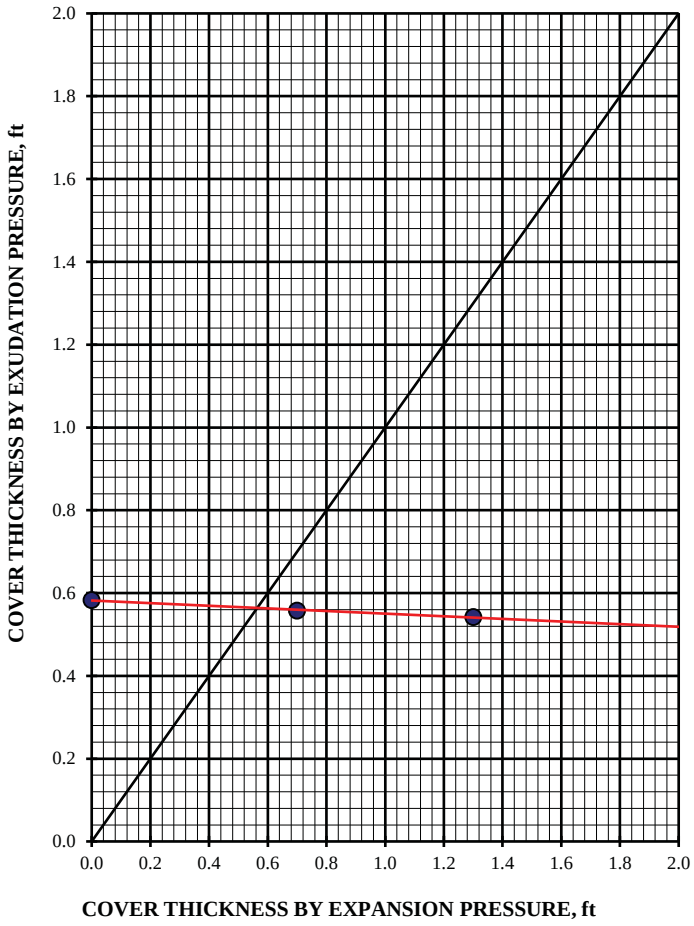
Boring #6 @ 0.0 - 5.0'
Brown Sandy Fat Clay (CH)
Specified Traffic Index: 5.0

Dry Density @ 300 psi Exudation Pressure: 107.3-pcf
%Moisture @ 300 psi Exudation Pressure: 20.1%
R-Value - Exudation Pressure: 12
R-Value - Expansion Pressure: 10
R-Value @ Equilibrium: 10

EXUDATION PRESSURE CHART



EXPANSION PRESSURE CHART



California State Certified Laboratory No. 2153

CERCO analytical
1100 Willow Pass Court, Suite A
Concord, CA 94520-1006
925 462 2771 Fax. 925 462 2775
www.cercoanalytical.com

11 September, 2018

Job No. 1808286
Cust. No. 11221

Ms. Kira Ortiz
Earth Systems Pacific
500 Park Center Drive, Suite 1
Hollister, CA 95023

Subject: Project No.: 302339-001
Project Name: San Benito County Behavioral Health Center
Corrosivity Analysis – ASTM Test Methods

Dear Ms. Ortiz:

Pursuant to your request, CERCO Analytical has analyzed the soil samples submitted on August 31, 2018. Based on the analytical results, a brief corrosivity evaluation is enclosed for your consideration.

Based upon the resistivity measurements, Sample No.002 is classified as "corrosive" and Sample No.001 is classified as "moderately corrosive". All buried iron, steel, cast iron, ductile iron, galvanized steel and dielectric coated steel or iron should be properly protected against corrosion depending upon the critical nature of the structure. All buried metallic pressure piping such as ductile iron firewater pipelines should be protected against corrosion.

The chloride ion concentrations reflect none detected with a reporting limit of 15 mg/kg.

The sulfate ion concentrations were 25 and 27 mg/kg and are determined to be insufficient to damage reinforced concrete structures and cement mortar-coated steel at these locations.

The pH of the soils were 8.19 & 8.47, which does not present corrosion problems for buried iron, steel, mortar-coated steel and reinforced concrete structures.

The redox potential for both samples is 230-mV and is indicative of potentially "slightly corrosive" soils resulting from anaerobic soil conditions.

This corrosivity evaluation is based on general corrosion engineering standards and is non-specific in nature. For specific long-term corrosion control design recommendations or consultation, please call *JDH Corrosion Consultants, Inc. at (925) 927-6630.*

We appreciate the opportunity of working with you on this project. If you have any questions, or if you require further information, please do not hesitate to contact us.

Very truly yours,
CERCO ANALYTICAL, INC.

Cheryl McDonald for

J. Darby Howard, Jr., P.E.
President

JDH/jdl
Enclosure

California State Certified Laboratory No. 2153

CERCO analytical
1100 Willow Pass Court, Suite A
Concord, CA 94520-1006
925 462 2771 Fax. 925 462 2775
www.cercoanalytical.com

Client: EarthSystems Pacific
Client's Project No.: 302339-001
Client's Project Name: San Benita County Behavioral Health Center
Date Sampled: 22-Aug-18
Date Received: 31-Aug-18
Matrix: Soil
Authorization: Signed Chain of Custody

Date of Report: 11-Sep-2018

Job/Sample No.	Sample I.D.	Redox (mV)	pH	Conductivity (umhos/cm)*	Resistivity (100% Saturation) (ohms-cm)	Sulfide (mg/kg)*	Chloride (mg/kg)*	Sulfate (mg/kg)*
1808286-001	Bag B @ 2.0-5.0	230	8.47	-	2,700	-	N.D.	27
1808286-002	Bag D @ 0-5.0	230	8.19	-	1,200	-	N.D.	25

Method:	ASTM D1498	ASTM D4972	ASTM D1125M	ASTM G57	ASTM D4658M	ASTM D4327	ASTM D4327
Reporting Limit:	-	-	10	-	50	15	15
Date Analyzed:	10-Sep-2018	7-Sep-2018	-	7-Sep-2018	-	10-Sep-2018	10-Sep-2018

* Results Reported on "As Received" Basis

N.D. - None Detected

Cheryl McMillen
Laboratory Director

Quality Control Summary - All laboratory quality control parameters were found to be within established limits

Chain of Custody

1100 Willow Pass Court
Concord, CA 94520-1006
925 462 2771
Fax: 925 462 2775

CERCO analytical

Job No.	CU#	Client Project I.D.	Schedule / Analyte	Date Sampled	Date Due
1508286	11321			8/22/18	

Full Name Kira Ortiz

Phone (510) 353-3833

Fax

Company and/or Mailing Address Earth Systems, 4500 Park Center Dr., #1, Hollister, CA 95023

Cell (510) 552-3499

Sample Source San Benito County Behavioral Health Center (302339-001)

Lab No.	Sample I.D.	Date	Time	Matrix	Contain.	Size	Preserv.	Qty.	Redox Potential	pH	Sulfate	Chloride	Resistivity-100% Saturated			Brief Evaluation							
									ANALYSIS														ASTM
	Bag B @ 2.0-5.0	8/22/18	10am	S				1	x	x	x	x	x			x							
	Bag D @ 0-5.0	8/22/18	12pm	S				1	x	x	x	x	x			x							

MATRIX
- DW - Drinking Water
- GW - Ground Water
- SW - Surface Water
- WW - Waste Water
- Water
- SL - Sludge
- S - Soil
- Product

ABBREVIATIONS
- HB - Hosebib
- PV - Petcock Valve
- PT - Pressure Tank
- PH - Pump House
- RR - Restroom
- GL - Glass
- PL - Plastic
- ST - Sterile

SAMPLE RECEIPT
- Total No. of Containers
- Rec'd Good Cond/Cold
- Conforms to Record
- Temp. at Lab - °C
- Sampler

Relinquished By: Kira Ortiz	Date 8/29/18	Time 12:10	
Received By:	Date 8/31/18	Time	
Relinquished By:	Date	Time	
Received By:	Date	Time	
Relinquished By:	Date	Time	
Received By:	Date	Time	

Comments:

THERE IS AN ADDITIONAL CHARGE FOR EXTRUDING SOIL FROM METAL TUBES

Email Address: kortiz@earthsystems.com

APPENDIX C

CALEEMOD RESULTS

EMC PLANNING GROUP INC.
A LAND USE PLANNING & DESIGN FIRM

301 Lighthouse Avenue Suite C Monterey California 93940
Tel 831·649·1799 Fax 831·649·8399 www.emcplanning.com

To: **Teri Wissler Adam, Senior Principal**

From: **Tanya Kalaskar, Assistant Planner**

Cc: **File**

Date: **November 12, 2018**

Re: **New Behavioral Health Center – Greenhouse Gas (GHG) Emissions Assessment**

Project Description and Setting

The vacant 1.94-acre project site is located east of San Felipe Road and north of Community Parkway, between Park Center Drive and McCloskey Road, in the City of Hollister. The project site was disked in spring 2018 and likely planted for hay last year. The County of San Benito (county) proposes development of the site with a one-story 17,212 square feet New Behavioral Health Center (proposed project). The new facility will replace the existing behavioral health center located immediately to the west of the site. The existing facility would be re-occupied by another county department.

The project site is located within the North Central Coast Air Basin, which is within the jurisdiction of the Monterey Bay Air Resources District (air district). The proposed project is below the air district's screening threshold for criteria air pollutant emissions generated during construction and operation. Therefore, this assessment does not include an estimate of the proposed project's criteria air pollutant emissions.

Scope of Assessment

This assessment provides an estimate of the proposed project's greenhouse gas (GHG) emissions using the California Emissions Estimator Model (CalEEMod) Version 2016.3.2 software, a modeling platform recommended by the California Air Resources Board (CARB)

and accepted by the air district. Model results are attached to this memorandum. For modeling purposes, data inputs to the model take into account the type and size of proposed uses utilizing CalEEMod default land uses based on the site plan provided by the county (Hibser Yamauchi Architects 2018) and trip generation information provided by the project traffic consultant (Hexagon Transportation Consultants 2018).

Emissions Model

The CalEEMod software utilizes emissions models USEPA AP-42 emission factors, CARB vehicle emission models studies and studies commissioned by other California agencies such as the California Energy Commission and CalRecycle. The CalEEMod platform allows calculations of both construction and operational criteria pollutant and GHG emissions from land use projects. The model also calculates indirect emissions from processes "downstream" of the proposed project such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. CalEEMod also calculates a one-time only change in the carbon sequestration potential of the site that would result from changes in land use such as converting vegetation to built or paved surfaces, and is also capable of calculating estimated changes to the carbon sequestration potential that would result from planting new trees.

The project site is fallow and there are no natural plant communities present on the site. The site plans include data related to proposed tree replacement plantings; therefore, this analysis includes an analysis only of the change in carbon sequestration potential from planting new trees.

Project Emissions Sources

The size and type of proposed sources of GHG emissions on the project site and their respective CalEEMod land use default categories are presented in Table 1, Project Characteristics.

Table 1 Project Characteristics[1]

Project Components	CalEEMod Land Use[2]	Proposed[3]
Behavioral Health Center	Medical Office Building	17,212
Parking	Parking Lot	87 spaces
Landscaping[4]	Other Non-Asphalt Surfaces	14,399
Sidewalks, Courtyard, etc.	Other Non-Asphalt Surfaces	18,289

SOURCE: Trinity Consultants 2017, Hibser Yamauchi Architects 2018.
NOTES:
1. Numbers may vary due to rounding
2. CalEEMod default land use subtype. Descriptions of the model default land use categories and subtypes are found in the User's Guide for CalEEMod Version 2016.3.2 available online at: http://www.aqmd.gov/caleemod/user's-guide
3. Expressed in square feet unless otherwise noted.
4. Landscaping is not a substantial source of operational emissions and is included in the model only to capture GHG emissions from construction activities.

Methodology

Unless otherwise noted, model inputs are based upon the information provided by the county regarding the proposed activities and the site plan. An operational year of 2020 is used for the proposed project based on the information provided by the county. Construction and operational GHG emissions estimates are derived for the proposed project based on the project characteristics information presented in Table 1. A change in sequestration potential from planting of net new trees is also calculated based on the site plan.

Assumptions

Unless otherwise noted, data inputs for the project model are based on the following primary assumptions:

1. The assumed start date of construction for the proposed project is March 1, 2019.
2. Construction emissions and operational mobile- and area-source emissions generated by the proposed project were estimated using the following CalEEMod default land use subtypes:
    a. Emissions generated by the proposed behavioral health center are assumed to be similar to emissions that would be generated by the CalEEMod default land use subtype "Medical Office Building", which is defined as a facility that provides diagnoses and outpatient care on a routine basis but is unable to provide prolonged in-house medical and surgical care;

b. Emissions generated by the proposed parking lot are assumed to be similar to emissions that would be generated by the CalEEMod default land use subtype "Parking Lot", which is defined as a typical single surface parking lot typically covered with asphalt; and

c. Emissions from landscaping, sidewalks, courtyard, and other non-asphalt surfaces are assumed to be similar to emissions that would be generated by the CalEEMod default land use subtype "Other Non-Asphalt Surfaces".

3. The model's default CO_2 intensity factor of 641 pounds/megawatt hour is adjusted to 290 pounds/megawatt hour to reflect Pacific Gas & Electric energy intensity projections for 2020, which is the horizon year for the provider's energy intensity factor projections. The intensity factor has been falling, in significant part due to the increasing percentage of Pacific Gas & Electric's energy portfolio obtained from renewable energy. Emissions intensity data is from Pacific Gas & Electric's *Greenhouse Gas Factors: Guidance for PG&E Customers*, dated November 2015.

Modeling Scenario

CalEEMod default values for baseline conditions assume new development on a vacant site. The detailed model results for construction and annual operational GHG emissions are included in the CalEEMod results attached to this assessment.

Operational Emissions Data Inputs

As noted previously, the model default trip generation rate for the proposed behavioral health center is adjusted based on information provided by the project traffic consultant (Hexagon Transportation Consultants 2018). Each air district (or county) assigns trip lengths for urban and rural settings, which are incorporated into the CalEEMod defaults. The air district default values for the North Central Coast Air Basin are the same regardless of a project's location within the tri-county area; therefore, the model's defaults were set to "urban" and the jurisdictional authority parameters are based on the model defaults for the air district. Unmitigated operational emissions are modeled for proposed conditions based on the project size and land use data presented in Table 1.

Construction Emissions Data Inputs

The CalEEMod program models construction GHG emissions associated with land use development projects and allows for the input of project-specific construction information including phasing and equipment information, if known. CalEEMod default construction parameters allow estimates of short term construction GHG emissions based upon empirical data collected and analyzed by the California Air Resources Board.

Use of the model's default construction emissions data for a proposed project is recommended by the air district when construction information is not yet available. The air district also recommends amortizing the short term GHG construction emissions over a 30-year time period to yield an annual emissions volume. Information regarding type of construction equipment by phase for the proposed project was not yet available in detail sufficient to provide data inputs to the model; therefore, consistent with air district guidance, the model defaults were utilized for construction equipment, based on the project size and land use data presented in Table 1.

Carbon Sequestration Potential Data Inputs

CalEEMod also estimates a one-time only change in sequestration potential resulting from changes in natural communities, and also calculates a carbon "offset" based upon the number of net new trees proposed, averaged over a 20-year growth cycle. There are no trees currently on the project site. The proposed project includes planting 38 new trees. An estimate of the change in carbon sequestration potential from planting 38 net new trees is included in the assessment.

Results

Construction and operational GHG emissions model results are reported on an annual basis in metric tons of carbon dioxide equivalent (CO_2e).

GHG Emissions

Construction GHG Emissions

The model results indicate that construction activity would generate an estimated 199.79 MT CO_2e of unmitigated GHG emissions. When averaged over a thirty-year operational lifetime, the annual amortized emissions equal 6.66 MT CO_2e per year.

Operational GHG Emissions

The model results indicate that proposed project would generate annual unmitigated operational GHG emissions of 611.89 MT CO_2e, as summarized in Table 2, Unmitigated Operational GHG Emissions.

Table 2 Unmitigated Operational GHG Emissions[1,2]

Emissions Sources	Bio CO_2	NBio CO_2	CH_4	N_2O	CO_2e
Area	0.00	<0.01	<0.01	0.00	<0.01
Energy	0.00	34.24	<0.01	<0.01	34.50
Mobile	0.00	478.51	0.03	0.00	479.24
Waste	37.73	0.00	2.23	0.00	93.47
Water	0.69	1.73	0.07	<0.01	4.68
Total	**38.42**	**514.48**	**2.33**	**<0.01**	**611.89**

Source: EMC Planning Group 2018
Note:
1. Results may vary due to rounding.
2. MT CO_2e per year.

Carbon Sequestration Potential

Model results indicating the change in carbon sequestration potential on the site is shown in Section 2.3 of the model results for annual emissions. The model estimates the sequestration potential gained by planting 38 trees on the site as 26.90 MT CO_2e. The gain in sequestration potential is equivalent to 0.90 MT CO_2e per year, averaged over thirty years. This amount is deducted from the project's annual operational GHG emissions.

GHG Emissions Attributable to the Proposed Project

The estimated total GHG emissions that would be attributable to the proposed project consist of amortized construction emissions added to the mitigated operational emissions less the amortized annual gain of carbon sequestration potential. The net mitigated GHG emissions attributable to the proposed project are presented in Table 3, Summary of Unmitigated GHG Emissions Attributable to the Project (MT CO_2e per Year).

Table 3 Summary of Unmitigated GHG Emissions Attributable to the Project (MT CO_2e per Year)[1]

Annual Operations[2]	Amortized Construction	Annual Project Emissions[3]	Sequestration Potential[4]	Net Project Emissions
611.89	6.66	618.55	<0.90>	617.65

SOURCE: EMC Planning Group 2018
NOTES:
1. Results may vary due to rounding.
2. See Table 2.
3. Sum of amortized construction and unmitigated operational emissions.
4. <Brackets> Indicate deductions.

Construction and operation of the proposed project is estimated to generate net total unmitigated GHG emissions of 617.65 MT CO_2e per year.

Sources

1. Trinity Consultants. November 2017. *California Emissions Estimator (CalEEMod) Version 2016.3.2*. http://www.aqmd.gov/caleemod/home

2. Trinity Consultants. November 2017. *CalEEMod User's Guide (Version 2016.3.2)*. http://www.aqmd.gov/caleemod/user's-guide

3. Monterey Bay Air Resources District. 2008. *CEQA Air Quality Guidelines*. http://mbard.org/pdf/CEQA_full%20(1).pdf

4. Pacific Gas & Electric. November 2015. *Greenhouse Gas Factors: Guidance for PG&E Customers*; Accessed August 1, 2018. https://www.pge.com/includes/docs/pdfs/shared/environment/calculator/pge_ghg_emission_factor_info_sheet.pdf

5. Hibser Yamauchi Architects. 2018. Site Plan.

6. Hexagon Transportation Consultants. December 6, 2018. *San Benito Behavioral Health Center Traffic Impact Analysis*.

New Behavioral Health Center

Monterey Bay Unified APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Medical Office Building	17.21	1000sqft	0.40	17,212.00	0
Other Non-Asphalt Surfaces	18.29	1000sqft	0.42	18,289.00	0
Other Non-Asphalt Surfaces	14.40	1000sqft	0.33	14,399.00	0
Parking Lot	87.00	Space	0.78	34,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	53
Climate Zone	3			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E CO2 Intensity Factor for 2020

Land Use - from site plan

Construction Phase - Adjusted per construction schedule provided by county

Vehicle Trips - from traffic consultant

Energy Use -

Sequestration - from site plan

Construction Off-road Equipment Mitigation -

Area Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	1.00
tblConstructionPhase	NumDays	200.00	150.00
tblConstructionPhase	PhaseEndDate	3/28/2019	3/1/2019
tblConstructionPhase	PhaseEndDate	4/1/2019	3/5/2019
tblConstructionPhase	PhaseEndDate	4/5/2019	3/11/2019
tblConstructionPhase	PhaseEndDate	1/10/2020	10/7/2019
tblConstructionPhase	PhaseEndDate	1/24/2020	10/21/2019
tblConstructionPhase	PhaseEndDate	2/7/2020	11/4/2019
tblConstructionPhase	PhaseStartDate	3/29/2019	3/2/2019
tblConstructionPhase	PhaseStartDate	4/2/2019	3/6/2019
tblConstructionPhase	PhaseStartDate	4/6/2019	3/12/2019
tblConstructionPhase	PhaseStartDate	1/11/2020	10/8/2019
tblConstructionPhase	PhaseStartDate	1/25/2020	10/22/2019
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblSequestration	NumberOfNewTrees	0.00	38.00
tblVehicleTrips	WD_TR	36.13	38.16

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.3354	1.4724	1.2398	2.3200e-003	0.0439	0.0763	0.1202	0.0157	0.0734	0.0891	0.0000	198.9737	198.9737	0.0326	0.0000	199.7876
Maximum	**0.3354**	**1.4724**	**1.2398**	**2.3200e-003**	**0.0439**	**0.0763**	**0.1202**	**0.0157**	**0.0734**	**0.0891**	**0.0000**	**198.9737**	**198.9737**	**0.0326**	**0.0000**	**199.7876**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**3-1-2019**	**5-31-2019**	0.6711	0.6711
2	**6-1-2019**	**8-31-2019**	0.6742	0.6742
3	**9-1-2019**	**9-30-2019**	0.2198	0.2198
		Highest	0.6742	0.6742

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0851	2.0000e-005	1.7600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.4000e-003	3.4000e-003	1.0000e-005	0.0000	3.6300e-003
Energy	1.2100e-003	0.0110	9.2500e-003	7.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004	0.0000	34.2371	34.2371	2.4500e-003	6.8000e-004	34.5012
Mobile	0.2001	0.9723	2.1136	5.2200e-003	0.3643	6.4700e-003	0.3707	0.0979	6.0900e-003	0.1039	0.0000	478.5126	478.5126	0.0293	0.0000	479.2446
Waste						0.0000	0.0000		0.0000	0.0000	37.7299	0.0000	37.7299	2.2298	0.0000	93.4743
Water						0.0000	0.0000		0.0000	0.0000	0.6851	1.7265	2.4116	0.0705	1.7000e-003	4.6809
Total	**0.2865**	**0.9833**	**2.1246**	**5.2900e-003**	**0.3643**	**7.3200e-003**	**0.3716**	**0.0979**	**6.9400e-003**	**0.1048**	**38.4151**	**514.4796**	**552.8946**	**2.3321**	**2.3800e-003**	**611.9046**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	26.9040
Total	**26.9040**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2001	0.9723	2.1136	5.2200e-003	0.3643	6.4700e-003	0.3707	0.0979	6.0900e-003	0.1039	0.0000	478.5126	478.5126	0.0293	0.0000	479.2446
Unmitigated	0.2001	0.9723	2.1136	5.2200e-003	0.3643	6.4700e-003	0.3707	0.0979	6.0900e-003	0.1039	0.0000	478.5126	478.5126	0.0293	0.0000	479.2446

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Medical Office Building	656.81	154.22	26.68	968,824	968,824
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	656.81	154.22	26.68	968,824	968,824

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Medical Office Building	9.50	7.30	7.30	29.60	51.40	19.00	60	30	10
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Medical Office Building	0.533000	0.030830	0.199754	0.134871	0.025112	0.005817	0.017861	0.037451	0.003065	0.002809	0.007291	0.001110	0.001028
Other Non-Asphalt Surfaces	0.533000	0.030830	0.199754	0.134871	0.025112	0.005817	0.017861	0.037451	0.003065	0.002809	0.007291	0.001110	0.001028
Parking Lot	0.533000	0.030830	0.199754	0.134871	0.025112	0.005817	0.017861	0.037451	0.003065	0.002809	0.007291	0.001110	0.001028

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	22.2508	22.2508	2.2300e-003	4.6000e-004	22.4436
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	22.2508	22.2508	2.2300e-003	4.6000e-004	22.4436
NaturalGas Mitigated	1.2100e-003	0.0110	9.2500e-003	7.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004	0.0000	11.9864	11.9864	2.3000e-004	2.2000e-004	12.0576
NaturalGas Unmitigated	1.2100e-003	0.0110	9.2500e-003	7.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004	0.0000	11.9864	11.9864	2.3000e-004	2.2000e-004	12.0576

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Medical Office Building	224617	1.2100e-003	0.0110	9.2500e-003	7.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004	0.0000	11.9864	11.9864	2.3000e-004	2.2000e-004	12.0576
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**1.2100e-003**	**0.0110**	**9.2500e-003**	**7.0000e-005**		**8.4000e-004**	**8.4000e-004**		**8.4000e-004**	**8.4000e-004**	**0.0000**	**11.9864**	**11.9864**	**2.3000e-004**	**2.2000e-004**	**12.0576**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Medical Office Building	156973	20.6486	2.0600e-003	4.3000e-004	20.8275
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	12180	1.6022	1.6000e-004	3.0000e-005	1.6161

Total		**22.2508**	**2.2200e-003**	**4.6000e-004**	**22.4436**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0851	2.0000e-005	1.7600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.4000e-003	3.4000e-003	1.0000e-005	0.0000	3.6300e-003
Unmitigated	0.0851	2.0000e-005	1.7600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.4000e-003	3.4000e-003	1.0000e-005	0.0000	3.6300e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0134					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0716					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7000e-004	2.0000e-005	1.7600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.4000e-003	3.4000e-003	1.0000e-005	0.0000	3.6300e-003
Total	**0.0851**	**2.0000e-005**	**1.7600e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.4000e-003**	**3.4000e-003**	**1.0000e-005**	**0.0000**	**3.6300e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.4116	0.0705	1.7000e-003	4.6809

Unmitigated	2.4116	0.0705	1.7000e-003	4.6809

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Medical Office Building	2.15952 / 0.411337	2.4116	0.0705	1.7000e-003	4.6809
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**2.4116**	**0.0705**	**1.7000e-003**	**4.6809**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	37.7299	2.2298	0.0000	93.4743
Unmitigated	37.7299	2.2298	0.0000	93.4743

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Medical Office Building	185.87	37.7299	2.2298	0.0000	93.4743
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000

Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**37.7299**	**2.2298**	**0.0000**	**93.4743**

11.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	26.9040	0.0000	0.0000	26.9040

11.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	38	26.9040	0.0000	0.0000	26.9040
Total		**26.9040**	**0.0000**	**0.0000**	**26.9040**

APPENDIX D

TRAFFIC IMPACT ANALYSIS

HEXAGON TRANSPORTATION CONSULTANTS, INC.

San Benito County Behavioral Health Center

Traffic Impact Analysis

Prepared for:

EMC Planning Group, Inc.

December 6, 2018

Hexagon Transportation Consultants, Inc.
Hexagon Office: 8070 Santa Teresa Boulevard, Suite 230
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Hexagon Job Number: 18GD09
Phone: 408.846.7410
Client Name: EMC Planning Group, Inc.

Table of Contents

Executive Summary i
1. Introduction 1
2. Existing Conditions 8
3. Existing Plus Project Conditions 16
4. Background Conditions 20
5. Background Plus Project Conditions 24
6. Cumulative Conditions 34
7. Other Transportation Issues 40
8. Conclusions 51

Appendices

Appendix A Traffic Counts
Appendix B Volume Summary
Appendix C Level of Service Calculations
Appendix D Signal Warrant Checks

List of Tables

Table ES 1 Intersection Level of Service and Signal Warrant Analyses Summary i

Table 1 Signalized Intersection Level of Service Definitions Based on Control Delay 6
Table 2 Unsignalized Intersection Level of Service Definitions Based on Control Delay 7
Table 3 Existing Intersection Level of Service and Signal Warrant Analyses Summary 15
Table 4 Existing Plus Project Intersection Level of Service and Signal Warrant Analyses Summary 19
Table 5 Approved Development Projects 21
Table 6 Background Intersection Level of Service and Signal Warrant Analyses Summary 23
Table 7 Project Trip Generation Estimates 27
Table 8 Project Trip Generation Estimates Based on Project Information – Informational Only 28
Table 9 Background Plus Project Intersection Level of Service and Signal Warrant Analyses Summary 33
Table 10 Pending Development Projects 35
Table 11 Cumulative Intersection Level of Service and Signal Warrants Analyses Summary 39
Table 12 San Benito County Regional Transportation Plan Project List 44
Table 13 Vehicle Queuing Analysis 47

List of Figures

Figure 1 Site Location and Study Intersections 2
Figure 2 Project Site Plan 3
Figure 3 Existing Bicycle Facilities 10
Figure 4 Existing Transit Services 11
Figure 5 Existing Lane Configurations 13
Figure 6 Existing Traffic Volumes 14
Figure 7 Existing Plus Project Traffic Volumes 18
Figure 8 Background Traffic Volumes 22

Figure 9 Project Trip Distribution Pattern 30
Figure 10 Project Trip Assignment 31
Figure 11 Background Plus Project Traffic Volumes 32
Figure 12 Cumulative No Project Traffic Volumes 36
Figure 13 Cumulative With Project Traffic Volumes 37
Figure 14 Site Access and Circulation 45

Executive Summary

This report presents the results of the traffic impact analysis for the proposed San Benito County Behavioral Health Center located in the City of Hollister, California. The project as proposed consists of the construction of a 17,212-square-foot new facility that would house the existing San Benito County Behavioral Health Center (referred to hereafter as the Health Center). The project site is currently undeveloped (comprised of two 0.97-acre lots) and is located adjacent to and east of the existing Health Center, along the San Felipe Road frontage road, between McCloskey Road and Park Center Drive. The existing Health Center facility is proposed to be re-occupied by another County department.

Access to the proposed project would be provided via an existing drive aisle (Community Parkway) that intersects with the San Felipe Road frontage road and provides access to other existing uses, including the Health Center.

This traffic impact analysis documents the impacts to the surrounding transportation system associated with developing the proposed project. The potential impacts of the project were evaluated in accordance with the standards set forth by the City of Hollister and Caltrans. The study includes an analysis of traffic conditions at six intersections, including the project site driveway. The study also includes an analysis of site access, on-site circulation, and parking.

Traffic conditions were analyzed for the weekday AM and PM peak hours. The weekday AM peak-hour of traffic generally falls within the 7:00 to 9:00 AM period and the weekday PM peak-hour is typically in the 4:00 to 6:00 PM period. It is during these times that the most congested traffic conditions occur on an average day.

The following study intersections were evaluated:

Study Intersections

1. San Felipe Road (SR 156) and San Felipe Road (frontage) [CH] (unsignalized)
2. San Felipe Road (frontage) and Community Parkway (site access) [CH] (unsignalized)
3. San Felipe Road (frontage) and McCloskey Road [CH] (unsignalized)
4. San Felipe Road (SR 156) and McCloskey Road/Wright Road [CH]
5. San Felipe Road (SR 156) and SR 25 [CT]
6. SR 25 and Wright Road [CT] (unsignalized)

Intersections denoted with the superscript "[CH]" are under the jurisdiction of the City of Hollister. Intersections denoted with the superscript "[CT]" are under the jurisdiction of Caltrans.

Study Scenarios

Scenario 1: *Existing Conditions.* Existing conditions represent existing peak-hour traffic volumes on the existing roadway network. Existing traffic volumes were obtained from new turn-movement traffic counts conducted in November 2018.

Scenario 2: *Existing plus Project Conditions.* Existing plus project conditions represent existing peak-hour traffic volumes on the existing roadway network with the addition of traffic generated by the proposed project if the project was open and operating today. Existing plus project conditions were evaluated relative to existing conditions in order to determine potential project impacts on the existing transportation network attributable to the project only.

Scenario 3: *Background Conditions.* Background conditions represent near-term future traffic volumes on the near-term future transportation network. Background traffic volumes were estimated by adding trips from approved but not yet constructed development projects to existing peak-hour traffic volumes. Approved project information was provided by the City of Hollister and San Benito County Planning Departments. Background conditions represent the baseline conditions to which project conditions are compared for the purpose of determining project impacts.

Scenario 4: *Background plus Project Conditions.* Background plus project conditions (also referred to as *Project Conditions*) represent background traffic volumes, with the project, on the near-term future roadway network. Background plus project conditions were estimated by adding to background traffic volumes the trips associated with the proposed project (or *project traffic volumes*). Background plus project conditions were evaluated relative to background conditions in order to determine potential project impacts.

Scenario 5: *Cumulative Conditions.* Cumulative conditions represent future traffic volumes on the future transportation network that would result from traffic growth projected to occur due to proposed but not yet approved (pending) development projects, in addition to trips from approved project trips and the proposed project. Pending project information was provided by the City of Hollister and San Benito County Planning Departments. Cumulative conditions were evaluated for two scenarios: (1) without the proposed project and (2) with project-generated traffic. The change between these two scenarios illustrates the relative impact the proposed project could have on cumulative conditions.

Evaluation of Project Conditions

The impacts and proposed improvements to mitigate project impacts under existing plus project and background plus project conditions are described below. The results of the intersection level of service analysis are summarized in Table ES1.

Project Trips

The magnitude of traffic generated by the proposed project was estimated by applying to the size of the project the appropriate trip generation rates, as published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual, 10th Edition*. The trip generation estimates are based on ITE's trip generation rates for clinic (ITE land use code #630).

Based on the ITE rates, it is estimated that the project would generate 657 new daily trips, with 64 trips (50 inbound and 14 outbound) occurring during the AM peak-hour and 56 trips (16 inbound and 40 outbound) occurring during the PM peak-hour.

Existing Plus Project Conditions

Intersection Level of Service Analysis

The results of the intersection level of service analysis indicate that the following study intersection is projected to operate at an unacceptable LOS E and F during the AM and PM peak hours, respectively, under existing plus project conditions:

6. SR 25 and Wright Road [CT] (**Impact:** AM and PM peak hours)

Based on Caltrans level of service impact criteria, the above intersection would be significantly impacted by the project under existing plus project conditions.

Intersection Signal Warrant Analysis

The peak-hour signal warrant analysis indicates that the following two study intersections are projected to have peak-hour traffic volumes that meet the thresholds that warrant signalization under existing plus project conditions during at least one of the peak hours:

1. San Felipe Road and San Felipe Road (frontage) [CH] (PM peak-hour)
6. SR 25 and Wright Road [CT] (AM and PM peak hours)

The intersection of SR 25 and Wright Road also was found to be significantly impacted by the proposed project under existing plus project conditions.

Background Plus Project Conditions

Intersection Level of Service Analysis

The results of the intersection level of service analysis indicate that the following study intersection is projected to operate at an unacceptable LOS F during both the AM and PM under background plus project conditions:

6. SR 25 and Wright Road [CT] (**Impact:** AM and PM peak hours)

Based on Caltrans level of service impact criteria, the above intersection would be significantly impacted by the project under background plus project conditions.

Intersection Signal Warrant Analysis

The peak-hour signal warrant analysis indicates that the following two study intersections are projected to have peak-hour traffic volumes that meet the thresholds that warrant signalization under background plus project conditions during at least one of the peak hours:

1. San Felipe Road and San Felipe Road (frontage) [CH] (PM peak-hour)
6. SR 25 and Wright Road [CT] (AM and PM peak hours)

The intersection of SR 25 and Wright Road also was found to be significantly impacted by the proposed project under background plus project conditions.

Recommended Project Mitigation Measures

Described below are the recommended mitigation measures necessary to maintain the level of service standards and intersection operations under background plus project conditions.

6. SR 25 and Wright Road (Caltrans)

Impact: This unsignalized intersection's level of service is projected to be an unacceptable LOS F during both peak hours under background conditions and the addition of project traffic would cause the delay at the intersection to increase and the intersection would have traffic volumes that meet peak-hour signal warrants. This constitutes a significant project impact by Caltrans standards.

Mitigation Measures. The widening of Highway 25 to four lanes between San Felipe Road and Santa Clara County Line is included as part of the improvement projects of the San Benito County Regional Transportation Impact Mitigation Fee (TIMF). The developer will be required to pay the applicable TIMF fee as a fair-share contribution toward improvements at this intersection. With implementation of this mitigation measure, this impact would be less-than-significant.

Evaluation of Cumulative Conditions

Intersection Level of Service Analysis

The results of the intersection level of service analysis indicate that three of the study intersections are projected to operate at unacceptable levels of service during at least one of the peak hours under cumulative plus project conditions. Based on the applicable significance criteria, one of the three substandard intersections would be significantly impacted by the project under cumulative plus project conditions:

1. San Felipe Road and San Felipe Road ^{CH} (frontage)
5. San Felipe Road and SR 25 ^{CT}
6. SR 25 and Wright Road ^{CT} (**Impact:** AM and PM peak hours)

Intersection Signal Warrant Analysis

The peak hour signal warrant analysis indicates that the following two study intersections are projected to have peak-hour traffic volumes that meet the thresholds that warrant signalization during at least one of the peak hours under cumulative plus project conditions. Both of the intersections also were projected to warrant a traffic signal under cumulative no project conditions:

1. San Felipe Road and San Felipe Road (frontage) ^{CH} (PM peak-hour)
6. SR 25 and Wright Road ^{CT} (AM and PM peak hours)

Only the intersection of SR 25 and Wright Road also was found to be significantly impacted by the proposed project under cumulative plus project conditions.

Recommended Cumulative Mitigation Measures

The recommended mitigation measures necessary to maintain the level of service standards and intersection operations under cumulative plus project conditions are the same as those recommended under background plus project conditions, and identified above.

Other Transportation Issues

Bicycle and Pedestrian Circulation

The project site is served directly by Class II bicycle lanes along San Felipe Road (frontage). Other bicycle facilities in the vicinity of the project site include Class II bike lanes on San Felipe Road, south of SR 25, and along SR 25, west of San Felipe Road.

Pedestrian facilities in the project area are limited. With the project site being located within a highly undeveloped industrial area, none of the surrounding roadways currently have sidewalks.

The nearest marked crosswalks are available on three approaches of the signalized intersection of San Felipe Road and Write Road/McCloskey Road, located approximately ¼ mile south of the project site.

Project's effect on Bicycle and Pedestrian Facilities

The proposed project could increase the demand on bicycle facilities in the vicinity of the project site. The project site is served directly by Class II bike lanes along the San Felipe Road frontage road. However, currently there is not a connection between the bike lanes on San Felipe Road (frontage) and other existing bike lanes within the City of Hollister. With the existing limited and discontinuous bicycle network, the potential project-related bike riders would have to share the roadway with vehicular traffic, which could discourage the use of the bicycle as an alternative mode of transportation.

With implementation of the planned bicycle facilities identified in the County's Bikeway and Pedestrian Master Plan, a connection would be provided between the project site and other bicycle facilities to the south, providing a continuous bicycle network with access to most areas within Hollister and major facilities outside of town. However, since the above planned bicycle facilities are not fully funded, it is uncertain when these facilities would be available. Until these facilities are built out, project-related bicycle traffic would need to share the roadway with auto traffic.

The missing sidewalks in the project area make pedestrian travel to/from the project site challenging, discouraging pedestrian activity or forcing pedestrians to walk along undeveloped roadway shoulders and/or within the street. However, no other pedestrian destinations, such as residences, shopping centers, or other pedestrian services, are located within what would be considered an acceptable walking distance (0.25 to 0.5 miles) from the project site. Therefore, it is very unlikely that the project would generate a measurable need for pedestrian facilities.

Transit Service

County Express operates several fixed-route buses in Hollister and San Benito County. There are currently three County Express bus lines (Blue Line, Green Line, and Red Line) which operate within the City of Hollister. The Red line serves the project site directly, with the nearest bus stop to the project site located within the parking lot adjacent to the existing Health Center.

Project's Effect on Transit Services

Although no reduction to the project trip generation estimates was applied due to transit services, it can be assumed that some of the project trips could be done utilizing public transportation. Applying an estimated three to five percent transit mode share, which is probably the highest that could be expected for the project, equates to approximately 2-3 new transit riders generated by the proposed project during each of the peak hours. With the Red line serving the project site directly, the estimated number of new transit riders for the proposed project could be accommodated. Therefore, the additional transit demand generated by the project would not justify additional transit services in the study area based on the project demand alone.

Site Access and On-Site Circulation

This analysis is based on a review of the project site plan prepared by Hibser Yamauchi Architects, Inc. dated 2017.

Site Access

Access to the project site would be provided via an existing driveway along San Felipe Road (frontage). The existing driveway (Community Parkway) currently provides access to other existing uses adjacent to the project site, including the existing Health Center.

Within the project site, Community Parkway is proposed to be extended from its current terminus point (a cul-de-sac along the western project site boundary) northward to the northern project site boundary. The Community Parkway extension would provide access to the project site via two new internal driveways. Both new internal driveways would provide inbound and outbound access.

Project Driveway Design

The City of Hollister requires a minimum width of 21 feet (maximum of 42 feet) for all commercial and industrial driveways. The existing access driveway (east leg of the San Felipe Road frontage road and Community Parkway intersection) is approximately 30 feet wide, satisfying the minimum width requirements.

The site plan shows both internal driveways to be 24 feet wide, also satisfying the minimum driveway width requirements.

Project Driveway Operations

The site access intersection of San Felipe Road (frontage) and Community Parkway was evaluated within the intersection analysis presented in the previous chapters. The level of service analysis shows that this intersection currently operates and is projected to continue to operate adequately with implementation of the proposed project. Therefore, the existing stop control at this intersection would be adequate to serve the projected traffic volumes.

Operations at the proposed project site driveway also were evaluated for adequacy to serve the estimated project traffic based on vehicle queue projections. Based on the traffic volume projections, the queuing analysis shows that no more than one vehicle is projected to queue along the southbound approach on San Felipe Road (frontage) as it waits for a gap in opposing traffic to complete a left-turn into the site. It is also projected that queues of no more than two vehicles would occur along Community Parkway.

Therefore, based on the relatively low traffic volumes on San Felipe Road (frontage), operations at the project site access driveway are projected to be adequate.

Sight Distance

Adequate sight distance (sight distance triangles) should be provided at the project site driveway (intersection of San Felipe Road frontage road and Community Parkway) in accordance with the *American Association of State Highway Transportation Officials* (AASHTO) standards.

Based on field observations, aerial images, and the project driveway location, there are no existing trees or visual obstructions along San Felipe Road (frontage) at Community Parkway that would obscure sight distance to drivers exiting the project site, providing a clear view of approaching traffic on both sides of San Felipe Road (frontage) beyond the minimum required distance of 300 feet. Therefore, it can be concluded that the project access driveway would meet the AASHTO minimum stopping sight distance standards.

Site Access Recommendations

With the development of the project site, the project should ensure that any landscaping and signage proposed by the project site driveway should be located in such a way to ensure an unobstructed view for drivers entering and exiting the site.

Vehicular On-Site Circulation

The proposed drive aisle is shown on the site plan to be 24 feet wide. Parking stall dimensions are not listed. The San Benito County Code of Ordinance, Section 25.31.046 (Off-Street Parking Dimension Table) specifies that all parking stalls shall be at least nine (9) feet wide and 20 feet long, with a minimum of 25 feet of backup space. The drive aisle width of 24 feet does not provide the minimum required backup space of 25 feet, as recommend by the Code of Ordinance.

Truck Access and Circulation

In addition to adequately serving passenger vehicles, larger vehicles, such as emergency vehicles and garbage trucks, also must be able to access and maneuver through the parking lot. Thus, all internal corner radiuses must be designed to be able to accommodate the greater turn radii associated with larger vehicles.

The proposed site layout and two full access driveways would allow for continuous traffic circulation through the project site. With the proposed parking layout and providing adequate drive aisle widths and corner radii, access and on-site circulation for all vehicles, including garbage and fire trucks, would be adequate.

Circulation Recommendations

The design of the parking lot must adhere to San Benito County and City of Hollister design standards and guidelines, including adequate corner radii to accommodate the greater turn radii associated with larger vehicles, drive aisle widths, and parking dimensions, in order to provide adequate on-site circulation for all vehicles.

Pedestrian Access and Circulation

The site plan shows pedestrian walkways/sidewalks around the entire building, allowing pedestrians to access the building from their parking space. However, patients parking within the row of parking along the western project site boundary would have to cross the western drive aisle to access the building. The western drive aisle is anticipated to experience the most traffic activity throughout the day since all patient parking would occur along this drive aisle. The sharp 90-degree turn that all vehicles entering the western drive aisle must complete would help reduce vehicular speeds along this drive aisle, allowing for pedestrian circulation within the aisle.

No pedestrian connections are shown on the site plan between the project site and the existing uses to the west and south. As discussed previously, the Red line transit service stops within the existing parking lot west of the project site. Pedestrian circulation between the project site and existing uses/bus stop would be done within the parking lot, without the benefit of a defined pedestrian pathway. Thus, it is recommended that a clear pedestrian connection between the existing parking lot and the proposed project site be identified in an effort to minimize pedestrian circulation within the drive aisles. Alternatively, a second bus stop for the Red line, or relocation of the existing bus stop, could be implemented along the Community Parkway extension, across from the project site.

Pedestrian Access and Circulation Recommendations

It is recommended that a clear pedestrian connection between the existing parking lot and the proposed project site be identified in an effort to minimize pedestrian circulation within the drive aisles. Alternatively, a second bus stop for the Red line, or relocation of the existing bus stop, could be implemented along the Community Parkway extension, across from the project site.

Parking Supply

Based on the City's parking requirements, the project would need to provide 115 parking spaces to serve the project. Based on the County's parking requirements, the project would need to provide 115 parking spaces plus one additional space per doctor to serve the project. The project is proposing to provide a total of 85 parking spaces, which represents a 26% reduction (or 30 less parking spaces) from the 115 parking spaces required by the City code.

Additional parking is at the existing Health Center site. Depending on the parking occupancy rate of the existing parking spaces, the project may pursue a shared parking reduction per City code 17.18.090.B. The applicant would be required to provide documentation (i.e. shared parking use analysis) to evaluate the parking demand of the existing Health Center site (to be re-occupied) and the proposed project. Ultimately, San Benito County will determine if a shared parking program, or the proposed number of parking spaces are appropriate to serve the proposed project.

ADA Compliance

Accessible parking spaces also must be provided within any parking facility serving the public, such as the proposed project. Based on the San Benito County Code of Ordinance (Section 25.31.063) parking requirements and the proposed number of parking spaces, the project must provide a total of 5 accessible spaces.

The plans show a total of four accessible spaces, all located within along the west side of the proposed health center, adjacent to the main building entrance. Therefore, based on the County Code of Ordinance requirements, the project must provide one additional accessible parking space to comply County requirements.

Parking Recommendations

The project proposes to provide 85 of the 115 parking spaces required by City Code. The project may pursue a shared parking program, per City code 17.18.090.B, between the existing Health Center and the proposed project. Additionally, based on the County Code of Ordinance requirements, the project must provide one additional accessible parking space to comply with County requirements.

Ultimately, San Benito County will determine if a shared parking program, or the proposed number of parking spaces are appropriate to serve the proposed project.

Bicycle Parking

According to the City of Hollister Bicycle Parking Standards (Chapter 17.18.060, Table 17.18-1), the project is required to provide six bicycle parking spaces to serve the project. The site plan indicates five bike racks would be provided at the building's main entrance.

Bicycle Parking Recommendation

Based on City of Hollister bicycle parking standards, a total of six bicycle parking spaces would be required to serve the proposed project. One additional bike rack would be required to meet City requirements for bicycle parking.

Table ES 1
Intersection Level of Service and Signal Warrant Analyses Summary

#	Intersection	Jurisdiction	LOS Standard	Peak Hour	Count Date	Int. Control	Existing Warrant Met?[5]	Existing Delay[1]	Existing LOS	Existing Plus Project Warrant Met?[5]	Existing Plus Project Delay[1]	Existing Plus Project LOS	Change in Delay[2]
1	San Felipe Road and San Felipe Road (frontage)	City of Hollister	C	AM	11/06/18	TWSC	No	20.0	C	No	20.5	C	0.5
				PM	11/06/18		**Yes**	19.0	C	**Yes**	18.4	C	-0.6
2	San Felipe Road (frontage) and Community Parkway	City of Hollister	C	AM	11/06/18	OWSC	No	9.6	A	No	9.9	A	0.3
				PM	11/06/18		No	9.8	A	No	10.1	B	0.3
3	San Felipe Road (frontage) and McCloskey Road	City of Hollister	C	AM	11/06/18	OWSC	No	9.8	A	No	10.0	B	0.2
				PM	11/06/18		No	10.0	B	No	10.2	B	0.2
4	San Felipe Road and McCloskey Road/Wright Road	City of Hollister	C	AM	11/06/18	Signal	--	16.2	B	--	16.6	B	0.4
				PM	11/06/18		--	17.0	B	--	17.9	B	0.9
5	San Felipe Road and SR 25	Caltrans	C	AM	11/06/18	Signal	--	15.7	B	--	15.8	B	0.1
				PM	11/06/18		--	18.5	B	--	18.6	B	0.1
6	SR 25 and Wright Road	Caltrans	C	AM	11/06/18	TWSC	**Yes**	**42.1**	**E**	**Yes**	**43.5**	**E**	**1.4**
				PM	11/06/18		**Yes**	**102.6**	**F**	**Yes**	**107.3**	**F**	**4.7**

Notes:
[1]The reported delay and corresponding level of service for signalized intersections represent the average delay for all approaches at the intersection.
The reported delay and corresponding level of service for one- and two-way stop-controlled intersections are based on the stop-controlled approach with the highest delay.
[2] Change in delay measured relative to existing conditions.
[3] Change in delay measured relative to background conditions.
[4] Change in delay measured relative to cumulative no project conditions.
[5] Signal warrant analysis is not applicable to signalized intersections.
[6] Lane configuration and volume conditions exceed the bounds of the unsignalized level of service methodology. The intersection is over capacity, and delay cannot be calculated.
Bold indicates unacceptable LOS/signal warrant met.
Bold and boxed indicate significant impact.

Table ES 1 (Continued)
Intersection Level of Service and Signal Warrant Analyses Summary

#	Intersection	LOS Standard	Peak Hour	Background Warrant Met?[5]	Background Delay[1]	Background LOS	Background Plus Project Warrant Met?[5]	Background Plus Project Delay[1]	Background Plus Project LOS	Background Plus Project Change in Delay[3]	Cumulative No Project Warrant Met?[5]	Cumulative No Project Delay[1]	Cumulative No Project LOS	Cumulative Plus Project Warrant Met?[5]	Cumulative Plus Project Delay[1]	Cumulative Plus Project LOS	Cumulative Plus Project Change in Delay[4]
1	San Felipe Road and San Felipe Road (frontage)	C	AM	No	23.8	C	No	24.0	C	0.2	No	**27.2**	**D**	No	**27.0**	**D**	**-0.2**
			PM	**Yes**	23.4	C	**Yes**	22.6	C	-0.8	**Yes**	**29.5**	**D**	**Yes**	**28.3**	**D**	**-1.2**
2	San Felipe Road (frontage) and Community Parkway	C	AM	No	9.6	A	No	9.9	A	0.3	No	9.6	A	No	9.9	A	0.3
			PM	No	9.8	A	No	10.1	B	0.3	No	9.8	A	No	10.1	B	0.3
3	San Felipe Road (frontage) and McCloskey Road	C	AM	No	10.3	B	No	10.6	B	0.3	No	10.3	B	No	10.6	B	0.3
			PM	No	10.6	B	No	10.9	B	0.3	No	10.6	B	No	10.9	B	0.3
4	San Felipe Road and McCloskey Road/Wright Road	C	AM	--	18.5	B	--	19.0	B	0.5	--	18.5	B	--	19.0	B	0.5
			PM	--	20.1	C	--	21.2	C	1.1	--	20.8	C	--	22.1	C	1.3
5	San Felipe Road and SR 25	C	AM	--	17.4	B	--	17.6	B	0.2	--	47.1	D	--	47.3	D	0.2
			PM	--	21.3	C	--	21.5	C	0.2	--	**387.2**	**F**	--	**387.4**	**F**	**0.2**
6	SR 25 and Wright Road	C	AM	**Yes**	**205.6**	**F**	**Yes**	**218.9**	**F**	**13.3**	**Yes**	--[6]	**F**	**Yes**	--[6]	**F**	--[6]
			PM	**Yes**	--[6]	**F**	**Yes**	--[6]	**F**	--[6]	**Yes**	--[6]	**F**	**Yes**	--[6]	**F**	--[6]

Notes:
[1]The reported delay and corresponding level of service for signalized intersection represent the average delay for all approaches at the intersection.
The reported delay and corresponding level of service for one- and two-way stop-controlled intersections are based on the stop-controlled approach with the highest delay.
[2] Change in delay measured relative to existing conditions.
[3] Change in delay measured relative to background conditions.
[4] Change in delay measured relative to cumulative no project conditions.
[5] Signal warrant analysis is not applicable to signalized intersections.
[6] Lane configuration and volume conditions exceed the bounds of the unsignalized level of service methodology. The intersection is over capacity, and delay cannot be calculated.
Bold indicates unacceptable LOS/signal warrant met.
Bold and boxed indicate significant impact.

1. Introduction

This report presents the results of the traffic impact analysis for the proposed San Benito County Behavioral Health Center located in the City of Hollister, California. The project as proposed consists of the construction of a 17,212-square-foot new facility that would house the existing San Benito County Behavioral Health Center (referred to hereafter as the Health Center). The project site is currently undeveloped (comprised of two 0.97-acre lots) and is located adjacent to and east of the existing Health Center, along the San Felipe Road frontage road, between McCloskey Road and Park Center Drive. The existing Health Center facility is proposed to be re-occupied by another County department.

Access to the proposed project would be provided via an existing drive aisle (Community Parkway) that intersects with the San Felipe Road frontage road and provides access to other existing uses, including the Health Center. The project site location and the surrounding study area are shown on Figure 1. The project site plan is shown on Figure 2.

Although the proposed facility would house an existing use, it is conservatively assumed in this analysis that all project traffic would represent new trips to/from the project site since the existing Health Center would continue to generate traffic.

Scope of Study

This traffic impact analysis documents the impacts to the surrounding transportation system associated with developing the proposed project. The potential impacts of the project were evaluated in accordance with the standards set forth by the City of Hollister and Caltrans. The study includes an analysis of traffic conditions at six intersections, including the project site driveway. The study also includes an analysis of site access, on-site circulation, and parking. The study intersections are listed below and shown on Figure 1

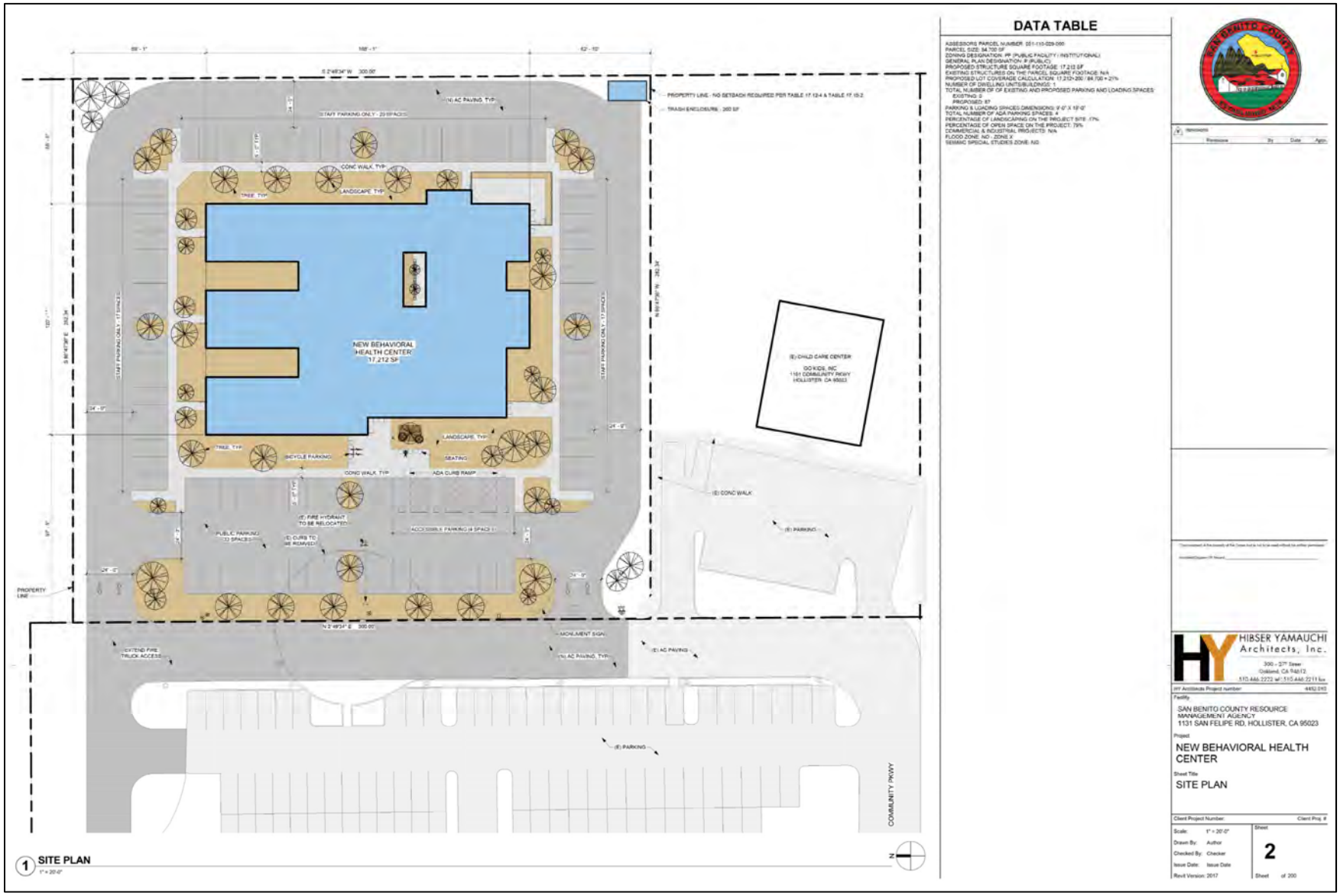
Study Intersections

The study includes the evaluation of traffic conditions at two signalized intersections and four unsignalized intersections. Four of the study intersections are under the jurisdiction of the City of Hollister and two under the jurisdiction of Caltrans. The following key intersections were evaluated:

1. San Felipe Road (SR 156) and San Felipe Road (frontage) [CH] (unsignalized)
2. San Felipe Road (frontage) and Community Parkway (site access) [CH] (unsignalized)
3. San Felipe Road (frontage) and McCloskey Road [CH] (unsignalized)
4. San Felipe Road (SR 156) and McCloskey Road/Wright Road [CH]
5. San Felipe Road (SR 156) and SR 25 [CT]
6. SR 25 and Wright Road [CT] (unsignalized)

Figure 1
Site Location and Study Intersections

Figure 2
Project Site Plan



Intersections denoted with the superscript "CH" are under the jurisdiction of the City of Hollister. Intersections denoted with the superscript "CT" are under the jurisdiction of Caltrans.

Study Time Periods

Traffic conditions at the study intersections were analyzed for the weekday AM and PM peak hours of traffic. The weekday AM peak hour of traffic generally falls within the 7:00 to 9:00 AM period and the weekday PM peak hour typically occurs in the 4:00 to 6:00 PM period. It is during these times that the most congested traffic conditions occur on an average day.

Study Scenarios

Traffic conditions were evaluated for the following scenarios:

Scenario 1: *Existing Conditions.* Existing conditions represent existing peak-hour traffic volumes on the existing roadway network. Existing traffic volumes were obtained from new turn-movement traffic counts conducted in November 2018.

Scenario 2: *Existing plus Project Conditions.* Existing plus project conditions represent existing peak-hour traffic volumes on the existing roadway network with the addition of traffic generated by the proposed project if the project was open and operating today. Existing plus project conditions were evaluated relative to existing conditions in order to determine potential project impacts on the existing transportation network attributable to the project only.

Scenario 3: *Background Conditions.* Background conditions represent near-term future traffic volumes on the near-term future transportation network. Background traffic volumes were estimated by adding trips from approved but not yet constructed development projects to existing peak-hour traffic volumes. Approved project information was provided by the City of Hollister and San Benito County Planning Departments. Background conditions represent the baseline conditions to which project conditions are compared for the purpose of determining project impacts.

Scenario 4: *Background plus Project Conditions.* Background plus project conditions (also referred to as *Project Conditions*) represent background traffic volumes, with the project, on the near-term future roadway network. Background plus project conditions were estimated by adding to background traffic volumes the trips associated with the proposed project (or *project traffic volumes*). Background plus project conditions were evaluated relative to background conditions in order to determine potential project impacts.

Scenario 5: *Cumulative Conditions.* Cumulative conditions represent future traffic volumes on the future transportation network that would result from traffic growth projected to occur due to proposed but not yet approved (pending) development projects, in addition to trips from approved project trips and the proposed project. Pending project information was provided by the City of Hollister and San Benito County Planning Departments. Cumulative conditions were evaluated for two scenarios: (1) without the proposed project and (2) with project-generated traffic. The change between these two scenarios illustrates the relative impact the proposed project could have on cumulative conditions.

Methodology

This section presents the methods used to determine the traffic conditions for each scenario described above. It includes descriptions of the data requirements, the analysis methodologies, and the applicable level of service standards.

Data Requirements

The data required for the analysis were obtained from new traffic counts, previous traffic studies, the City of Hollister, San Benito County, and field observations. The following data were collected from these sources:

- existing traffic volumes
- lane configurations and traffic control
- signal timing and phasing (for signalized intersections)
- approved and pending developments (size, use, and location)

Intersection Level of Service Standards and Analysis Methodologies

Traffic conditions at the study intersections were evaluated using level of service (LOS). *Level of Service* is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays. The various levels of service are based on the average amount of delay incurred by drivers traveling through the intersection.

The intersection analysis methods and level of service standards are described below.

Level of Service Standards

The level of service standard for City of Hollister intersections is LOS C.

The Caltrans level of service standard for intersections is LOS C or better. However, Caltrans acknowledges that a LOS C standard may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If maintaining a LOS C is not feasible, Caltrans attempts to maintain the existing level of service of service when assessing the impact of a new project. For the purposed of this study, LOS C standard also was applied to all Caltrans intersections.

Analysis Methodologies

All study intersections were evaluated with the use of the Synchro software and applying the *2010 Highway Capacity Manual* (2010 HCM) methodology.

Signalized Intersections

The level of service methodology chosen for the analysis of signalized study intersections is Synchro and the 2010 HCM methodology. Synchro evaluates signalized intersection operations based on average control delay time for all vehicles at the intersection. *Control delay* is the amount of delay that is attributed to the particular traffic control device at the intersection, and includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The correlation between average delay and level of service for signalized intersections is shown in Table 1.

Unsignalized Intersections

Synchro is also the methodology used to determine the level of service for unsignalized intersections, which is based on the *2010 Highway Capacity Manual* methodology for unsignalized intersection analysis. This method is applicable for both two-way and all-way stop-controlled intersections. For the analysis of stop-controlled intersections, the *2010 HCM* methodology evaluates intersection operations on the basis of average control delay time for all vehicles on the stop-controlled approaches. For the purpose of reporting level of service for one- and two-way stop-controlled intersections, the delay and corresponding level of service for the stop-controlled minor street approach with the highest delay is reported. For all-way stop-controlled intersections, the reported average delay and corresponding level

Table 1
Signalized Intersection Level of Service Definitions Based on Control Delay

Level of Service	Description	Average Control Delay per Vehicle (sec.)
A	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	up to 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	10.1 to 20.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.1 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.1 to 80.0
F	Operation with delays unacceptable to most drivers occurring due to oversaturation, poor progression, or very long cycle lengths.	Greater than 80.0

Sources: Transportation Research Board, 2010 Highway Capacity Manual.

of service is the average for all approaches at the intersection. The correlation between average control delay and level of service for unsignalized intersections is shown in Table 2.

Signal Warrants

The level of service analysis at unsignalized intersections is supplemented with an assessment of the need for signalization of the intersection. This assessment is made on the basis of signal warrant criteria adopted by Caltrans. For this study, the need for signalization is assessed on the basis of the peak-hour traffic signal warrant, Warrant #3, described in the *California Manual on Uniform Traffic Control Devices for Streets and Highways* (CAMUTCD), Part 4, Highway Traffic Signals, 2014. This method provides an indication of whether traffic conditions and peak-hour traffic levels are, or would be, sufficient to justify installation of a traffic signal. Other traffic signal warrants are available, however, they cannot be checked under future conditions (background, project, and cumulative) because they rely on data for which forecasts are not available (such as accidents, pedestrian volume, and four- or eight-hour vehicle volumes).

The decision to install a traffic signal should not be based purely on the warrants alone. Instead, the installation of a signal should be considered and further analysis performed when one or more of the warrants are met. Additionally, engineering judgment is exercised on a case-by-case basis to evaluate the effect a traffic signal will have on certain types of accidents and traffic conditions at the subject intersection as well as at adjacent intersections.

Table 2
Unsignalized Intersection Level of Service Definitions Based on Control Delay

Level of Service	Description	Average Control Delay per Vehicle (sec.)
A	Operations with very low delays occurring with favorable progression.	up to 10.0
B	Operations with low delays occurring with good progression.	10.1 to 15.0
C	Operations with average delays resulting from fair progression.	15.1 to 25.0
D	Operation with longer delays due to a combination of unfavorable progression of high V/C ratios.	25.1 to 35.0
E	Operation with high delay values indicating poor progression and high V/C ratios. This is considered to be the limited of acceptable delay.	35.1 to 50.0
F	Operation with delays unacceptable to most drivers occurring due to oversaturation and poor progression.	Greater than 50.0

Source: Transportation Research Board, 2010 Highway Capacity Manual

Report Organization

The remainder of this report is divided into seven chapters. Chapter 2 describes existing conditions in terms of the existing roadway network, transit service, and existing bicycle and pedestrian facilities. Chapter 3 presents the project impact on the transportation system and describes the recommended mitigation measures under existing plus project conditions. Chapter 4 presents the intersection levels of service under background conditions with the addition of traffic from approved development projects. Chapter 5 describes the method used to estimate project traffic, presents the intersection level of service analysis under background plus project conditions and its impact on the existing transportation system, and describes the recommended mitigation measures. Chapter 6 presents the traffic conditions in the study area under cumulative conditions with traffic from the proposed project. Chapter 7 contains an evaluation of other transportation-related issues than may not be considered environmental issues, and may not be evaluated in the environmental assessment, but have been included in the traffic study to meet the requirements of the local jurisdiction. Chapter 8 presents the conclusions of the traffic impact analysis.

2. Existing Conditions

This chapter describes the existing conditions for all of the major transportation facilities in the vicinity of the site, including the roadway network, transit service, and bicycle and pedestrian facilities. Also included are the existing levels of service of the key intersections in the study area.

Existing Roadway Network

Regional access to the project area is provided by State Routes 25 and 156 while local access to the project area is provided by San Felipe Road, Wright Road/McCloskey Road, San Felipe Road (frontage), and Community Parkway. These facilities are described below and shown on Figure 1.

State Route 25 is a two-lane highway that carries regional traffic between Gilroy and Hollister. It begins at its junction with Highway 101 in Gilroy and extends southward through Hollister towards Paicines. SR 25 is also designated as Hollister Road, Bolsa Road, Pinnacles National Park Highway, and Airline Highway. SR 25 provides access to the project site via Wright Road and San Felipe Road.

State Route 156 is generally a two-lane highway that carries regional traffic between Highway 101 and Highway 152 while passing through San Juan Bautista and the outskirts of the City of Hollister. Between Hollister and San Juan Bautista, SR 156 is a two-lane highway. Between San Juan Bautista and US 101, SR 156 is a four-lane divided highway. SR 156 provides access to the project site via San Felipe Road and Wright Road.

San Felipe Road is a two- to four-lane, north-south roadway that extends from Union Road in the southern part of Hollister through downtown as San Benito Street, then transitions into San Felipe Road north of North Street/Santa Ana Road. San Felipe Road extends into the north part of Hollister and connects to SR 152 in Santa Clara County. The City of Hollister General Plan designates San Felipe Road as a major thoroughfare. San Felipe Road has a posted speed limit of 55 miles per hour (mph) without bike lanes or sidewalks. San Felipe Road provides access to the project site via its intersections with Wright Road/McCloskey Road (south of the project site) and the San Felipe Road frontage road (north of the project site).

Wright Road/McCloskey Road is a two-lane east-west major collector roadway located in the north part of the City providing a connection between Fairview Road on the east and SR 156 on the west, with intersection at San Felipe Road and SR 25. Wright Road/McCloskey Road has a posted speed limit of 50 mph with no bike lanes or sidewalks. McCloskey Road provides access to the project site via its intersections with the San Felipe Road frontage road.

San Felipe Road (frontage) is a two-lane north-south roadway that runs parallel to (and east of) San Felipe Road. It begins at McCloskey Road and extends northward to Fallon Road, at which point it transitions into Technology Parkway. The San Felipe Road frontage road has a posted speed limited of 40 mph, includes striped bike lanes, and has no sidewalks on both sides of the road. The San Felipe Road frontage road provides direct access to the project site via Community Parkway.

Community Parkway is a two-lane east-west roadway/drive aisle that intersects with San Felipe Road (frontage) and provides direct access to various existing land uses, including the existing Health Center. Access to the proposed Health Center also would be provided via Community Parkway.

Existing Bicycle and Pedestrian Facilities

Bicycle facilities are divided into three classes of relative significance. Class I bikeways are bike paths that are physically separated from motor vehicles and offer two-way bicycle travel on a separate path. Class II bikeways are striped bike lanes on roadways that are marked by signage and pavement markings. Class III bikeways are bike routes and only have signs to help guide bicyclists on recommended routes to certain locations. The locations of existing bicycle facilities are show on Figure 3.

In the vicinity of the project site, the following Class II bike lanes are found:

- San Felipe Road (frontage), between McCloskey Road and Fallon Road
- SR 25, west of San Felipe Road (SR 156)
- San Felipe Road, between Maple Street and SR 25

The City of Hollister 2005 General Plan acknowledges that most bicycling within the city is done on roadway shoulders. However, as traffic increases along many of the streets in Hollister, it is desirable to increase emphasis on accommodating bicycle travel when designing City streets.

Pedestrian facilities in the project area are limited. With the project site being located within a highly undeveloped industrial area, none of the surrounding roadways currently have sidewalks. The missing sidewalks in the project area make pedestrian travel to/from the project site challenging, discouraging pedestrian activity or forcing pedestrians to walk along undeveloped roadway shoulders and/or within the street. However, no other pedestrian destinations, such as residences, shopping centers, or other pedestrian services, are located within what would be considered an acceptable walking distance (0.25 to 0.5 miles) from the project site. Therefore, it is very unlikely that the project would generate a measureable need for pedestrian facilities.

The nearest marked crosswalks are available on three approaches of the signalized intersection of San Felipe Road and Write Road/McCloskey Road, located approximately ¼ mile south of the project site.

Existing Transit Service

Transit service to the project area is provided by County Express Transit System. The transit services provided in the City are described below and shown on Figure 4.

Local Bus Service

County Express operates several fixed-route buses in Hollister and San Benito County. There are currently three County Express bus lines (Blue Line, Green Line, and Red Line) which operate within the City. The Blue and Green lines provide service throughout Hollister via Fourth Street, Rajkovich Way, Summer Drive, South Street, Line Street, Nash Road, Memorial Drive, and Meridian Street. The Red Line runs from Hazel Hawkins Memorial Hospital located in the central part of town to the County

Figure 3
Existing Bicycle Facilities

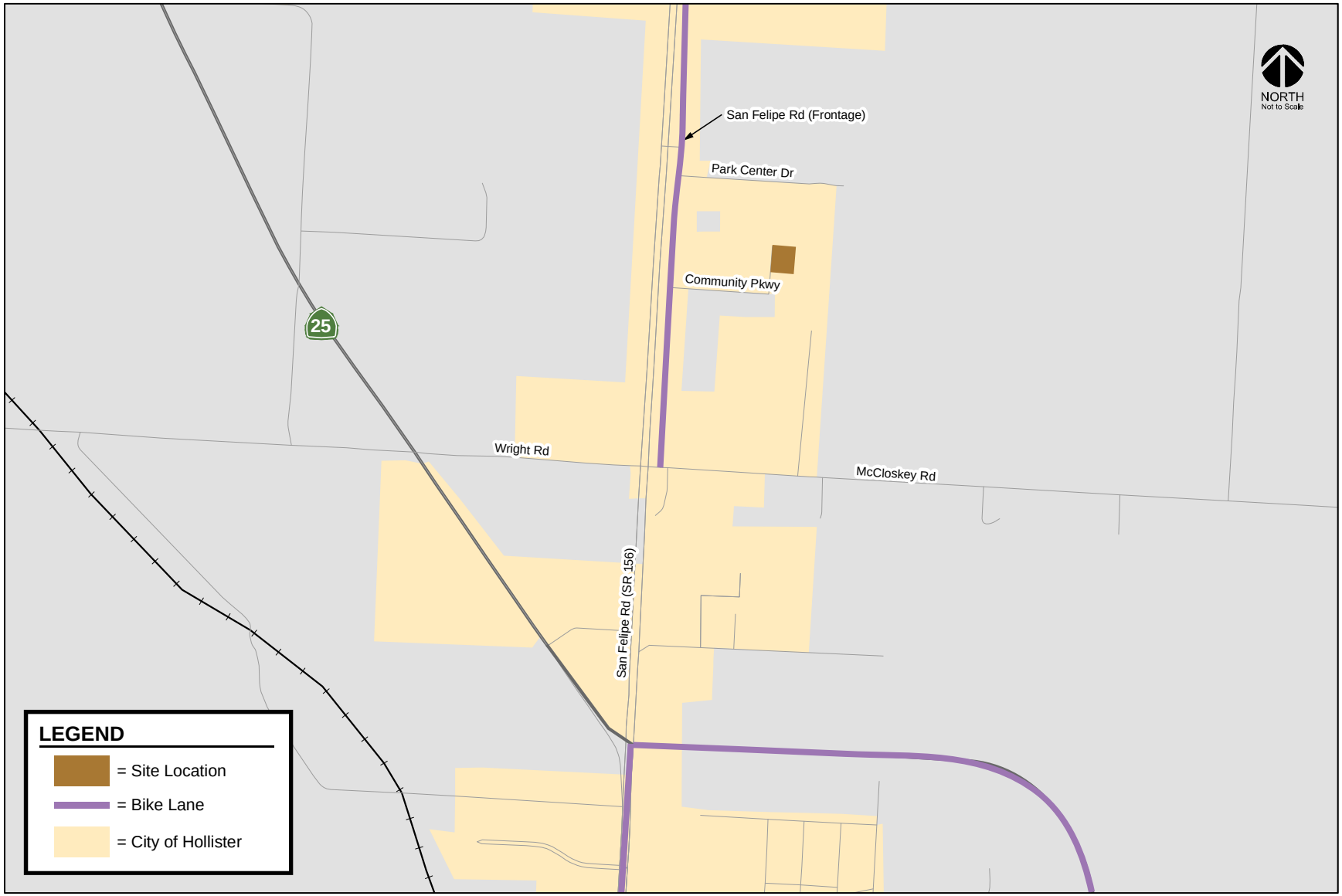
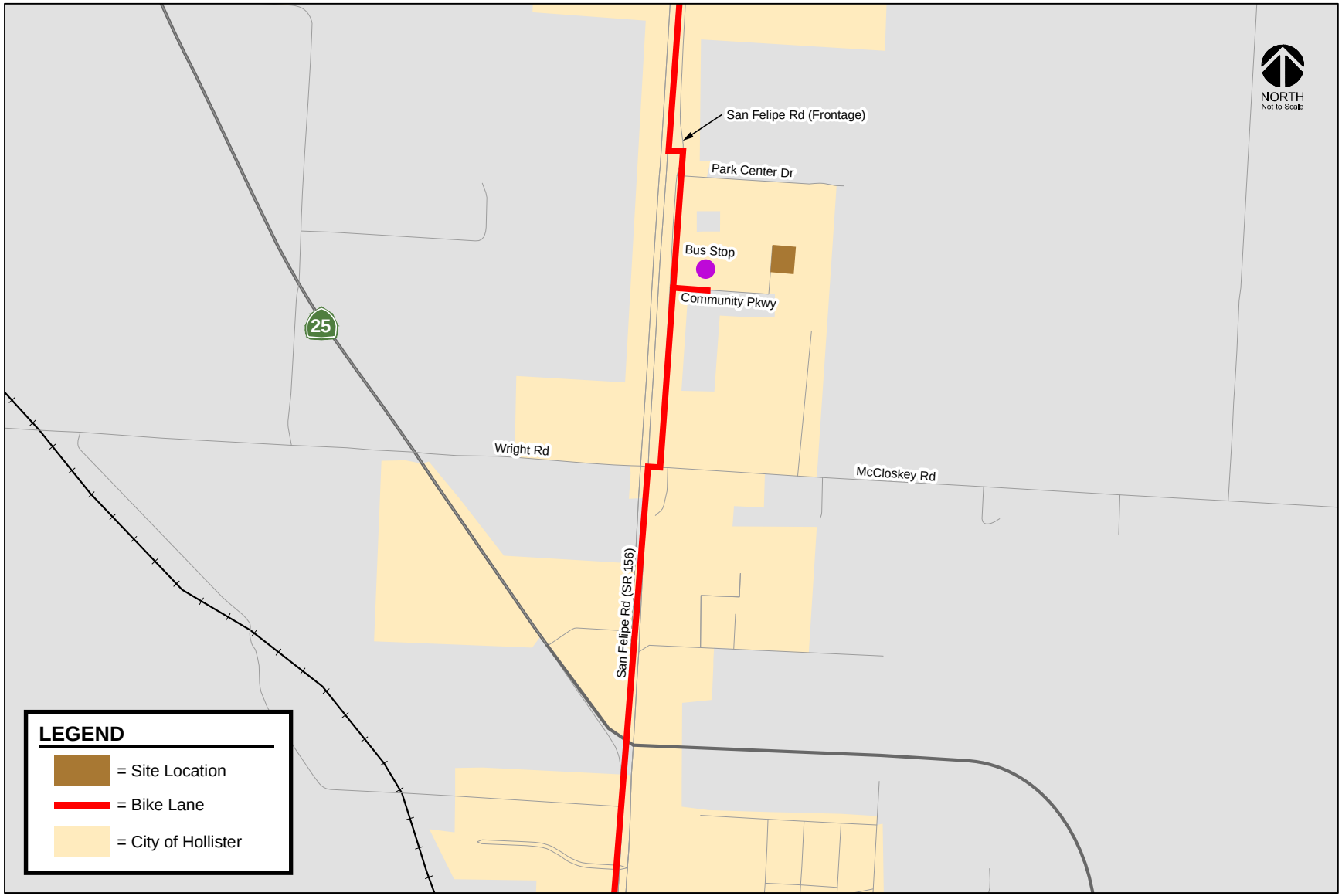


Figure 4
Existing Transit Services



Facilities located in the north part of town, via Ladd Lane, Tres Pinos Road, and San Benito Street/San Felipe Road.

Only the Red Line serves the project site directly and includes a bus stop within the parking lot adjacent to the existing Health Center. The Red Line provides service from approximately 6:15 AM to 5:50 PM (with no service between 11:15 AM and 2:10 PM) with approximately 60-minute headways during the peak hours.

Dial-A-Ride Service

Areas not served by the fixed-route bus service are eligible for Dial-a-Ride service. County Express provides the Dial-a-Ride service to Northern San Benito County, including Hollister, San Juan Bautista, and Tres Pinos, on weekdays between 6 AM and 6 PM and on weekends between 9 AM and 3 PM. County Express Transit System provides two types of Dial-a-Ride service – general public and paratransit. General public Dial-a-Ride serves those persons whose trips begin or end in a location more than three-quarters of a mile from the fixed route. Paratransit service provides rides to persons who have been determined to be Americans with Disabilities Act (ADA) eligible through the Local Transit Authority application process. Appointments for Dial-a-Ride service can be made up to 14 days in advance or on the day of the ride. However, same day scheduling is subject to a $1.00 convenience fee and availability.

Inter-County Service

County Express Transit System's inter-county service includes service to the Gilroy Transit Center and Gavilan Community College. Shuttle service to the Gilroy Transit Center and Gavilan Community College (school year only) operates Monday through Friday from 6:55 AM to 6:15 PM and connects to six trains per day operating between Gilroy and San Jose. The nearest bus stop serving the inter-county lines is located at the intersection of San Benito Street and Fourth Street, approximately 1.5 miles south of the project site.

Existing Intersection Lane Configurations and Traffic Controls

The existing lane configurations and traffic controls at the study intersections were determined by observations in the field, and are shown on Figure 5.

Existing Traffic Volumes

Existing weekday AM and PM peak-hour traffic volumes were obtained from new intersection turn-movement counts conducted in November 2018. The existing peak-hour intersection volumes are shown on Figure 6.

Caltrans requires its intersections to be analyzed using peak 15-minute flow rates. Therefore, the peak one-hour traffic volumes used in this analysis for the Caltrans intersections are calculated by multiplying the peak 15-minute volumes within each peak-hour by four.

The traffic count data are included in Appendix A. Peak-hour intersection turning movement volumes for all intersections and study scenarios are tabulated in Appendix B.

Existing Intersection Analyses

The results of the intersection level of service and signal warrant analyses under existing conditions are summarized in Table 3.

Figure 5
Existing Lane Configurations

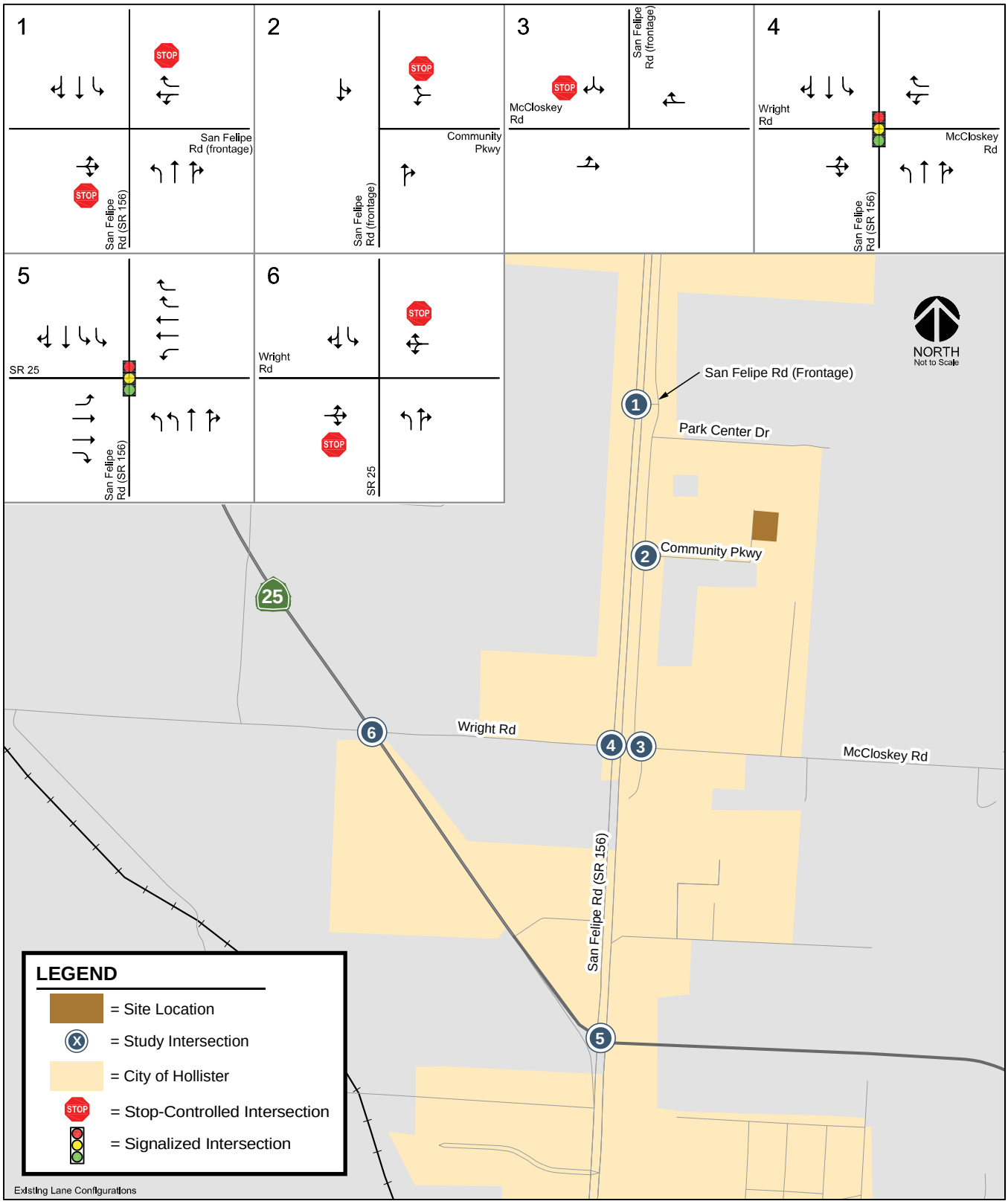


Figure 6
Existing Traffic Volumes

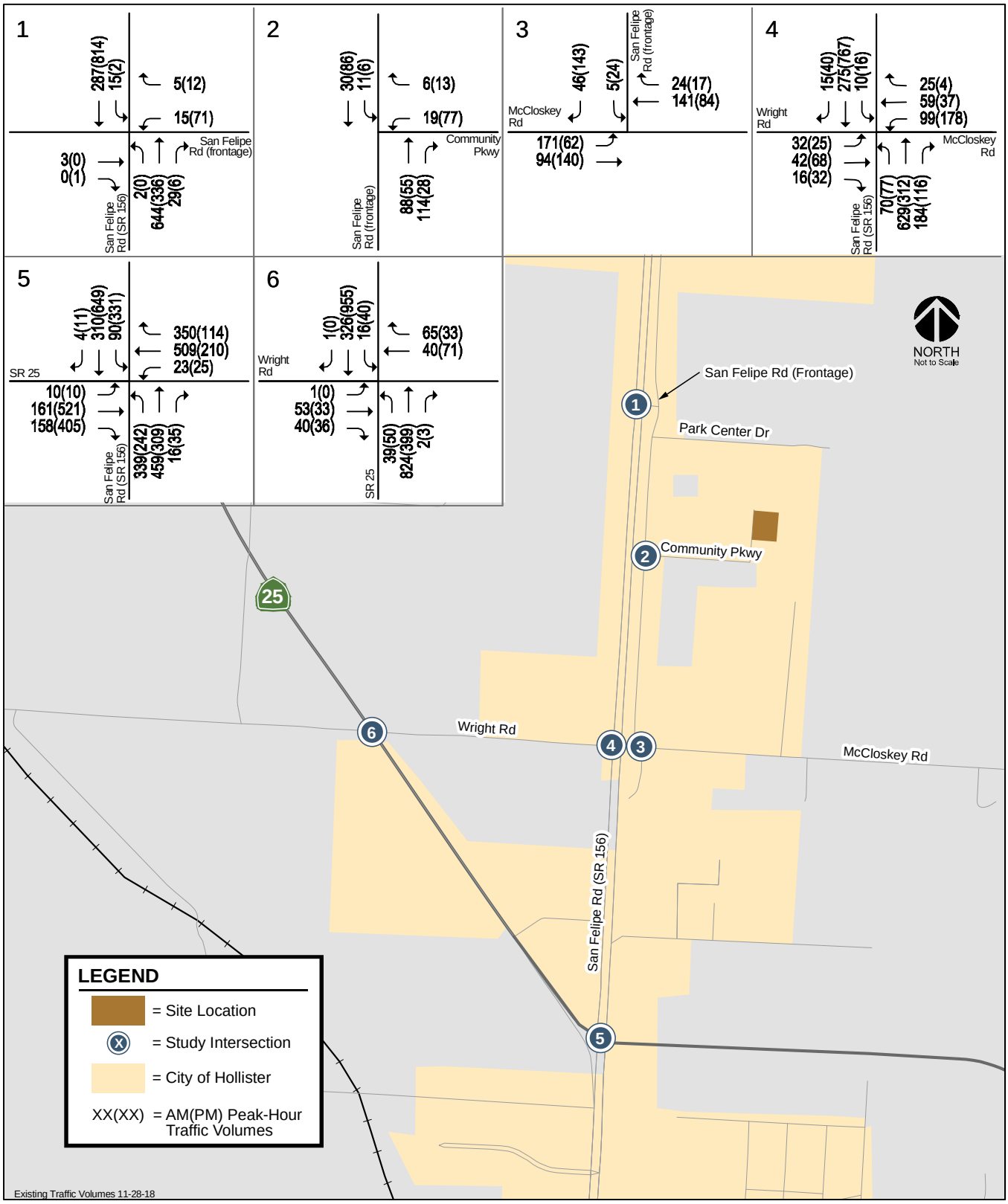


Table 3
Existing Intersection Level of Service and Signal Warrant Analyses Summary

#	Intersection	Jurisdiction	LOS Standard	Peak Hour	Count Date	Int. Control	Warrant Met?[2]	Delay[1]	LOS
1	San Felipe Road and San Felipe Road (frontage)	City of Hollister	C	AM	11/06/18	TWSC	No	20.0	C
				PM	11/06/18		**Yes**	19.0	C
2	San Felipe Road (frontage) and Community Parkway	City of Hollister	C	AM	11/06/18	OWSC	No	9.6	A
				PM	11/06/18		No	9.8	A
3	San Felipe Road (frontage) and McCloskey Road	City of Hollister	C	AM	11/06/18	OWSC	No	9.8	A
				PM	11/06/18		No	10.0	B
4	San Felipe Road and McCloskey Road/Wright Road	City of Hollister	C	AM	11/06/18	Signal	--	16.2	B
				PM	11/06/18		--	17.0	B
5	San Felipe Road and SR 25	Caltrans	C	AM	11/06/18	Signal	--	15.7	B
				PM	11/06/18		--	18.5	B
6	SR 25 and Wright Road	Caltrans	C	AM	11/06/18	TWSC	**Yes**	**42.1**	**E**
				PM	11/06/18		**Yes**	**102.6**	**F**

Notes:
[1]The reported delay and corresponding level of service for signalized intersections represent the average delay for all approaches at the intersection. The reported delay and corresponding level of service for one- and two-way stop-controlled intersections are based on the stop-controlled approach with the highest delay.
[2] Signal warrant analysis is not applicable to signalized intersections.
Bold indicates unacceptable LOS/signal warrant met.

Intersection Level of Service Analysis

The results of the intersection level of service analysis indicate that the study intersection of SR 25 and Wright Road currently operates at an unacceptable LOS E and F during the AM and PM peak hours, respectively, based on Caltrans level of service standards.

The remaining study intersections currently operate at acceptable LOS C or better conditions during both the AM and PM peak hours. The intersection level of service calculation sheets are included in Appendix C.

Intersection Signal Warrant Analysis

The peak hour signal warrant analysis indicates that the following unsignalized study intersections currently have peak hour traffic volumes that meet the thresholds that warrant signalization during the noted peak hours:

1. San Felipe Road and San Felipe Road (frontage) ^{CH} (PM peak-hour)
6. SR 25 and Wright Road ^{CT} (AM and PM peak hours)

The intersection of SR 25/Wright Road also was found to operate at unacceptable levels of service, as discussed in the previous section. Therefore, the installation of a traffic signal is warranted at the intersection of SR 25 and Wright Road. Although the intersection of San Felipe Road and San Felipe Road (frontage) also is projected to have traffic volumes that meet the thresholds that warrant signalization, this intersection is projected to operate within the applicable level of service standard and thus a traffic signal is not recommended at this location.

The remaining unsignalized study intersections currently have traffic conditions that fall below the thresholds that warrant signalization. The peak-hour signal warrant sheets are contained in Appendix D.

3. Existing Plus Project Conditions

This chapter describes existing traffic conditions with the addition of the traffic that would be generated by the proposed project. Existing plus project traffic conditions could potentially exist if the project was constructed and occupied prior to the other approved projects in the area. It is unlikely that this traffic condition would occur, since other approved projects expected to add traffic to the study area would likely be built and occupied during the time the project is going through the development review and construction process. Thus, this scenario describes a less congested traffic condition. Existing plus project conditions also does not include any planned and funded roadway improvements that have not been constructed.

Project impacts under existing plus project conditions are evaluated relative to existing conditions. Description of the significance criteria that define an impact as well as the method used to estimate project traffic are briefly discussed below and presented in Chapter 5 – Background plus Project Conditions.

Significant Impact Criteria

Significance criteria are used to establish what constitutes an impact. For this analysis, the set of relevant criteria for impacts on the transportation network is based on Level of Service standards and significance thresholds for the City of Hollister and Caltrans. The criteria for identifying impacts on the study facilities are discussed in Chapter 5.

Transportation Network under Existing Plus Project Conditions

The roadway network under existing plus project conditions would be the same as described under existing conditions.

Project Description

A full project description is provided in Chapter 5.

Project Traffic Estimates

The magnitude of traffic produced by a new development and the locations where that traffic would appear are estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. These procedures are described in detailed in Chapter 5 and summarized below.

Trip Generation

The magnitude of traffic generated by the proposed project was estimated by applying to the size of the project the appropriate trip generation rates, as published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual, 10th Edition*. The trip generation estimates are based on ITE's trip generation rates for clinic (ITE land use code #630).

Based on the ITE rates, it is estimated that the project would generate 657 new daily trips, with 64 trips (50 inbound and 14 outbound) occurring during the AM peak-hour and 56 trips (16 inbound and 40 outbound) occurring during the PM peak-hour.

The trip generation estimates are presented in Table 7 in Chapter 5.

Trip Distribution and Assignment

The trip distribution pattern for project-generated traffic was estimated based on existing travel patterns in the study area and on the locations of complementary land uses. Trip distribution and assignment are discussed and presented graphically in Chapter 5.

A tabular summary of project traffic at each study intersection is contained in Appendix B.

Existing Plus Project Traffic Volumes

Project trips, as represented in the project trip assignment described in Chapter 5 and shown graphically on Figure 10, were added to existing traffic volumes to obtain existing plus project traffic volumes. The traffic volumes under existing plus project conditions are shown on Figure 7.

Existing Plus Project Intersection Analyses

The results of the intersection level of service and signal warrant analyses under existing plus project conditions are summarized in Table 4.

Intersection Level of Service Analysis

The results of the intersection level of service analysis indicate that the following study intersection is projected to operate at an unacceptable LOS E and F during the AM and PM peak hours, respectively, under existing plus project conditions:

6. SR 25 and Wright Road [CT] (**Impact:** AM and PM peak hours)

Based on Caltrans level of service impact criteria, the above intersection would be significantly impacted by the project under existing plus project conditions. The impact and proposed improvements to mitigate the impact are described below.

All other study intersections are projected to operate at acceptable levels during both the AM and PM peak hours of traffic under existing plus project conditions when measured against the applicable level of service standards. The intersection level of service calculation sheets are included in Appendix C.

Intersection Signal Warrant Analysis

The peak-hour signal warrant analysis indicates that the same two study intersections that were identified under existing conditions to have peak-hour traffic volumes that meet the thresholds that warrant signalization would continue to meet signal warrant thresholds under existing plus project conditions during at least one of the peak hours:

Figure 7
Existing Plus Project Traffic Volumes

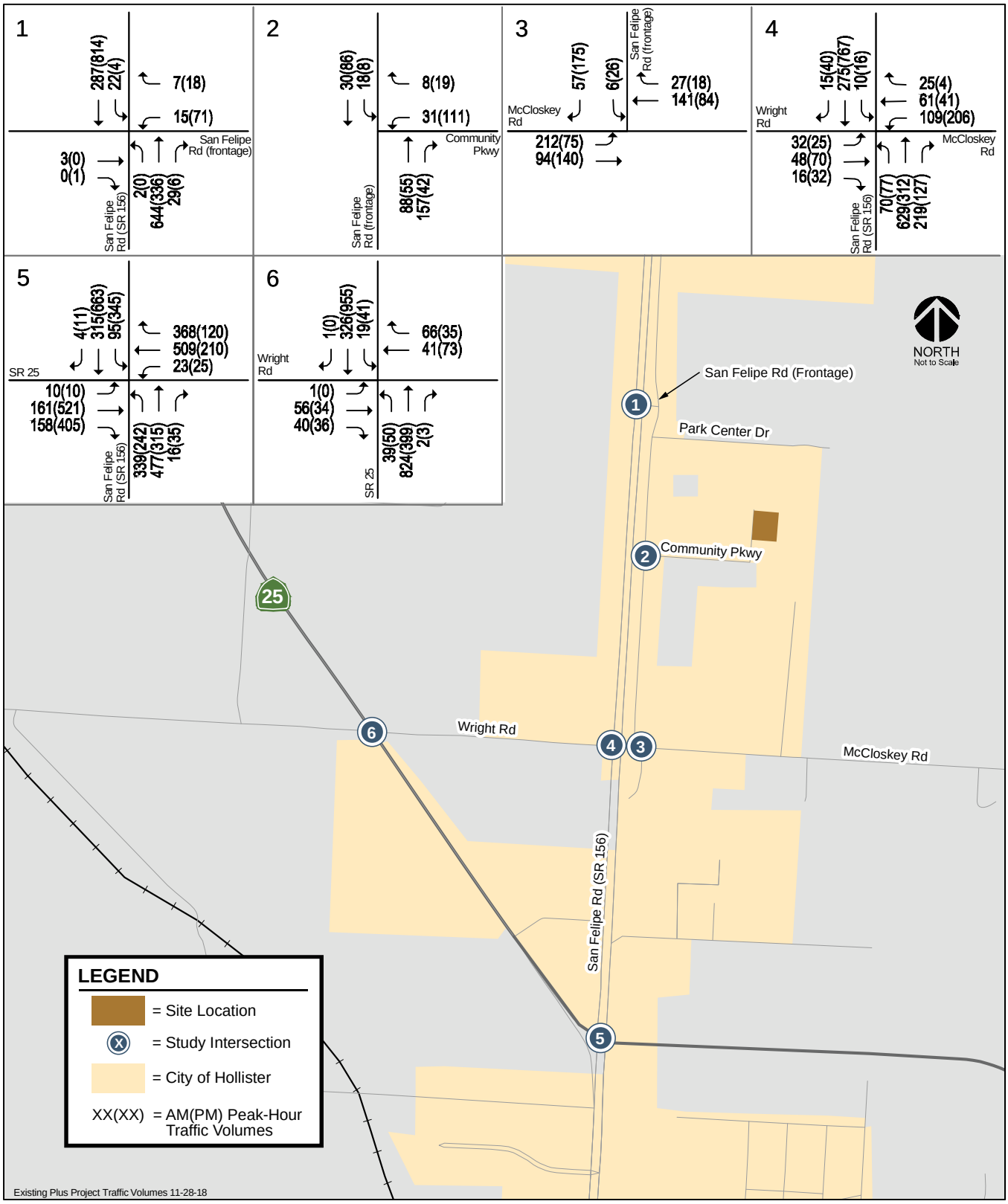


Table 4
Existing Plus Project Intersection Level of Service and Signal Warrant Analyses Summary

						Existing			Existing Plus Project			
#	Intersection	Jurisdiction	LOS Standard	Peak Hour	Int. Control	Warrant Met?[3]	Delay[1]	LOS	Warrant Met?[3]	Delay[1]	LOS	Change in Delay[2]
1	San Felipe Road and San Felipe Road (frontage)	City of Hollister	C	AM	TWSC	No	20.0	C	No	20.5	C	0.5
				PM		**Yes**	19.0	C	**Yes**	18.4	C	-0.6
2	San Felipe Road (frontage) and Community Parkway	City of Hollister	C	AM	OWSC	No	9.6	A	No	9.9	A	0.3
				PM		No	9.8	A	No	10.1	B	0.3
3	San Felipe Road (frontage) and McCloskey Road	City of Hollister	C	AM	OWSC	No	9.8	A	No	10.0	B	0.2
				PM		No	10.0	B	No	10.2	B	0.2
4	San Felipe Road and McCloskey Road/Wright Road	City of Hollister	C	AM	Signal	--	16.2	B	--	16.6	B	0.4
				PM		--	17.0	B	--	17.9	B	0.9
5	San Felipe Road and SR 25	Caltrans	C	AM	Signal	--	15.7	B	--	15.8	B	0.1
				PM		--	18.5	B	--	18.6	B	0.1
6	SR 25 and Wright Road	Caltrans	C	AM	TWSC	**Yes**	**42.1**	**E**	**Yes**	**43.5**	**E**	**1.4**
				PM		**Yes**	**102.6**	**F**	**Yes**	**107.3**	**F**	**4.7**

Notes:
[1]The reported delay and corresponding level of service for signalized intersection represent the average delay for all approaches at the intersection.
The reported delay and corresponding level of service for one- and two-way stop-controlled intersections are based on the stop-controlled approach with the highest delay.
[2] Change in delay measured relative to existing conditions.
[3] Signal warrant analysis is not applicable to signalized intersections.
Bold indicates unacceptable LOS/signal warrant met.
Bold and boxed indicate significant impact.

1. San Felipe Road and San Felipe Road (frontage) [CH] (PM peak-hour)
6. SR 25 and Wright Road [CT] (AM and PM peak hours)

The intersection of SR 25 and Wright Road also is projected to operate at unacceptable levels of service, as discussed in the previous section. Therefore, the installation of a traffic signal is warranted at the intersection of SR 25 and Wright Road. Although the intersection of San Felipe Road and San Felipe Road (frontage) also is projected to have traffic volumes that meet the thresholds that warrant signalization, this intersection is projected to operate within the applicable level of service standard and thus a traffic signal is not recommended at this location under existing plus project conditions.

The intersection of SR 25 and Wright Road also was found to be significantly impacted by the proposed project under existing plus project conditions.

The remaining unsignalized study intersections are projected to have traffic conditions that fall below the thresholds that warrant signalization under existing plus project conditions. The peak-hour signal warrant sheets are contained in Appendix D.

Project Impacts and Recommended Mitigation Measures

Described below are the intersection impacts under existing plus project conditions and recommended mitigation measures necessary to maintain the level of service standards and intersection operations.

6. SR 25 and Wright Road (Caltrans)

Impact: This unsignalized intersection's level of service is currently an unacceptable LOS E and F during the AM and PM peak hours, respectively, under existing conditions and the addition of project traffic would cause the delay at the intersection to increase and the intersection would have traffic volumes that meet peak-hour signal warrants. This constitutes a significant project impact by Caltrans standards.

Mitigation Measures. The widening of Highway 25 to four lanes between San Felipe Road and the Santa Clara County Line is included as part of the improvement projects of the San Benito County Regional Transportation Impact Mitigation Fee (TIMF). The developer will be required to pay the applicable TIMF fee as a fair-share contribution toward improvements at this intersection. With implementation of this mitigation measure, this impact would be less-than-significant.

4. Background Conditions

This chapter describes background traffic conditions. Background conditions are defined as conditions just prior to completion of the proposed project. Traffic volumes for background conditions comprise volumes from the existing traffic counts plus traffic generated by approved developments in the vicinity of the site, which would add traffic to the study intersections. Background conditions represent the baseline conditions to which background plus project conditions will be compared for the purpose of determining project impacts. This chapter describes the procedure used to determine background traffic volumes and the resulting traffic conditions.

Background Roadway Network

The transportation network under background conditions is assumed to be the same as the existing transportation network.

Approved Developments

Lists of approved projects were received from the City of Hollister and San Benito County Planning Departments in October and November 2018, respectively. Table 5 lists the approved but not-yet-completed developments that would add traffic to the roadway network under background conditions. The traffic associated with these developments is discussed below. The traffic generated by projects that are either very small or remotely located from the study intersections was assumed to be insignificant for the purpose of this traffic analysis.

Background Traffic Volumes

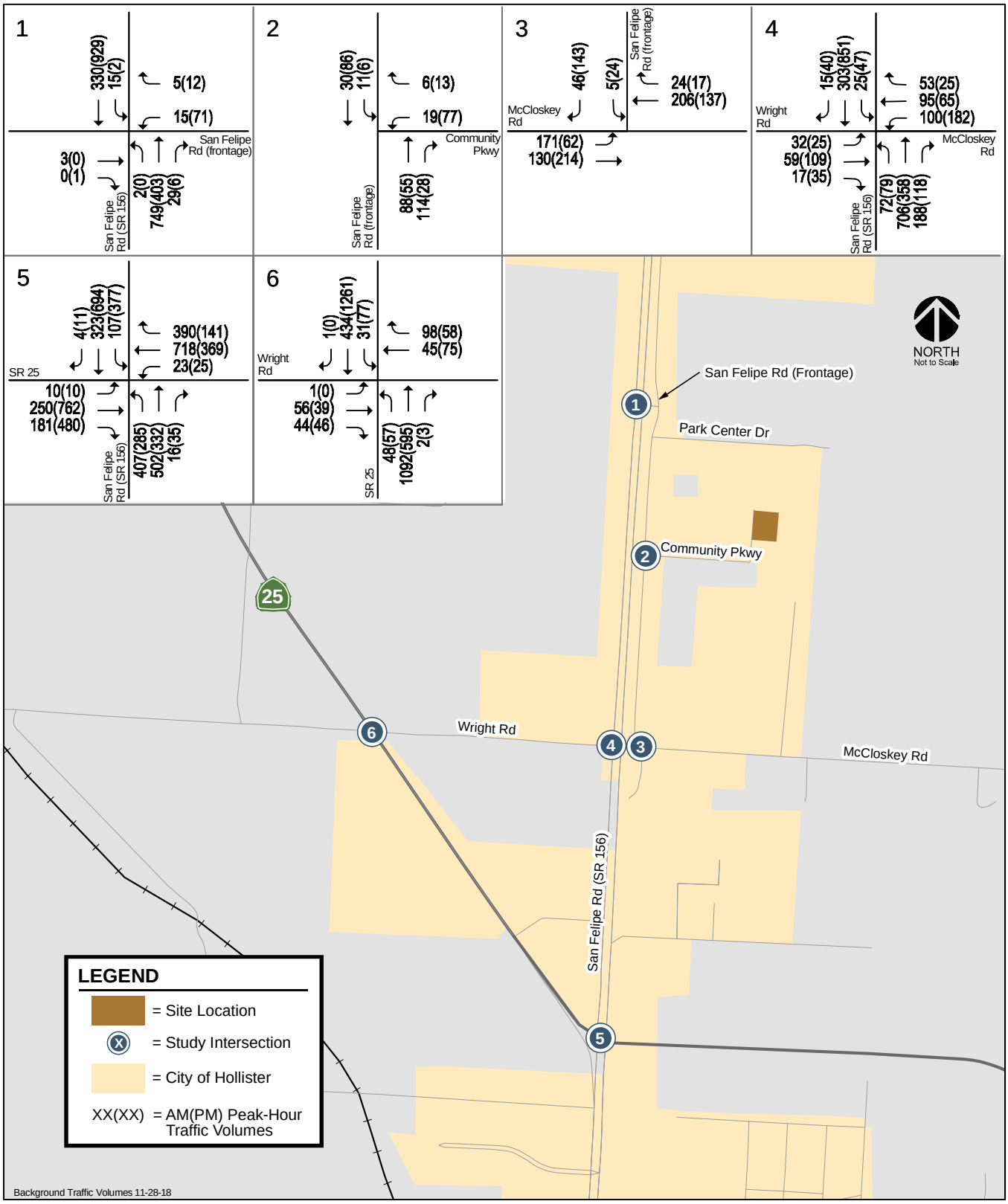
Background peak-hour traffic volumes were calculated by adding to existing volumes the estimated traffic from approved but not yet constructed developments. The traffic added to the study intersections from approved but not yet constructed developments was estimated by distributing and assigning trips generated by these developments to the roadway network. The process of trip generation, distribution, and assignment is described in the next chapter. Background traffic volumes are shown on Figure 8.

Table 5
Approved Development Projects

Applicant/Owner/Project Name	Address/Location	Proposed Project Description
Orchard Park	W/o Buena Vista Rd/Miller Rd	91 SFD
Vista de Oro/Saroyan & Howard	San Juan Rd, between Graf Rd and Miller Rd	80 Condominiums
Dike	SW corner of Westside Bl/South St	39 SFD
Sywak	SW corner of Westside Bl/South St	13 SFD
Ray Mariottini	S/o Haydon St between park st & Monterey St	13 SFD
Valles	E/o Cushman St, S/o Nash Rd	42 Apartments, 26 Townhomes and 15 SFD
Ladd Lane/Intravia/Bella Serra	W/o Ladd Ln, across from Hillock Dr	63 Apartments
Silver Oaks	W/o Valley View, s/o Hazel Hawkins Hospital, e/o Airline Hwy, n/o Valle Way	170 Senior Detached Housing
Award Homes	W/o Fairview, s/o St. Benedict's Church, e/o Calistoga Dr	507 SFD, 60 MF, and 100 Apartments
Brigantino South of Hillcrest	S/o Hillcrst Rd between Sawtooth Dr & El Dorado Dr	42 SFD
Del Curto Brothers South of Hillcrest	E/o El Cerro Dr	21 SFD
Cerrato Estates/Benchmark	Between Meridian St and Hillcrest Rd, W/o Memorial Dr	241 SFD
Hugh Bikle Maple Park	W/o N Chappell Rd between Maple St & Primavera Dr	49 SFD
Pivetti	Valley View Rd between Sunnyslope Rd and Sunset Dr	24 Apartments
Pacific West Communities	NE corner of Miller Rd/San Juan Rd	57 Apartments
Roberts Ranch	N/e of Enterprise/Airline	192 SFD and 35 Townhomes
DeNova Homes/North Street Allendale	North Street	227 SFD and 60 MF
Bob Kutz s/o of Hillcrest Road	S/o of Hillcrest, E/o of El Cerro	19 SFD
Thorning/Fahmy	1001 Fourth Street	39 MF and 40 SFD
CHISPA Age-Restricted Apartments	560 Line Street	49 MF
Borelli n/o of Buena Vista	N/o Buena Vista and W/o Miller Rd	148 SFD and 22 Duets
Kraig Klauer	811 Santa Ana Rd	11 SFD and 3 MF
George Ramstad	349 Apollo Way	18,116 s.f. Warehouse
Charlie Barton	1700 Shelton Dr	12,000 s.f. addition to an existing industrial building
Rong Chang USA	Northeast of Hollister Municipal Airport; W/o San Felipe Rd	151,200 s.f. shell building
Hawkins Companies	W/o SR 25 and S/o Park St	165,533 s.f. shopping center
Randy Griffith	777 Flynn Rd	15,900 s.f. building
Anthony Gaetani	1590 Lana Way	7,700 s.f. light industrial building
Lynn Lake	220 Fourth Street	5 MF; 2,183 s.f. commercial building
Robert Enz	1691 Airway Dr	15,000 s.f. shell building
American Casting	71 Fallon Road	21,200 s.f. industrial building
Del Curto Brothers	365 Fourth Street	8,846 commercial mixed-use building
Community Foundation for San Benito County	460, 434, 438 San Benito Street	10,858 s.f. community building
Santana Ranch	E/o Fairview Rd from Hillcrest to Sunnyslope	1,092 SFD, 800-student elementary school, and 65,000 s.f. of commercial space
Fairview Corners Residential	N/E Corner of Fairview Rd and Airline Hwy	220 SFD
Humboldt West	Southside/Airline	16 lots
Legacy Guerra	W/o Hwy 25 bypass between Meridian St and Hillcrest Rd	150 ksf home improvement store, 100.48 ksf general commercial and 120 Apartments
CSDC	Westside Blvd between 4th St and South St	15 Apartments

Notes:
SFD = Single-Family Detached Homes; MF = Multi-Family Residential Units
Source: City of Hollister and San Benito County Planning Department (October and November 2018)

Figure 8
Background Traffic Volumes



Background Intersection Analyses

The results of the intersection level of service and signal warrant analyses under background conditions are summarized in Table 6.

Table 6
Background Intersection Level of Service and Signal Warrant Analyses Summary

#	Intersection	Jurisdiction	LOS Standard	Peak Hour	Int. Control	Existing Warrant Met?[2]	Existing Delay[1]	Existing LOS	Background Warrant Met?[2]	Background Delay[1]	Background LOS
1	San Felipe Road and San Felipe Road (frontage)	City of Hollister	C	AM	TWSC	No	20.0	C	No	23.8	C
				PM		**Yes**	19.0	C	**Yes**	23.4	C
2	San Felipe Road (frontage) and Community Parkway	City of Hollister	C	AM	OWSC	No	9.6	A	No	9.6	A
				PM		No	9.8	A	No	9.8	A
3	San Felipe Road (frontage) and McCloskey Road	City of Hollister	C	AM	OWSC	No	9.8	A	No	10.3	B
				PM		No	10.0	B	No	10.6	B
4	San Felipe Road and McCloskey Road/Wright Road	City of Hollister	C	AM	Signal	--	16.2	B	--	18.5	B
				PM		--	17.0	B	--	20.1	C
5	San Felipe Road and SR 25	Caltrans	C	AM	Signal	--	15.7	B	--	17.4	B
				PM		--	18.5	B	--	21.3	C
6	SR 25 and Wright Road	Caltrans	C	AM	TWSC	**Yes**	**42.1**	**E**	**Yes**	**205.6**	**F**
				PM		**Yes**	**102.6**	**F**	**Yes**	--[3]	**F**

Notes:
[1]The reported delay and corresponding level of service for signalized intersections represent the average delay for all approaches at the intersection.
The reported delay and corresponding level of service for one- and two-way stop-controlled intersections are based on the stop-controlled approach with the highest delay.
[2] Signal warrant analysis is not applicable to signalized intersections.
[3] Lane configuration and volume conditions exceed the bounds of the unsignalized level of service methodology. The intersection is over capacity, and delay cannot be calculated.
Bold indicates unacceptable LOS/signal warrant met.

Intersection Level of Service Analysis

The results of the intersection level of service analysis indicate that the study intersection of SR 25 and Wright Road is projected to operate at an unacceptable LOS F during both the AM and PM peak hours under background conditions, based on Caltrans level of service standards.

The remaining study intersections are projected to operate at acceptable levels during both the AM and PM peak hours under background conditions when measured against applicable level of service standards. The intersection level of service calculation sheets are included in Appendix C.

Intersection Signal Warrant Analysis

The peak-hour signal warrant analysis indicates that the following two study intersections are projected to have peak-hour traffic volumes that meet the thresholds that warrant signalization under background conditions during at least one of the peak hours:

1. San Felipe Road and San Felipe Road (frontage) [CH] (PM peak-hour)
6. SR 25 and Wright Road [CT] (AM and PM peak hours)

The intersection of SR 25/Wright Road also was projected to operate at unacceptable levels of service, as discussed in the previous section. Therefore, the installation of a traffic signal is warranted at the intersection of SR 25 and Wright Road. Although the intersection of San Felipe Road and San Felipe Road (frontage) also is projected to have traffic volumes that meet the thresholds that warrant signalization, this intersection is projected to operate within the applicable level of service standard and thus a traffic signal is not recommended at this location under background conditions.

The remaining unsignalized study intersections are projected to have traffic conditions that fall below the thresholds that warrant signalization under background conditions. The peak-hour signal warrant sheets are contained in Appendix D.

5. Background Plus Project Conditions

This chapter describes traffic conditions, significant project impacts, and measures that are recommended to mitigate project impacts under background plus project conditions (as referred to as project conditions). Included are descriptions of the significance criteria that define an impact, estimates of project-generated traffic, identification of any impacts, and descriptions of any mitigation measures that may be necessary. Background plus project conditions are represented by background traffic conditions with the addition of traffic generated by the project.

Significant Impact Criteria

Significance criteria are used to establish what constitutes an impact. For this analysis, the set of relevant criteria for impacts on the transportation network is based on Level of Service standards and significance thresholds for the City of Hollister and Caltrans. The criteria for identifying impacts on the study facilities are described below. Project impacts on other transportation facilities, such as bicycle facilities and transit, were determined based on engineering judgment.

Definition of Significant Intersection Level of Service Impacts

Signalized Intersection Thresholds of Significance

City of Hollister and Caltrans Intersections

Both the City of Hollister and Caltrans identify a level of service standard of LOS C for their respective facilities. Neither agency has specific criteria for determining project impacts. For the purpose of this traffic analysis, the project is said to create a significant adverse impact on traffic conditions at an intersection if for either peak hour:

- The level of service at a City of Hollister and Caltrans controlled intersection degrades from an acceptable LOS C or better under baseline conditions to an unacceptable LOS D or worse under project conditions, or
- The level of service at a City of Hollister intersection is an unacceptable LOS D or worse under baseline conditions and the addition of project trips causes the average intersection delay to increase by five (5) or more seconds.
- The level of service at a Caltrans controlled intersection is an unacceptable LOS D or worse under baseline conditions and the addition of project traffic causes the average intersection control delay to increase by one (1) or more seconds.

Unsignalized Intersection Thresholds of Significance

City of Hollister and Caltrans Intersections

For unsignalized intersections in the City of Hollister and Caltrans, the project is said to create a significant adverse impact on traffic conditions at the intersection if for any peak hour:

- *All-way stop*: The average overall level of service at the intersection degrades from an acceptable LOS C or better under conditions without the project (baseline conditions) to an unacceptable LOS D or worse under project conditions, or
- *All-way stop*: The average overall intersection level of service is already at an unacceptable LOS D or worse without the project and the addition of project traffic causes the average overall delay to increase five (5) or more seconds, or
- *One- or two-way stop*: The delay on the worst approach at a one- or two-way stop-controlled intersection degrades from an acceptable LOS C or better under conditions without the project to an unacceptable LOS D or worse under project conditions and the traffic volumes at the intersection under project conditions are high enough to satisfy the peak-hour volume traffic signal warrant adopted by Caltrans, or
- *One- or two-way stop*: The delay on the worst approach at a one- or two-way stop-controlled intersection is already at an unacceptable LOS D or worse without the project and the traffic volumes at the intersection under project conditions are high enough to satisfy the peak-hour volume traffic signal warrant adopted by Caltrans, and the addition of project traffic causes the delay on the worst stop-controlled approach to increase beyond what it was without the project.

Transportation Network under Background Plus Project Conditions

The roadway network under background plus project conditions would be the same as described under background conditions.

Project Description

The project as proposed consists of the construction of a 17,212-square-foot new facility that would house the existing San Benito County Behavioral Health Center. The existing Health Center, located along the San Felipe Road frontage road between McCloskey Road and Park Center Drive, is proposed to be re-occupied by another County department. The proposed new facility would be located adjacent to the existing Health Center, within a currently undeveloped site consisting of two 0.97-acre lots. Access to the proposed project would be provided via an existing drive aisle (Community Parkway) that intersects with the San Felipe Road frontage road and provides access to other existing uses, including the Health Center.

The San Felipe Road frontage road runs along the east side San Felipe Road, between McCloskey Road to north of Fallon Road, and provides access to/from San Felipe Road to the adjacent land uses.

Although the proposed facility would house an existing use, it is conservatively assumed in this analysis that all project traffic would represent new trips to/from the project site since the existing Health Center would continue to generate traffic.

Project Traffic Estimates

The magnitude of traffic produced by a new development and the locations where that traffic would appear are estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip

assignment. In determining project trip generation, the magnitude of traffic entering and exiting the site is estimated for the weekday AM and PM peak hours. As part of the project trip distribution step, an estimate is made of the directions to and from which the project trips would travel. In the project trip assignment step, the project trips are assigned to specific streets and intersections in the study area. These procedures are described further in the following sections.

Trip Generation

The magnitude of traffic generated by the proposed project was estimated by applying to the size of the project the appropriate trip generation rates, as published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual, 10th Edition*. The trip generation estimates are based on ITE's trip generation rates for clinic (ITE land use code #630).

Based on the ITE rates, it is estimated that the project would generate 657 new daily trips, with 64 trips (50 inbound and 14 outbound) occurring during the AM peak-hour and 56 trips (16 inbound and 40 outbound) occurring during the PM peak-hour.

The trip generation estimates are presented in Table 7.

Trip Generation Estimates Based on Project Information

For comparison purposes, the project trip generation also was estimated based on information for the existing Health Center provided by County staff, including the hours of operation, number of employees, and number of patients that visit the Health Center on an average day.

The existing Health Center serves 25 to 40 patients daily, Monday through Friday from 8:00 AM to 5:00 PM. It is assumed that the existing hours of operation and number of daily patients would remain the same at the proposed new facility. The proposed facility is being designed to accommodate 62 employees.

The following assumptions were made:

- All employees would arrive at the project site within 7:00-9:00 AM
- Half of the employees would leave and return to the site between the hours of 12:00 and 2:00 PM (lunch hour)
- Patients would arrive and leave the site throughout the 9-hour day
- The average patient visit would be one hour long
- Half of the employees would leave the site between 5:00 and 6:00 PM while the remaining employees would be on site after 6:00 PM

Based on the above information and assumptions, it is estimated that the project would generate 64 trips (64 inbound and 0 outbound) during the AM peak-hour and 35 trips (0 inbound and 35 outbound) during the PM peak-hour.

The trip generation comparison showed that project trip generation estimates based on ITE trip rates are consistent with the amount of peak-hour project traffic estimated based on project-specific information. The proposed project was evaluated based on the project trips estimated based on ITE rates.

The estimated project trips based on the project information are presented in Table 8.

Table 7
Project Trip Generation Estimates

		Daily		AM Peak-Hour						PM Peak-Hour					
					Split		Trips				Split		Trips		
Land Use	Size	Rate	Trip	Rate	In	Out	In	Out	Total	Rate	In	Out	In	Out	Total
Clinic (#630)[1]	17,212 Square Feet	38.16	657	3.69	78%	22%	50	14	64	3.28	29%	71%	16	40	56

Source:
[1]ITE Trip Generation Manual, 10th Edition 2017

Table 8
Project Trip Generation Estimates Based on Project Information – Informational Only

Hours of Operation	Trip Type	Trips made by Employees	Trips made by Patient	Total Project Trips In	Total Project Trips Out	Total Project Trips Total
7:00 AM to 8:00 AM	Arrival Departure	62	2	**64**	**0**	**64**
8:00 AM to 9:00 AM	Arrival Departure		4 2	4	2	6
9:00 AM to 10:00 AM	Arrival Departure		4 4	4	4	8
10:00 AM to 11:00 AM	Arrival Departure		5 4	5	4	9
11:00 AM to 12:00 PM	Arrival Departure		5 5	5	5	10
12:00 PM to 1:00 PM	Arrival Departure	16 16	3 5	19	21	40
1:00 PM to 2:00 PM	Arrival Departure	15 15	5 3	20	18	38
2:00 PM to 3:00 PM	Arrival Departure		4 5	4	5	9
3:00 PM to 4:00 PM	Arrival Departure		4 4	4	4	8
4:00 PM to 5:00 PM	Arrival Departure		4 4	4	4	8
5:00 PM to 6:00 PM	Arrival Departure	31	4	**0**	**35**	**35**
After 6:00 PM	Arrival Departure	31		0	31	31
TOTAL TRIPS:		**186**	**80**	**133**	**133**	**266**

Source: Project information provided by San Benito County staff, which includes:
* Existing Behavioral Health Center serves 25-40 patients daily.
* The proposed project is being designed to accommodate 62 employees.
* Existing hours of operation are Monday through Friday 8:00 AM to 5:00 PM .
* Various group meetings occur on-site after 5:00 PM.

Assumptions:
* All employees would arrive at the project site within 7:00-8:00 AM.
* Half of the employees would leave and return to the site between the hours of 12:00-2:00 PM (lunch).
* Patients would arrive and leave throughout the 9-hour day.
* The average patient visit would be one hour long.
* Half of the employees would leave the site between 5:00 and 6:00 PM (end of the day), while the remaining employees would be on site after 6:00 PM.

Trip Distribution

The trip distribution pattern for project-generated traffic was estimated based on existing travel patterns in the study area and on the locations of complementary land uses. The project trip distribution pattern is shown graphically on Figure 9.

Trip Assignment

The peak-hour vehicle trips associated with the proposed project were added to the transportation network in accordance with the project trip distribution pattern discussed above. The assignment of project trips is presented graphically on Figure 10. A tabular summary of project traffic at each study intersection is contained in Appendix B.

Background plus Project Traffic Volumes

Project trips, as presented in the above project trip assignment, were added to background traffic volumes to obtain background plus project traffic volumes. The traffic volumes under background plus project conditions are shown on Figure 11.

Background plus Project Intersection Analyses

The results of the intersection level of service and signal warrant analyses under background plus project conditions are summarized in Table 9.

Intersection Level of Service Analysis

The results of the intersection level of service analysis indicate that the following study intersection is projected to operate at an unacceptable LOS F during both the AM and PM under background plus project conditions:

6. SR 25 and Wright Road [CT] (**Impact:** AM and PM peak hours)

Based on Caltrans level of service impact criteria, the above intersection would be significantly impacted by the project under background plus project conditions. The impact and proposed improvements to mitigate the project impact are described below.

All other study intersections are projected to operate at acceptable levels during both the AM and PM peak hours of traffic under background plus project conditions when measured against the applicable level of service standards. The intersection level of service calculation sheets are included in Appendix C.

Intersection Signal Warrant Analysis

The peak-hour signal warrant analysis indicates that the same two study intersections that were identified under background conditions to have peak-hour traffic volumes that meet the thresholds that warrant signalization would continue to meet signal warrant thresholds under background plus project conditions during at least one of the peak hours:

1. San Felipe Road and San Felipe Road (frontage) [CH] (PM peak-hour)
6. SR 25 and Wright Road [CT] (AM and PM peak hours)

The intersection of SR 25 and Wright Road also is projected to operate at unacceptable levels of service, as discussed in the previous section. Therefore, the installation of a traffic signal is warranted at the intersection of SR 25 and Wright Road. Although the intersection of San Felipe Road and San

Figure 9
Project Trip Distribution Pattern

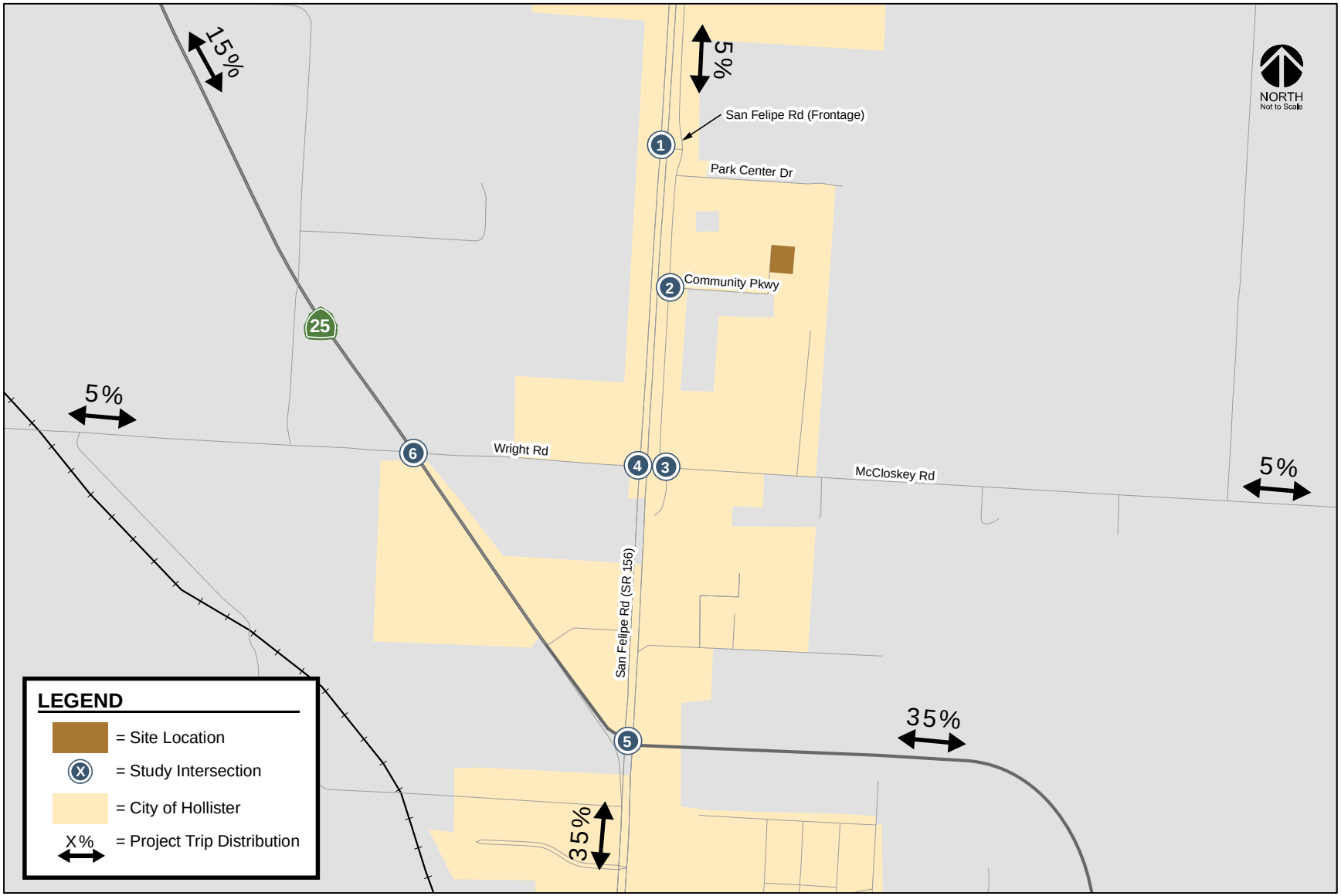


Figure 10
Project Trip Assignment

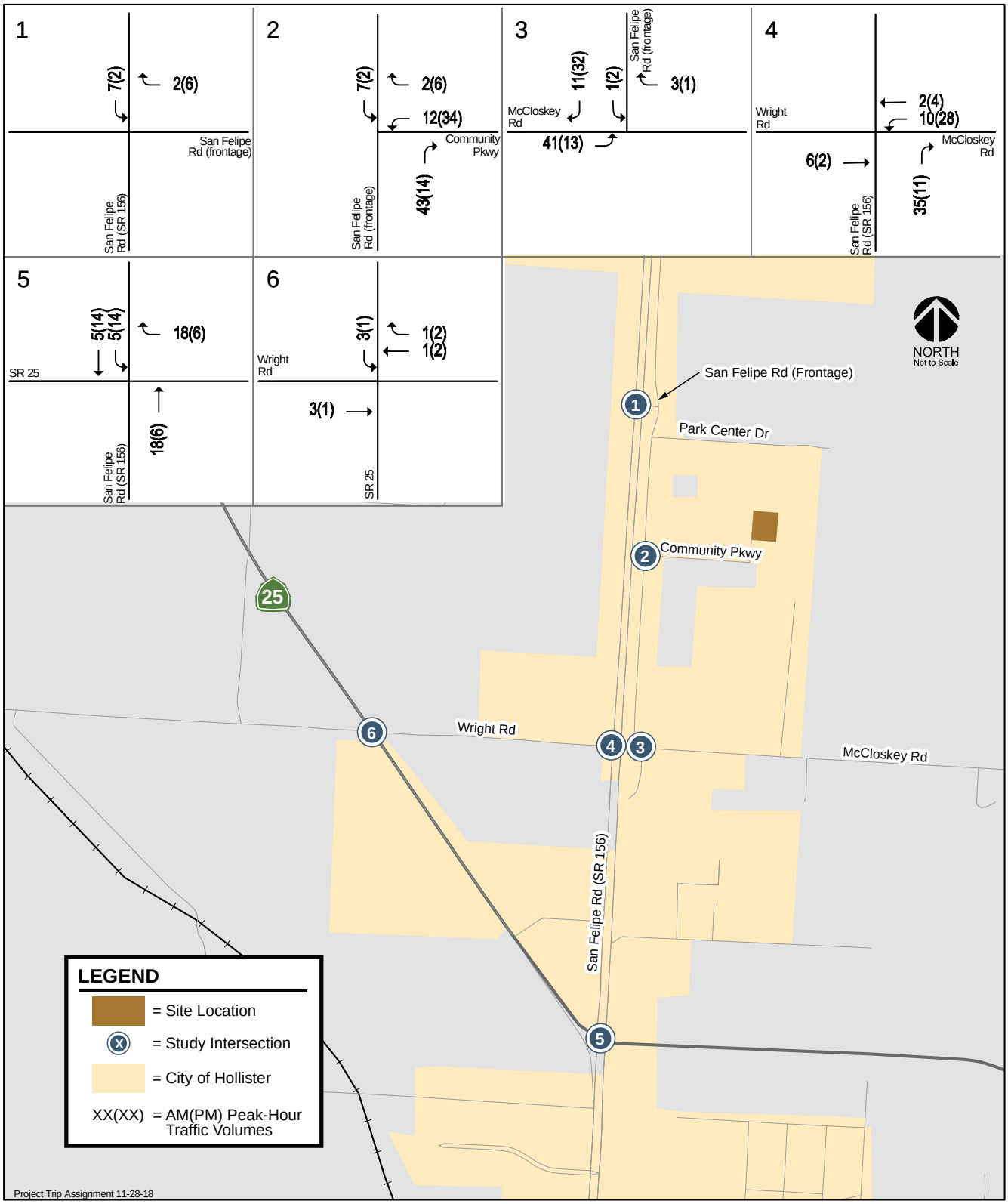


Figure 11
Background Plus Project Traffic Volumes

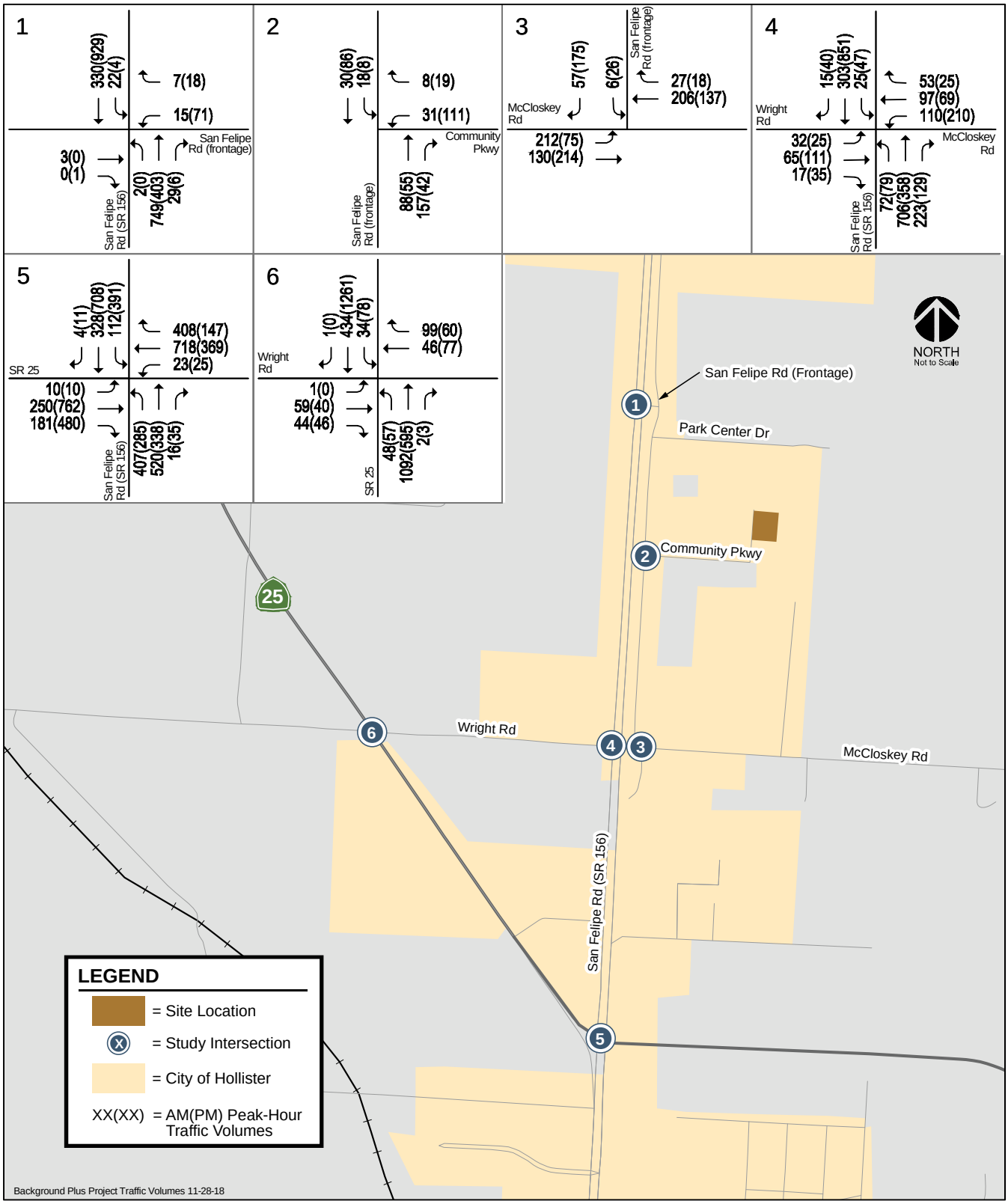


Table 9
Background Plus Project Intersection Level of Service and Signal Warrant Analyses Summary

#	Intersection	Jurisdiction	LOS Standard	Peak Hour	Int. Control	Background Warrant Met?[3]	Background Delay[1]	Background LOS	Background Plus Project Warrant Met?[3]	Background Plus Project Delay[1]	Background Plus Project LOS	Change in Delay[2]
1	San Felipe Road and San Felipe Road (frontage)	City of Hollister	C	AM	TWSC	No	23.8	C	No	24.0	C	0.2
				PM		**Yes**	23.4	C	**Yes**	22.6	C	-0.8
2	San Felipe Road (frontage) and Community Parkway	City of Hollister	C	AM	OWSC	No	9.6	A	No	9.9	A	0.3
				PM		No	9.8	A	No	10.1	B	0.3
3	San Felipe Road (frontage) and McCloskey Road	City of Hollister	C	AM	OWSC	No	10.3	B	No	10.6	B	0.3
				PM		No	10.6	B	No	10.9	B	0.3
4	San Felipe Road and McCloskey Road/Wright Road	City of Hollister	C	AM	Signal	--	18.5	B	--	19.0	B	0.5
				PM		--	20.1	C	--	21.2	C	1.1
5	San Felipe Road and SR 25	Caltrans	C	AM	Signal	--	17.4	B	--	17.6	B	0.2
				PM		--	21.3	C	--	21.5	C	0.2
6	SR 25 and Wright Road	Caltrans	C	AM	TWSC	**Yes**	**205.6**	**F**	**Yes**	**218.9**	**F**	**13.3**
				PM		**Yes**	--[4]	**F**	**Yes**	--[4]	**F**	--[4]

Notes:
[1]The reported delay and corresponding level of service for signalized intersections represent the average delay for all approaches at the intersection.
The reported delay and corresponding level of service for one- and two-way stop-controlled intersections are based on the stop-controlled approach with the highest delay.
[2] Change in delay measured relative to background conditions.
[3] Signal warrant analysis is not applicable to signalized intersections.
[4] Lane configuration and volume conditions exceed the bounds of the unsignalized level of service methodology. The intersection is over capacity, and delay cannot be calculated.
Bold indicates unacceptable LOS/signal warrant met.
Bold and boxed indicate significant impact.

Felipe Road (frontage) also is projected to have traffic volumes that meet the thresholds that warrant signalization, this intersection is projected to operate within the applicable level of service standard and thus a traffic signal is not recommended at this location under background plus project conditions.

The intersection of SR 25 and Wright Road also was found to be significantly impacted by the proposed project under background plus project conditions.

The remaining unsignalized study intersections are projected to have traffic conditions that fall below the thresholds that warrant signalization under background plus project conditions. The peak-hour signal warrant sheets are contained in Appendix D.

Project Impacts and Recommended Mitigation Measures

Described below are the intersection impacts under background plus project conditions and recommended mitigation measures necessary to maintain the level of service standards and intersection operations.

6. SR 25 and Wright Road (Caltrans)

Impact: This unsignalized intersection's level of service is projected to be an unacceptable LOS F during both peak hours under background conditions and the addition of project traffic would cause the delay at the intersection to increase and the intersection would have traffic volumes that meet peak-hour signal warrants. This constitutes a significant project impact by Caltrans standards.

Mitigation Measures. The widening of Highway 25 to four lanes between San Felipe Road and Santa Clara County Line is included as part of the improvement projects of the San Benito County Regional Transportation Impact Mitigation Fee (TIMF). The developer will be required to pay the applicable TIMF fee as a fair-share contribution toward improvements at this intersection. With implementation of this mitigation measure, this impact would be less-than-significant.

6. Cumulative Conditions

This chapter presents a summary of the traffic conditions that would occur under cumulative conditions. This chapter describes the intersection and roadway improvements expected to be in place under cumulative conditions, the procedure used to determine cumulative traffic volumes, and the resulting traffic conditions.

Transportation Network under Cumulative Conditions

The roadway network under cumulative conditions is assumed to be the same as described under existing conditions.

Pending Developments

Lists of pending projects were received from the City of Hollister and San Benito County Planning Departments in October and November 2018, respectively. Table 10 lists the proposed but not yet approved (pending) development projects that would add traffic to the roadway network under cumulative conditions. The traffic associated with these developments is discussed below. The traffic generated by projects that are either very small or remotely located from the study intersections was assumed to be insignificant for the purpose of this traffic analysis.

Cumulative Traffic Volumes

Cumulative peak-hour traffic volumes were calculated by adding to background volumes the estimated traffic from the proposed but not yet approved (pending) development projects. The traffic added to the study intersections from pending developments was estimated by distributing and assigning trips generated by these developments to the roadway network. Additionally, traffic associated with the proposed project also were added to the cumulative traffic volumes to obtain traffic volumes under cumulative plus project conditions. The process of trip generation, distribution, and assignment is described in Chapter 5. Figures 12 and 13 show the cumulative no project and cumulative plus project traffic volumes, respectively.

Table 10
Pending Development Projects

Applicant/Owner/Project Name	Address/Location	Proposed Project Description
King	Memorial Dr, South of Sunset Dr	8 SFD
Natmar	South of Eastview Dr and East of San Benito St	11 SFD
1040 South Street (Fahmy)	N/o of South St, S/o Jan Ave	12 MF and 26 SFD
Chappell	S/o and E/o of North Chappell Rd; W/o SR 25; N/o Santa Ana Rd	Pre-zone 118 acres Low Density (802 max units)
Gonzalez Property	N/o Buena Vista Rd; E/o Carmoble Dr	Pre-zone 11.11 acres Medium Density (133 max units)
Rosati/Doug Ledeboer	S/o Santa Ana Rd, N/o Meridian St; W/o El Toro Dr	Pre-zone 23.45 acres Medium Density (281 max units)
Geary Coats/Coats Consulting	773 San Felipe Road	2,400 s.f. cannabis dispensary
Scenic Southside	Southside Road	184 SFD
Floriani Ranch - Rancho San Benito	Bolsa Road	5,300 SFD and 2.7 m.s.f. commercial space
Javid Assisted Living	3586 Airline Highway	136,367 s.f. 180-room assisted care facility
Williams - Spring Meadows Estate	1735 Santa Ana Road	20 lot subdivision
San Juan Oaks	SW corner of Union Street/San Juan Oaks Drive	1100 homes, 200-room hotel, 65,000 s.f. commercial, assisted living/skilled nursing center
Sunnyside Estates	Southside Rd/Hospital Rd	200 homes
Bluffs at Ridgemark	Between Southside Rd and Ridgemark Dr	93 SFD
Churchill	NW corner of Fairview Road/Hillcrest Road	Pre-Zone 24 acres Low Density Residential and High Density Residential; up to 95 SFD and 42 MF
Woodle Pre-Zone	N/o Buena Vista Rd; W/o Miller Rd	Pre-zone 9.09 acres Medium Density (109 max units)

Notes:
SFD = Single-Family Detached
MF = Multi-Family Residential Units
Source: City of Hollister and San Benito County Planning Department (October and November 2018)

Figure 12
Cumulative No Project Traffic Volumes

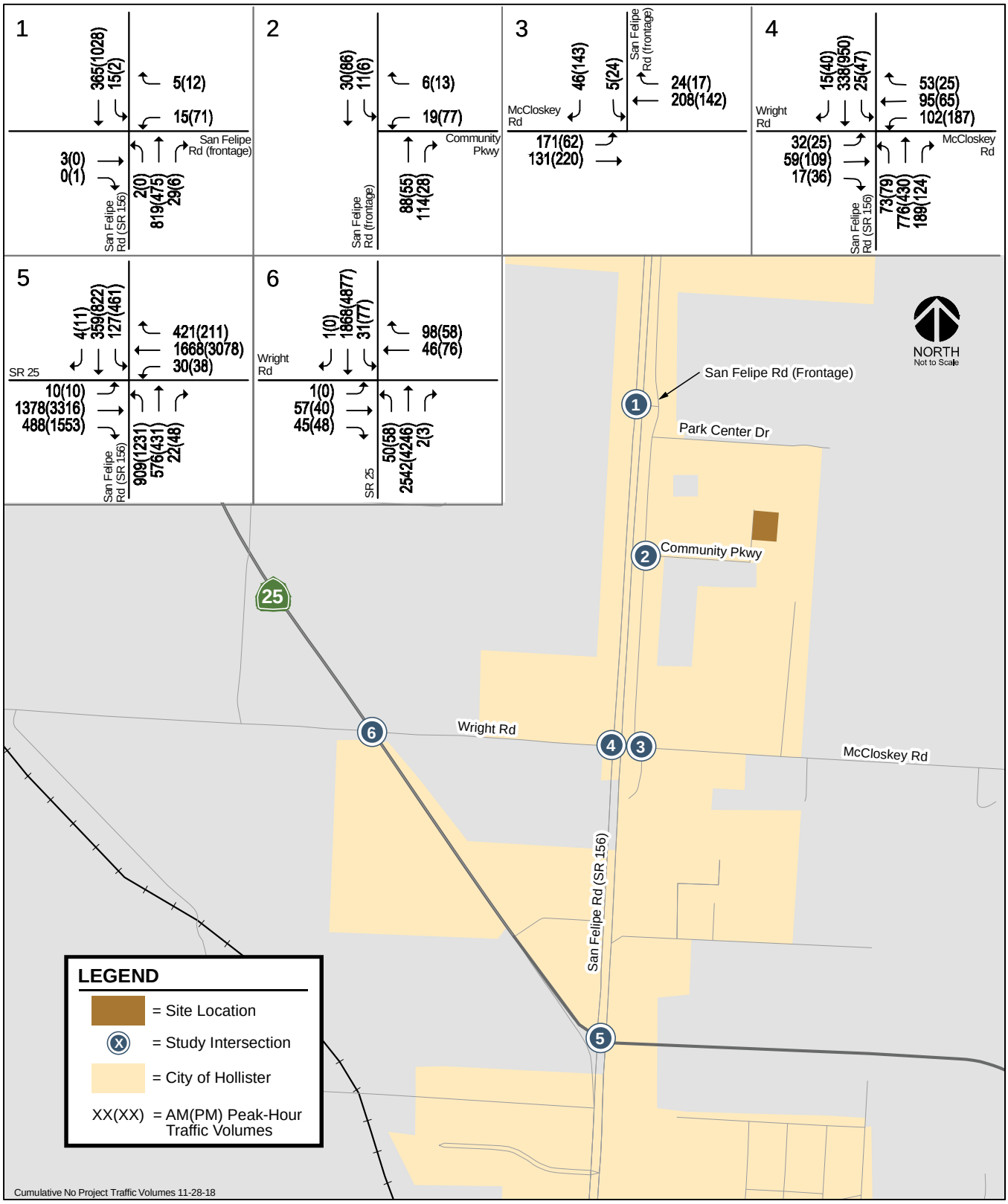
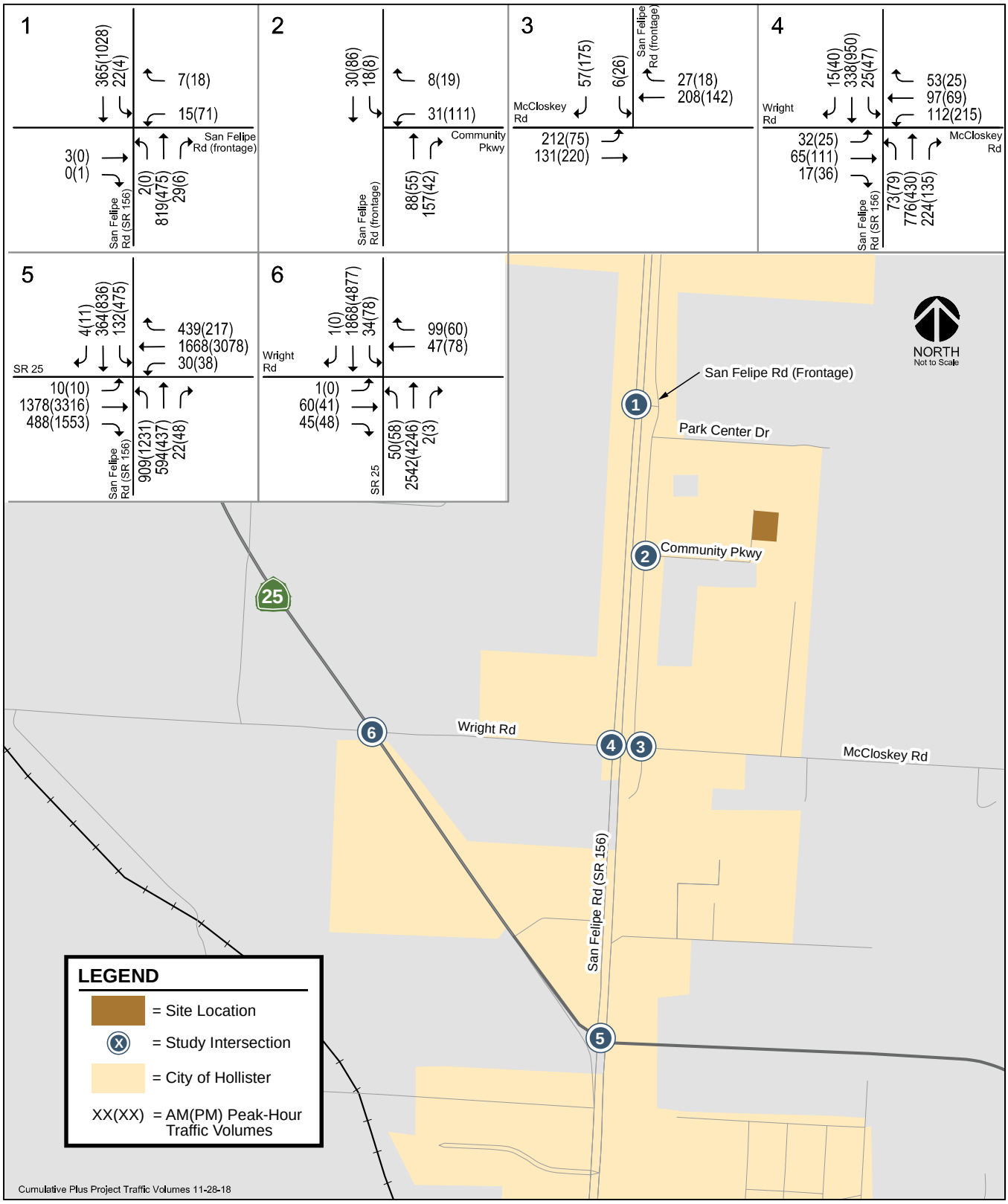


Figure 13
Cumulative With Project Traffic Volumes



Cumulative Intersection Analyses

A significant cumulative traffic impact at an intersection is identified by comparing cumulative with project traffic conditions against cumulative no project traffic conditions and applying the same impact criteria used to evaluate background plus project conditions described in Chapter 5. The results of the intersection level of service and signal warrant analyses under cumulative conditions are summarized in Table 11.

Intersection Level of Service Analysis

The results of the intersection level of service analysis indicate that three of the study intersections are projected to operate at unacceptable levels of service during at least one of the peak hours under cumulative plus project conditions. Based on the applicable significance criteria, one of the three substandard intersections would be significantly impacted by the project under cumulative plus project conditions:

1. San Felipe Road and San Felipe Road [CH] (frontage)
5. San Felipe Road and SR 25 [CT]
6. SR 25 and Wright Road [CT] (**Impact:** AM and PM peak hours)

The impact and proposed improvements to mitigate the cumulative impacts are described below.

All other study intersections are projected to operate at acceptable levels during both the AM and PM peak hours of traffic under cumulative plus project conditions when measured against the applicable level of service standards. The intersection level of service calculation sheets are included in Appendix C.

Intersection Signal Warrant Analysis

The peak hour signal warrant analysis indicates that the following two study intersections are projected to have peak-hour traffic volumes that meet the thresholds that warrant signalization during at least one of the peak hours under cumulative plus project conditions. Both of the intersections also were projected to warrant a traffic signal under cumulative no project conditions:

1. San Felipe Road and San Felipe Road (frontage) [CH] (PM peak-hour)
6. SR 25 and Wright Road [CT] (AM and PM peak hours)

Both of the above intersections also are projected to operate at unacceptable levels of service under cumulative plus project conditions, as discussed in the previous section. Therefore, the installation of traffic signals at both of the intersections listed above is warranted under cumulative plus project conditions.

Only the intersection of SR 25 and Wright Road also was found to be significantly impacted by the proposed project under cumulative plus project conditions.

The remaining unsignalized study intersections are projected to have traffic conditions that fall below the thresholds that warrant signalization under cumulative plus project conditions. The peak-hour signal warrant sheets are contained in Appendix D.

Cumulative Impacts and Recommended Mitigation Measures

Described below are the intersection impacts under cumulative plus project conditions and recommended mitigation measures necessary to maintain the level of service standards and intersection operations.

Table 11
Cumulative Intersection Level of Service and Signal Warrants Analyses Summary

#	Intersection	Jurisdiction	LOS Standard	Peak Hour	Int. Control	Cumulative No Project Warrant Met?[3]	Cumulative No Project Delay[1]	Cumulative No Project LOS	Cumulative Plus Project Warrant Met?[3]	Cumulative Plus Project Delay[1]	Cumulative Plus Project LOS	Change in Delay[2]
1	San Felipe Road and San Felipe Road (frontage)	City of Hollister	C	AM	TWSC	No	**27.2**	**D**	No	**27.0**	**D**	**-0.2**
				PM		**Yes**	**29.5**	**D**	**Yes**	**28.3**	**D**	**-1.2**
2	San Felipe Road (frontage) and Community Parkway	City of Hollister	C	AM	OWSC	No	9.6	A	No	9.9	A	0.3
				PM		No	9.8	A	No	10.1	B	0.3
3	San Felipe Road (frontage) and McCloskey Road	City of Hollister	C	AM	OWSC	No	10.3	B	No	10.6	B	0.3
				PM		No	10.6	B	No	10.9	B	0.3
4	San Felipe Road and McCloskey Road/Wright Road	City of Hollister	C	AM	Signal	--	18.5	B	--	19.0	B	0.5
				PM		--	20.8	C	--	22.1	C	1.3
5	San Felipe Road and SR 25	Caltrans	C	AM	Signal	--	47.1	D	--	47.3	D	0.2
				PM		--	**387.2**	**F**	--	**387.4**	**F**	**0.2**
6	SR 25 and Wright Road	Caltrans	C	AM	TWSC	**Yes**	--[4]	**F**	**Yes**	--[4]	**F**	--[4]
				PM		**Yes**	--[4]	**F**	**Yes**	--[4]	**F**	--[4]

Notes:
[1]The reported delay and corresponding level of service for signalized intersections represent the average delay for all approaches at the intersection.
The reported delay and corresponding level of service for one- and two-way stop-controlled intersections are based on the stop-controlled approach with the highest delay.
[2] Change in delay measured relative to cumulative no project conditions.
[3] Signal warrant analysis is not applicable to signalized intersections.
[4] Lane configuration and volume conditions exceed the bounds of the unsignalized level of service methodology. The intersection is over capacity, and delay cannot be calculated.
Bold indicates unacceptable LOS/signal warrant met.
Bold and boxed indicate significant impact.

6. SR 25 and Wright Road (Caltrans)

Impact: This unsignalized intersection's level of service is projected to be an unacceptable LOS F during both peak hours under cumulative no project conditions and the addition of project traffic would cause the delay at the intersection to increase and the intersection would have traffic volumes that meet peak-hour signal warrants. This constitutes a significant project impact by Caltrans standards.

Mitigation Measures. The widening of Highway 25 to four lanes between San Felipe Road and Santa Clara County Line is included as part of the improvement projects of the San Benito County Regional Transportation Impact Mitigation Fee (TIMF). The developer will be required to pay the applicable TIMF fee as a fair-share contribution toward improvements at this intersection. With implementation of this mitigation measure, this impact would be less-than-significant.

7. Other Transportation Issues

This chapter presents an analysis of other transportation issues associated with the project site, including:

- Potential impacts to transit, bicycle, and pedestrian facilities
- Site access and circulation
- Parking supply

These other transportation issues were evaluated to determine if any deficiencies would exist under project conditions that may not be specifically linked to environmental impact reporting. These may not be considered environmental issues, and may not be evaluated in an environmental assessment, but have been included in the traffic study to meet the requirements of the local jurisdiction. Unlike the level of service impact methodology, which is adopted by the City Council, the analyses in this chapter are based on professional judgment in accordance with the standards and methods employed by the traffic engineering community.

Bicycle and Pedestrian Circulation

The project site is served directly by Class II bicycle lanes along San Felipe Road (frontage). Other bicycle facilities in the vicinity of the project site include Class II bike lanes on San Felipe Road, south of SR 25, and along SR 25, west of San Felipe Road.

Pedestrian facilities in the project area are limited. With the project site being located within a highly undeveloped industrial area, none of the surrounding roadways currently have sidewalks.

The nearest marked crosswalks are available on three approaches of the signalized intersection of San Felipe Road and Write Road/McCloskey Road, located approximately ¼ mile south of the project site.

Bicycle and Pedestrian Policies

Various State, County, and City policies exist that are aimed at developing a complete pedestrian and bicycle network to provide residents with an alternative accessible and desirable mode of transportation. These policies require and/or make recommendations for local jurisdictions to work with residents, developers, lead agencies, and County officials to coordinate, design, implement and maintain bicycle and pedestrian facilities and services. Some of these policies are described below.

City of Hollister 2005 General Plan

The City of Hollister 2005 General Plan acknowledges that most bicycling within the city is done on roadway shoulders, which in many cases can be accommodated on well-designed streets without the need for separate striped bike lanes. However, as traffic increases along many of the streets in Hollister, it is desirable to increase emphasis on accommodating bicycle travel when designing City streets.

One of the City of Hollister General Plan Goals is to "provide a variety of pedestrian and bicycle facilities to promote safe and efficient non-motorized vehicle circulation in Downtown and throughout Hollister." (Goal C2). The General Plan policies further emphasize pedestrian connectivity by working with local businesses, private developers, and public agencies to ensure provision of safe pedestrian pathways to major public facilities, schools, and employment centers.

Policy C2.1 encourages intergovernmental coordination among the leading agencies (City of Hollister, San Benito County, San Benito County Council of Governments (COG), and Caltrans) to develop, implement, and maintain bicycle facilities as described in the San Benito County Bicycle Master Plan. Implementation of these bicycle facilities would provide direct access to major public facilities, schools, and employment centers, providing an alternative mode of travel to automobile.

2009 San Benito County Bikeway and Pedestrian Master Plan

The 2009 *San Benito County Bikeway and Pedestrian Master Plan* provides a guide for the future development of bicycle and pedestrian facilities within the County, including the City of Hollister. The purpose of the plan is to expand the existing bicycle and pedestrian networks, connect existing gaps, address constrained areas, provide greater connectivity, educate and encourage the use of non-motorized travel alternatives, and to maximize funding sources. The goals of the plan include:

- Increase bicycle and pedestrian access
- Improve bicycle and pedestrian safety
- Ensure all residents are knowledgeable about bicycle and pedestrian safety
- Increase bicycle and pedestrian trips

Master Plan Recommended Bikeway Improvements

The Bikeway and Pedestrian Master Plan identifies various bikeway improvements for the San Benito County regional bikeway network. The recommend improvements for incorporated areas, such as the City of Hollister, were developed focusing on connecting community destinations such as parks, libraries, transit, schools, recreational opportunities, as well as through public input.

The Bikeway and Pedestrian Master Plan identifies a total of 46 bikeway projects in the City of Hollister, including 2 Class I, 29 Class II, and 15 Class III bicycle facilities. Implementation of the recommended bicycle network improvements would provide an extensive bicycle network within the City of Hollister, providing a continuous bicycle network with access to virtually every part of town as well as planned regional facilities.

The recommended bicycle improvements were ranked based on criteria such as connections to parks, major employment centers, schools, closure of gaps in existing network, and public input and safety. From the ranking process, a prioritized list of bicycle projects for construction was developed, which includes Tier 1 (highest potential projects intended for near-term implementation within 1-5 years), Tier 2 (intended for implementation within 6-10 years), and Tier 3 projects (long-term potential bicycle-specific projects that could be implemented over the next 11-20 years). The following bike projects are located in the immediate vicinity of the project site:

- Tier 1 Rank #12 - Class II bike lanes on San Felipe Road, between Santa Ana Road and Pacheco Pass Highway
- Tier 2 Rank #33 – Class III bike lanes on SR 25, between San Felipe Road and County Line
- Tier 3 – Rank #53 – Class I bike lanes on San Felipe Road, between Wright Road and Flynn Road

Master Plan Recommended Pedestrian Improvements

The Bikeway and Pedestrian Master Plan also identifies various pedestrian improvements that aim at providing increased opportunities for residents in San Benito County to walk for transportation or recreation. These improvements are not funded but can be capital projects or installed with roadway improvement projects or development/redevelopment of the adjacent properties. The Master Plan lists various pedestrian improvements throughout the County, including the City of Hollister, which include:

- Infill of sidewalk gaps
- Improvements at signalized intersections, including installation of transverse crosswalks, countdown traffic signals, and audible signals, as well as adjusting signal timing to provide additional pedestrian time at locations near elementary schools.
- Improvements at unsignalized intersections, including installation of high-visibility crosswalk markings at local streets adjacent to schools, installation of curb extensions, and improving railroad crossings.
- Curb ramp improvements
- Safe routes to school programs
- Multi-use path projects

The Master Plan recommends various locations where the above pedestrian improvements should be implemented. However, none of the locations listed are near the project site.

San Benito County Regional Transportation Plan

The latest San Benito County *Regional Transportation Plan* (RTP), as described in its latest document (On the Move: 2035 – San Benito Regional Transportation Plan, adopted in June 2014), presents a blueprint for solving region wide transportation issues, now and into the future. The document identifies the existing transportation conditions and plans future needs based on projected growth, previously approved plans, public input, and prior Council of Government Board action. The plan identifies various multimodal transportation projects (including roadway network, public transit, and active transportation improvements) and provides a timeline and cost estimate for each project.

The construction of the Tier I Projects identified in the San Benito County Bikeway and Pedestrian Master Plan is identified in the RTP list of projects with a completion date of 2035.

Project's Effect on Bicycle and Pedestrian Facilities

The proposed project could increase the demand on bicycle facilities in the vicinity of the project site. The project site is served directly by Class II bike lanes along the San Felipe Road frontage road. However, currently there is not a connection between the bike lanes on San Felipe Road (frontage) and other existing bike lanes within the City of Hollister. With the existing limited and discontinuous bicycle network, the potential project-related bike riders would have to share the roadway with vehicular traffic, which could discourage the use of the bicycle as an alternative mode of transportation.

With implementation of the planned bicycle facilities identified in the County's Bikeway and Pedestrian Master Plan, a connection would be provided between the project site and other bicycle facilities to the south, providing a continuous bicycle network with access to most areas within Hollister and major facilities outside of town. However, since the above planned bicycle facilities are not fully funded, it is

uncertain when these facilities would be available. Until these facilities are built out, project-related bicycle traffic would need to share the roadway with auto traffic.

The missing sidewalks in the project area make pedestrian travel to/from the project site challenging, discouraging pedestrian activity or forcing pedestrians to walk along undeveloped roadway shoulders and/or within the street. However, no other pedestrian destinations, such as residences, shopping centers, or other pedestrian services, are located within what would be considered an acceptable walking distance (0.25 to 0.5 miles) from the project site. Therefore, it is very unlikely that the project would generate a measurable need for pedestrian facilities.

Transit Service

County Express operates several fixed-route buses in Hollister and San Benito County. There are currently three County Express bus lines (Blue Line, Green Line, and Red Line) which operate within the City of Hollister. The Red line serves the project site directly, with the nearest bus stop to the project site located within the parking lot adjacent to the existing Health Center.

Transit Service Policies

As with the bicycle and pedestrian facilities, various policies exist within City and County adopted documents that strive at enhancing and expanding the existing transit services to adequately serve both the existing and future demands, providing an efficient, extensive and easily accessible alternative mode of travel for residents. Some of these policies are described below.

City of Hollister 2005 General Plan

Policies C4.2 and C4.3 of the City of Hollister General Plan encourage intergovernmental coordination among the leading agencies (City of Hollister, San Benito County, COG, and Caltrans) to develop, implement, and maintain public transit services and park and ride facilities. Providing an extensive transit service network could encourage the use of public transportation as an alternative mode of travel.

San Benito County Regional Transportation Plan

On the Move: 2035, the latest San Benito County RTP, identifies various public transit improvements within the County, most of which would directly benefit the City of Hollister. The RTP public transit improvements and their completion dates are listed in Table 12 below.

Project's Effect on Transit Services

Although no reduction to the project trip generation estimates was applied due to transit services, it can be assumed that some of the project trips could be done utilizing public transportation. Applying an estimated three to five percent transit mode share, which is probably the highest that could be expected for the project, equates to approximately 2-3 new transit riders generated by the proposed project during each of the peak hours. With the Red line serving the project site directly, the estimated number of new transit riders for the proposed project could be accommodated. Therefore, the additional transit demand generated by the project would not justify additional transit services in the study area based on the project demand alone.

Table 12
San Benito County Regional Transportation Plan Project List

Project Title	Description	Responsible Agency	Year of Expenditure [1]
Transit Vehicle Replacement	Replace fleet as needed	San Benito County Local Transportation Authority	2035
Transit Technology Infrastructure Improvements	Improve transit infrastructure to accommodate operations	San Benito County Local Transportation Authority	2025
Transit Service Operations	Ongoing operation of fixed route and other transit services	San Benito County Local Transportation Authority	2035
Regional Transit - Salinas	Regional transit connection to Salinas	San Benito County Local Transportation Authority	2035
Regional Transit - Gilroy Caltrain	Regional transit connection to Gilroy Caltrain Station	San Benito County Local Transportation Authority	2035
Regional Transit - Gavilan College	Regional transit connection to Gavilan College Campus	San Benito County Local Transportation Authority	2035
Regional Transit - Watsonville	Regional transit connection to City of Watsonville	San Benito County Local Transportation Authority	2035
Regional Transit Planning	Planning for ongoing regional transit activities	San Benito County Local Transportation Authority	[2]
Transit Infrastructure - Bust Stop Facility Improvements	Improvements to transit bus stop facilities	San Benito County Local Transportation Authority	2020
Rideshare Program (TDM)	Promote the use of alternative modes of transportation	Council of Governments	2035
Vanpool Program	Provide commuter vanpool services - lease program	Council of Governments	2035
Commuter Rail Extension to Santa Clara County	Extend commuter rail (currently Caltrain) from Hollister to Gilroy	San Benito County Local Transportation Authority	[2]

Source: On the Move: 2035 - San Benito Regional Transportation Plan, June 2014, Appendix C - Project List.
[1] Year of Expenditure is broken down in five-year increments based on the anticipated date of project completion. Multi-year projects are identified in year of completion.
[2] Expenditure year not listed.

Site Access and On-Site Circulation

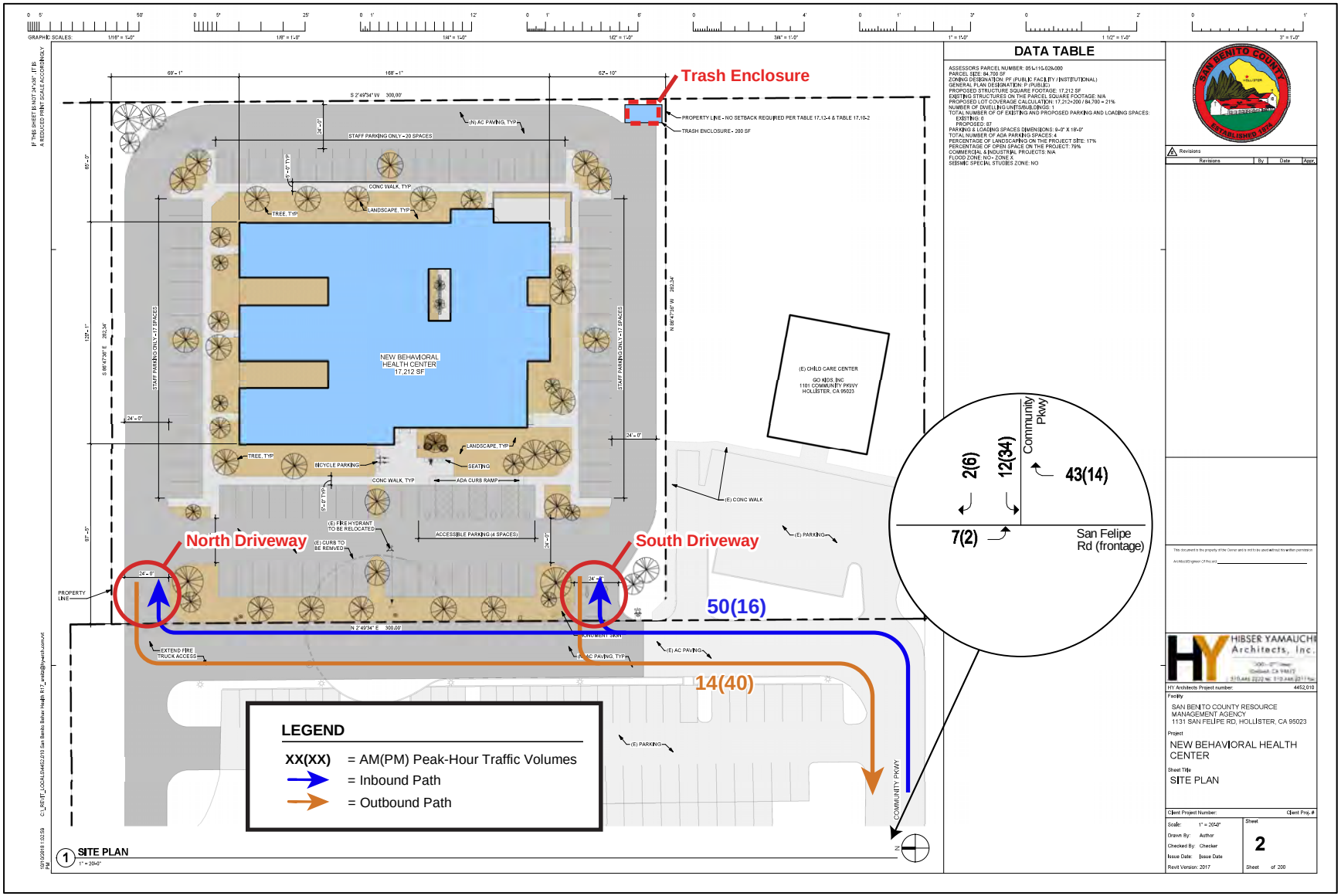
This analysis is based on a review of the project site plan prepared by Hibser Yamauchi Architects, Inc. dated 2017. Site access was evaluated to determine the adequacy of the project site access driveway with regard to the following: traffic volume, sight distance, projected vehicle queues, and geometric design. On-site vehicular circulation was reviewed in accordance with generally accepted traffic engineering standards and transportation planning principles. The site plan is presented on Figure 14.

Site Access

Access to the project site would be provided via an existing driveway along San Felipe Road (frontage). The existing driveway (Community Parkway) currently provides access to other existing uses adjacent to the project site, including the existing Health Center.

Within the project site, Community Parkway is proposed to be extended from its current terminus point (a cul-de-sac along the western project site boundary) northward to the northern project site boundary. The Community Parkway extension would provide access to the project site via two new internal driveways (labeled as North Driveway and South Driveway on Figure 14.) Both new internal driveways would provide inbound and outbound access.

Figure 14
Site Access and Circulation



Project Driveway Design

The City of Hollister requires a minimum width of 21 feet (maximum of 42 feet) for all commercial and industrial driveways. The existing access driveway (east leg of the San Felipe Road frontage road and Community Parkway intersection) is approximately 30 feet wide, satisfying the minimum width requirements.

The site plan shows both internal driveways to be 24 feet wide, also satisfying the minimum driveway width requirements.

Project Driveway Operations

The site access intersection of San Felipe Road (frontage) and Community Parkway was evaluated within the intersection analysis presented in the previous chapters. The level of service analysis shows that this intersection currently operates and is projected to continue to operate adequately with implementation of the proposed project. No more than 10 seconds of delay are projected to be experienced at the intersection. Additionally, the peak-hour traffic signal warrant checks show that traffic volumes at this intersection are not projected to meet the threshold that warrants signalization. Therefore, the existing stop control at this intersection would be adequate to serve the projected traffic volumes.

Operations at the proposed project site driveway also were evaluated for adequacy to serve the estimated project traffic based on vehicle queue projections. Since San Felipe Road (frontage) consists of a two lane roadway, project traffic entering the site from the north would have to complete the left-turn into the site from the southbound through lane. Thus, vehicle queues at the project driveway could interfere with traffic operations along the San Felipe Road frontage road. The Poisson probability distribution was utilized to estimate the 95th percentile maximum number of queue vehicles at the site access intersection, based on the projected traffic volumes.

As illustrated on Figure 14, the proposed project is estimated to add 14 and 40 AM and PM peak hour trips, respectively, to the outbound (westbound) approach of the San Felipe Road (frontage)/Community Parkway intersection. Additionally, 50 inbound project trips during the AM peak-hour (16 trips during the PM peak-hour) are estimated to turn into Community Parkway from San Felipe Road (frontage), with 8 of those trips making a left-turn and 42 trips making a right-turn into the site. Based on the traffic volume projections, the queuing analysis shows that no more than one vehicle is projected to queue along the southbound approach on San Felipe Road (frontage) as it waits for a gap in opposing traffic to complete a left-turn into the site. It is also projected that queues of no more than two vehicles would occur along Community Parkway. The projected vehicle queue calculations are shown in Table 13.

Therefore, based on the relatively low traffic volumes on San Felipe Road (frontage), operations at the project site access driveway are projected to be adequate.

Sight Distance

Adequate sight distance (sight distance triangles) should be provided at the project site driveway (intersection of San Felipe Road frontage road and Community Parkway) in accordance with the *American Association of State Highway Transportation Officials* (AASHTO) standards. Sight distance triangles should be measured at the driveway approximately 10 feet back from the traveled way. Providing the appropriate sight distance reduces the likelihood of a collision at a driveway or intersection and provides drivers with the ability to exit a driveway and locate sufficient gaps in traffic. The minimum acceptable sight distance is often considered the AASHTO stopping sight distance. Sight distance requirements vary depending on the roadway speeds. San Felipe Road (frontage) has a posted speed limit of 40 mph. The AASHTO stopping sight distance for a facility with a posted speed

Table 13
Vehicle Queuing Analysis

Measurement	San Felipe Road(frontage) and Community Parkway			
	WB AM	WB PM	SB AM	SB PM
Existing Conditions				
Cycle/Delay[1] (sec)	9.6	9.8	7.6	7.4
Lanes	1	1	1	1
Volume (vph)	25	90	41	92
Volume (vphpl)	25	90	41	92
Avg. Queue (veh/ln.)	0.1	0.2	0.1	0.2
Avg. Queue[2] (ft./ln)	2	6	2	5
95th %. Queue (veh/ln.)	1	1	1	1
95th %. Queue (ft./ln)	25	25	25	25
Storage (ft./ ln.)	600	600	275	275
Adequate (Y/N)	YES	YES	YES	YES
Background Conditions				
Cycle/Delay[1] (sec)	9.6	9.8	7.6	7.4
Lanes	1	1	1	1
Volume (vph)	25	90	41	92
Volume (vphpl)	25	90	41	92
Avg. Queue (veh/ln.)	0.1	0.2	0.1	0.2
Avg. Queue[2] (ft./ln)	2	6	2	5
95th %. Queue (veh/ln.)	1	1	1	1
95th %. Queue (ft./ln)	25	25	25	25
Storage (ft./ ln.)	600	600	275	275
Adequate (Y/N)	YES	YES	YES	YES
Background Plus Project Conditions				
Cycle/Delay[1] (sec)	9.9	10.1	7.7	7.4
Lanes	1	1	1	1
Volume (vph)	39	130	48	94
Volume (vphpl)	39	130	48	94
Avg. Queue (veh/ln.)	0.1	0.4	0.1	0.2
Avg. Queue[2] (ft./ln)	3	9	3	5
95th %. Queue (veh/ln.)	1	2	1	1
95th %. Queue (ft./ln)	25	50	25	25
Storage (ft./ ln.)	600	600	275	275
Adequate (Y/N)	YES	YES	YES	YES

Notes:
[1] Vehicle queue calculations based on control delay for unsignalized intersections.
[2] Assumes 25 feet per vehicle queued
NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound, R = Right, T = Through, L = Left.

limit of 40 mph is 300 feet. Thus, a driver exiting the access driveway must be able to see approaching traffic on San Felipe Road (frontage) at a minimum distance of 300 feet in order to be able to stop and avoid a collision.

Based on field observations, aerial images, and the project driveway location, there are no existing trees or visual obstructions along San Felipe Road (frontage) at Community Parkway that would obscure sight distance to drivers exiting the project site, providing a clear view of approaching traffic on both sides of San Felipe Road (frontage) beyond the minimum required distance of 300 feet. Therefore, it can be concluded that the project access driveway would meet the AASHTO minimum stopping sight distance standards.

With the development of the project site, the two new internal driveways providing access to the project site should be free and clear of any obstructions to provide a clear view of any person within the Community Parkway extension. The San Benito County parking requirements (Section 25.31.070, Entrance and Exit Visibility Requirements, of the Code of Ordinance) states that “each exit and entrance to a parking lot shall be constructed and maintained such that any vehicle entering or leaving the parking lot shall be clearly visible for a distance of at least ten feet to any person on a walk or footpath intersected by such exit or entrance.” Any landscaping and signage proposed by the project should be located in such a way to ensure an unobstructed view for drivers exiting the site.

Site Access Recommendations

With the development of the project site, the project should ensure that any landscaping and signage proposed by the project site driveway should be located in such a way to ensure an unobstructed view for drivers entering and exiting the site.

Vehicular On-Site Circulation

From Community Parkway, project traffic would access the project site via one of the two proposed internal project site driveways. Both project driveways would connect to a drive aisle that would run along the perimeter of the project site and around the centrally located proposed building. Ninety-degree parking stalls would be provided along one side of the drive aisle only adjacent to the proposed building, with the exception of the western side of the building, where parking spaces would be located along both sides of the drive aisle.

The proposed drive aisle is shown on the site plan to be 24 feet wide. Parking stall dimensions are not listed. The San Benito County Code of Ordinance, Section 25.31.046 (Off-Street Parking Dimension Table) specifies that all parking stalls shall be at least nine (9) feet wide and 20 feet long, with a minimum of 25 feet of backup space. The drive aisle width of 24 feet does not provide the minimum required backup space of 25 feet, as recommend by the Code of Ordinance.

Truck Access and Circulation

In addition to adequately serving passenger vehicles, larger vehicles, such as emergency vehicles and garbage trucks, also must be able to access and maneuver through the parking lot. Larger vehicles normally require more space than a passenger vehicle when entering and circulating a site mainly because trucks require a greater turn radii.

The site plan shows the trash enclosures to be located at the southeast corner of the project site, directly across from the south driveway (see Figure 14). An existing fire hydrant would be relocated near the western project site boundary, in front of the proposed row of parking stalls. Garbage trucks would enter the site, access the trash enclosure, and circulate the parking lot to exit the site. Likewise, emergency vehicles would have to circulate the parking lot to exit the site. Thus, all internal corner

radiuses must be designed to be able to accommodate the greater turn radii associated with larger vehicles.

The proposed site layout and two full access driveways would allow for continuous traffic circulation through the project site. With the proposed parking layout and providing adequate drive aisle widths and corner radii, access and on-site circulation for all vehicles, including garbage and fire trucks, would be adequate.

Circulation Recommendations

The design of the parking lot must adhere to San Benito County and City of Hollister design standards and guidelines, including adequate corner radii to accommodate the greater turn radii associated with larger vehicles, drive aisle widths, and parking dimensions, in order to provide adequate on-site circulation for all vehicles.

Pedestrian Access and Circulation

The majority of the parking spaces would be located adjacent to the proposed building. However, only the parking spaces along both sides of the western drive aisle (in front of the Health Centers main entrance) would be designated for patients; all other parking spaces (north, east, and south sides of building) would be designated as staff parking.

The site plan shows pedestrian walkways/sidewalks around the entire building, allowing pedestrians to access the building from their parking space. However, patients parking within the row of parking along the western project site boundary would have to cross the western drive aisle to access the building. The western drive aisle is anticipated to experience the most traffic activity throughout the day since all patient parking would occur along this drive aisle. The sharp 90-degree turn that all vehicles entering the western drive aisle must complete would help reduce vehicular speeds along this drive aisle, allowing for pedestrian circulation within the aisle.

No pedestrian connections are shown on the site plan between the project site and the existing uses to the west and south. As discussed previously, the Red line transit service stops within the existing parking lot west of the project site. Pedestrian circulation between the project site and existing uses/bus stop would be done within the parking lot, without the benefit of a defined pedestrian pathway. Thus, it is recommended that a clear pedestrian connection between the existing parking lot and the proposed project site be identified in an effort to minimize pedestrian circulation within the drive aisles. Alternatively, a second bus stop for the Red line, or relocation of the existing bus stop, could be implemented along the Community Parkway extension, across from the project site.

Pedestrian Access and Circulation Recommendations

It is recommended that a clear pedestrian connection between the existing parking lot and the proposed project site be identified in an effort to minimize pedestrian circulation within the drive aisles. Alternatively, a second bus stop for the Red line, or relocation of the existing bus stop, could be implemented along the Community Parkway extension, across from the project site.

Parking Supply

The project as proposed consists of a 17,212 s.f. health center. For clinics and medical offices under 20,000 s.f., the City of Hollister Zoning Code (Section 17.18.060) requires three parking spaces for each doctor or one space for each 150 square feet of gross floor area, whichever is greater. For the same use, the San Benito County Code of Ordinance (Section 25.31.023) requires one parking stall for every 150 square feet of gross floor area, plus one stall per doctor.

Based on the City's parking requirements, the project would need to provide 115 parking spaces to serve the project. Based on the County's parking requirements, the project would need to provide 115 parking spaces plus one additional space per doctor to serve the project. The project is proposing to provide a total of 85 parking spaces, which represents a 26% reduction (or 30 less parking spaces) from the 115 parking spaces required by the City code.

Additional parking is at the existing Health Center site. Depending on the parking occupancy rate of the existing parking spaces, the project may pursue a shared parking reduction per City code 17.18.090.B. The applicant would be required to provide documentation (i.e. shared parking use analysis) to evaluate the parking demand of the existing Health Center site (to be re-occupied) and the proposed project. Ultimately, San Benito County will determine if a shared parking program, or the proposed number of parking spaces are appropriate to serve the proposed project.

ADA Compliance

Accessible parking spaces also must be provided within any parking facility serving the public, such as the proposed project. The San Benito County Code of Ordinance (Section 25.31.063) requires that all medical offices and similar uses provide at least one accessible parking stall plus one additional space for every 20 required stalls, with mo more than 10 accessible stalls required on each site. Based on these requirements and the proposed number of parking spaces, the project must provide a total of 5 accessible spaces.

The plans show a total of four accessible spaces, all located within along the west side of the proposed health center, adjacent to the main building entrance. Therefore, based on the County Code of Ordinance requirements, the project must provide one additional accessible parking space to comply County requirements.

Parking Recommendations

The project proposes to provide 85 of the 115 parking spaces required by City Code. The project may pursue a shared parking program, per City code 17.18.090.B, between the existing Health Center and the proposed project. Additionally, based on the County Code of Ordinance requirements, the project must provide one additional accessible parking space to comply with County requirements.

Ultimately, San Benito County will determine if a shared parking program, or the proposed number of parking spaces are appropriate to serve the proposed project.

Bicycle Parking

According to the City of Hollister Bicycle Parking Standards (Chapter 17.18.060, Table 17.18-1), the project is required to provide bicycle parking for the new building at a rate of 5% of vehicle spaces. This equates to a total requirement of six bicycle parking spaces. The site plan indicates five bike racks would be provided at the building's main entrance. One additional bike rack would be required to meet City requirements for bicycle parking. The proposed location of the bike racks adjacent to the main entrance of the building is convenient and accessible.

Bicycle Parking Recommendation

Based on City of Hollister bicycle parking standards, a total of six bicycle parking spaces would be required to serve the proposed project. One additional bike rack would be required to meet City requirements for bicycle parking.

8. Conclusions

The potential impacts of the project were evaluated in accordance with the standards set forth by the city of Hollister and Caltrans. The study included an analysis of AM and PM peak-hour traffic conditions for two signalized intersections and four unsignalized intersections.

Evaluation of Project Conditions

The impacts and proposed improvements to mitigate project impacts under existing plus project and background plus project are described below.

Existing Plus Project Conditions

Intersection Level of Service Analysis

The results of the intersection level of service analysis indicate that the following study intersection would be significantly impacted by the project under existing plus project conditions, based on Caltrans level of service impact criteria:

6. SR 25 and Wright Road [CT] (**Impact:** AM and PM peak hours)

Intersection Signal Warrant Analysis

The peak-hour signal warrant analysis indicates that the following two study intersections are projected to have peak-hour traffic volumes that meet the thresholds that warrant signalization under existing plus project conditions during at least one of the peak hours:

1. San Felipe Road and San Felipe Road (frontage) [CH] (PM peak-hour)
6. SR 25 and Wright Road [CT] (AM and PM peak hours)

Background Plus Project Conditions

Intersection Level of Service Analysis

The results of the intersection level of service analysis indicate that the following study intersection would be significantly impacted by the project under background plus project conditions, based on Caltrans level of service impact criteria:

6. SR 25 and Wright Road [CT] (**Impact:** AM and PM peak hours)

Intersection Signal Warrant Analysis

The peak-hour signal warrant analysis indicates that the following two study intersections are projected to have peak-hour traffic volumes that meet the thresholds that warrant signalization under background plus project conditions during at least one of the peak hours:

1. San Felipe Road and San Felipe Road (frontage) [CH] (PM peak-hour)
6. SR 25 and Wright Road [CT] (AM and PM peak hours)

Recommended Project Mitigation Measures

6. SR 25 and Wright Road (Caltrans)

Mitigation Measures. The widening of Highway 25 to four lanes between San Felipe Road and Santa Clara County Line is included as part of the improvement projects of the San Benito County Regional Transportation Impact Mitigation Fee (TIMF). The developer will be required to pay the applicable TIMF fee as a fair-share contribution toward improvements at this intersection. With implementation of this mitigation measure, this impact would be less-than-significant.

Evaluation of Cumulative Conditions

Intersection Level of Service Analysis

The results of the intersection level of service analysis indicate that three of the study intersections are projected to operate at unacceptable levels of service during at least one of the peak hours under cumulative plus project conditions. Based on the applicable significance criteria, one of the three substandard intersections would be significantly impacted by the project under cumulative plus project conditions:

1. San Felipe Road and San Felipe Road [CH] (frontage)
5. San Felipe Road and SR 25 [CT]
6. SR 25 and Wright Road [CT] (**Impact:** AM and PM peak hours)

Intersection Signal Warrant Analysis

The peak hour signal warrant analysis indicates that the following two study intersections are projected to have peak-hour traffic volumes that meet the thresholds that warrant signalization during at least one of the peak hours under cumulative plus project conditions:

1. San Felipe Road and San Felipe Road (frontage) [CH] (PM peak-hour)
6. SR 25 and Wright Road [CT] (AM and PM peak hours)

Recommended Cumulative Mitigation Measures

The recommended mitigation measures necessary to maintain the level of service standards and intersection operations under cumulative plus project conditions are the same as those recommended under background plus project conditions, and identified above.

Other Transportation Issues

Bicycle and Pedestrian Circulation

Project's effect on Bicycle and Pedestrian Facilities

The proposed project could increase the demand on bicycle facilities in the vicinity of the project site. The project site is served directly by Class II bike lanes along the San Felipe Road frontage road. However, currently there is not a connection between the bike lanes on San Felipe Road (frontage) and other existing bike lanes within the City of Hollister. With the existing limited and discontinuous bicycle network, the potential project-related bike riders would have to share the roadway with vehicular traffic, which could discourage the use of the bicycle as an alternative mode of transportation.

With implementation of the planned bicycle facilities identified in the County's Bikeway and Pedestrian Master Plan, a connection would be provided between the project site and other bicycle facilities to the south, providing a continuous bicycle network with access to most areas within Hollister and major facilities outside of town. However, since the above planned bicycle facilities are not fully funded, it is uncertain when these facilities would be available. Until these facilities are built out, project-related bicycle traffic would need to share the roadway with auto traffic.

The missing sidewalks in the project area make pedestrian travel to/from the project site challenging, discouraging pedestrian activity or forcing pedestrians to walk along undeveloped roadway shoulders and/or within the street. However, no other pedestrian destinations, such as residences, shopping centers, or other pedestrian services, are located within what would be considered an acceptable walking distance (0.25 to 0.5 miles) from the project site. Therefore, it is very unlikely that the project would generate a measurable need for pedestrian facilities.

Transit Service

Project's Effect on Transit Services

Although no reduction to the project trip generation estimates was applied due to transit services, it can be assumed that some of the project trips could be done utilizing public transportation. Applying an estimated three to five percent transit mode share, which is probably the highest that could be expected for the project, equates to approximately 2-3 new transit riders generated by the proposed project during each of the peak hours. With the Red line serving the project site directly, the estimated number of new transit riders for the proposed project could be accommodated. Therefore, the additional transit demand generated by the project would not justify additional transit services in the study area based on the project demand alone.

Site Access and On-Site Circulation

Site Access Recommendations

With the development of the project site, the project should ensure that any landscaping and signage proposed by the project site driveway should be located in such a way to ensure an unobstructed view for drivers entering and exiting the site.

Circulation Recommendations

The design of the parking lot must adhere to San Benito County and City of Hollister design standards and guidelines, including adequate corner radii to accommodate the greater turn radii associated with larger vehicles, drive aisle widths, and parking dimensions, in order to provide adequate on-site circulation for all vehicles.

Pedestrian Access and Circulation Recommendations

It is recommended that a clear pedestrian connection between the existing parking lot and the proposed project site be identified in an effort to minimize pedestrian circulation within the drive aisles. Alternatively, a second bus stop for the Red line, or relocation of the existing bus stop, could be implemented along the Community Parkway extension, across from the project site.

Parking Supply

Parking Recommendations

The project proposes to provide 85 of the 115 parking spaces required by City Code. The project may pursue a shared parking program, per City code 17.18.090.B, between the existing Health Center and the proposed project. Additionally, based on the County Code of Ordinance requirements, the project must provide one additional accessible parking space to comply with County requirements.

Ultimately, San Benito County will determine if a shared parking program, or the proposed number of parking spaces are appropriate to serve the proposed project.

Bicycle Parking Recommendation

Based on City of Hollister bicycle parking standards, a total of six bicycle parking spaces would be required to serve the proposed project. One additional bike rack would be required to meet City requirements for bicycle parking.

San Benito County Behavioral Health Center TIA
Technical Appendices

December 5, 2018

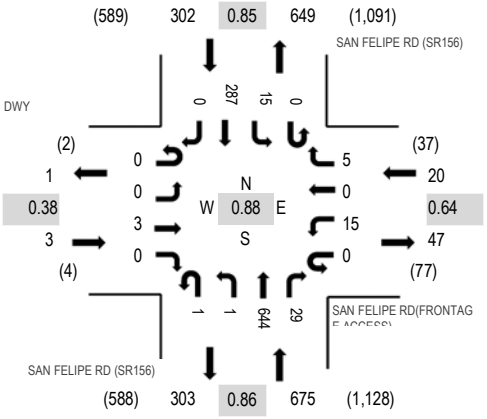
Appendix A
Traffic Counts

All Traffic Data Services Inc.

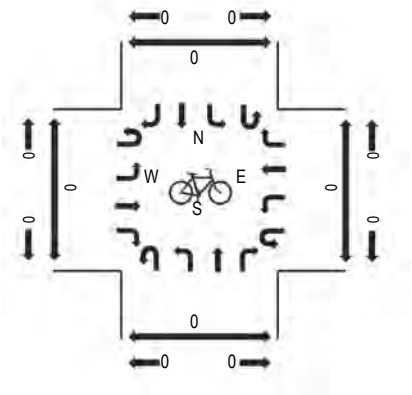
(303) 216-2439
www.alltrafficdata.net

Location: 1 SAN FELIPE RD (SR156) & SAN FELIPE RD(FRONTAGE ACCESS) AM
Date: Tuesday, November 6, 2018
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

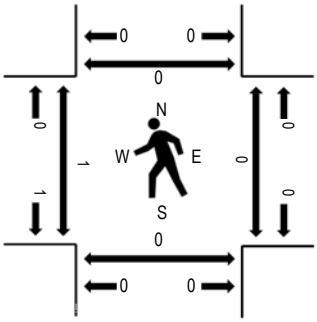
Peak Hour - All Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	DWY Eastbound				SAN FELIPE RD(FRONTAGE ACCESS) Westbound				SAN FELIPE RD (SR156) Northbound				SAN FELIPE RD (SR156) Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	0	0	0	0	1	1	0	0	111	1	0	1	77	0	192	966	0	0	0	0
7:15 AM	0	0	2	0	0	3	0	1	0	1	132	7	0	2	74	0	222	1,000	0	0	0	0
7:30 AM	0	0	0	0	0	4	0	2	0	0	183	7	0	3	70	0	269	980	1	0	0	0
7:45 AM	0	0	0	0	0	6	0	2	0	0	187	9	0	6	73	0	283	910	0	0	0	0
8:00 AM	0	0	1	0	0	2	0	0	1	0	142	6	0	4	70	0	226	792	0	0	0	0
8:15 AM	0	1	0	0	0	2	0	2	0	0	94	9	0	7	87	0	202		0	0	0	0
8:30 AM	0	0	0	0	0	5	0	4	0	0	125	3	0	5	57	0	199		0	0	0	0
8:45 AM	0	0	0	0	0	2	0	0	2	0	104	4	0	0	53	0	165		2	0	0	0

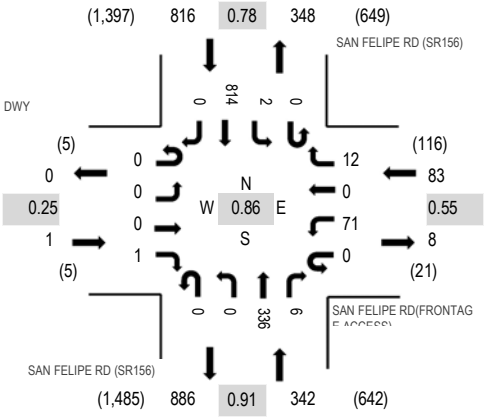
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	3	0	0	0	5	0	8
Lights	0	0	3	0	0	11	0	5	1	1	632	29	0	15	269	0	966
Mediums	0	0	0	0	0	4	0	0	0	0	9	0	0	0	13	0	26
Total	0	0	3	0	0	15	0	5	1	1	644	29	0	15	287	0	1,000

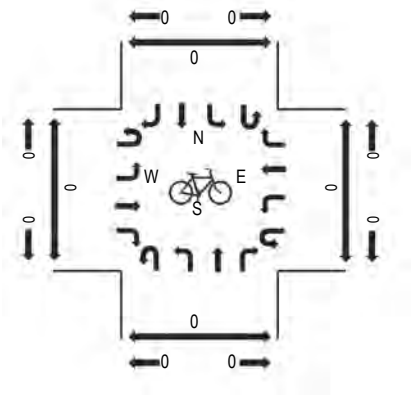
All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

Location: 1 SAN FELIPE RD (SR156) & SAN FELIPE RD(FRONTAGE ACCESS) PM
Date: Tuesday, November 6, 2018
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 04:30 PM - 04:45 PM

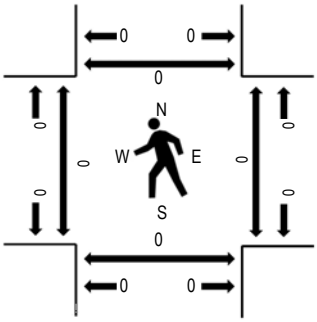
Peak Hour - All Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	DWY Eastbound				SAN FELIPE RD(FRONTAGE ACCESS) Westbound				SAN FELIPE RD (SR156) Northbound				SAN FELIPE RD (SR156) Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	3	1	0	9	5	4	0	0	83	2	0	1	144	0	252	1,095	0	0	0	0
4:15 PM	0	0	0	0	0	3	0	1	1	0	77	2	0	2	135	0	221	1,204	0	0	0	0
4:30 PM	0	0	0	0	0	18	0	5	0	0	76	3	0	0	260	0	362	1,242	0	0	0	0
4:45 PM	0	0	0	0	0	6	0	4	0	0	94	0	0	1	155	0	260	1,117	0	0	0	0
5:00 PM	0	0	0	1	0	35	0	3	0	0	87	2	0	0	233	0	361	1,065	0	0	0	0
5:15 PM	0	0	0	0	0	12	0	0	0	0	79	1	0	1	166	0	259		0	0	0	0
5:30 PM	0	0	0	0	0	5	0	2	0	0	70	1	0	1	158	0	237		0	0	0	0
5:45 PM	0	0	0	0	0	3	0	1	0	0	63	1	0	0	140	0	208		0	0	0	0

Peak Rolling Hour Flow Rates

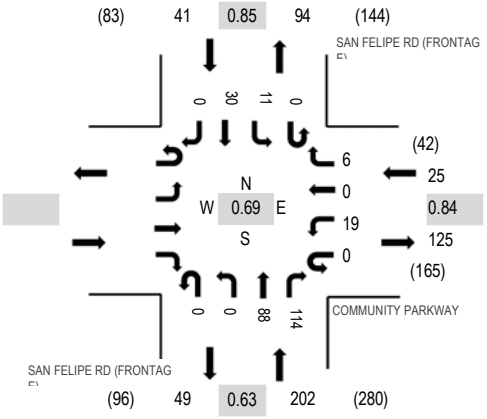
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	4
Lights	0	0	0	1	0	70	0	12	0	0	327	6	0	2	808	0	1,226
Mediums	0	0	0	0	0	1	0	0	0	0	7	0	0	0	4	0	12
Total	0	0	0	1	0	71	0	12	0	0	336	6	0	2	814	0	1,242

All Traffic Data Services Inc.

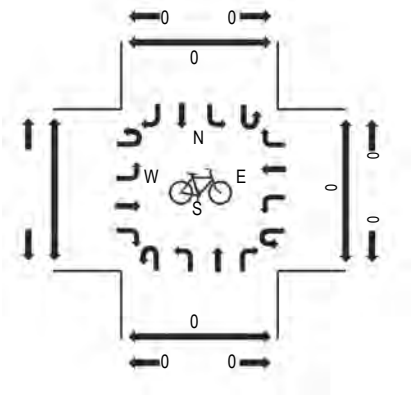
(303) 216-2439
www.alltrafficdata.net

Location: 2 SAN FELIPE RD (FRONTAGE) & COMMUNITY PARKWAY AM
Date: Tuesday, November 6, 2018
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

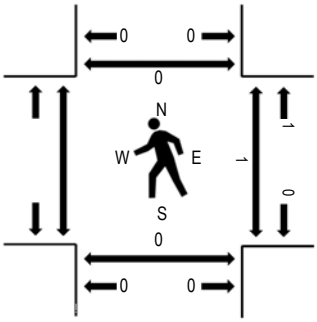
Peak Hour - All Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	Eastbound U-Turn	Eastbound Left	Eastbound Thru	Eastbound Right	COMMUNITY PARKWAY Westbound U-Turn	Westbound Left	Westbound Thru	Westbound Right	SAN FELIPE RD (FRONTAGE) Northbound U-Turn	Northbound Left	Northbound Thru	Northbound Right	SAN FELIPE RD (FRONTAGE) Southbound U-Turn	Southbound Left	Southbound Thru	Southbound Right	Total	Rolling Hour	Pedestrian Crossings West	Pedestrian Crossings East	Pedestrian Crossings South	Pedestrian Crossings North
7:00 AM					0	2	0	1	0	0	8	3	0	1	6	0	21	197		0	0	0
7:15 AM					0	4	0	2	0	0	12	6	0	2	7	0	33	251		0	0	0
7:30 AM					0	4	0	2	0	0	15	18	0	4	3	0	46	268		0	0	0
7:45 AM					0	6	0	2	0	0	30	50	0	3	6	0	97	265		0	0	0
8:00 AM					0	5	0	2	0	0	26	27	0	3	12	0	75	208		0	0	0
8:15 AM					0	4	0	0	0	0	17	19	0	1	9	0	50			1	0	0
8:30 AM					0	3	0	1	0	0	14	12	0	3	10	0	43			0	0	0
8:45 AM					0	4	0	0	0	0	12	11	0	2	11	0	40			1	0	0

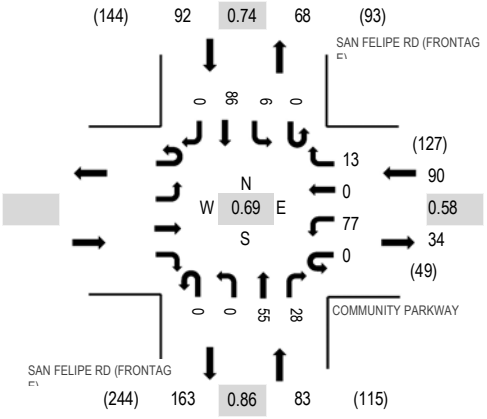
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound U-Turn	Eastbound Left	Eastbound Thru	Eastbound Right	Westbound U-Turn	Westbound Left	Westbound Thru	Westbound Right	Northbound U-Turn	Northbound Left	Northbound Thru	Northbound Right	Southbound U-Turn	Southbound Left	Southbound Thru	Southbound Right	Total
Articulated Trucks					0	0	0	0	0	0	0	0	0	0	0	0	0
Lights					0	19	0	6	0	0	85	114	0	11	28	0	263
Mediums					0	0	0	0	0	0	3	0	0	0	2	0	5
Total					0	19	0	6	0	0	88	114	0	11	30	0	268

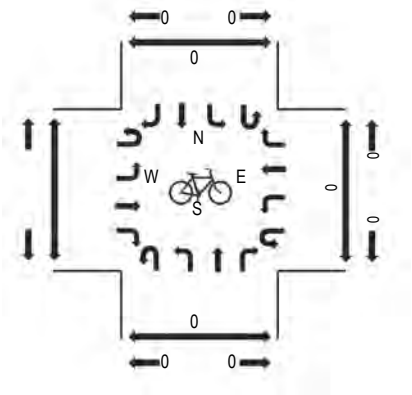
All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

Location: 2 SAN FELIPE RD (FRONTAGE) & COMMUNITY PARKWAY PM
Date: Tuesday, November 6, 2018
Peak Hour: 04:15 PM - 05:15 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

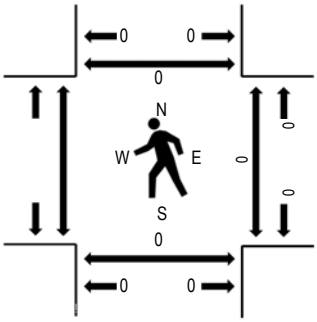
Peak Hour - All Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	Eastbound U-Turn	Eastbound Left	Eastbound Thru	Eastbound Right	COMMUNITY PARKWAY Westbound U-Turn	Westbound Left	Westbound Thru	Westbound Right	SAN FELIPE RD (FRONTAGE) Northbound U-Turn	Northbound Left	Northbound Thru	Northbound Right	SAN FELIPE RD (FRONTAGE) Southbound U-Turn	Southbound Left	Southbound Thru	Southbound Right	Total	Rolling Hour	Pedestrian Crossings West	Pedestrian Crossings East	Pedestrian Crossings South	Pedestrian Crossings North
4:00 PM					0	14	0	1	0	0	11	7	1	1	20	0	55	224		0	0	0
4:15 PM					0	9	0	0	0	0	10	2	0	2	19	0	42	265		0	0	0
4:30 PM					0	18	0	3	0	0	16	8	0	3	20	0	68	256		0	0	0
4:45 PM					0	18	0	1	0	0	15	8	0	0	17	0	59	215		0	0	0
5:00 PM					0	32	0	9	0	0	14	10	0	1	30	0	96	162		0	0	0
5:15 PM					0	12	0	2	0	0	3	3	0	1	12	0	33			0	0	0
5:30 PM					0	6	0	0	0	0	6	2	0	1	12	0	27			0	0	0
5:45 PM					0	1	0	1	0	0	0	0	0	0	4	0	6			0	0	0

Peak Rolling Hour Flow Rates

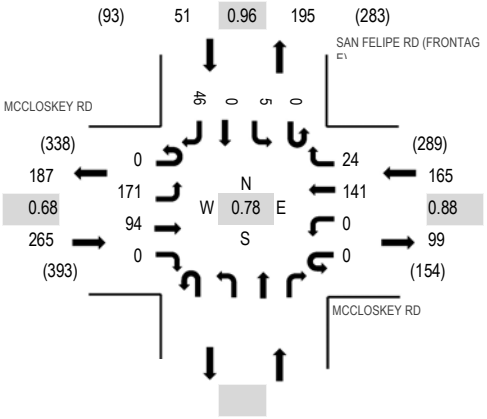
Vehicle Type	Eastbound U-Turn	Eastbound Left	Eastbound Thru	Eastbound Right	Westbound U-Turn	Westbound Left	Westbound Thru	Westbound Right	Northbound U-Turn	Northbound Left	Northbound Thru	Northbound Right	Southbound U-Turn	Southbound Left	Southbound Thru	Southbound Right	Total
Articulated Trucks					0	0	0	0	0	0	0	0	0	0	0	0	0
Lights					0	77	0	13	0	0	53	27	0	6	85	0	261
Mediums					0	0	0	0	0	0	2	1	0	0	1	0	4
Total					0	77	0	13	0	0	55	28	0	6	86	0	265

All Traffic Data Services Inc.

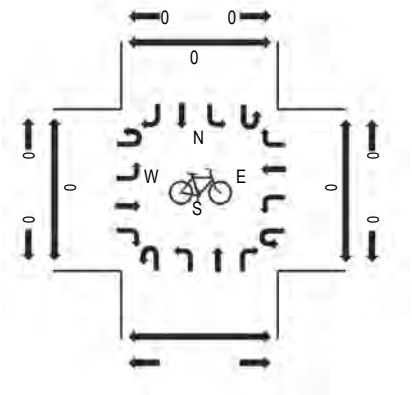
(303) 216-2439
www.alltrafficdata.net

Location: 3 SAN FELIPE RD (FRONTAGE) & MCCLOSKEY RD AM
Date: Tuesday, November 6, 2018
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

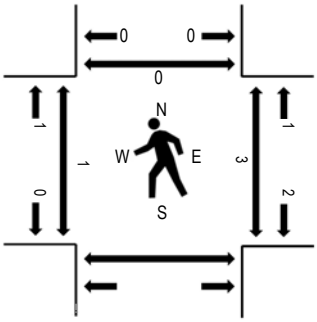
Peak Hour - All Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	MCCLOSKEY RD Eastbound				MCCLOSKEY RD Westbound				Northbound				SAN FELIPE RD (FRONTAGE) Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	1	9	7	0	0	0	24	2					0	0	0	10	53	374	0	0		0
7:15 AM	0	17	17	0	0	0	35	5					0	0	0	11	85	450	0	0		0
7:30 AM	0	28	17	0	0	0	26	3					0	0	0	7	81	472	0	0		0
7:45 AM	0	75	22	0	0	0	39	8					0	2	0	9	155	481	1	0		0
8:00 AM	0	46	23	0	0	0	39	8					0	0	0	13	129	401	0	2		0
8:15 AM	0	28	22	0	0	0	38	5					0	2	0	12	107		0	1		0
8:30 AM	0	22	27	0	0	0	25	3					0	1	0	12	90		0	0		0
8:45 AM	0	19	13	0	0	0	24	5					0	1	0	13	75		0	1		0

Peak Rolling Hour Flow Rates

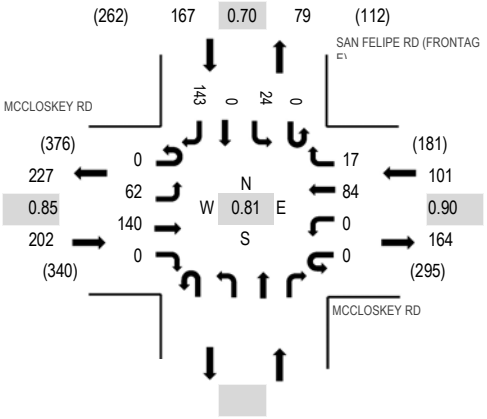
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	1	2	0	0	0	2	0					0	0	0	0	5
Lights	0	166	81	0	0	0	132	24					0	5	0	45	453
Mediums	0	4	11	0	0	0	7	0					0	0	0	1	23
Total	0	171	94	0	0	0	141	24					0	5	0	46	481

All Traffic Data Services Inc.

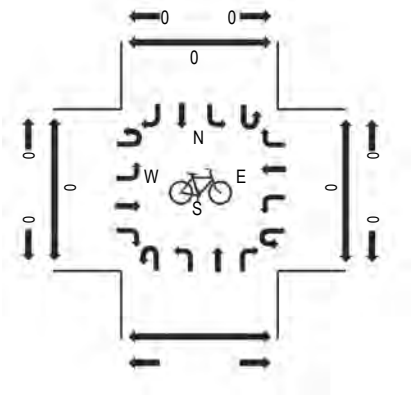
(303) 216-2439
www.alltrafficdata.net

Location: 3 SAN FELIPE RD (FRONTAGE) & MCCLOSKEY RD PM
Date: Tuesday, November 6, 2018
Peak Hour: 04:15 PM - 05:15 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

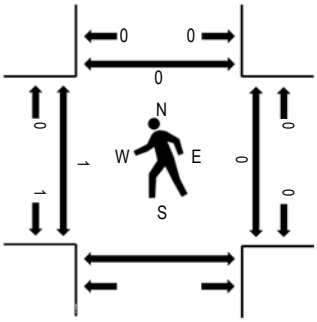
Peak Hour - All Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	MCCLOSKEY RD Eastbound				MCCLOSKEY RD Westbound				Northbound				SAN FELIPE RD (FRONTAGE) Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	7	36	0	0	0	21	7					0	5	0	34	110	435	0	0		0
4:15 PM	0	5	33	0	0	0	15	7					0	5	0	21	86	470	1	0		0
4:30 PM	0	22	38	0	0	0	22	3					0	7	0	37	129	469	0	0		0
4:45 PM	0	18	30	0	0	0	22	4					0	7	0	29	110	409	0	0		0
5:00 PM	0	17	39	0	0	0	25	3					0	5	0	56	145	348	0	0		0
5:15 PM	0	8	33	0	0	0	15	0					0	9	0	20	85		0	0		0
5:30 PM	0	8	25	0	0	0	19	0					0	3	0	14	69		0	0		0
5:45 PM	0	3	18	0	0	0	18	0					0	2	0	8	49		0	1		0

Peak Rolling Hour Flow Rates

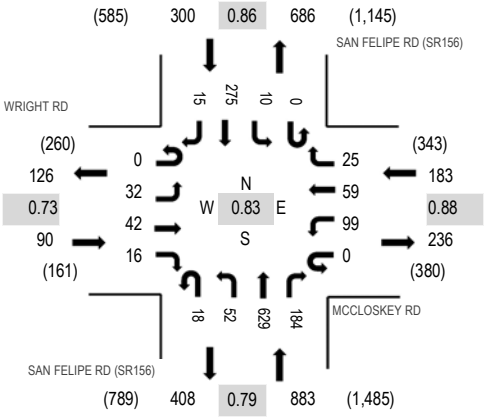
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	1	1	0	0	0	0	0					0	1	0	0	3
Lights	0	59	135	0	0	0	80	16					0	23	0	141	454
Mediums	0	2	4	0	0	0	4	1					0	0	0	2	13
Total	0	62	140	0	0	0	84	17					0	24	0	143	470

All Traffic Data Services Inc.

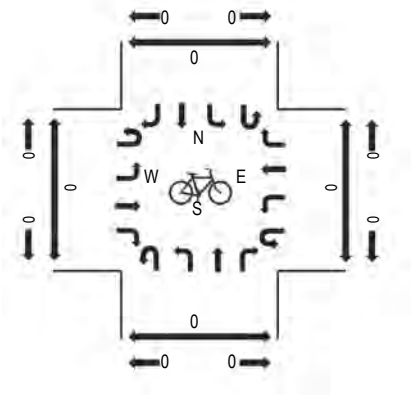
(303) 216-2439
www.alltrafficdata.net

Location: 4 SAN FELIPE RD (SR156) & MCCLOSKEY RD AM
Date: Tuesday, November 6, 2018
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

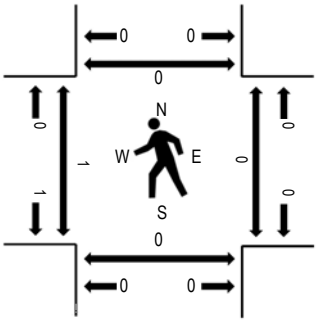
Peak Hour - All Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	WRIGHT RD Eastbound				MCCLOSKEY RD Westbound				SAN FELIPE RD (SR156) Northbound				SAN FELIPE RD (SR156) Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	9	2	4	0	19	12	4	2	14	108	13	0	2	66	4	259	1,382	0	0	0	0
7:15 AM	0	5	6	3	0	27	15	8	4	10	141	25	0	1	75	4	324	1,456	0	0	0	0
7:30 AM	0	7	11	3	0	15	12	4	4	21	176	32	0	3	71	0	359	1,430	0	0	0	0
7:45 AM	0	13	13	6	0	25	13	10	4	13	187	76	0	4	71	5	440	1,375	0	0	0	0
8:00 AM	0	7	12	4	0	32	19	3	6	8	125	51	0	2	58	6	333	1,192	1	0	0	0
8:15 AM	0	10	5	3	0	25	22	4	5	11	86	37	0	4	81	5	298		0	0	0	0
8:30 AM	0	8	5	3	0	22	13	3	6	17	118	42	0	1	60	6	304		0	0	0	0
8:45 AM	0	13	3	6	0	20	16	0	5	13	96	29	0	1	54	1	257		0	0	0	0

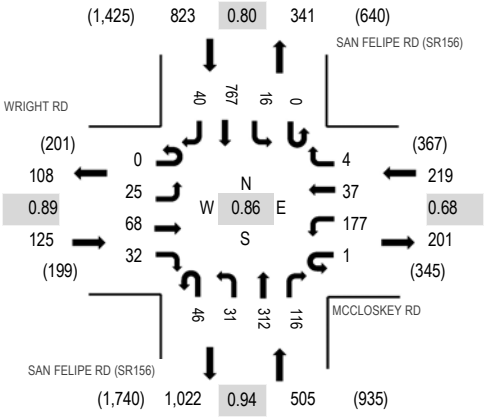
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	1	3	0	0	0	1	0	0	0	2	0	0	0	7	0	14
Lights	0	27	38	15	0	98	54	24	17	51	620	180	0	5	258	14	1,401
Mediums	0	4	1	1	0	1	4	1	1	1	7	4	0	5	10	1	41
Total	0	32	42	16	0	99	59	25	18	52	629	184	0	10	275	15	1,456

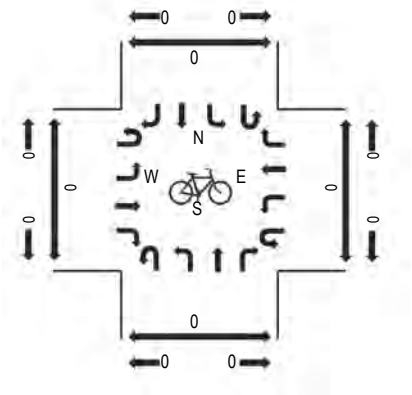
All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

Location: 4 SAN FELIPE RD (SR156) & MCCLOSKEY RD PM
Date: Tuesday, November 6, 2018
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

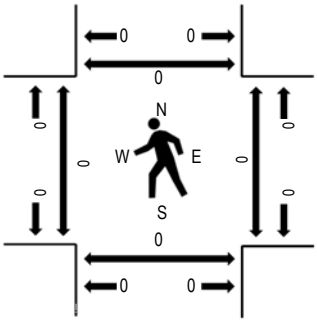
Peak Hour - All Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	WRIGHT RD Eastbound				MCCLOSKEY RD Westbound				SAN FELIPE RD (SR156) Northbound				SAN FELIPE RD (SR156) Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	2	15	7	0	40	12	3	8	14	80	28	0	6	139	5	359	1,517	0	0	0	0
4:15 PM	0	4	15	6	0	27	8	1	11	8	74	22	0	4	129	8	317	1,642	1	0	0	0
4:30 PM	0	7	16	4	0	40	16	1	5	10	75	36	0	8	235	15	468	1,672	0	0	0	0
4:45 PM	0	5	15	10	0	39	5	2	14	8	85	28	0	2	154	6	373	1,517	0	0	0	0
5:00 PM	0	5	22	8	1	66	13	0	16	7	77	27	0	5	225	12	484	1,409	0	0	0	0
5:15 PM	0	8	15	10	0	32	3	1	11	6	75	25	0	1	153	7	347		0	0	0	0
5:30 PM	0	1	6	2	0	21	10	1	8	3	68	24	0	3	158	8	313		0	0	0	0
5:45 PM	0	3	10	3	0	16	8	1	5	6	61	10	0	1	138	3	265		0	0	0	0

Peak Rolling Hour Flow Rates

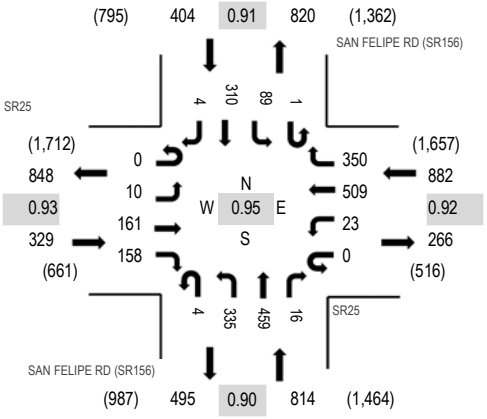
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	1	2	0	0	0	0	0	0	0	1	0	0	0	0	1	5
Lights	0	23	65	32	1	175	37	4	46	30	307	116	0	16	759	38	1,649
Mediums	0	1	1	0	0	2	0	0	0	1	4	0	0	0	8	1	18
Total	0	25	68	32	1	177	37	4	46	31	312	116	0	16	767	40	1,672

All Traffic Data Services Inc.

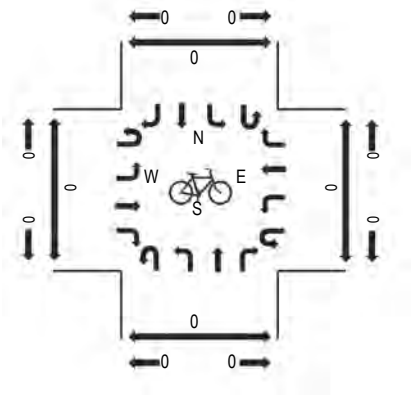
(303) 216-2439
www.alltrafficdata.net

Location: 5 SAN FELIPE RD (SR156) & SR25 AM
Date: Tuesday, November 6, 2018
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

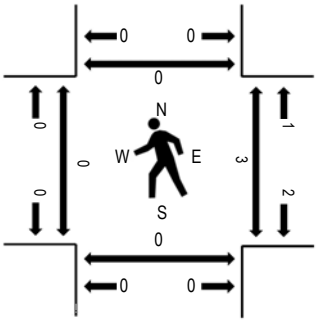
Peak Hour - All Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	SR25 Eastbound				SR25 Westbound				SAN FELIPE RD (SR156) Northbound				SAN FELIPE RD (SR156) Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	4	33	27	1	2	161	62	0	66	54	2	3	16	86	4	521	2,369	0	0	0	0
7:15 AM	0	2	31	40	0	5	154	86	1	102	88	3	0	21	90	0	623	2,429	0	0	0	0
7:30 AM	0	3	41	41	0	9	126	84	1	80	118	4	0	20	56	1	584	2,382	0	1	0	0
7:45 AM	0	4	46	41	0	5	99	108	0	71	151	3	0	25	87	1	641	2,387	0	0	0	0
8:00 AM	0	1	43	36	0	4	130	72	2	82	102	6	1	23	77	2	581	2,208	0	2	0	0
8:15 AM	0	0	51	44	0	5	138	48	0	92	84	1	0	17	96	0	576		0	0	0	0
8:30 AM	0	0	51	38	1	7	143	68	0	86	106	8	1	7	73	0	589		0	1	0	0
8:45 AM	0	2	43	39	0	6	95	38	0	77	72	2	0	17	69	2	462		0	1	0	0

Peak Rolling Hour Flow Rates

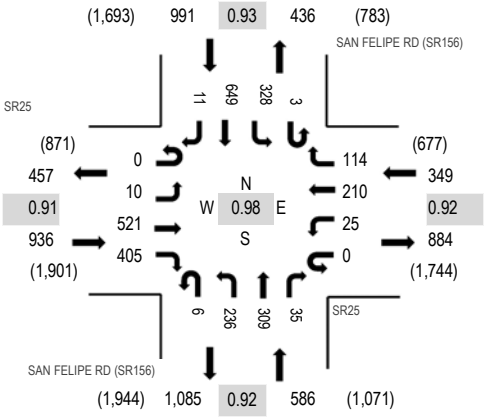
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	4	0	0	0	4	0	0	7	3	0	0	3	4	0	25
Lights	0	10	146	146	0	23	499	346	4	323	450	16	1	82	299	4	2,349
Mediums	0	0	11	12	0	0	6	4	0	5	6	0	0	4	7	0	55
Total	0	10	161	158	0	23	509	350	4	335	459	16	1	89	310	4	2,429

All Traffic Data Services Inc.

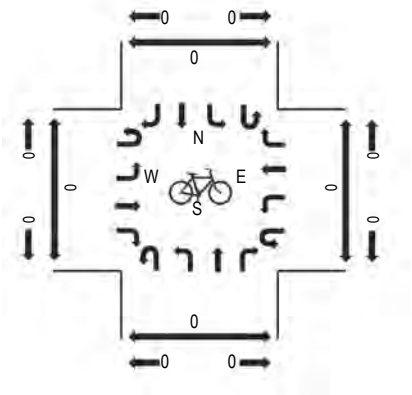
(303) 216-2439
www.alltrafficdata.net

Location: 5 SAN FELIPE RD (SR156) & SR25 PM
Date: Tuesday, November 6, 2018
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 04:45 PM - 05:00 PM

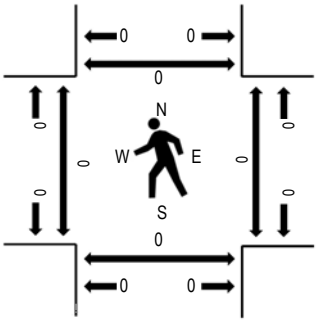
Peak Hour - All Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	SR25 Eastbound				SR25 Westbound				SAN FELIPE RD (SR156) Northbound				SAN FELIPE RD (SR156) Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	1	123	112	0	8	55	34	0	63	76	6	0	47	118	2	645	2,726	0	0	0	0
4:15 PM	0	7	155	108	0	6	59	18	0	54	61	6	1	61	118	1	655	2,810	0	0	0	0
4:30 PM	0	3	121	108	0	7	56	28	1	40	78	4	3	78	168	2	697	2,862	0	0	0	0
4:45 PM	0	3	139	105	0	5	47	34	1	70	79	11	0	69	163	3	729	2,768	0	0	0	0
5:00 PM	0	2	128	100	0	7	55	26	1	50	84	11	0	100	162	3	729	2,616	0	0	0	0
5:15 PM	0	2	133	92	0	6	52	26	3	76	68	9	0	81	156	3	707		0	0	0	0
5:30 PM	0	3	125	80	0	8	53	28	2	49	57	20	0	69	108	1	603		0	0	0	0
5:45 PM	0	5	158	88	0	3	42	14	1	35	42	13	0	77	99	0	577		0	0	0	0

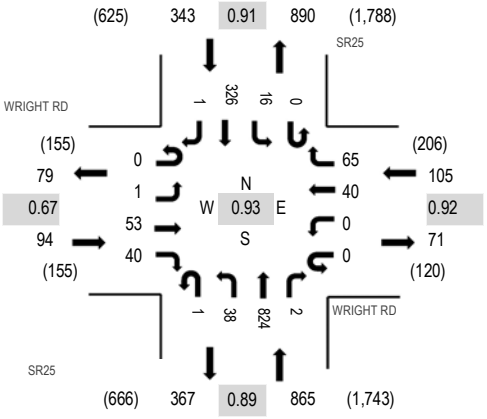
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	2	0	0	0	1	0	0	2	1	0	0	1	0	0	7
Lights	0	10	516	404	0	25	207	112	6	231	304	35	3	326	645	11	2,835
Mediums	0	0	3	1	0	0	2	2	0	3	4	0	0	1	4	0	20
Total	0	10	521	405	0	25	210	114	6	236	309	35	3	328	649	11	2,862

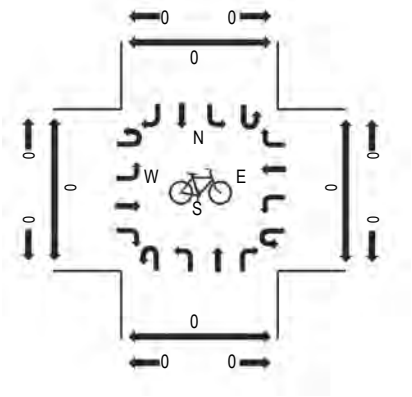
All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

Location: 6 SR25 & WRIGHT RD AM
Date: Tuesday, November 6, 2018
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 08:15 AM - 08:30 AM

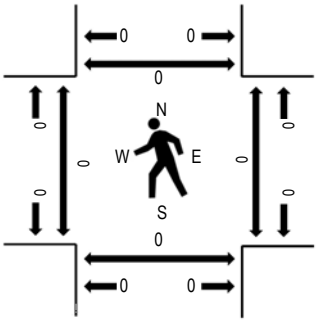
Peak Hour - All Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	WRIGHT RD Eastbound				WRIGHT RD Westbound				SR25 Northbound				SR25 Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	3	6	0	0	9	17	0	8	226	2	0	0	57	0	328	1,368	0	0	0	0
7:15 AM	0	0	8	7	0	1	12	15	0	13	238	1	0	6	67	0	368	1,377	0	0	0	0
7:30 AM	0	0	5	8	0	0	6	17	0	9	205	1	0	7	76	0	334	1,386	0	0	0	0
7:45 AM	0	1	26	9	0	0	9	10	1	8	181	0	0	4	89	0	338	1,407	0	0	0	0
8:00 AM	0	0	16	8	0	0	9	19	0	5	210	0	0	2	68	0	337	1,361	0	0	0	0
8:15 AM	0	0	5	18	0	0	11	19	0	10	220	0	0	7	86	1	377		0	0	0	0
8:30 AM	0	0	6	5	0	0	11	17	0	15	213	2	0	3	83	0	355		0	0	0	0
8:45 AM	0	0	15	9	0	0	9	15	0	10	165	0	0	1	68	0	292		0	0	0	0

Peak Rolling Hour Flow Rates

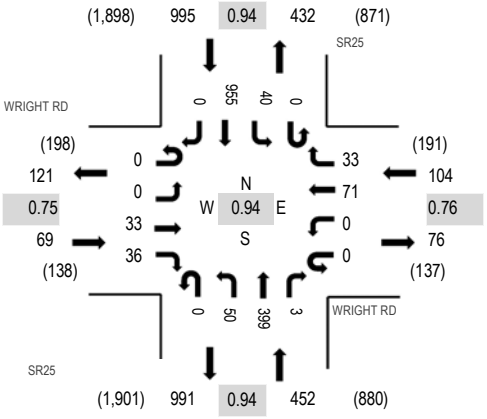
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	3	0	0	0	0	3	0	0	8	0	0	1	7	0	22
Lights	0	1	50	35	0	0	36	56	1	35	810	2	0	10	302	1	1,339
Mediums	0	0	0	5	0	0	4	6	0	3	6	0	0	5	17	0	46
Total	0	1	53	40	0	0	40	65	1	38	824	2	0	16	326	1	1,407

All Traffic Data Services Inc.

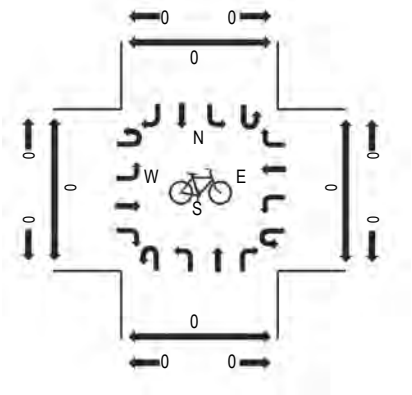
(303) 216-2439
www.alltrafficdata.net

Location: 6 SR25 & WRIGHT RD PM
Date: Tuesday, November 6, 2018
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:45 PM - 05:00 PM

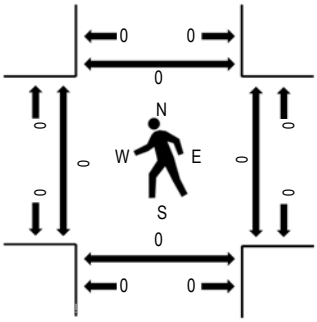
Peak Hour - All Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	WRIGHT RD Eastbound				WRIGHT RD Westbound				SR25 Northbound				SR25 Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	0	6	11	0	0	15	9	0	13	98	2	0	8	236	0	398	1,620	0	0	0	0
4:15 PM	0	0	11	13	0	0	11	8	0	13	106	1	0	9	239	0	411	1,613	0	0	0	0
4:30 PM	0	0	7	6	0	0	30	8	0	9	83	0	0	11	226	0	380	1,586	0	0	0	0
4:45 PM	0	0	9	6	0	0	15	8	0	15	112	0	0	12	254	0	431	1,565	0	0	0	0
5:00 PM	0	0	8	12	0	0	23	13	0	8	97	0	0	13	217	0	391	1,487	0	0	0	0
5:15 PM	0	0	10	10	0	0	6	8	0	6	120	0	0	8	216	0	384		0	0	0	0
5:30 PM	0	0	2	9	0	0	13	7	0	6	115	0	0	5	202	0	359		0	0	0	0
5:45 PM	0	0	8	10	0	0	7	10	0	8	68	0	1	7	234	0	353		0	0	0	0

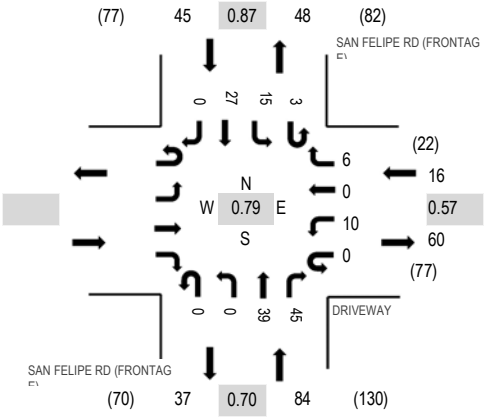
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	2	0	0	0	3	0	0	1	1	0	8
Lights	0	0	28	36	0	0	69	33	0	49	389	3	0	37	947	0	1,591
Mediums	0	0	4	0	0	0	0	0	0	1	7	0	0	2	7	0	21
Total	0	0	33	36	0	0	71	33	0	50	399	3	0	40	955	0	1,620

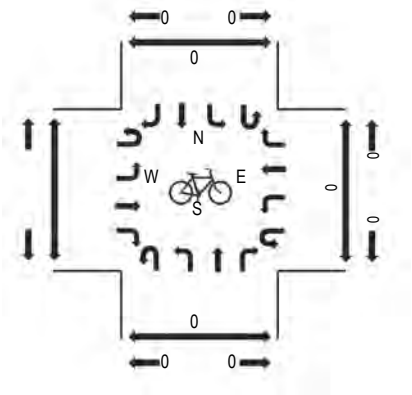
All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

Location: 7 SAN FELIPE RD (FRONTAGE) & DRIVEWAY AM
Date: Tuesday, November 6, 2018
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

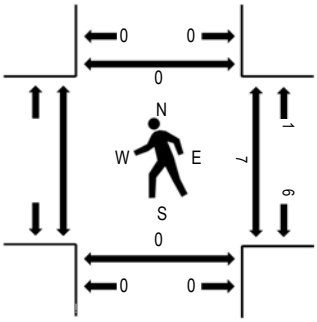
Peak Hour - All Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	Eastbound U-Turn	Eastbound Left	Eastbound Thru	Eastbound Right	DRIVEWAY Westbound U-Turn	DRIVEWAY Westbound Left	DRIVEWAY Westbound Thru	DRIVEWAY Westbound Right	SAN FELIPE RD (FRONTAGE) Northbound U-Turn	SAN FELIPE RD (FRONTAGE) Northbound Left	SAN FELIPE RD (FRONTAGE) Northbound Thru	SAN FELIPE RD (FRONTAGE) Northbound Right	SAN FELIPE RD (FRONTAGE) Southbound U-Turn	SAN FELIPE RD (FRONTAGE) Southbound Left	SAN FELIPE RD (FRONTAGE) Southbound Thru	SAN FELIPE RD (FRONTAGE) Southbound Right	Total	Rolling Hour	Pedestrian Crossings West	Pedestrian Crossings East	Pedestrian Crossings South	Pedestrian Crossings North
7:00 AM					0	1	0	0	0	0	7	1	0	0	4	0	13	105		0	0	0
7:15 AM					0	1	0	1	0	0	12	1	0	1	6	0	22	131		0	0	0
7:30 AM					0	0	0	0	0	0	8	6	0	1	9	0	24	140		1	0	0
7:45 AM					0	0	0	3	0	0	11	19	1	6	6	0	46	145		7	0	0
8:00 AM					0	6	0	1	0	0	10	12	1	4	5	0	39	124		0	0	0
8:15 AM					0	3	0	0	0	0	10	8	1	3	6	0	31			0	0	0
8:30 AM					0	1	0	2	0	0	8	6	0	2	10	0	29			0	0	0
8:45 AM					0	3	0	0	0	0	6	5	0	2	9	0	25			0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound U-Turn	Eastbound Left	Eastbound Thru	Eastbound Right	Westbound U-Turn	Westbound Left	Westbound Thru	Westbound Right	Northbound U-Turn	Northbound Left	Northbound Thru	Northbound Right	Southbound U-Turn	Southbound Left	Southbound Thru	Southbound Right	Total
Articulated Trucks					0	0	0	0	0	0	0	0	0	0	0	0	0
Lights					0	10	0	4	0	0	37	45	2	15	27	0	140
Mediums					0	0	0	2	0	0	2	0	1	0	0	0	5
Total					0	10	0	6	0	0	39	45	3	15	27	0	145

All Traffic Data Services Inc.

(303) 216-2439
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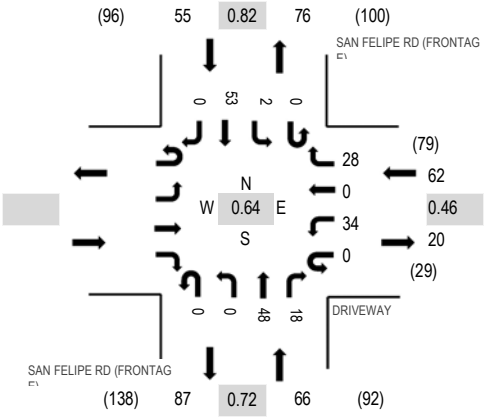
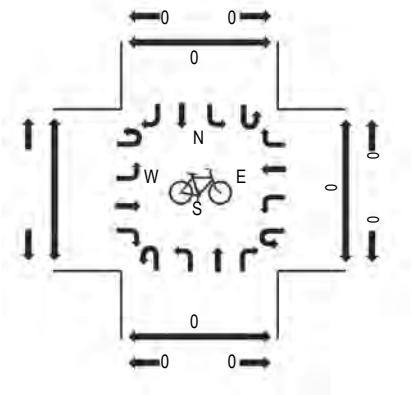
Location: 7 SAN FELIPE RD (FRONTAGE) & DRIVEWAY PM
Date: Tuesday, November 6, 2018
Peak Hour: 04:15 PM - 05:15 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

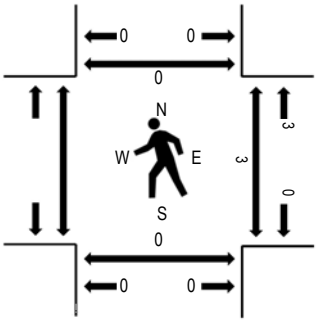
Peak Hour - All Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	Eastbound U-Turn	Eastbound Left	Eastbound Thru	Eastbound Right	DRIVEWAY Westbound U-Turn	DRIVEWAY Westbound Left	DRIVEWAY Westbound Thru	DRIVEWAY Westbound Right	SAN FELIPE RD (FRONTAGE) Northbound U-Turn	SAN FELIPE RD (FRONTAGE) Northbound Left	SAN FELIPE RD (FRONTAGE) Northbound Thru	SAN FELIPE RD (FRONTAGE) Northbound Right	SAN FELIPE RD (FRONTAGE) Southbound U-Turn	SAN FELIPE RD (FRONTAGE) Southbound Left	SAN FELIPE RD (FRONTAGE) Southbound Thru	SAN FELIPE RD (FRONTAGE) Southbound Right	Total	Rolling Hour	Pedestrian Crossings West	Pedestrian Crossings East	Pedestrian Crossings South	Pedestrian Crossings North
4:00 PM					0	7	0	3	1	0	8	3	0	3	13	0	38	149		2	0	0
4:15 PM					0	5	0	0	0	0	7	2	0	2	13	0	29	183		3	0	0
4:30 PM					0	5	0	5	0	0	13	6	0	0	17	0	46	172		0	0	0
4:45 PM					0	9	0	4	0	0	8	7	0	0	8	0	36	148		0	0	0
5:00 PM					0	15	0	19	0	0	20	3	0	0	15	0	72	118		0	0	0
5:15 PM					0	3	0	0	0	0	3	2	0	0	10	0	18			11	0	0
5:30 PM					0	2	0	2	0	0	7	0	0	0	11	0	22			2	0	0
5:45 PM					0	0	0	0	0	0	1	1	0	0	4	0	6			0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound U-Turn	Eastbound Left	Eastbound Thru	Eastbound Right	Westbound U-Turn	Westbound Left	Westbound Thru	Westbound Right	Northbound U-Turn	Northbound Left	Northbound Thru	Northbound Right	Southbound U-Turn	Southbound Left	Southbound Thru	Southbound Right	Total
Articulated Trucks					0	0	0	0	0	0	0	0	0	0	0	0	0
Lights					0	33	0	27	0	0	47	18	0	2	52	0	179
Mediums					0	1	0	1	0	0	1	0	0	0	1	0	4
Total					0	34	0	28	0	0	48	18	0	2	53	0	183

Appendix B
Volume Summary

1 7001
Intersection Name: San Felipe Road and San Felipe Road (frontage)
Peak Hour: AM
Jurisdiction: City of Hollister Count Date: 11/06/18

Scenario:	North Approach RT	North Approach TH	North Approach LT	East Approach RT	East Approach TH	East Approach LT	South Approach RT	South Approach TH	South Approach LT	West Approach RT	West Approach TH	West Approach LT	Int. Total
Existing Conditions (a)	**0**	**287**	**15**	**5**	**0**	**15**	**29**	**644**	**2**	**0**	**3**	**0**	**1,000**
Approved Project Trips (b)	0	43	0	0	0	0	0	105	0	0	0	0	148
Project Trips(c)	0	0	7	2	0	0	0	0	0	0	0	0	9
Existing Plus Project Conditions (a+c)	**0**	**287**	**22**	**7**	**0**	**15**	**29**	**644**	**2**	**0**	**3**	**0**	**1,009**
Background Conditions (a+b)	**0**	**330**	**15**	**5**	**0**	**15**	**29**	**749**	**2**	**0**	**3**	**0**	**1,148**
Background Plus Project Conditions (a+b+c)	**0**	**330**	**22**	**7**	**0**	**15**	**29**	**749**	**2**	**0**	**3**	**0**	**1,157**
Total Pending Project Trips (d)	0	35	0	0	0	0	0	70	0	0	0	0	105
Cumulative No Project Conditions (a+b+d)	**0**	**365**	**15**	**5**	**0**	**15**	**29**	**819**	**2**	**0**	**3**	**0**	**1,253**
Cumulative Plus Project Conditions (a+b+d+c)	**0**	**365**	**22**	**7**	**0**	**15**	**29**	**819**	**2**	**0**	**3**	**0**	**1,262**

2 7002
Intersection Name: San Felipe Road (frontage) and Community Parkway
Peak Hour: AM
Jurisdiction: City of Hollister Count Date: 11/06/18

Scenario:	North Approach RT	North Approach TH	North Approach LT	East Approach RT	East Approach TH	East Approach LT	South Approach RT	South Approach TH	South Approach LT	West Approach RT	West Approach TH	West Approach LT	Int. Total
Existing Conditions (a)	**0**	**30**	**11**	**6**	**0**	**19**	**114**	**88**	**0**	**0**	**0**	**0**	**268**
Approved Project Trips (b)	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips(c)	0	0	7	2	0	12	43	0	0	0	0	0	64
Existing Plus Project Conditions (a+c)	**0**	**30**	**18**	**8**	**0**	**31**	**157**	**88**	**0**	**0**	**0**	**0**	**332**
Background Conditions (a+b)	**0**	**30**	**11**	**6**	**0**	**19**	**114**	**88**	**0**	**0**	**0**	**0**	**268**
Background Plus Project Conditions (a+b+c)	**0**	**30**	**18**	**8**	**0**	**31**	**157**	**88**	**0**	**0**	**0**	**0**	**332**
Total Pending Project Trips (d)	0	0	0	0	0	0	0	0	0	0	0	0	0
Cumulative No Project Conditions (a+b+d)	**0**	**30**	**11**	**6**	**0**	**19**	**114**	**88**	**0**	**0**	**0**	**0**	**268**
Cumulative Plus Project Conditions (a+b+d+c)	**0**	**30**	**18**	**8**	**0**	**31**	**157**	**88**	**0**	**0**	**0**	**0**	**332**

3 7003
Intersection Name: San Felipe Road (frontage) and McCloskey Road
Peak Hour: AM
Jurisdiction: City of Hollister Count Date: 11/06/18

Scenario:	North Approach RT	North Approach TH	North Approach LT	East Approach RT	East Approach TH	East Approach LT	South Approach RT	South Approach TH	South Approach LT	West Approach RT	West Approach TH	West Approach LT	Int. Total
Existing Conditions (a)	**46**	**0**	**5**	**24**	**141**	**0**	**0**	**0**	**0**	**0**	**94**	**171**	**481**
Approved Project Trips (b)	0	0	0	0	65	0	0	0	0	0	36	0	101
Project Trips(c)	11	0	1	3	0	0	0	0	0	0	0	41	56
Existing Plus Project Conditions (a+c)	**57**	**0**	**6**	**27**	**141**	**0**	**0**	**0**	**0**	**0**	**94**	**212**	**537**
Background Conditions (a+b)	**46**	**0**	**5**	**24**	**206**	**0**	**0**	**0**	**0**	**0**	**130**	**171**	**582**
Background Plus Project Conditions (a+b+c)	**57**	**0**	**6**	**27**	**206**	**0**	**0**	**0**	**0**	**0**	**130**	**212**	**638**
Total Pending Project Trips (d)	0	0	0	0	2	0	0	0	0	0	1	0	3
Cumulative No Project Conditions (a+b+d)	**46**	**0**	**5**	**24**	**208**	**0**	**0**	**0**	**0**	**0**	**131**	**171**	**585**
Cumulative Plus Project Conditions (a+b+d+c)	**57**	**0**	**6**	**27**	**208**	**0**	**0**	**0**	**0**	**0**	**131**	**212**	**641**

4 2849
Intersection Name: San Felipe Road and McCloskey Road/Wright Road
Peak Hour: AM
Jurisdiction: City of Hollister Count Date: 11/06/18

Scenario:	North Approach RT	North Approach TH	North Approach LT	East Approach RT	East Approach TH	East Approach LT	South Approach RT	South Approach TH	South Approach LT	West Approach RT	West Approach TH	West Approach LT	Int. Total
Existing Conditions (a)	**15**	**275**	**10**	**25**	**59**	**99**	**184**	**629**	**70**	**16**	**42**	**32**	**1,456**
Approved Project Trips (b)	0	28	15	28	36	1	4	77	2	1	17	0	209
Project Trips(c)	0	0	0	0	2	10	35	0	0	0	6	0	53
Existing Plus Project Conditions (a+c)	**15**	**275**	**10**	**25**	**61**	**109**	**219**	**629**	**70**	**16**	**48**	**32**	**1,509**
Background Conditions (a+b)	**15**	**303**	**25**	**53**	**95**	**100**	**188**	**706**	**72**	**17**	**59**	**32**	**1,665**
Background Plus Project Conditions (a+b+c)	**15**	**303**	**25**	**53**	**97**	**110**	**223**	**706**	**72**	**17**	**65**	**32**	**1,718**
Total Pending Project Trips (d)	0	35	0	0	0	2	1	70	1	0	0	0	109
Cumulative No Project Conditions (a+b+d)	**15**	**338**	**25**	**53**	**95**	**102**	**189**	**776**	**73**	**17**	**59**	**32**	**1,774**
Cumulative Plus Project Conditions (a+b+d+c)	**15**	**338**	**25**	**53**	**97**	**112**	**224**	**776**	**73**	**17**	**65**	**32**	**1,827**

5
Intersection Name: 2842 San Felipe Road and SR 25
Peak Hour: AM
Jurisdiction: Caltrans Count Date: 11/06/18

Scenario:	North Approach RT	North Approach TH	North Approach LT	East Approach RT	East Approach TH	East Approach LT	South Approach RT	South Approach TH	South Approach LT	West Approach RT	West Approach TH	West Approach LT	Int. Total
Existing Conditions (a)	**4**	**310**	**90**	**350**	**509**	**23**	**16**	**459**	**339**	**158**	**161**	**10**	**2,429**
Approved Project Trips (b)	0	13	17	40	209	0	0	43	68	23	89	0	502
Project Trips(c)	0	5	5	18	0	0	0	18	0	0	0	0	46
Existing Plus Project Conditions (a+c)	**4**	**315**	**95**	**368**	**509**	**23**	**16**	**477**	**339**	**158**	**161**	**10**	**2,475**
Background Conditions (a+b)	**4**	**323**	**107**	**390**	**718**	**23**	**16**	**502**	**407**	**181**	**250**	**10**	**2,931**
Background Plus Project Conditions (a+b+c)	**4**	**328**	**112**	**408**	**718**	**23**	**16**	**520**	**407**	**181**	**250**	**10**	**2,977**
Total Pending Project Trips (d)	0	36	20	31	950	7	6	74	502	307	1,128	0	3,061
Cumulative No Project Conditions (a+b+d)	**4**	**359**	**127**	**421**	**1,668**	**30**	**22**	**576**	**909**	**488**	**1,378**	**10**	**5,992**
Cumulative Plus Project Conditions (a+b+d+c)	**4**	**364**	**132**	**439**	**1,668**	**30**	**22**	**594**	**909**	**488**	**1,378**	**10**	**6,038**

6
Intersection Name: 3512 SR 25 and Wright Road
Peak Hour: AM
Jurisdiction: Caltrans Count Date: 11/06/18

Scenario:	North Approach RT	North Approach TH	North Approach LT	East Approach RT	East Approach TH	East Approach LT	South Approach RT	South Approach TH	South Approach LT	West Approach RT	West Approach TH	West Approach LT	Int. Total
Existing Conditions (a)	**1**	**326**	**16**	**65**	**40**	**0**	**2**	**824**	**39**	**40**	**53**	**1**	**1,407**
Approved Project Trips (b)	0	108	15	33	5	0	0	268	9	4	3	0	445
Project Trips(c)	0	0	3	1	1	0	0	0	0	0	3	0	8
Existing Plus Project Conditions (a+c)	**1**	**326**	**19**	**66**	**41**	**0**	**2**	**824**	**39**	**40**	**56**	**1**	**1,415**
Background Conditions (a+b)	**1**	**434**	**31**	**98**	**45**	**0**	**2**	**1,092**	**48**	**44**	**56**	**1**	**1,852**
Background Plus Project Conditions (a+b+c)	**1**	**434**	**34**	**99**	**46**	**0**	**2**	**1,092**	**48**	**44**	**59**	**1**	**1,860**
Total Pending Project Trips (d)	0	1,434	0	0	1	0	0	1,450	2	1	1	0	2,889
Cumulative No Project Conditions (a+b+d)	**1**	**1,868**	**31**	**98**	**46**	**0**	**2**	**2,542**	**50**	**45**	**57**	**1**	**4,741**
Cumulative Plus Project Conditions (a+b+d+c)	**1**	**1,868**	**34**	**99**	**47**	**0**	**2**	**2,542**	**50**	**45**	**60**	**1**	**4,749**

1 7001
Intersection Name: San Felipe Road and San Felipe Road (frontage)
Peak Hour: PM
Jurisdiction: City of Hollister Count Date: 11/06/18

Scenario:	North Approach RT	North Approach TH	North Approach LT	East Approach RT	East Approach TH	East Approach LT	South Approach RT	South Approach TH	South Approach LT	West Approach RT	West Approach TH	West Approach LT	Int. Total
Existing Conditions (a)	**0**	**814**	**2**	**12**	**0**	**71**	**6**	**336**	**0**	**1**	**0**	**0**	**1,242**
Approved Project Trips (b)	0	115	0	0	0	0	0	67	0	0	0	0	182
Project Trips(c)	0	0	2	6	0	0	0	0	0	0	0	0	8
Existing Plus Project Conditions (a+c)	**0**	**814**	**4**	**18**	**0**	**71**	**6**	**336**	**0**	**1**	**0**	**0**	**1,250**
Background Conditions (a+b)	**0**	**929**	**2**	**12**	**0**	**71**	**6**	**403**	**0**	**1**	**0**	**0**	**1,424**
Background Plus Project Conditions (a+b+c)	**0**	**929**	**4**	**18**	**0**	**71**	**6**	**403**	**0**	**1**	**0**	**0**	**1,432**
Total Pending Project Trips (d)	0	99	0	0	0	0	0	72	0	0	0	0	171
Cumulative No Project Conditions (a+b+d)	**0**	**1,028**	**2**	**12**	**0**	**71**	**6**	**475**	**0**	**1**	**0**	**0**	**1,595**
Cumulative Plus Project Conditions (a+b+d+c)	**0**	**1,028**	**4**	**18**	**0**	**71**	**6**	**475**	**0**	**1**	**0**	**0**	**1,603**

2 7002
Intersection Name: San Felipe Road (frontage) and Community Parkway
Peak Hour: PM
Jurisdiction: City of Hollister Count Date: 11/06/18

Scenario:	North Approach RT	North Approach TH	North Approach LT	East Approach RT	East Approach TH	East Approach LT	South Approach RT	South Approach TH	South Approach LT	West Approach RT	West Approach TH	West Approach LT	Int. Total
Existing Conditions (a)	**0**	**86**	**6**	**13**	**0**	**77**	**28**	**55**	**0**	**0**	**0**	**0**	**265**
Approved Project Trips (b)	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips(c)	0	0	2	6	0	34	14	0	0	0	0	0	56
Existing Plus Project Conditions (a+c)	**0**	**86**	**8**	**19**	**0**	**111**	**42**	**55**	**0**	**0**	**0**	**0**	**321**
Background Conditions (a+b)	**0**	**86**	**6**	**13**	**0**	**77**	**28**	**55**	**0**	**0**	**0**	**0**	**265**
Background Plus Project Conditions (a+b+c)	**0**	**86**	**8**	**19**	**0**	**111**	**42**	**55**	**0**	**0**	**0**	**0**	**321**
Total Pending Project Trips (d)	0	0	0	0	0	0	0	0	0	0	0	0	0
Cumulative No Project Conditions (a+b+d)	**0**	**86**	**6**	**13**	**0**	**77**	**28**	**55**	**0**	**0**	**0**	**0**	**265**
Cumulative Plus Project Conditions (a+b+d+c)	**0**	**86**	**8**	**19**	**0**	**111**	**42**	**55**	**0**	**0**	**0**	**0**	**321**

3
Intersection Name: 7003
Peak Hour: San Felipe Road (frontage) and McCloskey Road
Jurisdiction: PM
City of Hollister Count Date: 11/06/18

Scenario:	North Approach RT	North Approach TH	North Approach LT	East Approach RT	East Approach TH	East Approach LT	South Approach RT	South Approach TH	South Approach LT	West Approach RT	West Approach TH	West Approach LT	Int. Total
Existing Conditions (a)	**143**	**0**	**24**	**17**	**84**	**0**	**0**	**0**	**0**	**0**	**140**	**62**	**470**
Approved Project Trips (b)	0	0	0	0	53	0	0	0	0	0	74	0	127
Project Trips(c)	32	0	2	1	0	0	0	0	0	0	0	13	48
Existing Plus Project Conditions (a+c)	**175**	**0**	**26**	**18**	**84**	**0**	**0**	**0**	**0**	**0**	**140**	**75**	**518**
Background Conditions (a+b)	**143**	**0**	**24**	**17**	**137**	**0**	**0**	**0**	**0**	**0**	**214**	**62**	**597**
Background Plus Project Conditions (a+b+c)	**175**	**0**	**26**	**18**	**137**	**0**	**0**	**0**	**0**	**0**	**214**	**75**	**645**
Total Pending Project Trips (d)	0	0	0	0	5	0	0	0	0	0	6	0	11
Cumulative No Project Conditions (a+b+d)	**143**	**0**	**24**	**17**	**142**	**0**	**0**	**0**	**0**	**0**	**220**	**62**	**608**
Cumulative Plus Project Conditions (a+b+d+c)	**175**	**0**	**26**	**18**	**142**	**0**	**0**	**0**	**0**	**0**	**220**	**75**	**656**

4
Intersection Name: 2849
Peak Hour: San Felipe Road and McCloskey Road/Wright Road
Jurisdiction: PM
City of Hollister Count Date: 11/06/18

Scenario:	North Approach RT	North Approach TH	North Approach LT	East Approach RT	East Approach TH	East Approach LT	South Approach RT	South Approach TH	South Approach LT	West Approach RT	West Approach TH	West Approach LT	Int. Total
Existing Conditions (a)	**40**	**767**	**16**	**4**	**37**	**178**	**116**	**312**	**77**	**32**	**68**	**25**	**1,672**
Approved Project Trips (b)	0	84	31	21	28	4	2	46	2	3	41	0	262
Project Trips(c)	0	0	0	0	4	28	11	0	0	0	2	0	45
Existing Plus Project Conditions (a+c)	**40**	**767**	**16**	**4**	**41**	**206**	**127**	**312**	**77**	**32**	**70**	**25**	**1,717**
Background Conditions (a+b)	**40**	**851**	**47**	**25**	**65**	**182**	**118**	**358**	**79**	**35**	**109**	**25**	**1,934**
Background Plus Project Conditions (a+b+c)	**40**	**851**	**47**	**25**	**69**	**210**	**129**	**358**	**79**	**35**	**111**	**25**	**1,979**
Total Pending Project Trips (d)	0	99	0	0	0	5	6	72	0	1	0	0	183
Cumulative No Project Conditions (a+b+d)	**40**	**950**	**47**	**25**	**65**	**187**	**124**	**430**	**79**	**36**	**109**	**25**	**2,117**
Cumulative Plus Project Conditions (a+b+d+c)	**40**	**950**	**47**	**25**	**69**	**215**	**135**	**430**	**79**	**36**	**111**	**25**	**2,162**

5
Intersection Name: 2842 San Felipe Road and SR 25
Peak Hour: PM
Jurisdiction: Caltrans Count Date: 11/06/18

Scenario:	North Approach RT	North Approach TH	North Approach LT	East Approach RT	East Approach TH	East Approach LT	South Approach RT	South Approach TH	South Approach LT	West Approach RT	West Approach TH	West Approach LT	Int. Total
Existing Conditions (a)	**11**	**649**	**331**	**114**	**210**	**25**	**35**	**309**	**242**	**405**	**521**	**10**	**2,862**
Approved Project Trips (b)	0	45	46	27	159	0	0	23	43	75	241	0	659
Project Trips(c)	0	14	14	6	0	0	0	6	0	0	0	0	40
Existing Plus Project Conditions (a+c)	**11**	**663**	**345**	**120**	**210**	**25**	**35**	**315**	**242**	**405**	**521**	**10**	**2,902**
Background Conditions (a+b)	**11**	**694**	**377**	**141**	**369**	**25**	**35**	**332**	**285**	**480**	**762**	**10**	**3,521**
Background Plus Project Conditions (a+b+c)	**11**	**708**	**391**	**147**	**369**	**25**	**35**	**338**	**285**	**480**	**762**	**10**	**3,561**
Total Pending Project Trips (d)	0	128	84	70	2,709	13	13	99	946	1,073	2,554	0	7,689
Cumulative No Project Conditions (a+b+d)	**11**	**822**	**461**	**211**	**3,078**	**38**	**48**	**431**	**1,231**	**1,553**	**3,316**	**10**	**11,210**
Cumulative Plus Project Conditions (a+b+d+c)	**11**	**836**	**475**	**217**	**3,078**	**38**	**48**	**437**	**1,231**	**1,553**	**3,316**	**10**	**11,250**

6
Intersection Name: 3512 SR 25 and Wright Road
Peak Hour: PM
Jurisdiction: Caltrans Count Date: 11/06/18

Scenario:	North Approach RT	North Approach TH	North Approach LT	East Approach RT	East Approach TH	East Approach LT	South Approach RT	South Approach TH	South Approach LT	West Approach RT	West Approach TH	West Approach LT	Int. Total
Existing Conditions (a)	**0**	**955**	**40**	**33**	**71**	**0**	**3**	**399**	**50**	**36**	**33**	**0**	**1,620**
Approved Project Trips (b)	0	306	37	25	4	0	0	196	7	10	6	0	591
Project Trips(c)	0	0	1	2	2	0	0	0	0	0	1	0	6
Existing Plus Project Conditions (a+c)	**0**	**955**	**41**	**35**	**73**	**0**	**3**	**399**	**50**	**36**	**34**	**0**	**1,626**
Background Conditions (a+b)	**0**	**1,261**	**77**	**58**	**75**	**0**	**3**	**595**	**57**	**46**	**39**	**0**	**2,211**
Background Plus Project Conditions (a+b+c)	**0**	**1,261**	**78**	**60**	**77**	**0**	**3**	**595**	**57**	**46**	**40**	**0**	**2,217**
Total Pending Project Trips (d)	0	3,616	0	0	1	0	0	3,651	1	2	1	0	7,272
Cumulative No Project Conditions (a+b+d)	**0**	**4,877**	**77**	**58**	**76**	**0**	**3**	**4,246**	**58**	**48**	**40**	**0**	**9,483**
Cumulative Plus Project Conditions (a+b+d+c)	**0**	**4,877**	**78**	**60**	**78**	**0**	**3**	**4,246**	**58**	**48**	**41**	**0**	**9,489**

1 7001
Intersection Name: San Felipe Road and San Felipe Road (frontage)
Peak Hour: AM
Jurisdiction: City of Hollister Count Date: 11/06/18

Scenario:	North Approach RT	North Approach TH	North Approach LT	East Approach RT	East Approach TH	East Approach LT	South Approach RT	South Approach TH	South Approach LT	West Approach RT	West Approach TH	West Approach LT	Int. Total
Peak Hour Volumes	0	287	15	5	0	15	29	644	2	0	3	0	1,000
Peak 15-Minute Volumes	0	73	6	2	0	6	9	187	0	0	0	0	283
Peak 15-Minute Volumes x 4	0	292	24	8	0	24	36	748	0	0	0	0	1,132
Existing Conditions (a)	**0**	**287**	**15**	**5**	**0**	**15**	**29**	**644**	**2**	**0**	**3**	**0**	**1,000**
Approved Project Trips (b)	0	43	0	0	0	0	0	105	0	0	0	0	148
Project Trips(c)	0	0	7	2	0	0	0	0	0	0	0	0	9
Existing Plus Project Conditions (a+c)	**0**	**287**	**22**	**7**	**0**	**15**	**29**	**644**	**2**	**0**	**3**	**0**	**1,009**
Background Conditions (a+b)	**0**	**330**	**15**	**5**	**0**	**15**	**29**	**749**	**2**	**0**	**3**	**0**	**1,148**
Background Plus Project Conditions (a+b+c)	**0**	**330**	**22**	**7**	**0**	**15**	**29**	**749**	**2**	**0**	**3**	**0**	**1,157**
Total Pending Project Trips (d)	0	35	0	0	0	0	0	70	0	0	0	0	105
Cumulative No Project Conditions (a+b+d)	**0**	**365**	**15**	**5**	**0**	**15**	**29**	**819**	**2**	**0**	**3**	**0**	**1,253**
Cumulative Plus Project Conditions (a+b+d+c)	**0**	**365**	**22**	**7**	**0**	**15**	**29**	**819**	**2**	**0**	**3**	**0**	**1,262**

2 7002
Intersection Name: San Felipe Road (frontage) and Community Parkway
Peak Hour: AM
Jurisdiction: City of Hollister Count Date: 11/06/18

Scenario:	North Approach RT	North Approach TH	North Approach LT	East Approach RT	East Approach TH	East Approach LT	South Approach RT	South Approach TH	South Approach LT	West Approach RT	West Approach TH	West Approach LT	Int. Total
Peak Hour Volumes	0	30	11	6	0	19	114	88	0	0	0	0	268
Peak 15-Minute Volumes	0	6	3	2	0	6	50	30	0	0	0	0	97
Peak 15-Minute Volumes x 4	0	24	12	8	0	24	200	120	0	0	0	0	388
Existing Conditions (a)	**0**	**30**	**11**	**6**	**0**	**19**	**114**	**88**	**0**	**0**	**0**	**0**	**268**
Approved Project Trips (b)	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips(c)	0	0	7	2	0	12	43	0	0	0	0	0	64
Existing Plus Project Conditions (a+c)	**0**	**30**	**18**	**8**	**0**	**31**	**157**	**88**	**0**	**0**	**0**	**0**	**332**
Background Conditions (a+b)	**0**	**30**	**11**	**6**	**0**	**19**	**114**	**88**	**0**	**0**	**0**	**0**	**268**
Background Plus Project Conditions (a+b+c)	**0**	**30**	**18**	**8**	**0**	**31**	**157**	**88**	**0**	**0**	**0**	**0**	**332**
Total Pending Project Trips (d)	0	0	0	0	0	0	0	0	0	0	0	0	0
Cumulative No Project Conditions (a+b+d)	**0**	**30**	**11**	**6**	**0**	**19**	**114**	**88**	**0**	**0**	**0**	**0**	**268**
Cumulative Plus Project Conditions (a+b+d+c)	**0**	**30**	**18**	**8**	**0**	**31**	**157**	**88**	**0**	**0**	**0**	**0**	**332**

3
Intersection Name: 7003
Peak Hour: San Felipe Road (frontage) and McCloskey Road
Jurisdiction: AM
City of Hollister Count Date: 11/06/18

Scenario:	North Approach RT	North Approach TH	North Approach LT	East Approach RT	East Approach TH	East Approach LT	South Approach RT	South Approach TH	South Approach LT	West Approach RT	West Approach TH	West Approach LT	Int. Total
Peak Hour Volumes	46	0	5	24	141	0	0	0	0	0	94	171	481
Peak 15-Minute Volumes	9	0	2	8	39	0	0	0	0	0	22	75	155
Peak 15-Minute Volumes x 4	36	0	8	32	156	0	0	0	0	0	88	300	620
Existing Conditions (a)	**46**	**0**	**5**	**24**	**141**	**0**	**0**	**0**	**0**	**0**	**94**	**171**	**481**
Approved Project Trips (b)	0	0	0	0	65	0	0	0	0	0	36	0	101
Project Trips(c)	11	0	1	3	0	0	0	0	0	0	0	41	56
Existing Plus Project Conditions (a+c)	**57**	**0**	**6**	**27**	**141**	**0**	**0**	**0**	**0**	**0**	**94**	**212**	**537**
Background Conditions (a+b)	**46**	**0**	**5**	**24**	**206**	**0**	**0**	**0**	**0**	**0**	**130**	**171**	**582**
Background Plus Project Conditions (a+b+c)	**57**	**0**	**6**	**27**	**206**	**0**	**0**	**0**	**0**	**0**	**130**	**212**	**638**
Total Pending Project Trips (d)	0	0	0	0	2	0	0	0	0	0	1	0	3
Cumulative No Project Conditions (a+b+d)	**46**	**0**	**5**	**24**	**208**	**0**	**0**	**0**	**0**	**0**	**131**	**171**	**585**
Cumulative Plus Project Conditions (a+b+d+c)	**57**	**0**	**6**	**27**	**208**	**0**	**0**	**0**	**0**	**0**	**131**	**212**	**641**

4
Intersection Name: 2849
Peak Hour: San Felipe Road and McCloskey Road/Wright Road
Jurisdiction: AM
City of Hollister Count Date: 11/06/18

Scenario:	North Approach RT	North Approach TH	North Approach LT	East Approach RT	East Approach TH	East Approach LT	South Approach RT	South Approach TH	South Approach LT	West Approach RT	West Approach TH	West Approach LT	Int. Total
Peak Hour Volumes	15	275	10	25	59	99	184	629	70	16	42	32	1,456
Peak 15-Minute Volumes	5	71	4	10	13	25	76	187	17	6	13	13	440
Peak 15-Minute Volumes x 4	20	284	16	40	52	100	304	748	68	24	52	52	1,760
Existing Conditions (a)	**15**	**275**	**10**	**25**	**59**	**99**	**184**	**629**	**70**	**16**	**42**	**32**	**1,456**
Approved Project Trips (b)	0	28	15	28	36	1	4	77	2	1	17	0	209
Project Trips(c)	0	0	0	0	2	10	35	0	0	0	6	0	53
Existing Plus Project Conditions (a+c)	**15**	**275**	**10**	**25**	**61**	**109**	**219**	**629**	**70**	**16**	**48**	**32**	**1,509**
Background Conditions (a+b)	**15**	**303**	**25**	**53**	**95**	**100**	**188**	**706**	**72**	**17**	**59**	**32**	**1,665**
Background Plus Project Conditions (a+b+c)	**15**	**303**	**25**	**53**	**97**	**110**	**223**	**706**	**72**	**17**	**65**	**32**	**1,718**
Total Pending Project Trips (d)	0	35	0	0	0	2	1	70	1	0	0	0	109
Cumulative No Project Conditions (a+b+d)	**15**	**338**	**25**	**53**	**95**	**102**	**189**	**776**	**73**	**17**	**59**	**32**	**1,774**
Cumulative Plus Project Conditions (a+b+d+c)	**15**	**338**	**25**	**53**	**97**	**112**	**224**	**776**	**73**	**17**	**65**	**32**	**1,827**

5 2842
Intersection Name: San Felipe Road and SR 25
Peak Hour: AM
Jurisdiction: Caltrans Count Date: 11/06/18

Scenario:	North Approach RT	North Approach TH	North Approach LT	East Approach RT	East Approach TH	East Approach LT	South Approach RT	South Approach TH	South Approach LT	West Approach RT	West Approach TH	West Approach LT	Int. Total
Peak Hour Volumes	4	310	90	350	509	23	16	459	339	158	161	10	2,429
Peak 15-Minute Volumes	1	87	25	108	99	5	3	151	71	41	46	4	641
Peak 15-Minute Volumes x 4	4	348	100	432	396	20	12	604	284	164	184	16	2,564
Existing Conditions (a)	**4**	**348**	**100**	**432**	**396**	**20**	**12**	**604**	**284**	**164**	**184**	**16**	**2,564**
Approved Project Trips (b)	0	13	17	40	209	0	0	43	68	23	89	0	502
Project Trips(c)	0	5	5	18	0	0	0	18	0	0	0	0	46
Existing Plus Project Conditions (a+c)	**4**	**353**	**105**	**450**	**396**	**20**	**12**	**622**	**284**	**164**	**184**	**16**	**2,610**
Background Conditions (a+b)	**4**	**361**	**117**	**472**	**605**	**20**	**12**	**647**	**352**	**187**	**273**	**16**	**3,066**
Background Plus Project Conditions (a+b+c)	**4**	**366**	**122**	**490**	**605**	**20**	**12**	**665**	**352**	**187**	**273**	**16**	**3,112**
Total Pending Project Trips (d)	0	36	20	31	950	7	6	74	502	307	1,128	0	3,061
Cumulative No Project Conditions (a+b+d)	**4**	**397**	**137**	**503**	**1,555**	**27**	**18**	**721**	**854**	**494**	**1,401**	**16**	**6,127**
Cumulative Plus Project Conditions (a+b+d+c)	**4**	**402**	**142**	**521**	**1,555**	**27**	**18**	**739**	**854**	**494**	**1,401**	**16**	**6,173**

6 3512
Intersection Name: SR 25 and Wright Road
Peak Hour: AM
Jurisdiction: Caltrans Count Date: 11/06/18

Scenario:	North Approach RT	North Approach TH	North Approach LT	East Approach RT	East Approach TH	East Approach LT	South Approach RT	South Approach TH	South Approach LT	West Approach RT	West Approach TH	West Approach LT	Int. Total
Peak Hour Volumes	1	326	16	65	40	0	2	824	39	40	53	1	1,407
Peak 15-Minute Volumes	1	86	7	19	11	0	0	220	10	18	5	0	377
Peak 15-Minute Volumes x 4	4	344	28	76	44	0	0	880	40	72	20	0	1,508
Existing Conditions (a)	**4**	**344**	**28**	**76**	**44**	**0**	**0**	**880**	**40**	**72**	**20**	**0**	**1,508**
Approved Project Trips (b)	0	108	15	33	5	0	0	268	9	4	3	0	445
Project Trips(c)	0	0	3	1	1	0	0	0	0	0	3	0	8
Existing Plus Project Conditions (a+c)	**4**	**344**	**31**	**77**	**45**	**0**	**0**	**880**	**40**	**72**	**23**	**0**	**1,516**
Background Conditions (a+b)	**4**	**452**	**43**	**109**	**49**	**0**	**0**	**1,148**	**49**	**76**	**23**	**0**	**1,953**
Background Plus Project Conditions (a+b+c)	**4**	**452**	**46**	**110**	**50**	**0**	**0**	**1,148**	**49**	**76**	**26**	**0**	**1,961**
Total Pending Project Trips (d)	0	1,434	0	0	1	0	0	1,450	2	1	1	0	2,889
Cumulative No Project Conditions (a+b+d)	**4**	**1,886**	**43**	**109**	**50**	**0**	**0**	**2,598**	**51**	**77**	**24**	**0**	**4,842**
Cumulative Plus Project Conditions (a+b+d+c)	**4**	**1,886**	**46**	**110**	**51**	**0**	**0**	**2,598**	**51**	**77**	**27**	**0**	**4,850**

1 7001
Intersection Name: San Felipe Road and San Felipe Road (frontage)
Peak Hour: PM
Jurisdiction: City of Hollister Count Date: 11/06/18

Scenario:	North Approach RT	North Approach TH	North Approach LT	East Approach RT	East Approach TH	East Approach LT	South Approach RT	South Approach TH	South Approach LT	West Approach RT	West Approach TH	West Approach LT	Int. Total
Peak Hour Volumes	0	814	2	12	0	71	6	336	0	1	0	0	1,242
Peak 15-Minute Volumes	0	260	0	5	0	18	3	76	0	0	0	0	362
Peak 15-Minute Volumes x 4	0	1,040	0	20	0	72	12	304	0	0	0	0	1,448
Existing Conditions (a)	**0**	**814**	**2**	**12**	**0**	**71**	**6**	**336**	**0**	**1**	**0**	**0**	**1,242**
Approved Project Trips (b)	0	115	0	0	0	0	0	67	0	0	0	0	182
Project Trips(c)	0	0	2	6	0	0	0	0	0	0	0	0	8
Existing Plus Project Conditions (a+c)	**0**	**814**	**4**	**18**	**0**	**71**	**6**	**336**	**0**	**1**	**0**	**0**	**1,250**
Background Conditions (a+b)	**0**	**929**	**2**	**12**	**0**	**71**	**6**	**403**	**0**	**1**	**0**	**0**	**1,424**
Background Plus Project Conditions (a+b+c)	**0**	**929**	**4**	**18**	**0**	**71**	**6**	**403**	**0**	**1**	**0**	**0**	**1,432**
Total Pending Project Trips (d)	0	99	0	0	0	0	0	72	0	0	0	0	171
Cumulative No Project Conditions (a+b+d)	**0**	**1,028**	**2**	**12**	**0**	**71**	**6**	**475**	**0**	**1**	**0**	**0**	**1,595**
Cumulative Plus Project Conditions (a+b+d+c)	**0**	**1,028**	**4**	**18**	**0**	**71**	**6**	**475**	**0**	**1**	**0**	**0**	**1,603**

2 7002
Intersection Name: San Felipe Road (frontage) and Community Parkway
Peak Hour: PM
Jurisdiction: City of Hollister Count Date: 11/06/18

Scenario:	North Approach RT	North Approach TH	North Approach LT	East Approach RT	East Approach TH	East Approach LT	South Approach RT	South Approach TH	South Approach LT	West Approach RT	West Approach TH	West Approach LT	Int. Total
Peak Hour Volumes	0	86	6	13	0	77	28	55	0	0	0	0	265
Peak 15-Minute Volumes	0	30	1	9	0	32	10	14	0	0	0	0	96
Peak 15-Minute Volumes x 4	0	120	4	36	0	128	40	56	0	0	0	0	384
Existing Conditions (a)	**0**	**86**	**6**	**13**	**0**	**77**	**28**	**55**	**0**	**0**	**0**	**0**	**265**
Approved Project Trips (b)	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips(c)	0	0	2	6	0	34	14	0	0	0	0	0	56
Existing Plus Project Conditions (a+c)	**0**	**86**	**8**	**19**	**0**	**111**	**42**	**55**	**0**	**0**	**0**	**0**	**321**
Background Conditions (a+b)	**0**	**86**	**6**	**13**	**0**	**77**	**28**	**55**	**0**	**0**	**0**	**0**	**265**
Background Plus Project Conditions (a+b+c)	**0**	**86**	**8**	**19**	**0**	**111**	**42**	**55**	**0**	**0**	**0**	**0**	**321**
Total Pending Project Trips (d)	0	0	0	0	0	0	0	0	0	0	0	0	0
Cumulative No Project Conditions (a+b+d)	**0**	**86**	**6**	**13**	**0**	**77**	**28**	**55**	**0**	**0**	**0**	**0**	**265**
Cumulative Plus Project Conditions (a+b+d+c)	**0**	**86**	**8**	**19**	**0**	**111**	**42**	**55**	**0**	**0**	**0**	**0**	**321**

3 7003
Intersection Name: San Felipe Road (frontage) and McCloskey Road
Peak Hour: PM
Jurisdiction: City of Hollister Count Date: 11/06/18

	North Approach			East Approach			South Approach			West Approach			Int.
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Peak Hour Volumes	143	0	24	17	84	0	0	0	0	0	140	62	470
Peak 15-Minute Volumes	56	0	5	3	25	0	0	0	0	0	39	17	145
Peak 15-Minute Volumes x 4	224	0	20	12	100	0	0	0	0	0	156	68	580
Existing Conditions (a)	**143**	**0**	**24**	**17**	**84**	**0**	**0**	**0**	**0**	**0**	**140**	**62**	**470**
Approved Project Trips (b)	0	0	0	0	53	0	0	0	0	0	74	0	127
Project Trips(c)	32	0	2	1	0	0	0	0	0	0	0	13	48
Existing Plus Project Conditions (a+c)	**175**	**0**	**26**	**18**	**84**	**0**	**0**	**0**	**0**	**0**	**140**	**75**	**518**
Background Conditions (a+b)	**143**	**0**	**24**	**17**	**137**	**0**	**0**	**0**	**0**	**0**	**214**	**62**	**597**
Background Plus Project Conditions (a+b+c)	**175**	**0**	**26**	**18**	**137**	**0**	**0**	**0**	**0**	**0**	**214**	**75**	**645**
Total Pending Project Trips (d)	0	0	0	0	5	0	0	0	0	0	6	0	11
Cumulative No Project Conditions (a+b+d)	**143**	**0**	**24**	**17**	**142**	**0**	**0**	**0**	**0**	**0**	**220**	**62**	**608**
Cumulative Plus Project Conditions (a+b+d+c)	**175**	**0**	**26**	**18**	**142**	**0**	**0**	**0**	**0**	**0**	**220**	**75**	**656**

4 2849
Intersection Name: San Felipe Road and McCloskey Road/Wright Road
Peak Hour: PM
Jurisdiction: City of Hollister Count Date: 11/06/18

	North Approach			East Approach			South Approach			West Approach			Int.
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Peak Hour Volumes	40	767	16	4	37	178	116	312	77	32	68	25	1,672
Peak 15-Minute Volumes	12	225	5	0	13	67	27	77	23	8	22	5	484
Peak 15-Minute Volumes x 4	48	900	20	0	52	268	108	308	92	32	88	20	1,936
Existing Conditions (a)	**40**	**767**	**16**	**4**	**37**	**178**	**116**	**312**	**77**	**32**	**68**	**25**	**1,672**
Approved Project Trips (b)	0	84	31	21	28	4	2	46	2	3	41	0	262
Project Trips(c)	0	0	0	0	4	28	11	0	0	0	2	0	45
Existing Plus Project Conditions (a+c)	**40**	**767**	**16**	**4**	**41**	**206**	**127**	**312**	**77**	**32**	**70**	**25**	**1,717**
Background Conditions (a+b)	**40**	**851**	**47**	**25**	**65**	**182**	**118**	**358**	**79**	**35**	**109**	**25**	**1,934**
Background Plus Project Conditions (a+b+c)	**40**	**851**	**47**	**25**	**69**	**210**	**129**	**358**	**79**	**35**	**111**	**25**	**1,979**
Total Pending Project Trips (d)	0	99	0	0	0	5	6	72	0	1	0	0	183
Cumulative No Project Conditions (a+b+d)	**40**	**950**	**47**	**25**	**65**	**187**	**124**	**430**	**79**	**36**	**109**	**25**	**2,117**
Cumulative Plus Project Conditions (a+b+d+c)	**40**	**950**	**47**	**25**	**69**	**215**	**135**	**430**	**79**	**36**	**111**	**25**	**2,162**

5 2842
Intersection Name: San Felipe Road and SR 25
Peak Hour: PM
Jurisdiction: Caltrans Count Date: 11/06/18

Scenario:	North Approach RT	North Approach TH	North Approach LT	East Approach RT	East Approach TH	East Approach LT	South Approach RT	South Approach TH	South Approach LT	West Approach RT	West Approach TH	West Approach LT	Int. Total
Peak Hour Volumes	11	649	331	114	210	25	35	309	242	405	521	10	2,862
Peak 15-Minute Volumes	3	163	69	34	47	5	11	79	71	105	139	3	729
Peak 15-Minute Volumes x 4	12	652	276	136	188	20	44	316	284	420	556	12	2,916
Existing Conditions (a)	**12**	**652**	**276**	**136**	**188**	**20**	**44**	**316**	**284**	**420**	**556**	**12**	**2,916**
Approved Project Trips (b)	0	45	46	27	159	0	0	23	43	75	241	0	659
Project Trips(c)	0	14	14	6	0	0	0	6	0	0	0	0	40
Existing Plus Project Conditions (a+c)	**12**	**666**	**290**	**142**	**188**	**20**	**44**	**322**	**284**	**420**	**556**	**12**	**2,956**
Background Conditions (a+b)	**12**	**697**	**322**	**163**	**347**	**20**	**44**	**339**	**327**	**495**	**797**	**12**	**3,575**
Background Plus Project Conditions (a+b+c)	**12**	**711**	**336**	**169**	**347**	**20**	**44**	**345**	**327**	**495**	**797**	**12**	**3,615**
Total Pending Project Trips (d)	0	128	84	70	2,709	13	13	99	946	1,073	2,554	0	7,689
Cumulative No Project Conditions (a+b+d)	**12**	**825**	**406**	**233**	**3,056**	**33**	**57**	**438**	**1,273**	**1,568**	**3,351**	**12**	**11,264**
Cumulative Plus Project Conditions (a+b+d+c)	**12**	**839**	**420**	**239**	**3,056**	**33**	**57**	**444**	**1,273**	**1,568**	**3,351**	**12**	**11,304**

6 3512
Intersection Name: SR 25 and Wright Road
Peak Hour: PM
Jurisdiction: Caltrans Count Date: 11/06/18

Scenario:	North Approach RT	North Approach TH	North Approach LT	East Approach RT	East Approach TH	East Approach LT	South Approach RT	South Approach TH	South Approach LT	West Approach RT	West Approach TH	West Approach LT	Int. Total
Peak Hour Volumes	0	955	40	33	71	0	3	399	50	36	33	0	1,620
Peak 15-Minute Volumes	0	254	12	8	15	0	0	112	15	6	9	0	431
Peak 15-Minute Volumes x 4	0	1,016	48	32	60	0	0	448	60	24	36	0	1,724
Existing Conditions (a)	**0**	**1,016**	**48**	**32**	**60**	**0**	**0**	**448**	**60**	**24**	**36**	**0**	**1,724**
Approved Project Trips (b)	0	306	37	25	4	0	0	196	7	10	6	0	591
Project Trips(c)	0	0	1	2	2	0	0	0	0	0	1	0	6
Existing Plus Project Conditions (a+c)	**0**	**1,016**	**49**	**34**	**62**	**0**	**0**	**448**	**60**	**24**	**37**	**0**	**1,730**
Background Conditions (a+b)	**0**	**1,322**	**85**	**57**	**64**	**0**	**0**	**644**	**67**	**34**	**42**	**0**	**2,315**
Background Plus Project Conditions (a+b+c)	**0**	**1,322**	**86**	**59**	**66**	**0**	**0**	**644**	**67**	**34**	**43**	**0**	**2,321**
Total Pending Project Trips (d)	0	3,616	0	0	1	0	0	3,651	1	2	1	0	7,272
Cumulative No Project Conditions (a+b+d)	**0**	**4,938**	**85**	**57**	**65**	**0**	**0**	**4,295**	**68**	**36**	**43**	**0**	**9,587**
Cumulative Plus Project Conditions (a+b+d+c)	**0**	**4,938**	**86**	**59**	**67**	**0**	**0**	**4,295**	**68**	**36**	**44**	**0**	**9,593**

Appendix C
Level of Service Calculations

HCM 2010 Signalized Intersection Summary
2842: San Felipe Road/San Felipe Rd & SR25

11/28/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	184	164	20	396	432	284	604	12	100	348	4
Future Volume (veh/h)	16	184	164	20	396	432	284	604	12	100	348	4
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1743	1759	1900	1863	1881	1827	1863	1900	1759	1828	1900
Adj Flow Rate, veh/h	16	184	42	20	396	113	284	604	12	100	348	4
Adj No. of Lanes	1	2	1	1	2	2	2	2	0	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	9	8	0	2	1	4	2	2	8	4	4
Cap, veh/h	17	716	323	22	775	616	500	1043	21	266	800	9
Arrive On Green	0.01	0.22	0.22	0.01	0.22	0.22	0.15	0.29	0.29	0.08	0.23	0.23
Sat Flow, veh/h	1810	3312	1495	1810	3539	2814	3375	3551	71	3250	3517	40
Grp Volume(v), veh/h	16	184	42	20	396	113	284	301	315	100	172	180
Grp Sat Flow(s),veh/h/ln	1810	1656	1495	1810	1770	1407	1688	1770	1851	1625	1736	1821
Q Serve(g_s), s	0.4	1.9	0.9	0.4	4.0	1.3	3.2	5.8	5.9	1.2	3.4	3.4
Cycle Q Clear(g_c), s	0.4	1.9	0.9	0.4	4.0	1.3	3.2	5.8	5.9	1.2	3.4	3.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		0.02
Lane Grp Cap(c), veh/h	17	716	323	22	775	616	500	520	544	266	395	414
V/C Ratio(X)	0.92	0.26	0.13	0.91	0.51	0.18	0.57	0.58	0.58	0.38	0.43	0.44
Avail Cap(c_a), veh/h	224	1804	814	314	2103	1672	1588	1534	1604	805	1118	1172
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.0	13.1	12.8	19.9	13.9	12.8	16.0	12.1	12.1	17.6	13.4	13.4
Incr Delay (d2), s/veh	80.2	0.2	0.2	66.2	0.5	0.1	1.0	1.0	1.0	0.9	0.8	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	0.6	0.9	0.4	0.6	2.0	0.5	1.5	3.0	3.1	0.6	1.7	1.8
LnGrp Delay(d),s/veh	100.2	13.3	12.9	86.1	14.4	13.0	17.0	13.2	13.1	18.4	14.1	14.1
LnGrp LOS	F	B	B	F	B	B	B	B	B	B	B	B
Approach Vol, veh/h		242			529			900			452	
Approach Delay, s/veh		19.0			16.8			14.4			15.1	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	15.9	4.5	12.7	10.0	13.2	4.4	12.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	10.0	35.0	7.0	22.0	19.0	26.0	5.0	24.0
Max Q Clear Time (g_c+I1), s	3.2	7.9	2.4	3.9	5.2	5.4	2.4	6.0
Green Ext Time (p_c), s	0.1	4.0	0.0	1.1	0.8	2.0	0.0	2.9

Intersection Summary	
HCM 2010 Ctrl Delay	15.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	42	16	99	59	25	70	629	184	10	275	15
Future Volume (veh/h)	32	42	16	99	59	25	70	629	184	10	275	15
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1705	1900	1900	1834	1827	1845	1877	1900	1267	1792	1900
Adj Flow Rate, veh/h	32	42	16	99	59	4	70	629	184	10	275	15
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	10	10	10	8	8	4	3	1	1	50	6	6
Cap, veh/h	40	53	20	142	85	198	87	1060	310	7	1135	62
Arrive On Green	0.07	0.07	0.07	0.13	0.13	0.13	0.05	0.39	0.39	0.01	0.35	0.35
Sat Flow, veh/h	578	758	289	1114	664	1553	1757	2724	796	1206	3284	178
Grp Volume(v), veh/h	90	0	0	158	0	4	70	411	402	10	142	148
Grp Sat Flow(s),veh/h/ln	1625	0	0	1778	0	1553	1757	1783	1737	1206	1702	1760
Q Serve(g_s), s	2.1	0.0	0.0	3.3	0.0	0.1	1.5	7.2	7.2	0.2	2.3	2.4
Cycle Q Clear(g_c), s	2.1	0.0	0.0	3.3	0.0	0.1	1.5	7.2	7.2	0.2	2.3	2.4
Prop In Lane	0.36		0.18	0.63		1.00	1.00		0.46	1.00		0.10
Lane Grp Cap(c), veh/h	113	0	0	227	0	198	87	694	676	7	588	608
V/C Ratio(X)	0.79	0.00	0.00	0.70	0.00	0.02	0.81	0.59	0.59	1.41	0.24	0.24
Avail Cap(c_a), veh/h	579	0	0	951	0	830	537	1953	1902	184	1604	1658
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.0	0.0	0.0	16.4	0.0	15.0	18.5	9.5	9.5	19.5	9.2	9.2
Incr Delay (d2), s/veh	11.7	0.0	0.0	3.8	0.0	0.0	16.0	0.8	0.8	300.8	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	63.8	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.0	1.9	0.0	0.0	1.1	3.6	3.5	0.7	1.1	1.1
LnGrp Delay(d),s/veh	29.7	0.0	0.0	20.2	0.0	15.0	34.5	10.3	10.4	384.1	9.4	9.4
LnGrp LOS	C			C		B	C	B	B	F	A	A
Approach Vol, veh/h		90			162			883			300	
Approach Delay, s/veh		29.7			20.1			12.3			21.9	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.2	19.3		6.7	5.9	17.6		9.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	6.0	43.0		14.0	12.0	37.0		21.0
Max Q Clear Time (g_c+I1), s	2.2	9.2		4.1	3.5	4.4		5.3
Green Ext Time (p_c), s	0.0	6.1		0.2	0.1	1.8		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	16.2
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	20	72	0	44	76	40	880	0	28	344	4
Future Vol, veh/h	0	20	72	0	44	76	40	880	0	28	344	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	220	-	-	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	6	13	0	10	14	8	2	0	38	7	0
Mvmt Flow	0	20	72	0	44	76	40	880	0	28	344	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1422	1362	346	1408	1364	880	348	0	0	880	0	0
Stage 1	402	402	-	960	960	-	-	-	-	-	-	-
Stage 2	1020	960	-	448	404	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.56	6.33	7.1	6.6	6.34	4.18	-	-	4.48	-	-
Critical Hdwy Stg 1	6.1	5.56	-	6.1	5.6	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.56	-	6.1	5.6	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.054	3.417	3.5	4.09	3.426	2.272	-	-	2.542	-	-
Pot Cap-1 Maneuver	115	145	673	118	142	329	1178	-	-	636	-	-
Stage 1	629	593	-	311	325	-	-	-	-	-	-	-
Stage 2	288	330	-	594	585	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	62	134	673	88	131	329	1178	-	-	636	-	-
Mov Cap-2 Maneuver	62	134	-	88	131	-	-	-	-	-	-	-
Stage 1	608	567	-	300	314	-	-	-	-	-	-	-
Stage 2	184	319	-	489	559	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	18.4	42.1	0.4	0.8
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1178	-	-	359	212	636	-	-
HCM Lane V/C Ratio	0.034	-	-	0.256	0.566	0.044	-	-
HCM Control Delay (s)	8.2	-	-	18.4	42.1	10.9	-	-
HCM Lane LOS	A	-	-	C	E	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1	3.1	0.1	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	3	0	15	0	5	2	644	29	15	287	0
Future Vol, veh/h	0	3	0	15	0	5	2	644	29	15	287	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	50	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	27	0	0	0	2	0	0	6	0
Mvmt Flow	0	3	0	15	0	5	2	644	29	15	287	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	643	994	144	838	980	337	287	0	0	673	0	0
Stage 1	317	317	-	663	663	-	-	-	-	-	-	-
Stage 2	326	677	-	175	317	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	8.04	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	7.04	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	7.04	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.77	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	362	247	884	221	252	665	1287	-	-	927	-	-
Stage 1	674	658	-	362	462	-	-	-	-	-	-	-
Stage 2	666	455	-	742	658	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	354	243	884	216	247	665	1287	-	-	927	-	-
Mov Cap-2 Maneuver	354	243	-	216	247	-	-	-	-	-	-	-
Stage 1	673	647	-	361	461	-	-	-	-	-	-	-
Stage 2	660	454	-	727	647	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	20	19.8	0	0.4
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1287	-	-	243	216	665	927	-	-
HCM Lane V/C Ratio	0.002	-	-	0.012	0.069	0.008	0.016	-	-
HCM Control Delay (s)	7.8	-	-	20	22.9	10.5	8.9	-	-
HCM Lane LOS	A	-	-	C	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0	0	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	6	88	114	11	30
Future Vol, veh/h	19	6	88	114	11	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	3	0	0	7
Mvmt Flow	19	6	88	114	11	30

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	197	145	0	0	202	0
Stage 1	145	-	-	-	-	-
Stage 2	52	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	796	908	-	-	1382	-
Stage 1	887	-	-	-	-	-
Stage 2	976	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	790	908	-	-	1382	-
Mov Cap-2 Maneuver	790	-	-	-	-	-
Stage 1	880	-	-	-	-	-
Stage 2	976	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	815	1382	-
HCM Lane V/C Ratio	-	-	0.031	0.008	-
HCM Control Delay (s)	-	-	9.6	7.6	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	171	94	141	24	5	46
Future Vol, veh/h	171	94	141	24	5	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	14	6	0	0	2
Mvmt Flow	171	94	141	24	5	46

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	165	0	-	0	589	153
Stage 1	-	-	-	-	153	-
Stage 2	-	-	-	-	436	-
Critical Hdwy	4.13	-	-	-	6.4	6.22
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.227	-	-	-	3.5	3.318
Pot Cap-1 Maneuver	1407	-	-	-	474	893
Stage 1	-	-	-	-	880	-
Stage 2	-	-	-	-	656	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1407	-	-	-	413	893
Mov Cap-2 Maneuver	-	-	-	-	413	-
Stage 1	-	-	-	-	767	-
Stage 2	-	-	-	-	656	-

Approach	EB	WB	SB
HCM Control Delay, s	5.1	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1407	-	-	-	802
HCM Lane V/C Ratio	0.122	-	-	-	0.064
HCM Control Delay (s)	7.9	0	-	-	9.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.4	-	-	-	0.2

HCM 2010 Signalized Intersection Summary
2842: San Felipe Road/San Felipe Rd & SR25

11/28/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	556	420	20	188	136	284	316	44	276	652	12
Future Volume (veh/h)	12	556	420	20	188	136	284	316	44	276	652	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1881	1863	1863	1867	1900	1881	1882	1900
Adj Flow Rate, veh/h	12	556	132	20	188	43	284	316	44	276	652	12
Adj No. of Lanes	1	2	1	1	2	2	2	2	0	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	1	0	0	1	2	2	2	2	1	1	1
Cap, veh/h	13	912	412	22	930	725	448	884	122	441	1002	18
Arrive On Green	0.01	0.26	0.26	0.01	0.26	0.26	0.13	0.28	0.28	0.13	0.28	0.28
Sat Flow, veh/h	1810	3574	1615	1810	3574	2787	3442	3133	432	3476	3591	66
Grp Volume(v), veh/h	12	556	132	20	188	43	284	178	182	276	324	340
Grp Sat Flow(s),veh/h/ln	1810	1787	1615	1810	1787	1393	1721	1774	1791	1738	1787	1870
Q Serve(g_s), s	0.3	6.8	3.3	0.5	2.0	0.6	3.9	4.0	4.0	3.7	7.9	7.9
Cycle Q Clear(g_c), s	0.3	6.8	3.3	0.5	2.0	0.6	3.9	4.0	4.0	3.7	7.9	7.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.24	1.00		0.04
Lane Grp Cap(c), veh/h	13	912	412	22	930	725	448	501	506	441	499	522
V/C Ratio(X)	0.93	0.61	0.32	0.89	0.20	0.06	0.63	0.35	0.36	0.63	0.65	0.65
Avail Cap(c_a), veh/h	110	1806	816	110	1806	1408	904	1004	1013	913	1011	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	16.3	15.0	24.4	14.3	13.8	20.4	14.2	14.2	20.5	15.7	15.7
Incr Delay (d2), s/veh	96.7	0.7	0.4	63.0	0.1	0.0	1.5	0.4	0.4	1.5	1.4	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	0.5	3.4	1.5	0.7	1.0	0.2	1.9	2.0	2.0	1.9	4.1	4.3
LnGrp Delay(d),s/veh	121.2	16.9	15.4	87.4	14.4	13.8	21.9	14.6	14.6	22.0	17.1	17.1
LnGrp LOS	F	B	B	F	B	B	C	B	B	C	B	B
Approach Vol, veh/h		700			251			644			940	
Approach Delay, s/veh		18.4			20.1			17.8			18.5	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	18.0	4.6	16.6	10.4	17.8	4.4	16.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	13.0	28.0	3.0	25.0	13.0	28.0	3.0	25.0
Max Q Clear Time (g_c+I1), s	5.7	6.0	2.5	8.8	5.9	9.9	2.3	4.0
Green Ext Time (p_c), s	0.6	2.1	0.0	3.8	0.6	3.9	0.0	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	18.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	68	32	178	37	4	77	312	116	16	767	40
Future Volume (veh/h)	25	68	32	178	37	4	77	312	116	16	767	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1831	1900	1900	1884	1900	1881	1873	1900	1900	1878	1900
Adj Flow Rate, veh/h	25	68	32	178	37	1	77	312	116	16	767	40
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	0	0	0	1	2	2	0	1	1
Cap, veh/h	34	92	43	250	52	269	99	1004	366	18	1199	63
Arrive On Green	0.10	0.10	0.10	0.17	0.17	0.17	0.06	0.39	0.39	0.01	0.35	0.35
Sat Flow, veh/h	347	944	444	1498	311	1615	1792	2555	932	1810	3450	180
Grp Volume(v), veh/h	125	0	0	215	0	1	77	215	213	16	396	411
Grp Sat Flow(s),veh/h/ln	1735	0	0	1809	0	1615	1792	1779	1708	1810	1784	1846
Q Serve(g_s), s	3.4	0.0	0.0	5.4	0.0	0.0	2.0	4.0	4.1	0.4	9.0	9.0
Cycle Q Clear(g_c), s	3.4	0.0	0.0	5.4	0.0	0.0	2.0	4.0	4.1	0.4	9.0	9.0
Prop In Lane	0.20		0.26	0.83		1.00	1.00		0.55	1.00		0.10
Lane Grp Cap(c), veh/h	169	0	0	302	0	269	99	699	671	18	620	642
V/C Ratio(X)	0.74	0.00	0.00	0.71	0.00	0.00	0.78	0.31	0.32	0.91	0.64	0.64
Avail Cap(c_a), veh/h	578	0	0	942	0	840	447	1852	1778	113	1522	1575
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.1	0.0	0.0	18.9	0.0	16.7	22.4	10.1	10.1	23.8	13.1	13.2
Incr Delay (d2), s/veh	6.2	0.0	0.0	3.1	0.0	0.0	12.4	0.2	0.3	77.4	1.1	1.1
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	1.9	0.0	0.0	2.9	0.0	0.0	1.3	2.0	2.0	0.6	4.6	4.8
LnGrp Delay(d),s/veh	27.3	0.0	0.0	22.0	0.0	16.7	34.8	10.3	10.4	101.1	14.3	14.2
LnGrp LOS	C			C		B	C	B	B	F	B	B
Approach Vol, veh/h		125			216			505			823	
Approach Delay, s/veh		27.3			22.0			14.1			15.9	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.5	22.9		8.7	6.6	20.7		12.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	3.0	50.0		16.0	12.0	41.0		25.0
Max Q Clear Time (g_c+I1), s	2.4	6.1		5.4	4.0	11.0		7.4
Green Ext Time (p_c), s	0.0	2.9		0.4	0.1	5.7		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	17.0
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	8.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	36	24	0	60	32	60	448	0	48	1016	0
Future Vol, veh/h	0	36	24	0	60	32	60	448	0	48	1016	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	220	-	-	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	15	0	0	3	0	2	3	0	8	1	0
Mvmt Flow	0	36	24	0	60	32	60	448	0	48	1016	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1726	1680	1016	1710	1680	448	1016	0	0	448	0	0
Stage 1	1112	1112	-	568	568	-	-	-	-	-	-	-
Stage 2	614	568	-	1142	1112	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.65	6.2	7.1	6.53	6.2	4.12	-	-	4.18	-	-
Critical Hdwy Stg 1	6.1	5.65	-	6.1	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.65	-	6.1	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.135	3.3	3.5	4.027	3.3	2.218	-	-	2.272	-	-
Pot Cap-1 Maneuver	71	88	291	72	94	615	683	-	-	1081	-	-
Stage 1	256	269	-	511	505	-	-	-	-	-	-	-
Stage 2	483	486	-	246	283	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	25	77	291	38	82	615	683	-	-	1081	-	-
Mov Cap-2 Maneuver	25	77	-	38	82	-	-	-	-	-	-	-
Stage 1	233	257	-	466	461	-	-	-	-	-	-	-
Stage 2	363	443	-	185	271	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	72.6	102.6	1.3	0.4
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	683	-	-	109	117	1081	-	-
HCM Lane V/C Ratio	0.088	-	-	0.55	0.786	0.044	-	-
HCM Control Delay (s)	10.8	-	-	72.6	102.6	8.5	-	-
HCM Lane LOS	B	-	-	F	F	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	2.6	4.5	0.1	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	1	71	0	12	0	336	6	2	814	0
Future Vol, veh/h	0	0	1	71	0	12	0	336	6	2	814	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	50	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	1	0	0	0	3	0	0	1	0
Mvmt Flow	0	0	1	71	0	12	0	336	6	2	814	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	986	1160	407	750	1157	171	814	0	0	342	0	0
Stage 1	818	818	-	339	339	-	-	-	-	-	-	-
Stage 2	168	342	-	411	818	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.52	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.52	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.52	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.51	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	205	197	599	302	198	849	822	-	-	1228	-	-
Stage 1	340	393	-	652	643	-	-	-	-	-	-	-
Stage 2	823	642	-	591	393	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	202	197	599	301	198	849	822	-	-	1228	-	-
Mov Cap-2 Maneuver	202	197	-	301	198	-	-	-	-	-	-	-
Stage 1	340	392	-	652	643	-	-	-	-	-	-	-
Stage 2	811	642	-	589	392	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11	19	0	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	822	-	-	599	301	849	1228	-	-
HCM Lane V/C Ratio	-	-	-	0.002	0.236	0.014	0.002	-	-
HCM Control Delay (s)	0	-	-	11	20.6	9.3	7.9	-	-
HCM Lane LOS	A	-	-	B	C	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.9	0	0	-	-

Intersection	
Int Delay, s/veh	3.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	77	13	55	28	6	86
Future Vol, veh/h	77	13	55	28	6	86
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	4	4	0	1
Mvmt Flow	77	13	55	28	6	86

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	167	69	0	0	83	0
Stage 1	69	-	-	-	-	-
Stage 2	98	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	828	1000	-	-	1527	-
Stage 1	959	-	-	-	-	-
Stage 2	931	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	825	1000	-	-	1527	-
Mov Cap-2 Maneuver	825	-	-	-	-	-
Stage 1	955	-	-	-	-	-
Stage 2	931	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	0.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	846	1527	-
HCM Lane V/C Ratio	-	-	0.106	0.004	-
HCM Control Delay (s)	-	-	9.8	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0	-

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	62	140	84	17	24	143
Future Vol, veh/h	62	140	84	17	24	143
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	5	4	5	6	4	1
Mvmt Flow	62	140	84	17	24	143

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	101	0	-	0	357	93
Stage 1	-	-	-	-	93	-
Stage 2	-	-	-	-	264	-
Critical Hdwy	4.15	-	-	-	6.44	6.21
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	2.245	-	-	-	3.536	3.309
Pot Cap-1 Maneuver	1473	-	-	-	637	967
Stage 1	-	-	-	-	926	-
Stage 2	-	-	-	-	776	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1473	-	-	-	608	967
Mov Cap-2 Maneuver	-	-	-	-	608	-
Stage 1	-	-	-	-	883	-
Stage 2	-	-	-	-	776	-

Approach	EB	WB	SB
HCM Control Delay, s	2.3	0	10
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1473	-	-	-	891
HCM Lane V/C Ratio	0.042	-	-	-	0.187
HCM Control Delay (s)	7.6	0	-	-	10
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.7

HCM 2010 Signalized Intersection Summary
2842: San Felipe Road/San Felipe Rd & SR25

11/28/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	184	164	20	396	450	284	622	12	105	353	4
Future Volume (veh/h)	16	184	164	20	396	450	284	622	12	105	353	4
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1743	1759	1900	1863	1881	1827	1863	1900	1759	1828	1900
Adj Flow Rate, veh/h	16	184	42	20	396	131	284	622	12	105	353	4
Adj No. of Lanes	1	2	1	1	2	2	2	2	0	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	9	8	0	2	1	4	2	2	8	4	4
Cap, veh/h	17	716	323	22	774	616	496	1061	20	269	824	9
Arrive On Green	0.01	0.22	0.22	0.01	0.22	0.22	0.15	0.30	0.30	0.08	0.23	0.23
Sat Flow, veh/h	1810	3312	1495	1810	3539	2814	3375	3553	69	3250	3517	40
Grp Volume(v), veh/h	16	184	42	20	396	131	284	310	324	105	174	183
Grp Sat Flow(s),veh/h/ln	1810	1656	1495	1810	1770	1407	1688	1770	1851	1625	1736	1821
Q Serve(g_s), s	0.4	1.9	0.9	0.5	4.0	1.6	3.2	6.1	6.1	1.3	3.5	3.5
Cycle Q Clear(g_c), s	0.4	1.9	0.9	0.5	4.0	1.6	3.2	6.1	6.1	1.3	3.5	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		0.02
Lane Grp Cap(c), veh/h	17	716	323	22	774	616	496	529	553	269	407	427
V/C Ratio(X)	0.92	0.26	0.13	0.90	0.51	0.21	0.57	0.59	0.59	0.39	0.43	0.43
Avail Cap(c_a), veh/h	221	1777	802	309	2071	1647	1564	1511	1580	793	1101	1154
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.3	13.3	13.0	20.2	14.1	13.1	16.3	12.2	12.2	17.8	13.4	13.4
Incr Delay (d2), s/veh	80.0	0.2	0.2	65.9	0.5	0.2	1.0	1.0	1.0	0.9	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	0.6	0.9	0.4	0.6	2.0	0.6	1.6	3.1	3.2	0.6	1.7	1.8
LnGrp Delay(d),s/veh	100.3	13.5	13.1	86.2	14.6	13.3	17.3	13.3	13.2	18.8	14.1	14.0
LnGrp LOS	F	B	B	F	B	B	B	B	B	B	B	B
Approach Vol, veh/h		242			547			918			462	
Approach Delay, s/veh		19.2			16.9			14.5			15.1	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.4	16.2	4.5	12.9	10.0	13.6	4.4	13.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	10.0	35.0	7.0	22.0	19.0	26.0	5.0	24.0
Max Q Clear Time (g_c+I1), s	3.3	8.1	2.5	3.9	5.2	5.5	2.4	6.0
Green Ext Time (p_c), s	0.1	4.1	0.0	1.1	0.8	2.0	0.0	2.9

Intersection Summary	
HCM 2010 Ctrl Delay	15.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	48	16	109	61	25	70	629	219	10	275	15
Future Volume (veh/h)	32	48	16	109	61	25	70	629	219	10	275	15
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1707	1900	1900	1836	1827	1845	1876	1900	1267	1792	1900
Adj Flow Rate, veh/h	32	48	16	109	61	4	70	629	219	10	275	15
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	10	10	10	8	8	4	3	1	1	50	6	6
Cap, veh/h	41	62	21	156	87	212	87	1030	358	7	1159	63
Arrive On Green	0.08	0.08	0.08	0.14	0.14	0.14	0.05	0.40	0.40	0.01	0.35	0.35
Sat Flow, veh/h	544	816	272	1140	638	1553	1757	2596	903	1206	3284	178
Grp Volume(v), veh/h	96	0	0	170	0	4	70	432	416	10	142	148
Grp Sat Flow(s),veh/h/ln	1631	0	0	1779	0	1553	1757	1783	1717	1206	1702	1760
Q Serve(g_s), s	2.4	0.0	0.0	3.8	0.0	0.1	1.6	8.0	8.0	0.2	2.4	2.5
Cycle Q Clear(g_c), s	2.4	0.0	0.0	3.8	0.0	0.1	1.6	8.0	8.0	0.2	2.4	2.5
Prop In Lane	0.33		0.17	0.64		1.00	1.00		0.53	1.00		0.10
Lane Grp Cap(c), veh/h	123	0	0	243	0	212	87	707	681	7	601	621
V/C Ratio(X)	0.78	0.00	0.00	0.70	0.00	0.02	0.81	0.61	0.61	1.41	0.24	0.24
Avail Cap(c_a), veh/h	589	0	0	900	0	785	465	1889	1820	116	1517	1568
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.9	0.0	0.0	17.1	0.0	15.5	19.5	10.0	10.0	20.6	9.5	9.5
Incr Delay (d2), s/veh	10.1	0.0	0.0	3.6	0.0	0.0	15.8	0.9	0.9	299.1	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.8	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.0	2.1	0.0	0.0	1.2	4.0	3.9	0.7	1.2	1.2
LnGrp Delay(d),s/veh	29.0	0.0	0.0	20.7	0.0	15.5	35.3	10.8	10.9	382.5	9.7	9.7
LnGrp LOS	C			C		B	D	B	B	F	A	A
Approach Vol, veh/h		96			174			918			300	
Approach Delay, s/veh		29.0			20.6			12.7			22.1	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.2	20.5		7.1	6.1	18.7		9.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	44.0		15.0	11.0	37.0		21.0
Max Q Clear Time (g_c+I1), s	2.2	10.0		4.4	3.6	4.5		5.8
Green Ext Time (p_c), s	0.0	6.4		0.3	0.1	1.8		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	16.6
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	23	72	0	45	77	40	880	0	31	344	4
Future Vol, veh/h	0	23	72	0	45	77	40	880	0	31	344	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	220	-	-	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	6	13	0	10	14	8	2	0	38	7	0
Mvmt Flow	0	23	72	0	45	77	40	880	0	31	344	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1429	1368	346	1416	1370	880	348	0	0	880	0	0
Stage 1	408	408	-	960	960	-	-	-	-	-	-	-
Stage 2	1021	960	-	456	410	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.56	6.33	7.1	6.6	6.34	4.18	-	-	4.48	-	-
Critical Hdwy Stg 1	6.1	5.56	-	6.1	5.6	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.56	-	6.1	5.6	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.054	3.417	3.5	4.09	3.426	2.272	-	-	2.542	-	-
Pot Cap-1 Maneuver	114	144	673	116	141	329	1178	-	-	636	-	-
Stage 1	624	590	-	311	325	-	-	-	-	-	-	-
Stage 2	288	330	-	588	582	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	60	132	673	84	130	329	1178	-	-	636	-	-
Mov Cap-2 Maneuver	60	132	-	84	130	-	-	-	-	-	-	-
Stage 1	603	561	-	300	314	-	-	-	-	-	-	-
Stage 2	183	319	-	479	553	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.8	43.5	0.4	0.9
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1178	-	-	338	210	636	-	-
HCM Lane V/C Ratio	0.034	-	-	0.281	0.581	0.049	-	-
HCM Control Delay (s)	8.2	-	-	19.8	43.5	10.9	-	-
HCM Lane LOS	A	-	-	C	E	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.1	3.2	0.2	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	3	0	15	0	7	2	644	29	22	287	0
Future Vol, veh/h	0	3	0	15	0	7	2	644	29	22	287	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	50	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	27	0	0	0	2	0	0	6	0
Mvmt Flow	0	3	0	15	0	7	2	644	29	22	287	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	657	1008	144	852	994	337	287	0	0	673	0	0
Stage 1	331	331	-	663	663	-	-	-	-	-	-	-
Stage 2	326	677	-	189	331	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	8.04	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	7.04	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	7.04	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.77	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	354	242	884	215	247	665	1287	-	-	927	-	-
Stage 1	662	649	-	362	462	-	-	-	-	-	-	-
Stage 2	666	455	-	727	649	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	343	236	884	209	241	665	1287	-	-	927	-	-
Mov Cap-2 Maneuver	343	236	-	209	241	-	-	-	-	-	-	-
Stage 1	661	633	-	361	461	-	-	-	-	-	-	-
Stage 2	658	454	-	706	633	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	20.5	19.4	0	0.6
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1287	-	-	236	209	665	927	-	-
HCM Lane V/C Ratio	0.002	-	-	0.013	0.072	0.011	0.024	-	-
HCM Control Delay (s)	7.8	-	-	20.5	23.6	10.5	9	-	-
HCM Lane LOS	A	-	-	C	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0	0.1	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	31	8	88	157	18	30
Future Vol, veh/h	31	8	88	157	18	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	3	0	0	7
Mvmt Flow	31	8	88	157	18	30

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	233	167	0	0	245	0
Stage 1	167	-	-	-	-	-
Stage 2	66	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	760	882	-	-	1333	-
Stage 1	867	-	-	-	-	-
Stage 2	962	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	749	882	-	-	1333	-
Mov Cap-2 Maneuver	749	-	-	-	-	-
Stage 1	855	-	-	-	-	-
Stage 2	962	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	2.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	773	1333	-
HCM Lane V/C Ratio	-	-	0.05	0.014	-
HCM Control Delay (s)	-	-	9.9	7.7	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	212	94	141	27	6	57
Future Vol, veh/h	212	94	141	27	6	57
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	14	6	0	0	2
Mvmt Flow	212	94	141	27	6	57

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	168	0	-	0	673	155
Stage 1	-	-	-	-	155	-
Stage 2	-	-	-	-	518	-
Critical Hdwy	4.13	-	-	-	6.4	6.22
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.227	-	-	-	3.5	3.318
Pot Cap-1 Maneuver	1404	-	-	-	424	891
Stage 1	-	-	-	-	878	-
Stage 2	-	-	-	-	602	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1404	-	-	-	357	891
Mov Cap-2 Maneuver	-	-	-	-	357	-
Stage 1	-	-	-	-	738	-
Stage 2	-	-	-	-	602	-

Approach	EB	WB	SB
HCM Control Delay, s	5.6	0	10
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1404	-	-	-	780
HCM Lane V/C Ratio	0.151	-	-	-	0.081
HCM Control Delay (s)	8	0	-	-	10
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.5	-	-	-	0.3

HCM 2010 Signalized Intersection Summary
2842: San Felipe Road/San Felipe Rd & SR25

11/28/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	556	420	20	188	142	284	322	44	290	666	12
Future Volume (veh/h)	12	556	420	20	188	142	284	322	44	290	666	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1881	1863	1863	1867	1900	1881	1882	1900
Adj Flow Rate, veh/h	12	556	132	20	188	49	284	322	44	290	666	12
Adj No. of Lanes	1	2	1	1	2	2	2	2	0	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	1	0	0	1	2	2	2	2	1	1	1
Cap, veh/h	13	909	411	22	927	723	446	885	120	455	1017	18
Arrive On Green	0.01	0.25	0.25	0.01	0.26	0.26	0.13	0.28	0.28	0.13	0.28	0.28
Sat Flow, veh/h	1810	3574	1615	1810	3574	2787	3442	3141	425	3476	3593	65
Grp Volume(v), veh/h	12	556	132	20	188	49	284	181	185	290	331	347
Grp Sat Flow(s),veh/h/ln	1810	1787	1615	1810	1787	1393	1721	1774	1792	1738	1787	1870
Q Serve(g_s), s	0.3	6.9	3.3	0.6	2.1	0.7	3.9	4.1	4.1	3.9	8.1	8.1
Cycle Q Clear(g_c), s	0.3	6.9	3.3	0.6	2.1	0.7	3.9	4.1	4.1	3.9	8.1	8.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.24	1.00		0.03
Lane Grp Cap(c), veh/h	13	909	411	22	927	723	446	500	505	455	506	529
V/C Ratio(X)	0.93	0.61	0.32	0.89	0.20	0.07	0.64	0.36	0.37	0.64	0.65	0.66
Avail Cap(c_a), veh/h	109	1791	809	109	1791	1397	897	996	1006	906	1003	1050
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.7	16.4	15.1	24.6	14.4	13.9	20.6	14.3	14.3	20.6	15.7	15.7
Incr Delay (d2), s/veh	96.5	0.7	0.4	62.8	0.1	0.0	1.5	0.4	0.4	1.5	1.4	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	0.5	3.4	1.5	0.7	1.0	0.3	1.9	2.0	2.1	2.0	4.2	4.3
LnGrp Delay(d),s/veh	121.3	17.1	15.6	87.4	14.5	14.0	22.1	14.8	14.8	22.1	17.2	17.1
LnGrp LOS	F	B	B	F	B	B	C	B	B	C	B	B
Approach Vol, veh/h		700			257			650			968	
Approach Delay, s/veh		18.6			20.1			18.0			18.6	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	18.1	4.6	16.7	10.5	18.1	4.4	16.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	13.0	28.0	3.0	25.0	13.0	28.0	3.0	25.0
Max Q Clear Time (g_c+I1), s	5.9	6.1	2.6	8.9	5.9	10.1	2.3	4.1
Green Ext Time (p_c), s	0.6	2.1	0.0	3.8	0.6	4.0	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	18.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	70	32	206	41	4	77	312	127	16	767	40
Future Volume (veh/h)	25	70	32	206	41	4	77	312	127	16	767	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1831	1900	1900	1884	1900	1881	1873	1900	1900	1878	1900
Adj Flow Rate, veh/h	25	70	32	206	41	1	77	312	127	16	767	40
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	0	0	0	1	2	2	0	1	1
Cap, veh/h	34	95	43	284	57	304	99	961	383	18	1177	61
Arrive On Green	0.10	0.10	0.10	0.19	0.19	0.19	0.06	0.39	0.39	0.01	0.34	0.34
Sat Flow, veh/h	342	957	438	1509	300	1615	1792	2486	992	1810	3450	180
Grp Volume(v), veh/h	127	0	0	247	0	1	77	222	217	16	396	411
Grp Sat Flow(s),veh/h/ln	1736	0	0	1809	0	1615	1792	1780	1698	1810	1784	1846
Q Serve(g_s), s	3.6	0.0	0.0	6.5	0.0	0.0	2.1	4.4	4.6	0.4	9.5	9.5
Cycle Q Clear(g_c), s	3.6	0.0	0.0	6.5	0.0	0.0	2.1	4.4	4.6	0.4	9.5	9.5
Prop In Lane	0.20		0.25	0.83		1.00	1.00		0.58	1.00		0.10
Lane Grp Cap(c), veh/h	172	0	0	340	0	304	99	688	656	18	608	630
V/C Ratio(X)	0.74	0.00	0.00	0.73	0.00	0.00	0.78	0.32	0.33	0.91	0.65	0.65
Avail Cap(c_a), veh/h	550	0	0	967	0	863	355	1691	1614	107	1448	1498
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.1	0.0	0.0	19.3	0.0	16.7	23.6	10.9	10.9	25.0	14.1	14.1
Incr Delay (d2), s/veh	6.1	0.0	0.0	2.9	0.0	0.0	12.5	0.3	0.3	76.4	1.2	1.1
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	2.0	0.0	0.0	3.5	0.0	0.0	1.4	2.2	2.2	0.6	4.8	5.0
LnGrp Delay(d),s/veh	28.3	0.0	0.0	22.2	0.0	16.7	36.0	11.1	11.2	101.4	15.3	15.2
LnGrp LOS	C			C		B	D	B	B	F	B	B
Approach Vol, veh/h		127			248			516			823	
Approach Delay, s/veh		28.3			22.2			14.9			16.9	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.5	23.5		9.0	6.8	21.2		13.5
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	3.0	48.0		16.0	10.0	41.0		27.0
Max Q Clear Time (g_c+I1), s	2.4	6.6		5.6	4.1	11.5		8.5
Green Ext Time (p_c), s	0.0	3.0		0.4	0.1	5.7		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	17.9
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	9.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	37	24	0	62	34	60	448	0	49	1016	0
Future Vol, veh/h	0	37	24	0	62	34	60	448	0	49	1016	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	220	-	-	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	15	0	0	3	0	2	3	0	8	1	0
Mvmt Flow	0	37	24	0	62	34	60	448	0	49	1016	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1730	1682	1016	1713	1682	448	1016	0	0	448	0	0
Stage 1	1114	1114	-	568	568	-	-	-	-	-	-	-
Stage 2	616	568	-	1145	1114	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.65	6.2	7.1	6.53	6.2	4.12	-	-	4.18	-	-
Critical Hdwy Stg 1	6.1	5.65	-	6.1	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.65	-	6.1	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.135	3.3	3.5	4.027	3.3	2.218	-	-	2.272	-	-
Pot Cap-1 Maneuver	70	88	291	72	94	615	683	-	-	1081	-	-
Stage 1	255	269	-	511	505	-	-	-	-	-	-	-
Stage 2	481	486	-	245	282	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	23	77	291	37	82	615	683	-	-	1081	-	-
Mov Cap-2 Maneuver	23	77	-	37	82	-	-	-	-	-	-	-
Stage 1	233	257	-	466	461	-	-	-	-	-	-	-
Stage 2	359	443	-	184	269	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	74.8	107.3	1.3	0.4
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	683	-	-	108	118	1081	-	-
HCM Lane V/C Ratio	0.088	-	-	0.565	0.814	0.045	-	-
HCM Control Delay (s)	10.8	-	-	74.8	107.3	8.5	-	-
HCM Lane LOS	B	-	-	F	F	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	2.7	4.8	0.1	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	1	71	0	18	0	336	6	4	814	0
Future Vol, veh/h	0	0	1	71	0	18	0	336	6	4	814	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	50	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	1	0	0	0	3	0	0	1	0
Mvmt Flow	0	0	1	71	0	18	0	336	6	4	814	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	990	1164	407	754	1161	171	814	0	0	342	0	0
Stage 1	822	822	-	339	339	-	-	-	-	-	-	-
Stage 2	168	342	-	415	822	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.52	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.52	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.52	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.51	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	204	196	599	300	197	849	822	-	-	1228	-	-
Stage 1	339	391	-	652	643	-	-	-	-	-	-	-
Stage 2	823	642	-	588	391	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	199	195	599	299	196	849	822	-	-	1228	-	-
Mov Cap-2 Maneuver	199	195	-	299	196	-	-	-	-	-	-	-
Stage 1	339	390	-	652	643	-	-	-	-	-	-	-
Stage 2	806	642	-	585	390	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11	18.4	0	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	822	-	-	599	299	849	1228	-	-
HCM Lane V/C Ratio	-	-	-	0.002	0.237	0.021	0.003	-	-
HCM Control Delay (s)	0	-	-	11	20.7	9.3	7.9	-	-
HCM Lane LOS	A	-	-	B	C	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.9	0.1	0	-	-

Intersection	
Int Delay, s/veh	4.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	111	19	55	42	8	86
Future Vol, veh/h	111	19	55	42	8	86
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	4	4	0	1
Mvmt Flow	111	19	55	42	8	86

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	178	76	0	0	97	0
Stage 1	76	-	-	-	-	-
Stage 2	102	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	816	991	-	-	1509	-
Stage 1	952	-	-	-	-	-
Stage 2	927	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	811	991	-	-	1509	-
Mov Cap-2 Maneuver	811	-	-	-	-	-
Stage 1	946	-	-	-	-	-
Stage 2	927	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	0.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	833	1509	-
HCM Lane V/C Ratio	-	-	0.156	0.005	-
HCM Control Delay (s)	-	-	10.1	7.4	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.6	0	-

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	75	140	84	18	26	175
Future Vol, veh/h	75	140	84	18	26	175
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	5	4	5	6	4	1
Mvmt Flow	75	140	84	18	26	175

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	102	0	-	0	383	93
Stage 1	-	-	-	-	93	-
Stage 2	-	-	-	-	290	-
Critical Hdwy	4.15	-	-	-	6.44	6.21
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	2.245	-	-	-	3.536	3.309
Pot Cap-1 Maneuver	1471	-	-	-	616	967
Stage 1	-	-	-	-	926	-
Stage 2	-	-	-	-	755	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1471	-	-	-	582	967
Mov Cap-2 Maneuver	-	-	-	-	582	-
Stage 1	-	-	-	-	875	-
Stage 2	-	-	-	-	755	-

Approach	EB	WB	SB
HCM Control Delay, s	2.6	0	10.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1471	-	-	-	891
HCM Lane V/C Ratio	0.051	-	-	-	0.226
HCM Control Delay (s)	7.6	0	-	-	10.2
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.9

HCM 2010 Signalized Intersection Summary
2842: San Felipe Road/San Felipe Rd & SR25

11/28/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	273	187	20	605	472	352	647	12	117	361	4
Future Volume (veh/h)	16	273	187	20	605	472	352	647	12	117	361	4
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1743	1759	1900	1863	1881	1827	1863	1900	1759	1828	1900
Adj Flow Rate, veh/h	16	273	65	20	605	153	352	647	12	117	361	4
Adj No. of Lanes	1	2	1	1	2	2	2	2	0	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	9	8	0	2	1	4	2	2	8	4	4
Cap, veh/h	18	939	424	22	1013	805	543	1028	19	257	730	8
Arrive On Green	0.01	0.28	0.28	0.01	0.29	0.29	0.16	0.29	0.29	0.08	0.21	0.21
Sat Flow, veh/h	1810	3312	1495	1810	3539	2814	3375	3556	66	3250	3518	39
Grp Volume(v), veh/h	16	273	65	20	605	153	352	322	337	117	178	187
Grp Sat Flow(s),veh/h/ln	1810	1656	1495	1810	1770	1407	1688	1770	1852	1625	1736	1821
Q Serve(g_s), s	0.4	3.1	1.6	0.5	7.0	2.0	4.7	7.5	7.5	1.6	4.3	4.3
Cycle Q Clear(g_c), s	0.4	3.1	1.6	0.5	7.0	2.0	4.7	7.5	7.5	1.6	4.3	4.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		0.02
Lane Grp Cap(c), veh/h	18	939	424	22	1013	805	543	512	536	257	360	378
V/C Ratio(X)	0.91	0.29	0.15	0.89	0.60	0.19	0.65	0.63	0.63	0.45	0.49	0.49
Avail Cap(c_a), veh/h	114	1668	753	266	2079	1653	1346	1263	1321	614	874	917
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.6	13.3	12.8	23.5	14.6	12.8	18.7	14.7	14.7	21.0	16.7	16.7
Incr Delay (d2), s/veh	77.5	0.2	0.2	63.2	0.6	0.1	1.3	1.3	1.2	1.3	1.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.4	0.7	0.6	3.4	0.8	2.2	3.8	4.0	0.8	2.2	2.3
LnGrp Delay(d),s/veh	101.1	13.5	13.0	86.7	15.2	13.0	20.0	16.0	15.9	22.2	17.7	17.7
LnGrp LOS	F	B	B	F	B	B	C	B	B	C	B	B
Approach Vol, veh/h		354			778			1011			482	
Approach Delay, s/veh		17.4			16.6			17.4			18.8	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	17.8	4.6	17.5	11.7	13.9	4.5	17.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	9.0	34.0	7.0	24.0	19.0	24.0	3.0	28.0
Max Q Clear Time (g_c+I1), s	3.6	9.5	2.5	5.1	6.7	6.3	2.4	9.0
Green Ext Time (p_c), s	0.1	4.2	0.0	1.8	1.0	1.9	0.0	4.6

Intersection Summary	
HCM 2010 Ctrl Delay	17.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	59	17	100	95	53	72	706	188	25	303	15
Future Volume (veh/h)	32	59	17	100	95	53	72	706	188	25	303	15
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1709	1900	1900	1820	1827	1845	1877	1900	1267	1792	1900
Adj Flow Rate, veh/h	32	59	17	100	95	32	72	706	188	25	303	15
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	10	10	10	8	8	4	3	1	1	50	6	6
Cap, veh/h	42	77	22	145	137	247	90	1096	292	20	1184	58
Arrive On Green	0.09	0.09	0.09	0.16	0.16	0.16	0.05	0.39	0.39	0.02	0.36	0.36
Sat Flow, veh/h	486	896	258	910	864	1553	1757	2788	742	1206	3302	163
Grp Volume(v), veh/h	108	0	0	195	0	32	72	452	442	25	156	162
Grp Sat Flow(s),veh/h/ln	1640	0	0	1774	0	1553	1757	1783	1746	1206	1702	1763
Q Serve(g_s), s	3.0	0.0	0.0	4.8	0.0	0.8	1.9	9.5	9.5	0.8	3.0	3.0
Cycle Q Clear(g_c), s	3.0	0.0	0.0	4.8	0.0	0.8	1.9	9.5	9.5	0.8	3.0	3.0
Prop In Lane	0.30		0.16	0.51		1.00	1.00		0.42	1.00		0.09
Lane Grp Cap(c), veh/h	140	0	0	282	0	247	90	701	687	20	610	632
V/C Ratio(X)	0.77	0.00	0.00	0.69	0.00	0.13	0.80	0.64	0.64	1.26	0.26	0.26
Avail Cap(c_a), veh/h	496	0	0	805	0	705	342	1580	1547	209	1471	1524
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.7	0.0	0.0	18.4	0.0	16.7	21.7	11.4	11.4	22.8	10.5	10.5
Incr Delay (d2), s/veh	8.6	0.0	0.0	3.0	0.0	0.2	14.8	1.0	1.0	178.5	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.8	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	0.0	2.6	0.0	0.4	1.3	4.8	4.7	1.2	1.4	1.5
LnGrp Delay(d),s/veh	29.3	0.0	0.0	21.4	0.0	16.9	36.5	12.4	12.4	217.1	10.7	10.7
LnGrp LOS	C			C		B	D	B	B	F	B	B
Approach Vol, veh/h		108			227			966			343	
Approach Delay, s/veh		29.3			20.8			14.2			25.7	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.8	22.2		8.0	6.4	20.6		11.4
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	8.0	41.0		14.0	9.0	40.0		21.0
Max Q Clear Time (g_c+I1), s	2.8	11.5		5.0	3.9	5.0		6.8
Green Ext Time (p_c), s	0.0	6.7		0.3	0.1	2.0		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	18.5
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	18.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	23	76	0	49	109	49	1148	0	43	452	4
Future Vol, veh/h	0	23	76	0	49	109	49	1148	0	43	452	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	220	-	-	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	6	13	0	10	14	8	2	0	38	7	0
Mvmt Flow	0	23	76	0	49	109	49	1148	0	43	452	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1865	1786	454	1836	1788	1148	456	0	0	1148	0	0
Stage 1	540	540	-	1246	1246	-	-	-	-	-	-	-
Stage 2	1325	1246	-	590	542	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.56	6.33	7.1	6.6	6.34	4.18	-	-	4.48	-	-
Critical Hdwy Stg 1	6.1	5.56	-	6.1	5.6	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.56	-	6.1	5.6	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.054	3.417	3.5	4.09	3.426	2.272	-	-	2.542	-	-
Pot Cap-1 Maneuver	56	80	584	59	78	229	1074	-	-	495	-	-
Stage 1	530	515	-	215	237	-	-	-	-	-	-	-
Stage 2	194	241	-	497	507	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	11	70	584	35	68	229	1074	-	-	495	-	-
Mov Cap-2 Maneuver	11	70	-	35	68	-	-	-	-	-	-	-
Stage 1	506	470	-	205	226	-	-	-	-	-	-	-
Stage 2	76	230	-	375	463	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	35	205.6	0.3	1.1
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1074	-	-	216	132	495	-	-
HCM Lane V/C Ratio	0.046	-	-	0.458	1.197	0.087	-	-
HCM Control Delay (s)	8.5	-	-	35	205.6	13	-	-
HCM Lane LOS	A	-	-	E	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	2.2	9.5	0.3	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	3	0	15	0	5	2	749	29	15	330	0
Future Vol, veh/h	0	3	0	15	0	5	2	749	29	15	330	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	50	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	27	0	0	0	2	0	0	6	0
Mvmt Flow	0	3	0	15	0	5	2	749	29	15	330	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	739	1142	165	965	1128	389	330	0	0	778	0	0
Stage 1	360	360	-	768	768	-	-	-	-	-	-	-
Stage 2	379	782	-	197	360	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	8.04	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	7.04	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	7.04	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.77	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	309	202	857	176	206	615	1241	-	-	848	-	-
Stage 1	636	630	-	310	414	-	-	-	-	-	-	-
Stage 2	620	408	-	719	630	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	302	198	857	171	202	615	1241	-	-	848	-	-
Mov Cap-2 Maneuver	302	198	-	171	202	-	-	-	-	-	-	-
Stage 1	635	619	-	309	413	-	-	-	-	-	-	-
Stage 2	614	407	-	703	619	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	23.5	23.8	0	0.4
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1241	-	-	198	171	615	848	-	-
HCM Lane V/C Ratio	0.002	-	-	0.015	0.088	0.008	0.018	-	-
HCM Control Delay (s)	7.9	-	-	23.5	28.1	10.9	9.3	-	-
HCM Lane LOS	A	-	-	C	D	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.3	0	0.1	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	6	88	114	11	30
Future Vol, veh/h	19	6	88	114	11	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	3	0	0	7
Mvmt Flow	19	6	88	114	11	30

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	197	145	0	0	202	0
Stage 1	145	-	-	-	-	-
Stage 2	52	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	796	908	-	-	1382	-
Stage 1	887	-	-	-	-	-
Stage 2	976	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	790	908	-	-	1382	-
Mov Cap-2 Maneuver	790	-	-	-	-	-
Stage 1	880	-	-	-	-	-
Stage 2	976	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	815	1382	-
HCM Lane V/C Ratio	-	-	0.031	0.008	-
HCM Control Delay (s)	-	-	9.6	7.6	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	171	130	206	24	5	46
Future Vol, veh/h	171	130	206	24	5	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	14	6	0	0	2
Mvmt Flow	171	130	206	24	5	46

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	230	0	-	0	690	218
Stage 1	-	-	-	-	218	-
Stage 2	-	-	-	-	472	-
Critical Hdwy	4.13	-	-	-	6.4	6.22
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.227	-	-	-	3.5	3.318
Pot Cap-1 Maneuver	1332	-	-	-	414	822
Stage 1	-	-	-	-	823	-
Stage 2	-	-	-	-	632	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1332	-	-	-	357	822
Mov Cap-2 Maneuver	-	-	-	-	357	-
Stage 1	-	-	-	-	709	-
Stage 2	-	-	-	-	632	-

Approach	EB	WB	SB
HCM Control Delay, s	4.6	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1332	-	-	-	729
HCM Lane V/C Ratio	0.128	-	-	-	0.07
HCM Control Delay (s)	8.1	0	-	-	10.3
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.4	-	-	-	0.2

HCM 2010 Signalized Intersection Summary
2842: San Felipe Road/San Felipe Rd & SR25

11/28/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	797	495	20	347	163	327	339	44	322	697	12
Future Volume (veh/h)	12	797	495	20	347	163	327	339	44	322	697	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1881	1863	1863	1867	1900	1881	1882	1900
Adj Flow Rate, veh/h	12	797	207	20	347	70	327	339	44	322	697	12
Adj No. of Lanes	1	2	1	1	2	2	2	2	0	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	1	0	0	1	2	2	2	2	1	1	1
Cap, veh/h	13	1140	515	23	1160	904	460	856	110	457	965	17
Arrive On Green	0.01	0.32	0.32	0.01	0.32	0.32	0.13	0.27	0.27	0.13	0.27	0.27
Sat Flow, veh/h	1810	3574	1615	1810	3574	2787	3442	3162	407	3476	3596	62
Grp Volume(v), veh/h	12	797	207	20	347	70	327	189	194	322	346	363
Grp Sat Flow(s),veh/h/ln	1810	1787	1615	1810	1787	1393	1721	1774	1795	1738	1787	1871
Q Serve(g_s), s	0.4	11.7	6.0	0.7	4.4	1.0	5.5	5.2	5.3	5.3	10.6	10.6
Cycle Q Clear(g_c), s	0.4	11.7	6.0	0.7	4.4	1.0	5.5	5.2	5.3	5.3	10.6	10.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.23	1.00		0.03
Lane Grp Cap(c), veh/h	13	1140	515	23	1160	904	460	480	486	457	480	502
V/C Ratio(X)	0.92	0.70	0.40	0.88	0.30	0.08	0.71	0.39	0.40	0.70	0.72	0.72
Avail Cap(c_a), veh/h	90	1666	753	90	1666	1299	745	738	747	752	744	778
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	17.9	16.0	29.6	15.2	14.1	24.9	17.9	17.9	25.0	19.9	20.0
Incr Delay (d2), s/veh	93.1	0.8	0.5	59.3	0.1	0.0	2.0	0.5	0.5	2.0	2.1	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	5.9	2.7	0.7	2.1	0.4	2.7	2.6	2.7	2.7	5.5	5.7
LnGrp Delay(d),s/veh	122.9	18.7	16.5	88.9	15.3	14.1	27.0	18.4	18.5	27.0	22.0	21.9
LnGrp LOS	F	B	B	F	B	B	C	B	B	C	C	C
Approach Vol, veh/h		1016			437			710			1031	
Approach Delay, s/veh		19.5			18.5			22.4			23.5	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.9	20.3	4.8	23.2	12.0	20.1	4.4	23.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	13.0	25.0	3.0	28.0	13.0	25.0	3.0	28.0
Max Q Clear Time (g_c+I1), s	7.3	7.3	2.7	13.7	7.5	12.6	2.4	6.4
Green Ext Time (p_c), s	0.6	2.1	0.0	5.4	0.6	3.5	0.0	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	21.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	109	35	182	65	25	79	358	118	47	851	40
Future Volume (veh/h)	25	109	35	182	65	25	79	358	118	47	851	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1831	1900	1900	1886	1900	1881	1872	1900	1900	1878	1900
Adj Flow Rate, veh/h	25	109	35	182	65	22	79	358	118	47	851	40
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	0	0	0	1	2	2	0	1	1
Cap, veh/h	33	145	47	245	88	295	102	1003	326	58	1232	58
Arrive On Green	0.13	0.13	0.13	0.18	0.18	0.18	0.06	0.38	0.38	0.03	0.36	0.36
Sat Flow, veh/h	259	1131	363	1340	479	1615	1792	2641	858	1810	3470	163
Grp Volume(v), veh/h	169	0	0	247	0	22	79	239	237	47	437	454
Grp Sat Flow(s),veh/h/ln	1754	0	0	1819	0	1615	1792	1778	1720	1810	1784	1849
Q Serve(g_s), s	5.4	0.0	0.0	7.4	0.0	0.7	2.5	5.6	5.7	1.5	12.1	12.1
Cycle Q Clear(g_c), s	5.4	0.0	0.0	7.4	0.0	0.7	2.5	5.6	5.7	1.5	12.1	12.1
Prop In Lane	0.15		0.21	0.74		1.00	1.00		0.50	1.00		0.09
Lane Grp Cap(c), veh/h	225	0	0	333	0	295	102	675	653	58	633	657
V/C Ratio(X)	0.75	0.00	0.00	0.74	0.00	0.07	0.77	0.35	0.36	0.81	0.69	0.69
Avail Cap(c_a), veh/h	516	0	0	787	0	699	310	1384	1339	219	1296	1344
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	0.0	0.0	22.3	0.0	19.6	26.9	12.8	12.9	27.8	15.9	15.9
Incr Delay (d2), s/veh	5.0	0.0	0.0	3.3	0.0	0.1	11.7	0.3	0.3	22.3	1.4	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	0.0	4.0	0.0	0.3	1.6	2.8	2.8	1.1	6.2	6.4
LnGrp Delay(d),s/veh	29.3	0.0	0.0	25.6	0.0	19.7	38.6	13.2	13.2	50.1	17.3	17.2
LnGrp LOS	C			C		B	D	B	B	D	B	B
Approach Vol, veh/h		169			269			555			938	
Approach Delay, s/veh		29.3			25.1			16.8			18.9	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.9	26.0		11.4	7.3	24.5		14.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	7.0	45.0		17.0	10.0	42.0		25.0
Max Q Clear Time (g_c+I1), s	3.5	7.7		7.4	4.5	14.1		9.4
Green Ext Time (p_c), s	0.0	3.2		0.6	0.1	6.4		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	20.1
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	42	34	0	64	57	67	644	0	85	1322	0
Future Vol, veh/h	0	42	34	0	64	57	67	644	0	85	1322	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	220	-	-	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	15	0	0	3	0	2	3	0	8	1	0
Mvmt Flow	0	42	34	0	64	57	67	644	0	85	1322	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2331	2270	1322	2308	2270	644	1322	0	0	644	0	0
Stage 1	1492	1492	-	778	778	-	-	-	-	-	-	-
Stage 2	839	778	-	1530	1492	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.65	6.2	7.1	6.53	6.2	4.12	-	-	4.18	-	-
Critical Hdwy Stg 1	6.1	5.65	-	6.1	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.65	-	6.1	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.135	3.3	3.5	4.027	3.3	2.218	-	-	2.272	-	-
Pot Cap-1 Maneuver	26	~ 37	193	27	~ 40	476	523	-	-	913	-	-
Stage 1	156	175	-	392	405	-	-	-	-	-	-	-
Stage 2	363	388	-	148	186	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	~ 29	193	-	~ 32	476	523	-	-	913	-	-
Mov Cap-2 Maneuver	-	~ 29	-	-	~ 32	-	-	-	-	-	-	-
Stage 1	136	159	-	342	353	-	-	-	-	-	-	-
Stage 2	228	338	-	81	169	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			1.2	0.6
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	523	-	-	-	-	913	-	-
HCM Lane V/C Ratio	0.128	-	-	-	-	0.093	-	-
HCM Control Delay (s)	12.9	-	-	-	-	9.3	-	-
HCM Lane LOS	B	-	-	-	-	A	-	-
HCM 95th %tile Q(veh)	0.4	-	-	-	-	0.3	-	-

Notes

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

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	1	71	0	12	0	403	6	2	929	0
Future Vol, veh/h	0	0	1	71	0	12	0	403	6	2	929	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	50	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	1	0	0	0	3	0	0	1	0
Mvmt Flow	0	0	1	71	0	12	0	403	6	2	929	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1135	1342	465	875	1339	205	929	0	0	409	0	0
Stage 1	933	933	-	406	406	-	-	-	-	-	-	-
Stage 2	202	409	-	469	933	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.52	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.52	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.52	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.51	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	160	154	550	245	154	808	744	-	-	1161	-	-
Stage 1	290	348	-	595	601	-	-	-	-	-	-	-
Stage 2	787	600	-	547	348	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	157	154	550	244	154	808	744	-	-	1161	-	-
Mov Cap-2 Maneuver	157	154	-	244	154	-	-	-	-	-	-	-
Stage 1	290	347	-	595	601	-	-	-	-	-	-	-
Stage 2	775	600	-	545	347	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.6	23.4	0	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	744	-	-	550	244	808	1161	-	-
HCM Lane V/C Ratio	-	-	-	0.002	0.291	0.015	0.002	-	-
HCM Control Delay (s)	0	-	-	11.6	25.7	9.5	8.1	-	-
HCM Lane LOS	A	-	-	B	D	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	1.2	0	0	-	-

Intersection	
Int Delay, s/veh	3.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	77	13	55	28	6	86
Future Vol, veh/h	77	13	55	28	6	86
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	4	4	0	1
Mvmt Flow	77	13	55	28	6	86

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	167	69	0	0	83	0
Stage 1	69	-	-	-	-	-
Stage 2	98	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	828	1000	-	-	1527	-
Stage 1	959	-	-	-	-	-
Stage 2	931	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	825	1000	-	-	1527	-
Mov Cap-2 Maneuver	825	-	-	-	-	-
Stage 1	955	-	-	-	-	-
Stage 2	931	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	0.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	846	1527	-
HCM Lane V/C Ratio	-	-	0.106	0.004	-
HCM Control Delay (s)	-	-	9.8	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0	-

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	62	214	137	17	24	143
Future Vol, veh/h	62	214	137	17	24	143
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	5	4	5	6	4	1
Mvmt Flow	62	214	137	17	24	143

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	154	0	-	0	484	146
Stage 1	-	-	-	-	146	-
Stage 2	-	-	-	-	338	-
Critical Hdwy	4.15	-	-	-	6.44	6.21
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	2.245	-	-	-	3.536	3.309
Pot Cap-1 Maneuver	1408	-	-	-	538	904
Stage 1	-	-	-	-	876	-
Stage 2	-	-	-	-	718	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1408	-	-	-	511	904
Mov Cap-2 Maneuver	-	-	-	-	511	-
Stage 1	-	-	-	-	832	-
Stage 2	-	-	-	-	718	-

Approach	EB	WB	SB
HCM Control Delay, s	1.7	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1408	-	-	-	814
HCM Lane V/C Ratio	0.044	-	-	-	0.205
HCM Control Delay (s)	7.7	0	-	-	10.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.8

HCM 2010 Signalized Intersection Summary
2842: San Felipe Road/San Felipe Rd & SR25

11/28/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	273	187	20	605	490	352	665	12	122	366	4
Future Volume (veh/h)	16	273	187	20	605	490	352	665	12	122	366	4
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1743	1759	1900	1863	1881	1827	1863	1900	1759	1828	1900
Adj Flow Rate, veh/h	16	273	65	20	605	171	352	665	12	122	366	4
Adj No. of Lanes	1	2	1	1	2	2	2	2	0	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	9	8	0	2	1	4	2	2	8	4	4
Cap, veh/h	18	937	423	22	1011	804	540	1046	19	260	754	8
Arrive On Green	0.01	0.28	0.28	0.01	0.29	0.29	0.16	0.29	0.29	0.08	0.21	0.21
Sat Flow, veh/h	1810	3312	1495	1810	3539	2814	3375	3558	64	3250	3519	38
Grp Volume(v), veh/h	16	273	65	20	605	171	352	331	346	122	180	190
Grp Sat Flow(s),veh/h/ln	1810	1656	1495	1810	1770	1407	1688	1770	1852	1625	1736	1821
Q Serve(g_s), s	0.4	3.1	1.6	0.5	7.1	2.2	4.7	7.9	7.9	1.7	4.4	4.4
Cycle Q Clear(g_c), s	0.4	3.1	1.6	0.5	7.1	2.2	4.7	7.9	7.9	1.7	4.4	4.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.03	1.00		0.02
Lane Grp Cap(c), veh/h	18	937	423	22	1011	804	540	520	545	260	372	390
V/C Ratio(X)	0.91	0.29	0.15	0.89	0.60	0.21	0.65	0.64	0.64	0.47	0.49	0.49
Avail Cap(c_a), veh/h	112	1642	742	262	2048	1628	1325	1244	1301	604	861	903
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.9	13.6	13.0	23.9	14.9	13.2	19.1	14.8	14.8	21.3	16.7	16.7
Incr Delay (d2), s/veh	77.2	0.2	0.2	63.0	0.6	0.1	1.3	1.3	1.2	1.3	1.0	0.9
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	0.6	1.4	0.7	0.7	3.5	0.9	2.3	4.0	4.1	0.8	2.2	2.3
LnGrp Delay(d),s/veh	101.2	13.7	13.2	86.8	15.5	13.3	20.4	16.1	16.1	22.6	17.7	17.6
LnGrp LOS	F	B	B	F	B	B	C	B	B	C	B	B
Approach Vol, veh/h		354			796			1029			492	
Approach Delay, s/veh		17.6			16.8			17.6			18.9	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.9	18.2	4.6	17.7	11.7	14.4	4.5	17.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	9.0	34.0	7.0	24.0	19.0	24.0	3.0	28.0
Max Q Clear Time (g_c+I1), s	3.7	9.9	2.5	5.1	6.7	6.4	2.4	9.1
Green Ext Time (p_c), s	0.1	4.4	0.0	1.8	1.0	2.0	0.0	4.7

Intersection Summary	
HCM 2010 Ctrl Delay	17.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	65	17	110	97	53	72	706	223	25	303	15
Future Volume (veh/h)	32	65	17	110	97	53	72	706	223	25	303	15
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1710	1900	1900	1822	1827	1845	1877	1900	1267	1792	1900
Adj Flow Rate, veh/h	32	65	17	110	97	32	72	706	223	25	303	15
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	10	10	10	8	8	4	3	1	1	50	6	6
Cap, veh/h	42	84	22	157	138	258	90	1067	337	20	1206	59
Arrive On Green	0.09	0.09	0.09	0.17	0.17	0.17	0.05	0.40	0.40	0.02	0.37	0.37
Sat Flow, veh/h	461	937	245	943	832	1553	1757	2668	843	1206	3302	163
Grp Volume(v), veh/h	114	0	0	207	0	32	72	472	457	25	156	162
Grp Sat Flow(s),veh/h/ln	1644	0	0	1775	0	1553	1757	1783	1728	1206	1702	1763
Q Serve(g_s), s	3.3	0.0	0.0	5.4	0.0	0.9	2.0	10.6	10.6	0.8	3.1	3.1
Cycle Q Clear(g_c), s	3.3	0.0	0.0	5.4	0.0	0.9	2.0	10.6	10.6	0.8	3.1	3.1
Prop In Lane	0.28		0.15	0.53		1.00	1.00		0.49	1.00		0.09
Lane Grp Cap(c), veh/h	148	0	0	295	0	258	90	713	691	20	621	644
V/C Ratio(X)	0.77	0.00	0.00	0.70	0.00	0.12	0.80	0.66	0.66	1.25	0.25	0.25
Avail Cap(c_a), veh/h	437	0	0	799	0	699	324	1496	1450	197	1393	1443
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.7	0.0	0.0	19.2	0.0	17.4	22.9	12.0	12.0	24.0	10.8	10.8
Incr Delay (d2), s/veh	8.1	0.0	0.0	3.1	0.0	0.2	14.5	1.1	1.1	173.7	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.9	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	0.0	2.9	0.0	0.4	1.3	5.3	5.2	1.2	1.5	1.6
LnGrp Delay(d),s/veh	29.9	0.0	0.0	22.3	0.0	17.6	37.5	13.0	13.1	213.6	11.0	11.1
LnGrp LOS	C			C		B	D	B	B	F	B	B
Approach Vol, veh/h		114			239			1001			343	
Approach Delay, s/veh		29.9			21.7			14.8			25.8	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.8	23.5		8.4	6.5	21.8		12.1
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	8.0	41.0		13.0	9.0	40.0		22.0
Max Q Clear Time (g_c+I1), s	2.8	12.6		5.3	4.0	5.1		7.4
Green Ext Time (p_c), s	0.0	7.0		0.3	0.1	2.0		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	19.0
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	20.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	26	76	0	50	110	49	1148	0	46	452	4
Future Vol, veh/h	0	26	76	0	50	110	49	1148	0	46	452	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	220	-	-	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	6	13	0	10	14	8	2	0	38	7	0
Mvmt Flow	0	26	76	0	50	110	49	1148	0	46	452	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1872	1792	454	1843	1794	1148	456	0	0	1148	0	0
Stage 1	546	546	-	1246	1246	-	-	-	-	-	-	-
Stage 2	1326	1246	-	597	548	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.56	6.33	7.1	6.6	6.34	4.18	-	-	4.48	-	-
Critical Hdwy Stg 1	6.1	5.56	-	6.1	5.6	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.56	-	6.1	5.6	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.054	3.417	3.5	4.09	3.426	2.272	-	-	2.542	-	-
Pot Cap-1 Maneuver	56	79	584	58	77	229	1074	-	-	495	-	-
Stage 1	526	512	-	215	237	-	-	-	-	-	-	-
Stage 2	194	241	-	493	504	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	10	68	584	32	67	229	1074	-	-	495	-	-
Mov Cap-2 Maneuver	10	68	-	32	67	-	-	-	-	-	-	-
Stage 1	502	464	-	205	226	-	-	-	-	-	-	-
Stage 2	75	230	-	367	457	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	40.7	218.9	0.3	1.2
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1074	-	-	199	130	495	-	-
HCM Lane V/C Ratio	0.046	-	-	0.513	1.231	0.093	-	-
HCM Control Delay (s)	8.5	-	-	40.7	218.9	13	-	-
HCM Lane LOS	A	-	-	E	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	2.6	9.8	0.3	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	3	0	15	0	7	2	749	29	22	330	0
Future Vol, veh/h	0	3	0	15	0	7	2	749	29	22	330	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	50	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	27	0	0	0	2	0	0	6	0
Mvmt Flow	0	3	0	15	0	7	2	749	29	22	330	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	753	1156	165	979	1142	389	330	0	0	778	0	0
Stage 1	374	374	-	768	768	-	-	-	-	-	-	-
Stage 2	379	782	-	211	374	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	8.04	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	7.04	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	7.04	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.77	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	302	198	857	171	202	615	1241	-	-	848	-	-
Stage 1	624	621	-	310	414	-	-	-	-	-	-	-
Stage 2	620	408	-	704	621	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	292	192	857	165	196	615	1241	-	-	848	-	-
Mov Cap-2 Maneuver	292	192	-	165	196	-	-	-	-	-	-	-
Stage 1	623	605	-	309	413	-	-	-	-	-	-	-
Stage 2	612	407	-	682	605	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	24	23.2	0	0.6
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1241	-	-	192	165	615	848	-	-
HCM Lane V/C Ratio	0.002	-	-	0.016	0.091	0.011	0.026	-	-
HCM Control Delay (s)	7.9	-	-	24	29	10.9	9.4	-	-
HCM Lane LOS	A	-	-	C	D	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.3	0	0.1	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	31	8	88	157	18	30
Future Vol, veh/h	31	8	88	157	18	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	3	0	0	7
Mvmt Flow	31	8	88	157	18	30

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	233	167	0	0	245	0
Stage 1	167	-	-	-	-	-
Stage 2	66	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	760	882	-	-	1333	-
Stage 1	867	-	-	-	-	-
Stage 2	962	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	749	882	-	-	1333	-
Mov Cap-2 Maneuver	749	-	-	-	-	-
Stage 1	855	-	-	-	-	-
Stage 2	962	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	2.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	773	1333	-
HCM Lane V/C Ratio	-	-	0.05	0.014	-
HCM Control Delay (s)	-	-	9.9	7.7	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	212	130	206	27	6	57
Future Vol, veh/h	212	130	206	27	6	57
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	14	6	0	0	2
Mvmt Flow	212	130	206	27	6	57

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	233	0	-	0	774	220
Stage 1	-	-	-	-	220	-
Stage 2	-	-	-	-	554	-
Critical Hdwy	4.13	-	-	-	6.4	6.22
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.227	-	-	-	3.5	3.318
Pot Cap-1 Maneuver	1329	-	-	-	370	820
Stage 1	-	-	-	-	821	-
Stage 2	-	-	-	-	580	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1329	-	-	-	306	820
Mov Cap-2 Maneuver	-	-	-	-	306	-
Stage 1	-	-	-	-	680	-
Stage 2	-	-	-	-	580	-

Approach	EB	WB	SB
HCM Control Delay, s	5.1	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1329	-	-	-	707
HCM Lane V/C Ratio	0.16	-	-	-	0.089
HCM Control Delay (s)	8.2	0	-	-	10.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.6	-	-	-	0.3

HCM 2010 Signalized Intersection Summary
2842: San Felipe Road/San Felipe Rd & SR25

11/28/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	797	495	20	347	169	327	345	44	336	711	12
Future Volume (veh/h)	12	797	495	20	347	169	327	345	44	336	711	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1881	1863	1863	1867	1900	1881	1881	1900
Adj Flow Rate, veh/h	12	797	207	20	347	76	327	345	44	336	711	12
Adj No. of Lanes	1	2	1	1	2	2	2	2	0	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	1	0	0	1	2	2	2	2	1	1	1
Cap, veh/h	13	1137	514	23	1156	901	459	852	108	474	977	16
Arrive On Green	0.01	0.32	0.32	0.01	0.32	0.32	0.13	0.27	0.27	0.14	0.27	0.27
Sat Flow, veh/h	1810	3574	1615	1810	3574	2787	3442	3169	401	3476	3598	61
Grp Volume(v), veh/h	12	797	207	20	347	76	327	192	197	336	353	370
Grp Sat Flow(s),veh/h/ln	1810	1787	1615	1810	1787	1393	1721	1774	1796	1738	1787	1871
Q Serve(g_s), s	0.4	11.8	6.1	0.7	4.4	1.1	5.5	5.4	5.5	5.6	10.9	10.9
Cycle Q Clear(g_c), s	0.4	11.8	6.1	0.7	4.4	1.1	5.5	5.4	5.5	5.6	10.9	10.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.22	1.00		0.03
Lane Grp Cap(c), veh/h	13	1137	514	23	1156	901	459	477	483	474	486	508
V/C Ratio(X)	0.91	0.70	0.40	0.88	0.30	0.08	0.71	0.40	0.41	0.71	0.73	0.73
Avail Cap(c_a), veh/h	90	1653	747	90	1653	1289	739	703	712	804	738	773
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.0	18.1	16.1	29.8	15.3	14.2	25.1	18.1	18.2	25.0	20.0	20.0
Incr Delay (d2), s/veh	93.0	0.8	0.5	59.1	0.1	0.0	2.1	0.5	0.6	2.0	2.1	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	5.9	2.7	0.7	2.2	0.4	2.7	2.7	2.8	2.8	5.6	5.8
LnGrp Delay(d),s/veh	123.0	18.9	16.7	89.0	15.5	14.3	27.2	18.7	18.7	27.0	22.1	22.0
LnGrp LOS	F	B	B	F	B	B	C	B	B	C	C	C
Approach Vol, veh/h		1016			443			716			1059	
Approach Delay, s/veh		19.7			18.6			22.6			23.6	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.3	20.3	4.8	23.3	12.1	20.4	4.4	23.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	14.0	24.0	3.0	28.0	13.0	25.0	3.0	28.0
Max Q Clear Time (g_c+I1), s	7.6	7.5	2.7	13.8	7.5	12.9	2.4	6.4
Green Ext Time (p_c), s	0.7	2.1	0.0	5.4	0.6	3.6	0.0	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	21.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	111	35	210	69	25	79	358	129	47	851	40
Future Volume (veh/h)	25	111	35	210	69	25	79	358	129	47	851	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1831	1900	1900	1886	1900	1881	1872	1900	1900	1878	1900
Adj Flow Rate, veh/h	25	111	35	210	69	22	79	358	129	47	851	40
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	0	0	0	1	2	2	0	1	1
Cap, veh/h	33	147	46	276	91	326	102	960	341	58	1208	57
Arrive On Green	0.13	0.13	0.13	0.20	0.20	0.20	0.06	0.37	0.37	0.03	0.35	0.35
Sat Flow, veh/h	257	1139	359	1368	449	1615	1792	2576	914	1810	3470	163
Grp Volume(v), veh/h	171	0	0	279	0	22	79	246	241	47	437	454
Grp Sat Flow(s),veh/h/ln	1755	0	0	1817	0	1615	1792	1779	1711	1810	1784	1849
Q Serve(g_s), s	5.7	0.0	0.0	8.8	0.0	0.7	2.6	6.1	6.2	1.6	12.8	12.8
Cycle Q Clear(g_c), s	5.7	0.0	0.0	8.8	0.0	0.7	2.6	6.1	6.2	1.6	12.8	12.8
Prop In Lane	0.15		0.20	0.75		1.00	1.00		0.53	1.00		0.09
Lane Grp Cap(c), veh/h	226	0	0	367	0	326	102	663	638	58	621	644
V/C Ratio(X)	0.76	0.00	0.00	0.76	0.00	0.07	0.77	0.37	0.38	0.80	0.70	0.70
Avail Cap(c_a), veh/h	493	0	0	811	0	721	296	1264	1216	209	1180	1223
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.4	0.0	0.0	22.8	0.0	19.5	28.1	13.8	13.9	29.1	17.0	17.0
Incr Delay (d2), s/veh	5.1	0.0	0.0	3.3	0.0	0.1	11.7	0.3	0.4	21.9	1.5	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	3.1	0.0	0.0	4.7	0.0	0.3	1.6	3.0	3.0	1.1	6.6	6.8
LnGrp Delay(d),s/veh	30.6	0.0	0.0	26.1	0.0	19.6	39.8	14.2	14.2	50.9	18.5	18.5
LnGrp LOS	C			C		B	D	B	B	D	B	B
Approach Vol, veh/h		171			301			566			938	
Approach Delay, s/veh		30.6			25.6			17.8			20.1	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.0	26.5		11.8	7.4	25.1		16.2
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	7.0	43.0		17.0	10.0	40.0		27.0
Max Q Clear Time (g_c+I1), s	3.6	8.2		7.7	4.6	14.8		10.8
Green Ext Time (p_c), s	0.0	3.3		0.6	0.1	6.2		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	21.2
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	43	34	0	66	59	67	644	0	86	1322	0
Future Vol, veh/h	0	43	34	0	66	59	67	644	0	86	1322	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	220	-	-	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	15	0	0	3	0	2	3	0	8	1	0
Mvmt Flow	0	43	34	0	66	59	67	644	0	86	1322	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2335	2272	1322	2311	2272	644	1322	0	0	644	0	0
Stage 1	1494	1494	-	778	778	-	-	-	-	-	-	-
Stage 2	841	778	-	1533	1494	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.65	6.2	7.1	6.53	6.2	4.12	-	-	4.18	-	-
Critical Hdwy Stg 1	6.1	5.65	-	6.1	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.65	-	6.1	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.135	3.3	3.5	4.027	3.3	2.218	-	-	2.272	-	-
Pot Cap-1 Maneuver	26	~ 37	193	27	~ 40	476	523	-	-	913	-	-
Stage 1	155	175	-	392	405	-	-	-	-	-	-	-
Stage 2	362	388	-	147	185	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	~ 29	193	-	~ 32	476	523	-	-	913	-	-
Mov Cap-2 Maneuver	-	~ 29	-	-	~ 32	-	-	-	-	-	-	-
Stage 1	135	159	-	342	353	-	-	-	-	-	-	-
Stage 2	225	338	-	80	168	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			1.2	0.6
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	523	-	-	-	-	913	-	-
HCM Lane V/C Ratio	0.128	-	-	-	-	0.094	-	-
HCM Control Delay (s)	12.9	-	-	-	-	9.4	-	-
HCM Lane LOS	B	-	-	-	-	A	-	-
HCM 95th %tile Q(veh)	0.4	-	-	-	-	0.3	-	-

Notes

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

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	1	71	0	18	0	403	6	4	929	0
Future Vol, veh/h	0	0	1	71	0	18	0	403	6	4	929	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	50	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	1	0	0	0	3	0	0	1	0
Mvmt Flow	0	0	1	71	0	18	0	403	6	4	929	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1139	1346	465	879	1343	205	929	0	0	409	0	0
Stage 1	937	937	-	406	406	-	-	-	-	-	-	-
Stage 2	202	409	-	473	937	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.52	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.52	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.52	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.51	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	159	153	550	243	153	808	744	-	-	1161	-	-
Stage 1	289	346	-	595	601	-	-	-	-	-	-	-
Stage 2	787	600	-	544	346	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	155	153	550	242	153	808	744	-	-	1161	-	-
Mov Cap-2 Maneuver	155	153	-	242	153	-	-	-	-	-	-	-
Stage 1	289	345	-	595	601	-	-	-	-	-	-	-
Stage 2	769	600	-	541	345	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.6	22.6	0	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	744	-	-	550	242	808	1161	-	-
HCM Lane V/C Ratio	-	-	-	0.002	0.293	0.022	0.003	-	-
HCM Control Delay (s)	0	-	-	11.6	25.9	9.6	8.1	-	-
HCM Lane LOS	A	-	-	B	D	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	1.2	0.1	0	-	-

Intersection	
Int Delay, s/veh	4.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	111	19	55	42	8	86
Future Vol, veh/h	111	19	55	42	8	86
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	4	4	0	1
Mvmt Flow	111	19	55	42	8	86

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	178	76	0	0	97	0
Stage 1	76	-	-	-	-	-
Stage 2	102	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	816	991	-	-	1509	-
Stage 1	952	-	-	-	-	-
Stage 2	927	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	811	991	-	-	1509	-
Mov Cap-2 Maneuver	811	-	-	-	-	-
Stage 1	946	-	-	-	-	-
Stage 2	927	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	0.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	833	1509	-
HCM Lane V/C Ratio	-	-	0.156	0.005	-
HCM Control Delay (s)	-	-	10.1	7.4	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.6	0	-

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	75	214	137	18	26	175
Future Vol, veh/h	75	214	137	18	26	175
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	5	4	5	6	4	1
Mvmt Flow	75	214	137	18	26	175

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	155	0	-	0	510	146
Stage 1	-	-	-	-	146	-
Stage 2	-	-	-	-	364	-
Critical Hdwy	4.15	-	-	-	6.44	6.21
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	2.245	-	-	-	3.536	3.309
Pot Cap-1 Maneuver	1407	-	-	-	520	904
Stage 1	-	-	-	-	876	-
Stage 2	-	-	-	-	699	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1407	-	-	-	489	904
Mov Cap-2 Maneuver	-	-	-	-	489	-
Stage 1	-	-	-	-	823	-
Stage 2	-	-	-	-	699	-

Approach	EB	WB	SB
HCM Control Delay, s	2	0	10.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1407	-	-	-	815
HCM Lane V/C Ratio	0.053	-	-	-	0.247
HCM Control Delay (s)	7.7	0	-	-	10.9
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	1

HCM 2010 Signalized Intersection Summary
2842: San Felipe Road/San Felipe Rd & SR25

11/28/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	1401	494	27	1555	503	854	721	18	137	397	4
Future Volume (veh/h)	16	1401	494	27	1555	503	854	721	18	137	397	4
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1743	1759	1900	1863	1881	1827	1864	1900	1759	1828	1900
Adj Flow Rate, veh/h	16	1401	372	27	1555	184	854	721	18	137	397	4
Adj No. of Lanes	1	2	1	1	2	2	2	2	0	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	9	8	0	2	1	4	2	2	8	4	4
Cap, veh/h	19	1441	651	33	1568	1247	829	1075	27	207	432	4
Arrive On Green	0.01	0.44	0.44	0.02	0.44	0.44	0.25	0.30	0.30	0.06	0.12	0.12
Sat Flow, veh/h	1810	3312	1495	1810	3539	2814	3375	3530	88	3250	3522	35
Grp Volume(v), veh/h	16	1401	372	27	1555	184	854	361	378	137	196	205
Grp Sat Flow(s),veh/h/ln	1810	1656	1495	1810	1770	1407	1688	1770	1848	1625	1736	1821
Q Serve(g_s), s	0.8	37.1	16.8	1.3	39.1	3.5	22.0	16.0	16.0	3.7	10.0	10.0
Cycle Q Clear(g_c), s	0.8	37.1	16.8	1.3	39.1	3.5	22.0	16.0	16.0	3.7	10.0	10.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.05	1.00		0.02
Lane Grp Cap(c), veh/h	19	1441	651	33	1568	1247	829	539	563	207	213	224
V/C Ratio(X)	0.86	0.97	0.57	0.82	0.99	0.15	1.03	0.67	0.67	0.66	0.92	0.92
Avail Cap(c_a), veh/h	40	1441	651	40	1568	1247	829	539	563	218	213	224
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.3	24.8	19.0	43.9	24.8	14.9	33.8	27.2	27.2	41.0	38.9	38.9
Incr Delay (d2), s/veh	64.8	17.4	1.2	65.9	20.7	0.1	39.4	3.2	3.1	6.8	39.7	38.7
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	20.4	7.1	1.3	23.5	1.4	14.7	8.3	8.7	1.9	7.1	7.4
LnGrp Delay(d),s/veh	109.1	42.2	20.2	109.8	45.5	14.9	73.2	30.5	30.3	47.9	78.5	77.6
LnGrp LOS	F	D	C	F	D	B	F	C	C	D	E	E
Approach Vol, veh/h		1789			1766			1593			538	
Approach Delay, s/veh		38.3			43.3			53.4			70.4	
Approach LOS		D			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	31.3	5.6	43.0	26.0	15.0	4.9	43.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	27.0	2.0	39.0	22.0	11.0	2.0	39.0
Max Q Clear Time (g_c+I1), s	5.7	18.0	3.3	39.1	24.0	12.0	2.8	41.1
Green Ext Time (p_c), s	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	47.1
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	59	17	102	95	53	73	776	189	25	338	15
Future Volume (veh/h)	32	59	17	102	95	53	73	776	189	25	338	15
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1709	1900	1900	1820	1827	1845	1878	1900	1267	1792	1900
Adj Flow Rate, veh/h	32	59	17	102	95	32	73	776	189	25	338	15
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	10	10	10	8	8	4	3	1	1	50	6	6
Cap, veh/h	41	76	22	146	136	246	92	1173	286	20	1250	55
Arrive On Green	0.09	0.09	0.09	0.16	0.16	0.16	0.05	0.41	0.41	0.02	0.38	0.38
Sat Flow, veh/h	486	896	258	919	856	1553	1757	2846	693	1206	3321	147
Grp Volume(v), veh/h	108	0	0	197	0	32	73	486	479	25	173	180
Grp Sat Flow(s),veh/h/ln	1640	0	0	1774	0	1553	1757	1784	1755	1206	1702	1766
Q Serve(g_s), s	3.2	0.0	0.0	5.1	0.0	0.9	2.0	10.8	10.8	0.8	3.4	3.5
Cycle Q Clear(g_c), s	3.2	0.0	0.0	5.1	0.0	0.9	2.0	10.8	10.8	0.8	3.4	3.5
Prop In Lane	0.30		0.16	0.52		1.00	1.00		0.39	1.00		0.08
Lane Grp Cap(c), veh/h	140	0	0	281	0	246	92	735	723	20	641	665
V/C Ratio(X)	0.77	0.00	0.00	0.70	0.00	0.13	0.80	0.66	0.66	1.25	0.27	0.27
Avail Cap(c_a), veh/h	436	0	0	763	0	668	324	1533	1509	198	1428	1482
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.9	0.0	0.0	19.5	0.0	17.7	22.9	11.6	11.6	24.0	10.6	10.6
Incr Delay (d2), s/veh	8.7	0.0	0.0	3.2	0.0	0.2	14.3	1.0	1.0	173.7	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.9	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	0.0	2.8	0.0	0.4	1.3	5.5	5.4	1.2	1.6	1.7
LnGrp Delay(d),s/veh	30.6	0.0	0.0	22.6	0.0	17.9	37.2	12.6	12.7	213.6	10.8	10.8
LnGrp LOS	C			C		B	D	B	B	F	B	B
Approach Vol, veh/h		108			229			1038			378	
Approach Delay, s/veh		30.6			22.0			14.4			24.2	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.8	24.1		8.2	6.6	22.4		11.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	8.0	42.0		13.0	9.0	41.0		21.0
Max Q Clear Time (g_c+I1), s	2.8	12.8		5.2	4.0	5.5		7.1
Green Ext Time (p_c), s	0.0	7.4		0.3	0.1	2.2		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	18.5
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	24	77	0	50	109	51	2598	0	43	1886	4
Future Vol, veh/h	0	24	77	0	50	109	51	2598	0	43	1886	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	220	-	-	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	6	13	0	10	14	8	2	0	38	7	0
Mvmt Flow	0	24	77	0	50	109	51	2598	0	43	1886	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	4754	4674	1888	4725	4676	2598	1890	0	0	2598	0	0
Stage 1	1974	1974	-	2700	2700	-	-	-	-	-	-	-
Stage 2	2780	2700	-	2025	1976	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.56	6.33	7.1	6.6	6.34	4.18	-	-	4.48	-	-
Critical Hdwy Stg 1	6.1	5.56	-	6.1	5.6	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.56	-	6.1	5.6	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.054	3.417	3.5	4.09	3.426	2.272	-	-	2.542	-	-
Pot Cap-1 Maneuver	0	~ 1	82	0	~ 1	~ 29	302	-	-	122	-	-
Stage 1	82	105	-	30	~ 42	-	-	-	-	-	-	-
Stage 2	27	44	-	76	102	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	~ 1	82	-	~ 1	~ 29	302	-	-	122	-	-
Mov Cap-2 Maneuver	-	~ 1	-	-	~ 1	-	-	-	-	-	-	-
Stage 1	68	68	-	25	~ 35	-	-	-	-	-	-	-
Stage 2	27	37	-	2	66	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			0.4	1.1
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	302	-	-	-	-	122	-	-
HCM Lane V/C Ratio	0.169	-	-	-	-	0.352	-	-
HCM Control Delay (s)	19.3	-	-	-	-	49.8	-	-
HCM Lane LOS	C	-	-	-	-	E	-	-
HCM 95th %tile Q(veh)	0.6	-	-	-	-	1.4	-	-

Notes

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

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	3	0	15	0	5	2	819	29	15	365	0
Future Vol, veh/h	0	3	0	15	0	5	2	819	29	15	365	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	50	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	27	0	0	0	2	0	0	6	0
Mvmt Flow	0	3	0	15	0	5	2	819	29	15	365	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	809	1247	183	1052	1233	424	365	0	0	848	0	0
Stage 1	395	395	-	838	838	-	-	-	-	-	-	-
Stage 2	414	852	-	214	395	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	8.04	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	7.04	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	7.04	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.77	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	275	175	834	150	178	584	1205	-	-	798	-	-
Stage 1	607	608	-	279	384	-	-	-	-	-	-	-
Stage 2	592	379	-	701	608	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	268	171	834	146	174	584	1205	-	-	798	-	-
Mov Cap-2 Maneuver	268	171	-	146	174	-	-	-	-	-	-	-
Stage 1	606	596	-	278	383	-	-	-	-	-	-	-
Stage 2	586	378	-	684	596	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	26.4	27.2	0	0.4
HCM LOS	D	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1205	-	-	171	146	584	798	-	-
HCM Lane V/C Ratio	0.002	-	-	0.018	0.103	0.009	0.019	-	-
HCM Control Delay (s)	8	-	-	26.4	32.5	11.2	9.6	-	-
HCM Lane LOS	A	-	-	D	D	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0	0.1	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	6	88	114	11	30
Future Vol, veh/h	19	6	88	114	11	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	3	0	0	7
Mvmt Flow	19	6	88	114	11	30

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	197	145	0	0	202	0
Stage 1	145	-	-	-	-	-
Stage 2	52	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	796	908	-	-	1382	-
Stage 1	887	-	-	-	-	-
Stage 2	976	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	790	908	-	-	1382	-
Mov Cap-2 Maneuver	790	-	-	-	-	-
Stage 1	880	-	-	-	-	-
Stage 2	976	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	815	1382	-
HCM Lane V/C Ratio	-	-	0.031	0.008	-
HCM Control Delay (s)	-	-	9.6	7.6	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	171	131	208	24	5	46
Future Vol, veh/h	171	131	208	24	5	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	14	6	0	0	2
Mvmt Flow	171	131	208	24	5	46

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	232	0	-	0	693	220
Stage 1	-	-	-	-	220	-
Stage 2	-	-	-	-	473	-
Critical Hdwy	4.13	-	-	-	6.4	6.22
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.227	-	-	-	3.5	3.318
Pot Cap-1 Maneuver	1330	-	-	-	412	820
Stage 1	-	-	-	-	821	-
Stage 2	-	-	-	-	631	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1330	-	-	-	355	820
Mov Cap-2 Maneuver	-	-	-	-	355	-
Stage 1	-	-	-	-	707	-
Stage 2	-	-	-	-	631	-

Approach	EB	WB	SB
HCM Control Delay, s	4.6	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1330	-	-	-	727
HCM Lane V/C Ratio	0.129	-	-	-	0.07
HCM Control Delay (s)	8.1	0	-	-	10.3
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.4	-	-	-	0.2

HCM 2010 Signalized Intersection Summary
2842: San Felipe Road/San Felipe Rd & SR25

11/28/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	3351	1568	33	3056	233	1273	438	57	406	825	12
Future Volume (veh/h)	12	3351	1568	33	3056	233	1273	438	57	406	825	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1881	1863	1863	1867	1900	1881	1881	1900
Adj Flow Rate, veh/h	12	3351	1280	33	3056	140	1273	438	57	406	825	12
Adj No. of Lanes	1	2	1	1	2	2	2	2	0	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	1	0	0	1	2	2	2	2	1	1	1
Cap, veh/h	13	1642	742	41	1696	1322	648	605	78	480	510	7
Arrive On Green	0.01	0.46	0.46	0.02	0.47	0.47	0.19	0.19	0.19	0.14	0.14	0.14
Sat Flow, veh/h	1810	3574	1615	1810	3574	2787	3442	3159	409	3476	3607	52
Grp Volume(v), veh/h	12	3351	1280	33	3056	140	1273	245	250	406	409	428
Grp Sat Flow(s),veh/h/ln	1810	1787	1615	1810	1787	1393	1721	1774	1795	1738	1787	1872
Q Serve(g_s), s	0.6	39.0	39.0	1.5	40.3	2.4	16.0	11.0	11.1	9.7	12.0	12.0
Cycle Q Clear(g_c), s	0.6	39.0	39.0	1.5	40.3	2.4	16.0	11.0	11.1	9.7	12.0	12.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.23	1.00		0.03
Lane Grp Cap(c), veh/h	13	1642	742	41	1696	1322	648	340	344	480	253	265
V/C Ratio(X)	0.89	2.04	1.73	0.81	1.80	0.11	1.96	0.72	0.73	0.85	1.62	1.62
Avail Cap(c_a), veh/h	43	1642	742	43	1696	1322	648	340	344	491	253	265
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.1	23.0	23.0	41.3	22.3	12.3	34.5	32.2	32.2	35.7	36.5	36.5
Incr Delay (d2), s/veh	85.9	470.7	332.2	67.4	363.4	0.0	439.0	7.3	7.6	12.6	295.8	295.1
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	0.6	126.5	85.7	1.5	105.4	0.9	47.1	6.1	6.2	5.5	26.6	27.9
LnGrp Delay(d),s/veh	128.1	493.7	355.2	108.8	385.7	12.4	473.4	39.5	39.8	48.3	332.3	331.6
LnGrp LOS	F	F	F	F	F	B	F	D	D	D	F	F
Approach Vol, veh/h		4643			3229			1768			1243	
Approach Delay, s/veh		454.6			366.7			352.0			239.3	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.7	20.3	5.9	43.0	20.0	16.0	4.6	44.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	12.0	16.0	2.0	39.0	16.0	12.0	2.0	39.0
Max Q Clear Time (g_c+I1), s	11.7	13.1	3.5	41.0	18.0	14.0	2.6	42.3
Green Ext Time (p_c), s	0.1	0.8	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	387.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	109	36	187	65	25	79	430	124	47	950	40
Future Volume (veh/h)	25	109	36	187	65	25	79	430	124	47	950	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1831	1900	1900	1886	1900	1881	1871	1900	1900	1878	1900
Adj Flow Rate, veh/h	25	109	36	187	65	22	79	430	124	47	950	40
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	0	0	0	1	2	2	0	1	1
Cap, veh/h	33	143	47	246	86	295	102	1101	315	59	1321	56
Arrive On Green	0.13	0.13	0.13	0.18	0.18	0.18	0.06	0.40	0.40	0.03	0.38	0.38
Sat Flow, veh/h	258	1124	371	1349	469	1615	1792	2730	780	1810	3490	147
Grp Volume(v), veh/h	170	0	0	252	0	22	79	279	275	47	486	504
Grp Sat Flow(s),veh/h/ln	1753	0	0	1819	0	1615	1792	1777	1733	1810	1784	1852
Q Serve(g_s), s	5.9	0.0	0.0	8.3	0.0	0.7	2.7	7.0	7.1	1.6	14.6	14.6
Cycle Q Clear(g_c), s	5.9	0.0	0.0	8.3	0.0	0.7	2.7	7.0	7.1	1.6	14.6	14.6
Prop In Lane	0.15		0.21	0.74		1.00	1.00		0.45	1.00		0.08
Lane Grp Cap(c), veh/h	223	0	0	332	0	295	102	717	699	59	675	701
V/C Ratio(X)	0.76	0.00	0.00	0.76	0.00	0.07	0.77	0.39	0.39	0.80	0.72	0.72
Avail Cap(c_a), veh/h	474	0	0	724	0	643	285	1273	1241	202	1193	1238
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.5	0.0	0.0	24.4	0.0	21.3	29.2	13.3	13.3	30.2	16.7	16.7
Incr Delay (d2), s/veh	5.3	0.0	0.0	3.6	0.0	0.1	11.6	0.3	0.4	21.5	1.5	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	3.2	0.0	0.0	4.5	0.0	0.3	1.7	3.5	3.4	1.1	7.4	7.7
LnGrp Delay(d),s/veh	31.8	0.0	0.0	28.0	0.0	21.4	40.8	13.6	13.7	51.7	18.1	18.1
LnGrp LOS	C			C		C	D	B	B	D	B	B
Approach Vol, veh/h		170			274			633			1037	
Approach Delay, s/veh		31.8			27.4			17.0			19.6	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.0	29.3		12.0	7.6	27.8		15.5
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	7.0	45.0		17.0	10.0	42.0		25.0
Max Q Clear Time (g_c+I1), s	3.6	9.1		7.9	4.7	16.6		10.3
Green Ext Time (p_c), s	0.0	3.8		0.6	0.1	7.2		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	20.8
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	21.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	43	36	0	65	57	68	4295	0	85	4938	0
Future Vol, veh/h	0	43	36	0	65	57	68	4295	0	85	4938	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	220	-	-	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	15	0	0	3	0	2	3	0	8	1	0
Mvmt Flow	0	43	36	0	65	57	68	4295	0	85	4938	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	9600	9539	4938	9579	9539	4295	4938	0	0	4295	0	0
Stage 1	5108	5108	-	4431	4431	-	-	-	-	-	-	-
Stage 2	4492	4431	-	5148	5108	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.65	6.2	7.1	6.53	6.2	4.12	-	-	4.18	-	-
Critical Hdwy Stg 1	6.1	5.65	-	6.1	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.65	-	6.1	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.135	3.3	3.5	4.027	3.3	2.218	-	-	2.272	-	-
Pot Cap-1 Maneuver	0	0	~ 1	0	0	~ 3	~ 18	-	-	~ 31	-	-
Stage 1	1	~ 2	-	2	~ 5	-	-	-	-	-	-	-
Stage 2	2	~ 4	-	1	~ 2	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	0	~ 1	-	0	~ 3	~ 18	-	-	~ 31	-	-
Mov Cap-2 Maneuver	-	0	-	-	0	-	-	-	-	-	-	-
Stage 1	1	0	-	2	0	-	-	-	-	-	-	-
Stage 2	-	0	-	-	0	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			26.3	17.9
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	~ 18	-	-	-	-	~ 31	-	-
HCM Lane V/C Ratio	3.778	-	-	-	-	2.742	-	-
HCM Control Delay (s)	$ 1684.8	-	-	-	-	$ 1058	-	-
HCM Lane LOS	F	-	-	-	-	F	-	-
HCM 95th %tile Q(veh)	9.1	-	-	-	-	10	-	-

Notes

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

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	1	71	0	12	0	475	6	2	1028	0
Future Vol, veh/h	0	0	1	71	0	12	0	475	6	2	1028	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	50	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	1	0	0	0	3	0	0	1	0
Mvmt Flow	0	0	1	71	0	12	0	475	6	2	1028	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1270	1513	514	996	1510	241	1028	0	0	481	0	0
Stage 1	1032	1032	-	478	478	-	-	-	-	-	-	-
Stage 2	238	481	-	518	1032	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.52	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.52	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.52	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.51	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	127	121	511	200	122	766	683	-	-	1092	-	-
Stage 1	253	313	-	540	559	-	-	-	-	-	-	-
Stage 2	750	557	-	511	313	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	125	121	511	199	122	766	683	-	-	1092	-	-
Mov Cap-2 Maneuver	125	121	-	199	122	-	-	-	-	-	-	-
Stage 1	253	312	-	540	559	-	-	-	-	-	-	-
Stage 2	738	557	-	509	312	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.1	29.5	0	0
HCM LOS	B	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	683	-	-	511	199	766	1092	-	-
HCM Lane V/C Ratio	-	-	-	0.002	0.357	0.016	0.002	-	-
HCM Control Delay (s)	0	-	-	12.1	32.8	9.8	8.3	-	-
HCM Lane LOS	A	-	-	B	D	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	1.5	0	0	-	-

Intersection	
Int Delay, s/veh	3.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	77	13	55	28	6	86
Future Vol, veh/h	77	13	55	28	6	86
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	4	4	0	1
Mvmt Flow	77	13	55	28	6	86

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	167	69	0	0	83	0
Stage 1	69	-	-	-	-	-
Stage 2	98	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	828	1000	-	-	1527	-
Stage 1	959	-	-	-	-	-
Stage 2	931	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	825	1000	-	-	1527	-
Mov Cap-2 Maneuver	825	-	-	-	-	-
Stage 1	955	-	-	-	-	-
Stage 2	931	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	0.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	846	1527	-
HCM Lane V/C Ratio	-	-	0.106	0.004	-
HCM Control Delay (s)	-	-	9.8	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0	-

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	62	220	142	17	24	143
Future Vol, veh/h	62	220	142	17	24	143
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	5	4	5	6	4	1
Mvmt Flow	62	220	142	17	24	143

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	159	0	-	0	495	151
Stage 1	-	-	-	-	151	-
Stage 2	-	-	-	-	344	-
Critical Hdwy	4.15	-	-	-	6.44	6.21
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	2.245	-	-	-	3.536	3.309
Pot Cap-1 Maneuver	1402	-	-	-	530	898
Stage 1	-	-	-	-	872	-
Stage 2	-	-	-	-	713	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1402	-	-	-	504	898
Mov Cap-2 Maneuver	-	-	-	-	504	-
Stage 1	-	-	-	-	828	-
Stage 2	-	-	-	-	713	-

Approach	EB	WB	SB
HCM Control Delay, s	1.7	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1402	-	-	-	807
HCM Lane V/C Ratio	0.044	-	-	-	0.207
HCM Control Delay (s)	7.7	0	-	-	10.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.8

HCM 2010 Signalized Intersection Summary
2842: San Felipe Road/San Felipe Rd & SR25

11/28/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	1401	494	27	1555	521	854	739	18	142	402	4
Future Volume (veh/h)	16	1401	494	27	1555	521	854	739	18	142	402	4
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1743	1759	1900	1863	1881	1827	1864	1900	1759	1828	1900
Adj Flow Rate, veh/h	16	1401	372	27	1555	202	854	739	18	142	402	4
Adj No. of Lanes	1	2	1	1	2	2	2	2	0	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	9	8	0	2	1	4	2	2	8	4	4
Cap, veh/h	19	1441	651	33	1568	1247	829	1071	26	212	432	4
Arrive On Green	0.01	0.44	0.44	0.02	0.44	0.44	0.25	0.30	0.30	0.07	0.12	0.12
Sat Flow, veh/h	1810	3312	1495	1810	3539	2814	3375	3533	86	3250	3523	35
Grp Volume(v), veh/h	16	1401	372	27	1555	202	854	370	387	142	198	208
Grp Sat Flow(s),veh/h/ln	1810	1656	1495	1810	1770	1407	1688	1770	1848	1625	1736	1821
Q Serve(g_s), s	0.8	37.1	16.8	1.3	39.1	3.9	22.0	16.5	16.5	3.8	10.1	10.1
Cycle Q Clear(g_c), s	0.8	37.1	16.8	1.3	39.1	3.9	22.0	16.5	16.5	3.8	10.1	10.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.05	1.00		0.02
Lane Grp Cap(c), veh/h	19	1441	651	33	1568	1247	829	537	560	212	213	224
V/C Ratio(X)	0.86	0.97	0.57	0.82	0.99	0.16	1.03	0.69	0.69	0.67	0.93	0.93
Avail Cap(c_a), veh/h	40	1441	651	40	1568	1247	829	537	560	218	213	224
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.3	24.8	19.0	43.9	24.8	15.0	33.8	27.5	27.5	41.0	38.9	38.9
Incr Delay (d2), s/veh	64.8	17.4	1.2	65.9	20.7	0.1	39.4	3.7	3.6	7.5	42.4	41.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	20.4	7.1	1.3	23.5	1.5	14.7	8.6	8.9	1.9	7.3	7.7
LnGrp Delay(d),s/veh	109.1	42.2	20.2	109.8	45.5	15.0	73.2	31.3	31.1	48.5	81.3	80.3
LnGrp LOS	F	D	C	F	D	B	F	C	C	D	F	F
Approach Vol, veh/h		1789			1784			1611			548	
Approach Delay, s/veh		38.3			43.0			53.5			72.4	
Approach LOS		D			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.8	31.2	5.6	43.0	26.0	15.0	4.9	43.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	27.0	2.0	39.0	22.0	11.0	2.0	39.0
Max Q Clear Time (g_c+I1), s	5.8	18.5	3.3	39.1	24.0	12.1	2.8	41.1
Green Ext Time (p_c), s	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	47.3
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	65	17	112	97	53	73	776	224	25	338	15
Future Volume (veh/h)	32	65	17	112	97	53	73	776	224	25	338	15
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1710	1900	1900	1823	1827	1845	1877	1900	1267	1792	1900
Adj Flow Rate, veh/h	32	65	17	112	97	32	73	776	224	25	338	15
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	10	10	10	8	8	4	3	1	1	50	6	6
Cap, veh/h	42	84	22	156	135	254	92	1146	331	20	1274	56
Arrive On Green	0.09	0.09	0.09	0.16	0.16	0.16	0.05	0.42	0.42	0.02	0.38	0.38
Sat Flow, veh/h	461	937	245	951	824	1553	1757	2732	789	1206	3321	147
Grp Volume(v), veh/h	114	0	0	209	0	32	73	506	494	25	173	180
Grp Sat Flow(s),veh/h/ln	1644	0	0	1775	0	1553	1757	1783	1738	1206	1702	1766
Q Serve(g_s), s	3.5	0.0	0.0	5.8	0.0	0.9	2.1	11.9	11.9	0.9	3.6	3.6
Cycle Q Clear(g_c), s	3.5	0.0	0.0	5.8	0.0	0.9	2.1	11.9	11.9	0.9	3.6	3.6
Prop In Lane	0.28		0.15	0.54		1.00	1.00		0.45	1.00		0.08
Lane Grp Cap(c), veh/h	148	0	0	291	0	254	92	748	729	20	653	677
V/C Ratio(X)	0.77	0.00	0.00	0.72	0.00	0.13	0.79	0.68	0.68	1.23	0.26	0.27
Avail Cap(c_a), veh/h	414	0	0	688	0	602	306	1486	1448	187	1385	1437
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.0	0.0	0.0	20.5	0.0	18.4	24.2	12.2	12.2	25.4	10.9	10.9
Incr Delay (d2), s/veh	8.2	0.0	0.0	3.3	0.0	0.2	14.0	1.1	1.1	168.7	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.7	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	0.0	3.1	0.0	0.4	1.4	6.0	5.8	1.2	1.7	1.8
LnGrp Delay(d),s/veh	31.1	0.0	0.0	23.8	0.0	18.6	38.2	13.2	13.3	209.8	11.1	11.1
LnGrp LOS	C			C		B	D	B	B	F	B	B
Approach Vol, veh/h		114			241			1073			378	
Approach Delay, s/veh		31.1			23.1			14.9			24.3	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.9	25.6		8.6	6.7	23.8		12.5
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	8.0	43.0		13.0	9.0	42.0		20.0
Max Q Clear Time (g_c+I1), s	2.9	13.9		5.5	4.1	5.6		7.8
Green Ext Time (p_c), s	0.0	7.8		0.3	0.1	2.2		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	19.0
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	27	77	0	51	110	51	2598	0	46	1886	4
Future Vol, veh/h	0	27	77	0	51	110	51	2598	0	46	1886	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	220	-	-	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	6	13	0	10	14	8	2	0	38	7	0
Mvmt Flow	0	27	77	0	51	110	51	2598	0	46	1886	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	4761	4680	1888	4732	4682	2598	1890	0	0	2598	0	0
Stage 1	1980	1980	-	2700	2700	-	-	-	-	-	-	-
Stage 2	2781	2700	-	2032	1982	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.56	6.33	7.1	6.6	6.34	4.18	-	-	4.48	-	-
Critical Hdwy Stg 1	6.1	5.56	-	6.1	5.6	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.56	-	6.1	5.6	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.054	3.417	3.5	4.09	3.426	2.272	-	-	2.542	-	-
Pot Cap-1 Maneuver	0	~ 1	82	0	~ 1	~ 29	302	-	-	122	-	-
Stage 1	81	104	-	30	~ 42	-	-	-	-	-	-	-
Stage 2	27	44	-	75	101	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	~ 1	82	-	~ 1	~ 29	302	-	-	122	-	-
Mov Cap-2 Maneuver	-	~ 1	-	-	~ 1	-	-	-	-	-	-	-
Stage 1	67	65	-	25	~ 35	-	-	-	-	-	-	-
Stage 2	29	37	-	2	63	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			0.4	1.2
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	302	-	-	-	-	122	-	-
HCM Lane V/C Ratio	0.169	-	-	-	-	0.377	-	-
HCM Control Delay (s)	19.3	-	-	-	-	51.4	-	-
HCM Lane LOS	C	-	-	-	-	F	-	-
HCM 95th %tile Q(veh)	0.6	-	-	-	-	1.6	-	-

Notes

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

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	3	0	15	0	7	2	819	29	22	365	0
Future Vol, veh/h	0	3	0	15	0	7	2	819	29	22	365	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	50	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	27	0	0	0	2	0	0	6	0
Mvmt Flow	0	3	0	15	0	7	2	819	29	22	365	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	823	1261	183	1066	1247	424	365	0	0	848	0	0
Stage 1	409	409	-	838	838	-	-	-	-	-	-	-
Stage 2	414	852	-	228	409	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	8.04	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	7.04	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	7.04	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.77	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	269	172	834	147	175	584	1205	-	-	798	-	-
Stage 1	596	600	-	279	384	-	-	-	-	-	-	-
Stage 2	592	379	-	687	600	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	260	167	834	142	170	584	1205	-	-	798	-	-
Mov Cap-2 Maneuver	260	167	-	142	170	-	-	-	-	-	-	-
Stage 1	595	583	-	278	383	-	-	-	-	-	-	-
Stage 2	584	378	-	665	583	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	27	26.3	0	0.5
HCM LOS	D	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1205	-	-	167	142	584	798	-	-
HCM Lane V/C Ratio	0.002	-	-	0.018	0.106	0.012	0.028	-	-
HCM Control Delay (s)	8	-	-	27	33.3	11.2	9.6	-	-
HCM Lane LOS	A	-	-	D	D	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0	0.1	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	31	8	88	157	18	30
Future Vol, veh/h	31	8	88	157	18	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	3	0	0	7
Mvmt Flow	31	8	88	157	18	30

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	233	167	0	0	245	0
Stage 1	167	-	-	-	-	-
Stage 2	66	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	760	882	-	-	1333	-
Stage 1	867	-	-	-	-	-
Stage 2	962	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	749	882	-	-	1333	-
Mov Cap-2 Maneuver	749	-	-	-	-	-
Stage 1	855	-	-	-	-	-
Stage 2	962	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	2.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	773	1333	-
HCM Lane V/C Ratio	-	-	0.05	0.014	-
HCM Control Delay (s)	-	-	9.9	7.7	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	212	131	208	27	6	57
Future Vol, veh/h	212	131	208	27	6	57
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	14	6	0	0	2
Mvmt Flow	212	131	208	27	6	57

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	235	0	-	0	777	222
Stage 1	-	-	-	-	222	-
Stage 2	-	-	-	-	555	-
Critical Hdwy	4.13	-	-	-	6.4	6.22
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.227	-	-	-	3.5	3.318
Pot Cap-1 Maneuver	1326	-	-	-	368	818
Stage 1	-	-	-	-	820	-
Stage 2	-	-	-	-	579	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1326	-	-	-	305	818
Mov Cap-2 Maneuver	-	-	-	-	305	-
Stage 1	-	-	-	-	679	-
Stage 2	-	-	-	-	579	-

Approach	EB	WB	SB
HCM Control Delay, s	5.1	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1326	-	-	-	705
HCM Lane V/C Ratio	0.16	-	-	-	0.089
HCM Control Delay (s)	8.2	0	-	-	10.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.6	-	-	-	0.3

HCM 2010 Signalized Intersection Summary
2842: San Felipe Road/San Felipe Rd & SR25

11/28/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	3351	1568	33	3056	239	1273	444	57	420	839	12
Future Volume (veh/h)	12	3351	1568	33	3056	239	1273	444	57	420	839	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1881	1863	1863	1867	1900	1881	1881	1900
Adj Flow Rate, veh/h	12	3351	1280	33	3056	146	1273	444	57	420	839	12
Adj No. of Lanes	1	2	1	1	2	2	2	2	0	2	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	1	0	0	1	2	2	2	2	1	1	1
Cap, veh/h	13	1642	742	41	1696	1322	648	596	76	491	510	7
Arrive On Green	0.01	0.46	0.46	0.02	0.47	0.47	0.19	0.19	0.19	0.14	0.14	0.14
Sat Flow, veh/h	1810	3574	1615	1810	3574	2787	3442	3165	404	3476	3608	52
Grp Volume(v), veh/h	12	3351	1280	33	3056	146	1273	248	253	420	416	435
Grp Sat Flow(s),veh/h/ln	1810	1787	1615	1810	1787	1393	1721	1774	1796	1738	1787	1872
Q Serve(g_s), s	0.6	39.0	39.0	1.5	40.3	2.5	16.0	11.2	11.3	10.0	12.0	12.0
Cycle Q Clear(g_c), s	0.6	39.0	39.0	1.5	40.3	2.5	16.0	11.2	11.3	10.0	12.0	12.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.23	1.00		0.03
Lane Grp Cap(c), veh/h	13	1642	742	41	1696	1322	648	334	338	491	253	265
V/C Ratio(X)	0.89	2.04	1.73	0.81	1.80	0.11	1.96	0.74	0.75	0.86	1.65	1.65
Avail Cap(c_a), veh/h	43	1642	742	43	1696	1322	648	334	338	491	253	265
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.1	23.0	23.0	41.3	22.3	12.4	34.5	32.5	32.6	35.6	36.5	36.5
Incr Delay (d2), s/veh	85.9	470.7	332.2	67.4	363.4	0.0	439.0	8.6	8.9	13.8	307.6	306.9
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	0.6	126.5	85.8	1.5	105.4	1.0	47.1	6.3	6.5	5.7	27.5	28.7
LnGrp Delay(d),s/veh	128.1	493.7	355.2	108.8	385.7	12.4	473.4	41.1	41.4	49.4	344.0	343.4
LnGrp LOS	F	F	F	F	F	B	F	D	D	D	F	F
Approach Vol, veh/h		4643			3235			1774			1271	
Approach Delay, s/veh		454.6			366.0			351.4			246.4	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	20.0	5.9	43.0	20.0	16.0	4.6	44.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	12.0	16.0	2.0	39.0	16.0	12.0	2.0	39.0
Max Q Clear Time (g_c+I1), s	12.0	13.3	3.5	41.0	18.0	14.0	2.6	42.3
Green Ext Time (p_c), s	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	387.4
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	111	36	215	69	25	79	430	135	47	950	40
Future Volume (veh/h)	25	111	36	215	69	25	79	430	135	47	950	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1831	1900	1900	1886	1900	1881	1872	1900	1900	1878	1900
Adj Flow Rate, veh/h	25	111	36	215	69	22	79	430	135	47	950	40
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	4	0	0	0	1	2	2	0	1	1
Cap, veh/h	33	145	47	276	89	324	102	1056	329	59	1294	54
Arrive On Green	0.13	0.13	0.13	0.20	0.20	0.20	0.06	0.40	0.40	0.03	0.37	0.37
Sat Flow, veh/h	255	1132	367	1376	441	1615	1792	2672	831	1810	3490	147
Grp Volume(v), veh/h	172	0	0	284	0	22	79	285	280	47	486	504
Grp Sat Flow(s),veh/h/ln	1754	0	0	1817	0	1615	1792	1778	1725	1810	1784	1852
Q Serve(g_s), s	6.2	0.0	0.0	9.7	0.0	0.7	2.9	7.6	7.7	1.7	15.5	15.5
Cycle Q Clear(g_c), s	6.2	0.0	0.0	9.7	0.0	0.7	2.9	7.6	7.7	1.7	15.5	15.5
Prop In Lane	0.15		0.21	0.76		1.00	1.00		0.48	1.00		0.08
Lane Grp Cap(c), veh/h	224	0	0	365	0	324	102	703	682	59	661	687
V/C Ratio(X)	0.77	0.00	0.00	0.78	0.00	0.07	0.77	0.41	0.41	0.80	0.73	0.73
Avail Cap(c_a), veh/h	454	0	0	747	0	664	273	1164	1129	193	1087	1128
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.7	0.0	0.0	24.9	0.0	21.3	30.5	14.3	14.3	31.6	17.9	17.9
Incr Delay (d2), s/veh	5.4	0.0	0.0	3.6	0.0	0.1	11.5	0.4	0.4	21.2	1.6	1.5
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	3.3	0.0	0.0	5.3	0.0	0.3	1.7	3.8	3.7	1.2	7.9	8.1
LnGrp Delay(d),s/veh	33.1	0.0	0.0	28.5	0.0	21.4	42.1	14.7	14.7	52.7	19.5	19.4
LnGrp LOS	C			C		C	D	B	B	D	B	B
Approach Vol, veh/h		172			306			644			1037	
Approach Delay, s/veh		33.1			28.0			18.1			21.0	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.1	30.0		12.4	7.8	28.3		17.2
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	7.0	43.0		17.0	10.0	40.0		27.0
Max Q Clear Time (g_c+I1), s	3.7	9.7		8.2	4.9	17.5		11.7
Green Ext Time (p_c), s	0.0	3.9		0.5	0.1	6.9		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	22.1
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	21.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	44	36	0	67	59	68	4295	0	86	4938	0
Future Vol, veh/h	0	44	36	0	67	59	68	4295	0	86	4938	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	220	-	-	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	15	0	0	3	0	2	3	0	8	1	0
Mvmt Flow	0	44	36	0	67	59	68	4295	0	86	4938	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	9604	9541	4938	9581	9541	4295	4938	0	0	4295	0	0
Stage 1	5110	5110	-	4431	4431	-	-	-	-	-	-	-
Stage 2	4494	4431	-	5150	5110	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.65	6.2	7.1	6.53	6.2	4.12	-	-	4.18	-	-
Critical Hdwy Stg 1	6.1	5.65	-	6.1	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.65	-	6.1	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.135	3.3	3.5	4.027	3.3	2.218	-	-	2.272	-	-
Pot Cap-1 Maneuver	0	0	~ 1	0	0	~ 3	~ 18	-	-	~ 31	-	-
Stage 1	1	~ 2	-	2	~ 5	-	-	-	-	-	-	-
Stage 2	2	~ 4	-	1	~ 2	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	0	~ 1	-	0	~ 3	~ 18	-	-	~ 31	-	-
Mov Cap-2 Maneuver	-	0	-	-	0	-	-	-	-	-	-	-
Stage 1	1	0	-	2	0	-	-	-	-	-	-	-
Stage 2	-	0	-	-	0	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			26.3	18.4
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	~ 18	-	-	-	-	~ 31	-	-
HCM Lane V/C Ratio	3.778	-	-	-	-	2.774	-	-
HCM Control Delay (s)	$ 1684.8	-	-	-	-	$ 1072	-	-
HCM Lane LOS	F	-	-	-	-	F	-	-
HCM 95th %tile Q(veh)	9.1	-	-	-	-	10.1	-	-

Notes

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

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	1	71	0	18	0	475	6	4	1028	0
Future Vol, veh/h	0	0	1	71	0	18	0	475	6	4	1028	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	50	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	1	0	0	0	3	0	0	1	0
Mvmt Flow	0	0	1	71	0	18	0	475	6	4	1028	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1274	1517	514	1000	1514	241	1028	0	0	481	0	0
Stage 1	1036	1036	-	478	478	-	-	-	-	-	-	-
Stage 2	238	481	-	522	1036	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.52	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.52	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.52	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.51	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	126	120	511	199	121	766	683	-	-	1092	-	-
Stage 1	251	311	-	540	559	-	-	-	-	-	-	-
Stage 2	750	557	-	508	311	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	123	120	511	198	121	766	683	-	-	1092	-	-
Mov Cap-2 Maneuver	123	120	-	198	121	-	-	-	-	-	-	-
Stage 1	251	310	-	540	559	-	-	-	-	-	-	-
Stage 2	732	557	-	505	310	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.1	28.3	0	0
HCM LOS	B	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	683	-	-	511	198	766	1092	-	-
HCM Lane V/C Ratio	-	-	-	0.002	0.359	0.023	0.004	-	-
HCM Control Delay (s)	0	-	-	12.1	33	9.8	8.3	-	-
HCM Lane LOS	A	-	-	B	D	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	1.5	0.1	0	-	-

Intersection	
Int Delay, s/veh	4.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	111	19	55	42	8	86
Future Vol, veh/h	111	19	55	42	8	86
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	4	4	0	1
Mvmt Flow	111	19	55	42	8	86

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	178	76	0	0	97	0
Stage 1	76	-	-	-	-	-
Stage 2	102	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	816	991	-	-	1509	-
Stage 1	952	-	-	-	-	-
Stage 2	927	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	811	991	-	-	1509	-
Mov Cap-2 Maneuver	811	-	-	-	-	-
Stage 1	946	-	-	-	-	-
Stage 2	927	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	0.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	833	1509	-
HCM Lane V/C Ratio	-	-	0.156	0.005	-
HCM Control Delay (s)	-	-	10.1	7.4	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.6	0	-

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	75	220	142	18	26	175
Future Vol, veh/h	75	220	142	18	26	175
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	5	4	5	6	4	1
Mvmt Flow	75	220	142	18	26	175

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	160	0	-	0	521	151
Stage 1	-	-	-	-	151	-
Stage 2	-	-	-	-	370	-
Critical Hdwy	4.15	-	-	-	6.44	6.21
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	2.245	-	-	-	3.536	3.309
Pot Cap-1 Maneuver	1401	-	-	-	512	898
Stage 1	-	-	-	-	872	-
Stage 2	-	-	-	-	694	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1401	-	-	-	481	898
Mov Cap-2 Maneuver	-	-	-	-	481	-
Stage 1	-	-	-	-	819	-
Stage 2	-	-	-	-	694	-

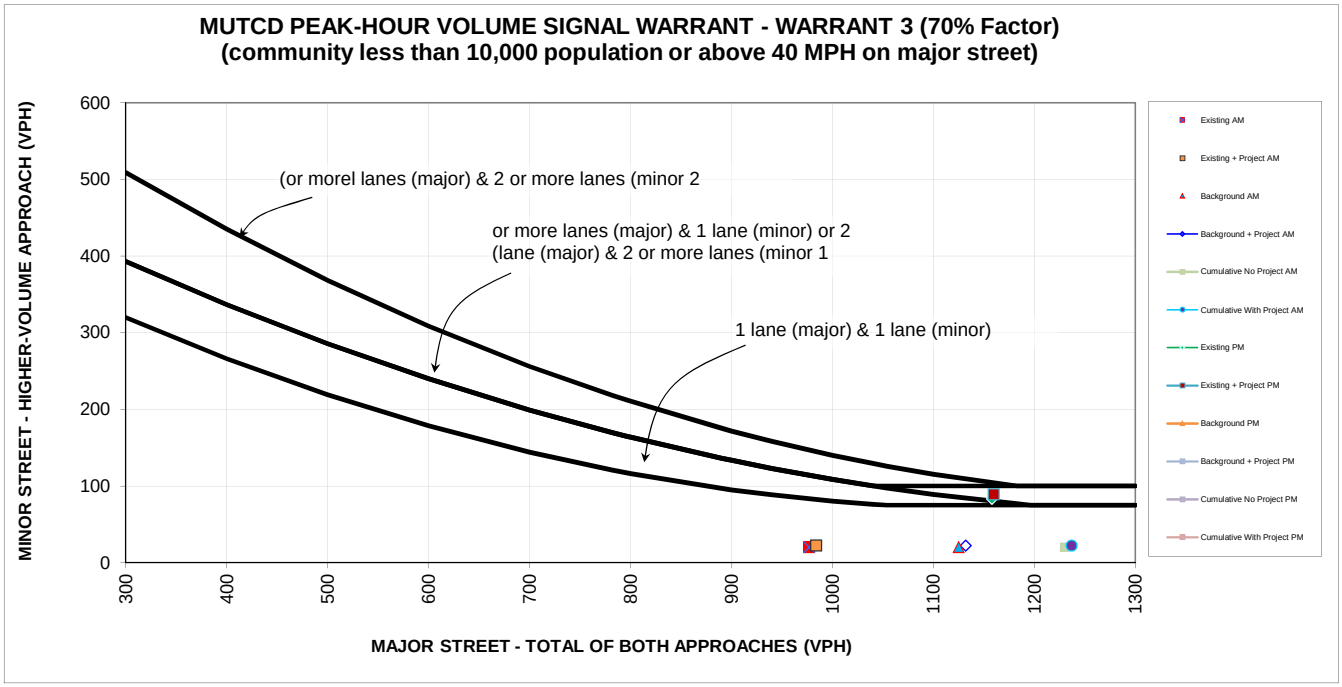
Approach	EB	WB	SB
HCM Control Delay, s	2	0	10.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1401	-	-	-	807
HCM Lane V/C Ratio	0.054	-	-	-	0.249
HCM Control Delay (s)	7.7	0	-	-	10.9
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	1

Appendix D
Signal Warrant Checks

San Benito County Behavioral Health Center

1 . San Felipe Road & San Felipe Road (frontage)



Source: Figure 4C-4 of the Manual on Unifrom Traffic Control and Devices (MUTCD) from California Department of Transportation (Caltrans).
* 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

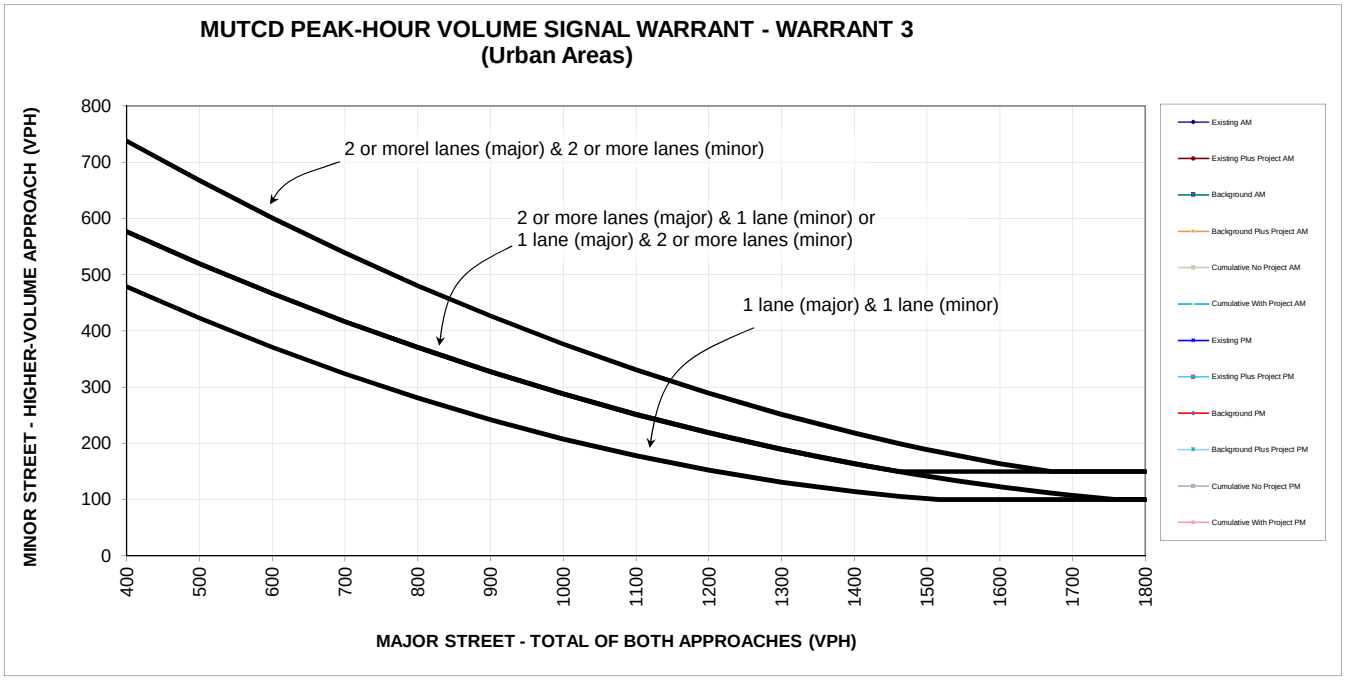
		Approach Lanes		Existing AM	Existing + Project AM	Background AM	Background + Project AM	Cumulative No Project AM	Cumulative With Project AM
		One	2 or More						
Major Street - Both Approaches	San Felipe Road		X	977	984	1125	1132	1230	1237
Minor Street - Highest Approach	San Felipe Road (frontage)	X		20	22	20	22	20	22
Maximum warrant threshold for minor street volume				114	112	85	84	75	75
Difference between warrant threshold & minor street volume				94	90	65	62	55	53
		Warrant Met?		No	No	No	No	No	No

PM Peak Hour

		Approach Lanes		Existing PM	Existing + Project PM	Background PM	Background + Project PM	Cumulative No Project PM	Cumulative With Project PM
		One	2 or More						
Major Street - Both Approaches	San Felipe Road	X		1158	1160	1340	1342	1511	1513
Minor Street - Highest Approach	San Felipe Road (frontage)	X		83	89	83	89	83	89
Maximum warrant threshold for minor street volume				80	80	75	75	75	75
Difference between warrant threshold & minor street volume				3	9	8	14	8	14
		Warrant Met?		Yes	Yes	Yes	Yes	Yes	Yes

San Benito County Behavioral Health Center

2 . San Felipe Road (frontage) & Community Parkway



Source: Figure 4C-3 of the Manual on Unifrom Traffic Control and Devices (MUTCD) from California Department of Transportation (Caltrans).
* 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes
and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

AM Peak Hour

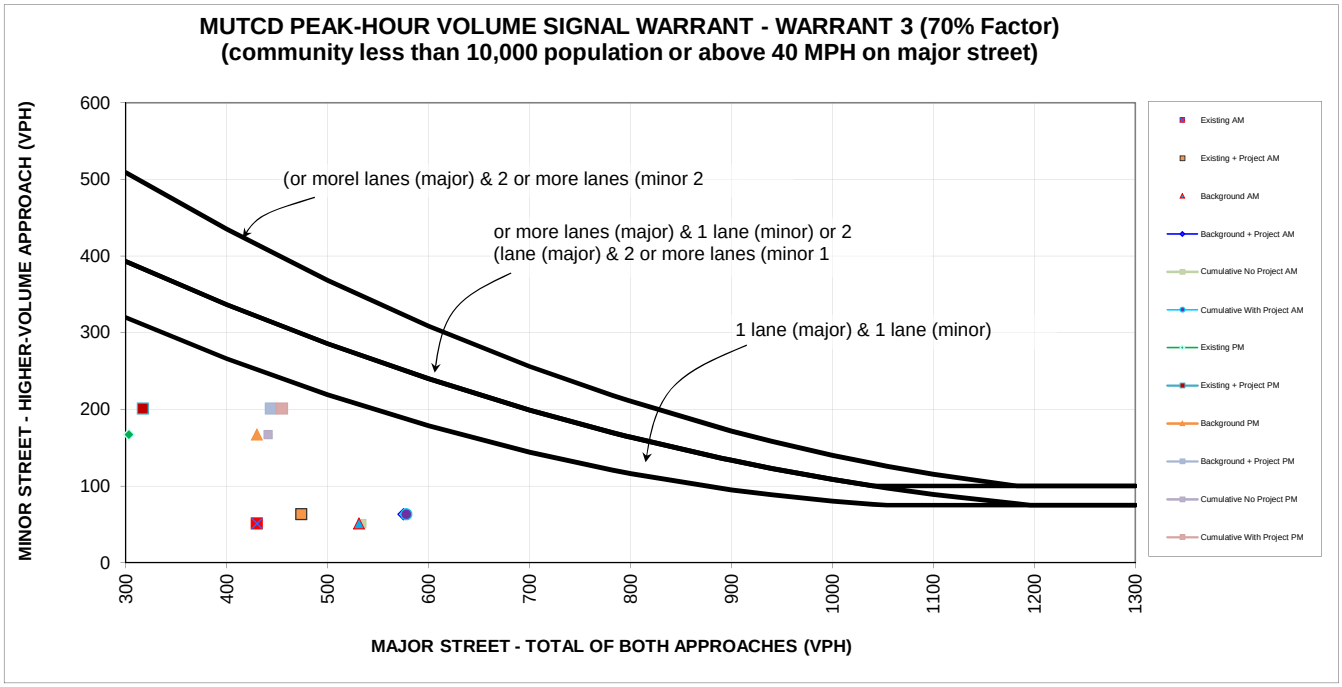
		Existing Approach Lanes: One	Existing Approach Lanes: 2 or More	Existing AM	Existing Plus Project AM	Background AM	Background Plus Project AM	Cumulative No Project AM	Cumulative With Project AM
Major Street - Both Approaches	San Felipe Road (frontage	X		243	293	243	293	243	293
Minor Street - Highest Approach	Community Parkway	X		25	39	25	39	25	39
Maximum warrant threshold for minor street volume				575	543	575	543	575	543
Difference between warrant threshold & minor street volume				550	504	550	504	550	504
		Warrant Met?		No	No	No	No	No	No

PM Peak Hour

		Existing Approach Lanes: One	Existing Approach Lanes: 2 or More	Existing PM	Existing Plus Project PM	Background PM	Background Plus Project PM	Cumulative No Project PM	Cumulative With Project PM
Major Street - Both Approaches	San Felipe Road (frontage	X		175	191	175	191	175	191
Minor Street - Highest Approach	Community Parkway	X		90	130	90	130	90	130
Maximum warrant threshold for minor street volume				620	609	620	609	620	609
Difference between warrant threshold & minor street volume				530	479	530	479	530	479
		Warrant Met?		No	No	No	No	No	No

San Benito County Behavioral Health Center

3 . San Felipe Road (frontage) & McCloskey Road



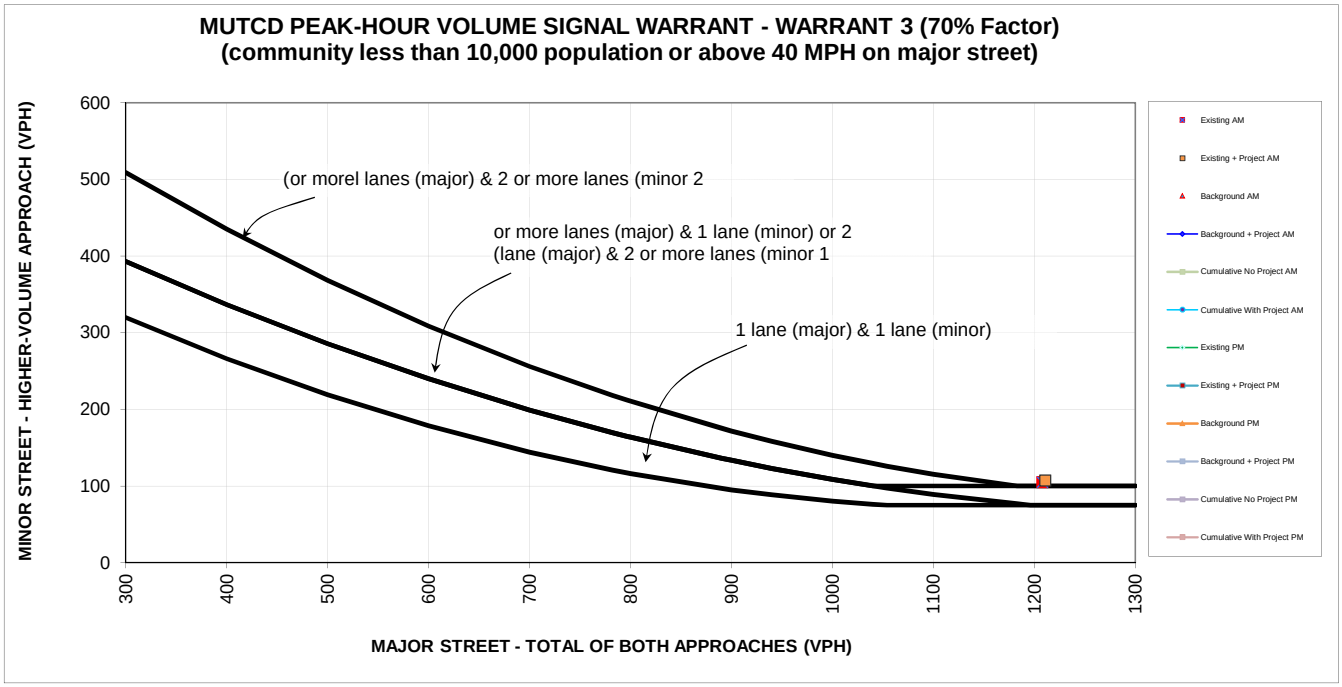
Source: Figure 4C-4 of the Manual on Unifrom Traffic Control and Devices (MUTCD) from California Department of Transportation (Caltrans).
* 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

		Approach Lanes		AM Peak Hour					
		One	2 or More	Existing AM	Existing + Project AM	Background AM	Background + Project AM	Cumulative No Project AM	Cumulative With Project AM
Major Street - Both Approaches	McCloskey Road	X		430	474	531	575	534	578
Minor Street - Highest Approach	San Felipe Road (frontage)	X		51	63	51	63	51	63
Maximum warrant threshold for minor street volume				251	231	206	188	204	187
Difference between warrant threshold & minor street volume				200	168	155	125	153	124
		Warrant Met?		No	No	No	No	No	No

		Approach Lanes		PM Peak Hour					
		One	2 or More	Existing PM	Existing + Project PM	Background PM	Background + Project PM	Cumulative No Project PM	Cumulative With Project PM
Major Street - Both Approaches	McCloskey Road	X		303	317	430	444	441	455
Minor Street - Highest Approach	San Felipe Road (frontage)	X		167	201	167	201	167	201
Maximum warrant threshold for minor street volume				318	310	251	245	246	239
Difference between warrant threshold & minor street volume				151	109	84	44	79	38
		Warrant Met?		No	No	No	No	No	No

San Benito County Behavioral Health Center

6 . SR 25 & Wright Road



Source: Figure 4C-4 of the Manual on Unifrom Traffic Control and Devices (MUTCD) from California Department of Transportation (Caltrans).
* 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

		Approach Lanes One	Approach Lanes 2 or More	Existing AM	Existing + Project AM	Background AM	Background + Project AM	Cumulative No Project AM	Cumulative With Project AM
Major Street - Both Approaches	SR 25	X		1208	1211	1608	1611	4494	4497
Minor Street - Highest Approach	Wright Road	X		105	107	143	145	144	146
Maximum warrant threshold for minor street volume				75	75	75	75	75	75
Difference between warrant threshold & minor street volume				30	32	68	70	69	71
		Warrant Met?		Yes	Yes	Yes	Yes	Yes	Yes

PM Peak Hour

		Approach Lanes One	Approach Lanes 2 or More	Existing PM	Existing + Project PM	Background PM	Background + Project PM	Cumulative No Project PM	Cumulative With Project PM
Major Street - Both Approaches	SR 25	X		1447	1448	1993	1994	9261	9262
Minor Street - Highest Approach	Wright Road	X		104	108	133	137	134	138
Maximum warrant threshold for minor street volume				75	75	75	75	75	75
Difference between warrant threshold & minor street volume				29	33	58	62	59	63
		Warrant Met?		Yes	Yes	Yes	Yes	Yes	Yes