CITY OF DALY CITY

Regular Meeting - CITY COUNCIL

AGENDA

Monday, February 22, 2016 - 7:00 PM
City Hall Council Chambers – 2nd Floor
333 – 90th Street, Daly City, CA 94015

Live Telecast: Comcast Channel 27, Astound 26, AT&T U-Verse 99

Webcast: www.dalycity.org/meetings

DRAFT

For those wishing to address the City Council on any Item on the Agenda or under Public Appearances/Oral Communications, please complete a Speaker Card located at the entrance to the Council Chambers and submit to a Staff Member as early in the meeting as possible.

Persons with disabilities who require auxiliary aids or services in attending or participating in this meeting should call the office of the City Clerk at 991-8078 as soon as possible.

CALL TO ORDER:

PLEDGE TO THE FLAG:

ROLL CALL:

APPROVAL OF MINUTES:

Regular Meeting of January 25, 2016

APPROVAL OF AGENDA:

CONSENT AGENDA

All items listed on the Consent Agenda are considered to be routine and may be approved by one roll call vote of the City Council. There shall be no separate discussion of the matters on the Consent Agenda unless requested by a member of the City Council. If discussion is required, that item will be removed from the Consent Agenda and will be considered separately at the end of the Agenda.

Resolutions:

AVAILABILITY OF PUBLIC RECORDS:

All public record to an open session item on this agenda, which are not exempt from disclosure pursuant to the California Public Records Act, that are distributed to a majority of the legislative body will be available for public inspection at the City Clerk's Office, City Hall located at 333 90th Street, Daly City, CA during normal business hours, at the same time that the public records are distributed or made available to the legislative body.

1. Setting Time and Place for Public Hearing - Introducing an Ordinance to Amend the Municipal Code Re: Surcharges on Prepaid Mobile Telephony Services (MTS)

2. Accepting and Appropriating a $17,500 Grant from the Daly City Public Library Associates

3. Finding that the Bayshore Elementary School District's Construction of a New Public School at 155 Oriente Street (APN 005-124-100) Conforms to the General Plan

4. Requesting Use of Federal Asset Forfeiture Funds (DEA) to Purchase Crowd Control Helmets for the Daly City Police Department

5. Noticing Completion for 2015-16 Street Resurfacing

6. Approving a Contract Amendment with the County of San Mateo Human Services Agency to Accept Additional Contractual Services Funding

Check Registers:

7. Check Registers for the Month of January 2016

END OF CONSENT AGENDA

PUBLIC HEARINGS:

8. Substantial Amendment to Fiscal Year 2015-16 HUD Action Plan

   Staff:
   ZoBell
   Recommended Action:
   Open/Close Hearing
   Adopt Resolution
   Roll Call

COMMUNICATIONS:

9. Review and Consideration of Proposal from the County of San Mateo to Assume Responsibility for Providing Police 9-1-1 Dispatch Services to the City of Daly City through a Five Year Contract

   Staff:
   Martel
   Recommended Action:
   Authorize City Manager to negotiate final terms of the contract for approval by the City Council

10. Adopting New Fees for the Daly City Afterschool Youth Recreation Program

    Staff:
    Curran
    Recommended Action:
    Adopt Resolution
    Roll Call

11. Planned Development PD-10-15-11781 (Preliminary Plan Review)--Subdivision of a 17.82 acre site on Carter Street for 115 Residential Lots

    Staff:
    VanLonkhuysen
    Recommended Action:
    Adopt Resolution
    Roll Call

12. Planned Development PD-1-15-10255 (Preliminary Plan Review)--Subdivision of a 6.96 acre site at 1 Martin Street for 71 Residential Lots

    Staff:
    VanLonkhuysen
    Recommended Action:
    Adopt Resolution
    Roll Call

13. Use Permit UPR-8-15-11316 and Design Review 8-15-11317--In-N-Out Burger Restaurant and Drive-Through at 372 Gellert Boulevard

    A. EA (Categorical Exemption)
    B. Findings
    C. UPR-8-15-11316, DR- 8-15-11317

    Staff:
    VanLonkhuysen
    Recommended Action:
    Adopt Resolution
    Roll Call

14. Use Permit UPR-11-15-11833 — Rental Car Defueling Facility at 2600 Geneva Avenue (Cow Palace Parking Lot)

    A. EA (Categorical Exemption)
    B. Findings
    C. UPR-11-15-11833

Staff:
VanLonkhuysen
Recommended Action:
Adopt Resolution
Roll Call

ORDINANCES:

15. Second Reading, Ordinance No. 1406, Authorizing the Implementation of a Community Choice Aggregation Program

Staff:
Zimmerman
Recommended Action:
Adopt Ordinance
Roll Call

16. Second Reading, Ordinance No. 1407, Repealing and Replacing Chapter 17.41 of the Daly City Municipal Code, Re: Water Conservation in Landscaping Regulations

Staff:
Zimmerman
Recommended Action:
Adopt Ordinance
Roll Call

PUBLIC APPEARANCES/ORAL COMMUNICATIONS:

NOTE: Speakers are limited to two minutes, unless modified by the Mayor. The Council cannot take action on any matter raised under this item

APPOINTMENTS: Board/Commission Membership Committee Appointments

REPORTS:

17. Council Committee

18. City Council

19. Staff

ADJOURNMENT:

CITY OF DALY CITY
MINUTES – REGULAR MEETING - CITY COUNCIL
JANUARY 25, 2016

The meeting was called to order by Mayor Buenaventura at 7:04 P.M.

ROLL CALL: Councilmembers Present:

Sal Torres, Mayor
David J. Canepa, Vice Mayor
Raymond A. Buenaventura
Judith A. Christensen
Michael P. Guingona

Staff Present:

Patricia E. Martel, City Manager
Julie T. Underwood, Assistant City Manager
Rose L. Zimmerman, City Attorney
K. Annette Hipona, City Clerk

PRESENTATIONS:

Proclaiming February 2016 Black History Month in Daly City (Janice Daniels)

Councilmember Guingona presented a proclamation to Janice Daniels declaring February as Black History Month. Ms. Daniels thanked the Council in behalf of the African American residents in the city and invited everyone to their National Black History event.

Proclaiming San Mateo County Mosquito and Vector Control District's 100 Years of Public Health (Christine Fuller, Board Trustee)

Councilmember Canepa presented a proclamation to Board Trustee Christine Fuller and Public Health Education and Outreach Officer Megan Caldwell recognizing the District's 100 years of service to the residents of San Mateo County since 1916.

Ms. Fuller and Ms. Caldwell thanked the Council and staff, and invited everyone to their centennial celebration in Burlingame scheduled for Tuesday, January 26th.

APPROVAL OF MINUTES:

Regular Meeting of January 11, 2016

It carried by unanimous voice vote to approve the minutes of January 11, 2016.

APPROVAL OF AGENDA:

It was moved by Vice Mayor Canepa, seconded by Councilmember Christensen and carried to approve the Agenda.

CONSENT AGENDA:

RESOLUTIONS:

Approving Use of Federal Asset Forfeiture Funds (DEA) to Contract with Action Target to Upgrade the Police Shooting Range

Resolution 16-6, Authorizing Use of Federal Asset Forfeiture (DEA) Funds and Enter into Contract with Action Target to Upgrade the Police Shooting Range

Adopting Composite Summary Memorandum of Understanding and Salary Schedule between the City of Daly City and AFSCME, Local 829

Resolution 16-7, Adopting Composite Summary Memorandum of Understanding with AFSCME Local 829

Authorizing Proposed Revisions to the Street Maintenance Worker I/II Job Specification (Civil Service)

Resolution 16-8, Adopting Revised Job Specifications for the Positions of Street Maintenance Worker I/II

Adopting Amendment to the Recurrent and Part-time Hourly Rates Schedule

Resolution 16-9, Adopting Amendment to Recurrent and Part-Time Hourly Rates Schedule

Authorizing Amendment to Traffic Regulations to: (1) Install a 4-ft. No Parking (red) zone at the south side of the driveway at 7535 Mission Street (TSR 16/43); and (2) Remove disabled parking (blue) zone in front of 838 Skyline Drive (TSR 16/50)

Resolution 16-10, Establishing Traffic Regulations

Adopting Composite Summary Memorandum of Understanding and Salary Schedules between the City of Daly City and Specific Employee Organizations

Resolution 16-11, Adopting Composite Summary Memorandum of Understanding with Teamsters Local 856 Clerical Technical Unit

Resolution 16-12, Adopting Composite Summary Memorandum of Understanding with Teamsters Local 856 Public Safety Dispatchers and Police Assistants Unit

Resolution 16-13, Adopting Composite Summary Memorandum of Understanding with Teamsters Local 856 Safety Inspectors

END OF CONSENT AGENDA

It was moved by Vice Mayor Canepa, seconded by Councilmember Buenaventura and carried to approve and adopt the Consent Agenda.

PUBLIC HEARINGS:

Approval of Daly City Participation in a Countywide Community Choice Aggregation Program and Introduction of Ordinance Authorizing the Implementation of a Community Choice Aggregation Program

City Manager Patricia Martel introduced Stephen Stolte to the Council as the new Environmental Compliance Manager for the City, a position responsible for overseeing the contract with Republic Services, the City's climate action plan, and other environmental issues. Mr. Stolte's experience and a background include working for San Mateo County's Environmental Services.

Mr. Stolte introduced the Community Choice Aggregation (CCA) Plan as a program allowing communities to pool their electricity demand in order to purchase and potentially develop power on behalf of local residents, businesses and municipal facilities. Peninsula Clean Energy (PCE) purchases electricity from renewable energy sources, while utility companies deliver energy, maintain lines and bill customers. The customers would then benefit from affordable rates and clean energy.

According to Mr. Stolte, the CCA is the quickest way to achieve Green Vision, the City's Climate Action Plan. He gave an overview of the benefits including providing competition in the energy market and using funding for innovative local energy programs. He explained how the program works and provided data on residential energy rates comparing PG&E and Clean Energy programs.

Mayor Torres opened the public hearing.

Dave Pine, San Mateo County Supervisor, expressed encouragement of Daly City joining the CCA program. Mr. Pine reported that six cities have signed on thus far. He declared it a powerful tool in reducing the carbon footprint in the county, while giving customers an alternative choice on where they receive their energy from.

Sharon Keenan, resident, had questions regarding the opt-out fee, the total number of jobs being generated by the project, and the cost of insurance for the program.

Ray Keenan, resident, questioned whether this item should be decided on by the voting public, instead of the City Council. Mr. Keenan also questioned whether the energy will be purchased from PG&E, and what exactly makes this energy "clean."

PUBLIC HEARINGS: Continued

Dana Smith, resident, expressed her support for the program. Ms. Smith was eager about the City bringing competition into energy production as well as the program's promotion of switching to cleaner types of energy.

It was moved by Councilmember Christensen, seconded by Councilmember Buenaventura and carried by vote to close the public hearing.

Gordon Tong, Sustainability Coordinator from San Mateo County, addressed the issue regarding the exit fee for residents opting to leave PG&E and becoming PCE customers. However, Ms. Martel noted that City facilities would automatically be enrolled under the CCA option. Furthermore, Mr. Tong explained the $100,000 written into the Joint Exercise of Power Agreement, which is there in the event that the CCA fails, and customers have to switch back to PG&E.

Discussion ensued with Mr. Tong addressing the state-wide 8-10k construction jobs the plan would generate, which would depend on where the renewable power projects are built. Mr. Tong added the CCA would be buying a bigger portion of its supple from cleaner types of power including those from solar farms, wind farms, and hydro-electric facilities.

Mayor Torres suggested establishing a frequently asked questions (FAQ) section on the website to address the community questions and all related matters pertaining to the CCA.

It was moved by Councilmember Guingona, seconded by Councilmember Christensen and carried that Ordinance No. 1406 be read by title only by the City Attorney.

Councilmember Guingona introduced the following ordinance:

Ordinance No. 1406, Authorizing the Implementation of a Community Choice Aggregation Program

It was moved by Vice Mayor Canepa, seconded by Councilmember Buenaventura and carried by unanimous roll call vote to adopt the following resolution:

Resolution 16-14, Authorizing the Execution of the Joint Exercise of Powers Agreement, which will Establish the Peninsula Clean Energy Authority with the City as a Charter Member and Appointing Michael Guingona to be the City's Director on the Board and Judith Christensen to be the City's Alternate Director

Mayor Torres made the appointments for the Director and the Alternate Direct on the Board.

PUBLIC HEARINGS: Continued

Public Hearing -- Introduction of Ordinance to Adopt Updated Model Water Efficient Landscape Ordinance

Director of Water and Wastewater Resources Patrick Sweetland reported that staff's recommendation is to adopt an updated Model Water Efficient Landscape Ordinance to comply with new outdoor watering requirements. Daly City benefits from the development of a regional ordinance, an ordinance which is a direct response to Governor Brown's Drought Executive Order to increase water efficiency.

Discussion ensued with Mr. Sweetland answering concerns raised by the Council. Furthermore, he gave an overview of the new requirements to the landscaping area allowed by the amended ordinance.

Mayor Torres stated there were no speakers on this item.

It was moved by Vice Mayor Canepa, seconded by Councilmember Buenaventura and carried to close the public hearing.

It was moved by Vice Mayor Canepa, seconded by Councilmember Buenaventura and carried that Ordinance No. 1407 be read by title only by the City Attorney.

Councilmember Christensen introduced the following ordinance:

Ordinance No. 1407, Repealing and Replacing Chapter 17.41 of the Daly City Municipal Code Re: Water Conservation in Landscaping Regulations

PUBLIC APPEARANCES/ORAL COMMUNICATIONS:

Sylvia Alvarez-Lynch, ODCPA, expressed her concern over the current litigation resulting from the Council's vote regarding a gun shop in the City, as well as litigation against Councilmember Canepa. Ms. Alvarez-Lynch was concerned over the cost of legal fees the City and residents may end up paying for these cases.

APPOINTMENTS:

It was moved by Councilmember Buenaventura, seconded by Vice Mayor Canepa and carried by unanimous roll call vote to appoint Juslyn Manalo to the Personnel Board with term ending February 8, 2022.

REPORTS:

Council Committee

There were no reports.

REPORTS: Continued

City Council

Councilmember Christensen reported receiving a number of e-mails from a resident complaining about a trailer endorsing the Supervisor election of Vice Mayor Canepa. The resident, Mr. Benedetti, expressed concern over the dangerous placement of the trailer along South Hill Boulevard.

Vice Mayor Canepa reported on the successes of the recent Daly City/Colma Chamber of Commerce event, as well as the community outreach for composting food wastes. Vice Mayor Canepa commended the Daly City senior centers as well as the Jefferson and Westmoor High School students for their interest in municipal government.

Mayor Torres reported he and the Mayor of Colma had the honor of making the address at the recent State of Cities Address.

Staff

City Manager Patricia Martel highlighted the recent swearing-in of 14 new police officers, as well as promotions within the Daly City Police Department. Ms. Martel expressed pride in the department due to the highly educated backgrounds of the newly sworn-in officers. She noted the excellence in standards and leadership in the department while providing safety for the residents. Ms. Martel commended Chief of Police Martinez and Police Captains Gamez and Hensley.

ADJOURNMENT:

It was moved by Councilmember Buenaventura, seconded by Councilmember Guingona and carried to adjourn the meeting at 8:18 PM in the memory of Carol L. Klatt, Susan G. Tone, and John McEntee.

City Clerk

Approved as submitted, this _____
day of _____, 2016.

_____
Mayor

City Council Meeting Agenda Report

Item # _____

Meeting Date: February 22, 2016

Subject: Setting Time and Place for Public Hearing - Introducing an Ordinance to Amend the Municipal Code Re: Surcharges on Prepaid Mobile Telephony Services (MTS)

Recommended Action

It is recommended the City Council set March 28, 2016 at 7:00 p.m. as the date and time for a public hearing - proposed Ordinance to the Daly City Municipal Code regarding Prepaid Mobile Telephony Services (MTS).

Discussion

State Assembly Bill 1717 (AB 1717) requires local jurisdictions to contract with the California State Board of Equalization (BOE) in order to receive revenue from local Utility User Taxes (UUT), local 911 charges, and any other local charges imposed on consumers of prepaid MTS. The City must have an ordinance that applies its local charge to prepaid MTS in order for the BOE to collect such fees from sellers of prepaid MTS.

Summary/Conclusion

Staff recommends that the City Council set March 28, 2016 at 7:00 p.m. as the date and time for a public hearing - proposed Ordinance to the Daly City Municipal Code regarding Prepaid Mobile Telephony Services (MTS).

Staff is available to provide any additional information desired by the Mayor or Councilmembers.

Respectfully submitted,

Christine Paras
Deputy Director of Finance &
Administrative Services

Lawrence Chiu
Director of Finance &
Administrative Services

City Council Meeting Agenda Report

Item # _____

Meeting Date: February 22, 2016

Subject: Accepting and Appropriating a $17,500 Grant from the Daly City Public Library Associates

Recommended Action

It is recommended the City Council accept a $17,500.00 grant from the Daly City Public Library Associates and appropriate this amount for the purchase of equipment and software for public use and educational programs.

Background/Discussion

The Daly City Public Library Associates provided a grant to the Library for the purposes of purchasing tablets, charging carts, and computers for public use. This contribution is attributed to grants from the Woodlawn Foundation, the Carl Gellert and Celia Berta Gellert Foundation, the Danford Foundation, the Town of Colma, Kaiser Permanente, and the generous support of members of the Daly City Public Library Associates.

Fiscal Impact

The $17,500 grant revenue from the Daly City Public Library Associates was not anticipated in the current Fiscal Year budget. These grant funds were received and will be expended in Fiscal Year 2015/16.

Summary/Conclusion

Staff is available to provide any additional information desired by the Mayor or City Council.

Respectfully submitted,

Chela Anderson
Library Services Manager

Joseph Curran
Director
Department of Library and Recreation Services

City of Daly City
Budget Transfer/Adjustment

Department/Division: Library and Recreation Services **Date:** 2/22/2016

Month/Fiscal Year: February / FY16

Explanation/Justification:

The Daly City Public Library Associates provided a grant to the Library for the purposes of purchasing tablets, charging carts, and computers for public use.

Approvals:

Originator

Director of Finance

Department Head

City Manager/City Council

City of Daly City Budget Transfer/Adjustment

Account Number	Account Name	Program/Project Name	Amount	Finance Only: Budget Balance Before	After
Use of Funds:					
01-120-128-4234	Special Departmental	Digital Media Grant	$17,500.00		
			$17,500.00	$	$
Source of Funds:					
Reduced Expenditures:					
New Revenue:					
01-120-128-3840	Private Contributions	Digital Media Grant	$17,500.00		
				$	$
		Total Source of Funds	$17,500.00		

For Capital Projects Only - Transfer of Funding Between Projects

From Account Number	Name/Type Code	Amount	**To** Account Number	Name/Type Code	Amount

Finance Only:

Verified By/Date | Entered By/Date | Audited By/Date | Document No.

City Council Meeting Agenda Report

Item # _____

Meeting Date: February 22, 2016

Subject: **Finding that the Bayshore Elementary School District's construction of a new public school at 155 Oriente Street (APN 005-124-100) conforms to the General Plan**

Recommended Action

Make the finding that the Bayshore Elementary School District's construction of a new public school at 155 Oriente Street (APN 005-124-100) conforms to the General Plan.

Background

Under a proposal by the Bayshore Elementary School District, the existing Robertson Intermediate School site located at 1 Martin Street would be sold and the sale proceeds used to construct a new school on the existing Bayshore Elementary School site located at 155 Oriente Street. The new school would combine the grade levels of the elementary school and intermediate school, thereby serving students from transitional kindergarten through eighth grade (TK-8) in a single school facility. A complete explanation of the project and the benefits of constructing the TK-8 are provided in the attached written narrative (see Attachment A – Project Narrative).

Discussion

Consistent with State law, the County Counsel is requesting that the City issue a finding that the new school's construction conforms to City's General Plan (see Attachment B – Letter from County Counsel dated January 19, 2016). Staff has reviewed the General Plan and finds that the school construction is in conformance with the Plan because the site is designated PF – Public Facilities.

Findings

Staff recommends that the City Council make the finding that the School District's construction of a new public school at 155 Oriente Street is consistent with the General Plan based on the following findings:

1. California Government Code section 65402(c) requires that a school district apply to the appropriate land use agency for a determination of whether a proposal to construct a public building complies with the general plan adopted by the jurisdiction in which the subject property is located;

2. The Bayshore Elementary School District ("District") is considering the building of a new, 47,000 square foot, 20-classroom facility school facility to serve students in transitional-kindergarten through the eighth grade on the current site of the District's Bayshore Elementary School, at 155 Oriente Street, in Daly City, California;

3. Under the Daly City 2030 General Plan ("General Plan"), 155 Oriente Street bears a land use designation of Public Facilities (PF);

4. According to the General Plan, the PF land use designation "applies to all land on which federal, state, or local government facilities are located," including "all public schools;"

5. The proposed new facility at 155 Oriente Street will be a public school and this use will be a continuation of a public school use that has long existed on this site; and

6. The City Council held a public meeting on this subject on February 22, 2016, providing an opportunity for public input.

Environmental Assessment

The City's General Plan consistency determination is exempt from the California Environmental Quality Act (CEQA) in accordance with CEQA Guidelines Section 15061(b)(3) – No Potential for Significant Environmental Effect.

Staff is available to provide any additional information desired by the Mayor or Council members.

Respectfully submitted,

Michael VanLonkhuysen
Interim Planning Manager

Attachment A – Project Narrative
Attachment B – Letter from County staff dated January 16, 2016

PROJECT DESCRIPTION

BKF No. 20149011
January 14, 2015

Mike Van Lonkhuysen
City of Daly City Planning Division
333 90th Street
Daly City, CA 94015-1895
mvanlonkhuysen@dalycity.org

Subject: Bayshore Elementary School District's Redevelopment of Robertson School Campus

Dear Mr. Van Lonkhuysen:

PROJECT INTENT

The Bayshore Elementary School District ("District") intends to process a Planned Development entitlement application to obtain approval for redeveloping the 6.96-acre site which currently houses the Robertson Intermediate School ("Robertson Property"). Redevelopment of the Robertson Property for single-family residences fits into the residential use of the surrounding area and will enhance the value of the land. Following the recommendation of the District's Surplus Property Committee, the District intends to sell the entitled Robertson Property. Proceeds from the sale would be used to construct a state-of-the art, energy efficient 21st century learning center on the existing Bayshore Elementary School site to serve students from Transitional Kindergarten through Eighth Grade.

The benefits of such a new TK-8 School project for the Bayshore school community are multifold:

- to provide a new campus that meets current State standards and anticipated District needs;
- to reduce energy consumption and create a "green" and healthy learning environment for all students;
- to reduce the current maintenance obligations that are split between the campuses; and,
- to consolidate District Staff on one campus, which will enhance professional collaboration and shared learning opportunities for students.

The Board of Education of the District adopted Resolution 14-15 on November 18, 2014, entitled "Resolution Authorizing Expenditure of Bond Proceeds on New School Construction and Authorizing the Institution of Judicial Validation Proceedings Relating Thereto," authorizing the District's use of Measure C funds for new school construction. The Board of Education also adopted Resolution 14-16 on January 13, 2015, entitled "Resolution Declaring Robertson Intermediate School Surplus and Approving Its Sale," which also specifically authorized the Superintendent to submit a Planned Development application to the City of Daly City in order to redevelop the Robertson Property for single-family residences. In

combination with Measure C funds, the proceeds from the sale of the Robertson Property as a 71-unit residential subdivision will enable construction of a new TK-8 School on the Bayshore School site.

PROJECT DESCRIPTION

The Robertson School Property comprises roughly 6.96 acres of land bounded by the Linda Vista single-family residential subdivisions on the South and East; multifamily housing along Martin Street and Midway Drive (along the northern and northeastern boundaries, respectively), and single-family with many zero-lot lines along Schwerin Street to the west of the site.

Redeveloping the Robertson Property for residential use must take into consideration the parcel's configuration ("L" shape) and topography. The site varies in ground elevations from roughly 120 feet in the southwest corner to roughly 30 feet on the Martin Street frontage on its northern boundary. This equates to an average grade of roughly 10-percent. However, the steepest slope areas are adjacent to the Linda Vista Drive subdivision along the south boundary with existing 2:1 slopes from the rear yards into the school site.

To mitigate these conditions, the development proposes to utilize a Planned Development approach to cluster 71 homes with open space buffers around the site perimeter. The average lot size of the proposed 71-home community is 2,550 square feet.

The proposed Planned Development provides the following planning advantages:

1. Transition: By clustering 71 single-family detached homes within courtyard areas, Planned Development approach can transition between the adjacent uses and fit the 71 homes within both the site configuration and topography.

2. Open Space Buffer: An open space area is provided around and through the development to provide a buffer to the existing communities. Additionally this buffer will serve to contain the steeper slopes and grade changes through the site.

3. Massing: Houses clustered around a private courtyard have a greater presence on the courtyard than they would on a linear public street for similar-sized houses. Additionally, the home clusters generally have smaller retaining walls or no walls between units encouraging a closer community and reducing the overall massing.

4. Access: The proposed development plan provides public access linkage (pedestrian and vehicle) between Linda Vista Drive and Martin Street. The public street will have sidewalk adjacent to parking since with clustered homes the locations where pedestrians access and cross the street are well delineated. Placing the sidewalk on only one side allows more land to be open space. Each cluster group will have its own local private street access to the public road and community

parking. The private streets would be accessible for emergency vehicle access. Courtyards will provide shared access to individual homes.

5. Stormwater Treatment: The cluster format provides shared driveway courtyards to be used for access, reducing the ratio of impervious surface to dwelling units which reduces the overall treatment volume. The private roadway layout provides separated storm flows which allow for local stormwater treatment at the source.

We believe that a 71-home cluster development approach, using a Planned Development (PD) zoning and development plan will serve the District and community. We can provide additional information as requested. Please contact me at the below number if you need additional information.

Respectfully,
BKF Engineers

Daniel Schaefer, PE
Principal/Vice President
00657-00100/705807.2

COUNTY COUNSEL
JOHN C. BEIERS

CHIEF DEPUTIES
KATHRYN E. MEOLA
JOHN D. NIBBELIN
PAUL A. OKADA
DAVID A. SILBERMAN

LEAD DEPUTIES
CLAIRE A. CUNNINGHAM
JUDITH A. HOLIBER

SCANNED 1-26-16

RECEIVED
JAN 25 2016
ECON/COM DEV DEPT

DEPUTIES
MELISSA D. ANDRIKOPOULOS
REBECCA M. ARCHER
AIMEE B. ARMSBY
PETER H. CRUZ
JAN E. ELLARD
NIRIT S. ERIKSSON
ADAM W. ELY
PETER K. FINCK
TIMOTHY J. FOX
JENNIFER S. KRASKE
BRIAN E. KULICH
DAVID A. LEVY
GLENN M. LEVY
KIMBERLY A. MARLOW
JUSTIN W. MATES
SANDRA Z. NIERENBERG
KRISTINA M. PASZEK
MONALI S. SHETH
TIMOTHY SHIMIZU
DANIEL J. VALIM
BRIAN J. WONG

COUNTY COUNSEL

COUNTY OF SAN MATEO
HALL OF JUSTICE AND RECORDS · 6TH FLOOR
400 COUNTY CENTER · REDWOOD CITY, CA 94063-1662
TELEPHONE: (650) 363-4250 · FACSIMILE: (650) 363-4034

January 19, 2016 *Please respond to: (650) 363-4757*

Via E-Mail (mvanlonkhuysen@dalycity.org) and United States Mail

Michael Van Lonkhuysen
Daly City Planning Division
333 90th Street
Daly City, CA 94015

Re: Request for General Plan Conformity Review Before the Daly City Planning Commission – Bayshore Elementary School District's Proposed New TK-8 School Building at Current Bayshore Elementary School Site, 155 Oriente Street, Daly City

Dear Mr. Van Lonkhuysen:

This office represents the Bayshore Elementary School District (the "District"), an elementary school district that presently serves approximately 380 students who reside in Daly City, and we write in support of the above-referenced request for General Plan Conformity Review, which we understand the Daly City Planning Commission will consider at its meeting of February 2, 2016.

As you know, the District plans to sell what is presently its Robertson Intermediate School site at 1 Martin Street, in Daly City, and consolidate the middle school operations there (grades 5 through 8) on the site that presently houses the District's Bayshore Elementary School at 155 Oriente Street. (Transitional kindergarten through 4th grade students are presently educated at Bayshore Elementary School.)

In order to move all of the District's students to the Oriente Street site, the District proposes to remove the existing buildings on that site, undertake construction of a new, larger modern school facility on the site, and install temporary structures to house students during project construction. The proposed new school facility would be approximately 47,000 square feet in size and would include a total of twenty classrooms, as well as supporting spaces (e.g.,

special education space, laboratories, nurse's office, administrative space, utility space, restrooms, food services, etc.). While the design capacity of the proposed new school facility would be as many as 638 students, the District anticipates that it may achieve a future stabilized enrollment level of approximately 568 students.

In connection with this proposed new structure, section 65402(c) of the California Government Code requires that the District apply to the appropriate land use agency for a determination of whether the proposed use (i.e., school use) complies with the general plan adopted by jurisdiction in which the property is located (i.e., Daly City).

The District believes that the project described above to be located at 155 Oriente Street does, in fact, comply with the *Daly City 2030 General Plan* ("General Plan"). In particular, the District notes that, under the General Plan, the land use designation for 155 Oriente Street is Public Facilities (PF). According to the General Plan, this land use designation "applies to all land on which federal, state, or local government facilities are located," including "all public schools."

The proposed facility will be a public school, consistent with the General Plan land use designation for the subject parcels. Moreover, the parcels have long been used by the District for school purposes and the proposed project will simply continue, in new facilities, a long-established use that is consistent with the General Plan.

Given the foregoing, the District appreciates your cooperation in agendizing this matter for consideration by the Daly City Planning Commission on on February 2, 2016. District staff and consultant are available to work with you as you prepare the matter for consideration by the Planning Commission. Along those lines, I have taken the liberty of preparing the attached draft resolution that the District would ask that you consider using as a starting point in preparing a resolution for the Planning Commission's action on this matter.

Thank you for your attention in this matter and I request that you confirm at your earliest convenience that this matter will be scheduled for consideration at the February 2, 2016 Planning Commission Meeting.

Very truly yours,

JOHN C. BEIERS, COUNTY COUNSEL

By: _____
John D. Nibbelin, Chief Deputy

cc: Dr. Audra Pittman, Superintendent, Bayshore Elementary School District

Paul Bunton, BCA Architects

JCB:JDN/jdn

Enclosure(s): Draft Resolution

DRAFT PLANNING COMMISSION RESOLUTION NO. _____

RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF DALY CITY DETERMINING THAT A PROPOSED NEW BAYSHORE ELEMENTARY SCHOOL DISTRICT SCHOOL FACILITY AT 155 ORIENTE STREET, DALY CITY, CALIFORNIA IS CONSISTENT WITH THE DALY CITY 2030 GENERAL PLAN

* * * * * *

RESOLVED, by the Planning Commission of the City of Daly City, County of San Mateo, State of California, that

WHEREAS, California Government Coe section 65402(c) requires that a school district apply to the appropriate land use agency for a determination of whether a proposal to construct a public building complies with the general plan adopted by the jurisdiction in which the subject property is located; and

WHEREAS, the Bayshore Elementary School District ("District") is considering the building of a new, 47,000 square foot, 20-classroom facility school facility to serve students in transitional-kindergarten through the eighth grade on the current site of the District's Bayshore Elementary School, at 155 Oriente Street, in Daly City, California; and

WHEREAS, under the *Daly City 2030 General Plan* ("General Plan"), 155 Oriente Street bears a land use designation of Public Facilities (PF); and

WHEREAS, according to the General Plan, the PF land use designation "applies to all land on which federal, state, or local government facilities are located," including "all public schools;" and

WHEREAS, the proposed new facility at 155 Oriente Street will be a public school and this use will be a continuation of a public school use that has long existed on this site; and

WHEREAS, this Commission held a public meeting on this subject on February 2, 2016, providing an opportunity for public input.

NOW, THEREFORE, IT IS HEREBY DETERMINED AND ORDERED that the District's proposed new school facility at 155 Oriente Street is consistent with the City's General Plan.

* * * * * *

[CCO-106720]

City Council Meeting Agenda Report

Item # _____

Meeting Date: February 22, 2016

Subject: Requesting Use of Federal Asset Forfeiture Funds (DEA) to Purchase Crowd Control Helmets

Recommended Action

Staff recommends Council approve the use of Federal Asset Forfeiture Funds (DEA) to purchase (120) Premier Crown, crowd control helmets for use by the Daly City Police Department.

Background

The current crowd control helmets in use by the Daly City Police Department have been in use for upwards of 25 years, and as a result they have become unreliable for deployment. Many have broken or missing parts, and there are not enough spares to outfit all officers in the event they are needed. The current helmets are not designed to accept integrated neck protection, considered a priority area for protection during potential crowd control deployment.

Discussion

The Daly City Police Department may be tasked with managing a demonstration or civil unrest situation. A key component to managing these events is to maintain a safe environment for the community during potentially emotional and dangerous situations. In preparation for response to these types of events, protective gear must consist of a helmet that protects the head, face and neck from hazardous substances and blunt objects should the situation become unruly.

Staff has researched replacement helmets and determined the Premier Crown helmet with integrated face and neck protection will best meet the needs of the sworn members of the Daly City Police Department.

Fiscal Impact

Funding is available through the use of Federal Asset Forfeiture Funds (DEA).

The one time purchase cost for the (120) Premier Crown helmets, face shields, and neck protection will be **$14,309.52.**

Summary/Conclusion

Staff is available to provide any additional information desired by the Mayor or Councilmembers.

Respectfully submitted,

Cameron Christensen
Lieutenant

Manuel Martinez Jr.
Chief of Police

City Council Agenda Report

Item # _____

Meeting Date: February 22, 2016

Subject: Notice of Completion for 2015-16 Street Resurfacing

Recommended Action

Staff recommends that the City Council accept the improvements completed in compliance with the construction contract for the 2015-16 Street Resurfacing project.

Background

The 2015-16 Street Resurfacing project included base failure repair and asphalt concrete (AC) overlay of approximately 2.0 centerline miles of City streets as shown on the attached location map. The streets were selected by a comprehensive evaluation through the City's Pavement Management Program, recommendations from the Street Maintenance Division, fund availability, and coordination with other planned projects of the City and utility companies to avoid immediate excavation in the newly rehabilitated streets.

Public Works solicited two alternative bids for this project: one utilizing the traditional deep lift repairs and AC overlay (Bid Alternate A) and one utilizing both deep lift repairs and cold-in-place recycling (CIR) with AC overlay (Bid Alternate B). Bid alternate B was awarded for the project.

Discussion

MCK Services, Inc. of Martinez, California, has completed all improvements required by the construction contract documents for a total amount of $1,790,820.40, including a balancing change order for $109,503.15. The original contract award was for $1,681,317.25. The difference of $109,503.15 (approximately 6.5%) above the original contract was due to the addition of Warwick Street between Shipley Avenue to Callan Boulevard, engineering changes in the field, and differences between estimated and actual bid item quantities.

MCK Services, Inc. proposed a field change for the pavement on Schwerin Street, by using 3-inch AC overlay in lieu of 3-inch deep lifts and 2.5-inch AC overlay. This change was based on the condition of the roadway base being better than anticipated.

Field changes were required on Warwick Street, Shipley Avenue, Christen Avenue, and Marbly Avenue. A geotechnical engineering firm was retained during the design phase to drill core samples to provide information on the existing pavement thickness. However, during construction the thickness of existing AC pavement was found to be much thinner than anticipated from the core samples. It was no longer feasible to implement the project the way it was originally designed due to the thinner than anticipated existing pavement. Therefore, instead of utilizing cold in-place recycling with AC overlay, these streets received 3-inch deep lifts and a 2.5-inch AC overlay.

Fiscal Impact

The contract has been completed in the total amount of $1,790,820.40 with funds available in the Capital Improvement Project Account 17-312-617, Water Fund Account 41-385-617 and 41-385-735, and Sanitation Fund Account 87-920-617.

Summary/Conclusion

The contractor's work is now complete and acceptable for City maintenance. Staff recommends that the City Council accept the completed improvements for the City's maintenance and use.

Staff is available to provide any additional information desired by the Mayor or Councilmembers.

Respectfully submitted,

Roland Yip
Civil Engineering Associate

John L. Fuller
Public Works Director

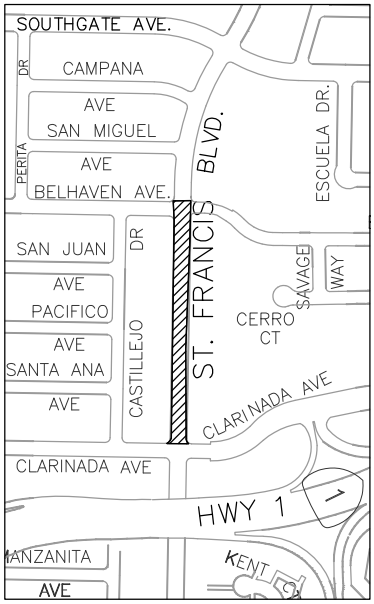
Attachment: Location Map
Notice of Completion
Resolution

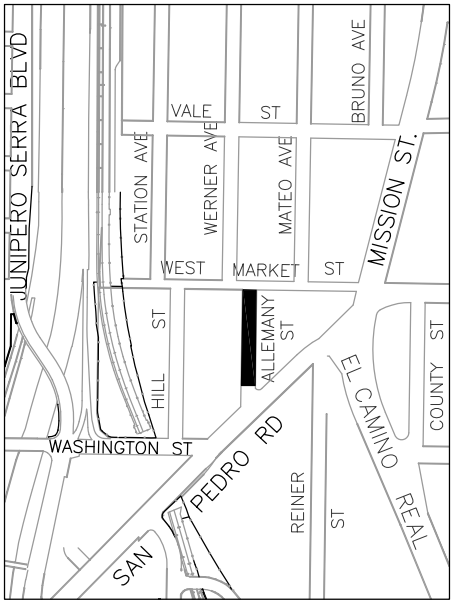
CITY OF DALY CITY

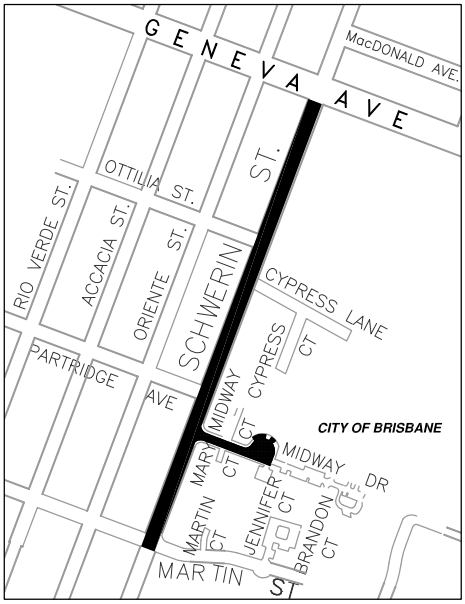
SAN MATEO COUNTY, CALIFORNIA

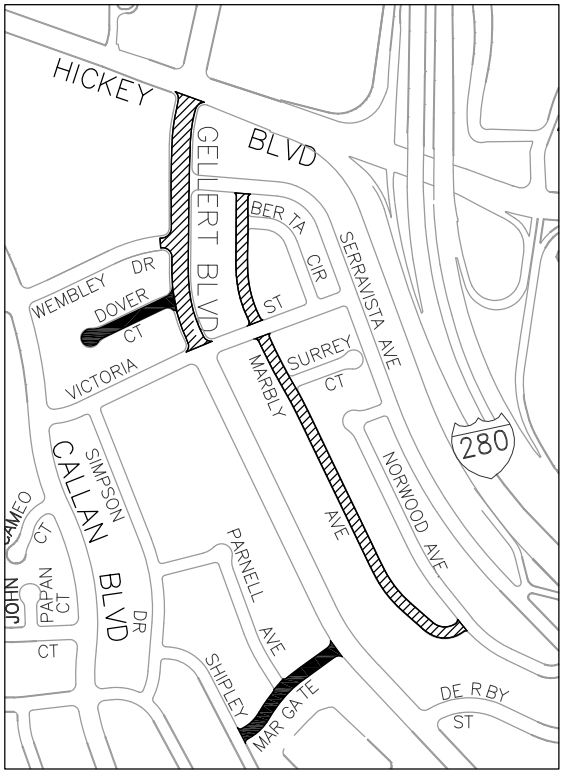
PROJECT LOCATION MAP

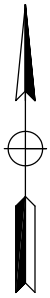
2015-16 STREET RESURFACING

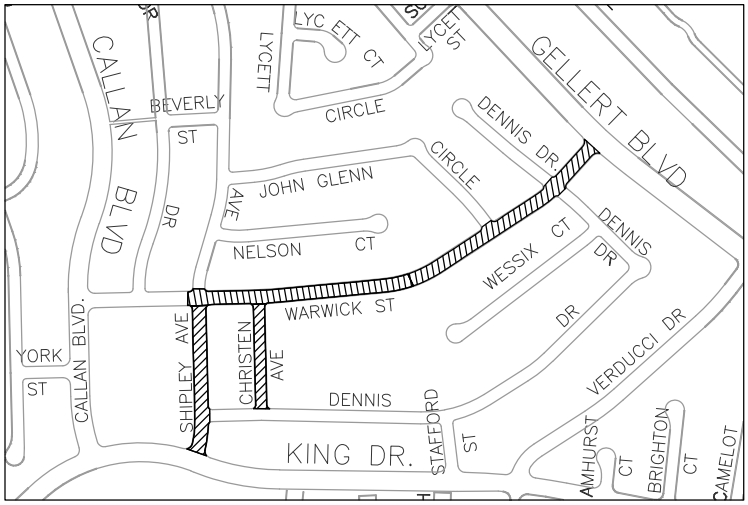












DEEP LIFT AND AC OVERLAY

DEEP LIFT AND AC OVERLAY (BID SCHEDULE A)

OR

COLD IN-PLACE RECYCLING (CIR) AND AC OVERLAY (BID SCHEDULE B)

0 500 1000

RECORDING REQUESTED BY

AND WHEN RECORDED MAIL TO

OFFICE OF THE CITY CLERK
CITY OF DALY CITY
333 - 90th Street
Daly City, California 94015

Notice of Completion

NOTICE IS HEREBY GIVEN as follows:

1. The date of completion of the work of improvement is: February 22, 2016

2. The owner of the work of improvements is: City of Daly City, a Municipal Corporation.

3. The address of the owner of the work of improvement is: City Hall
333 - 90th Street
Daly City, California 94015

4. The nature of the owner's interest or estate is: In fee.

5. The work of improvement is located in Daly City, California, and is particularly described as follows:

2015-16 STREET RESURFACING

The name of the original contractor for the work of improvement is:

MCK Services, Inc.
PO Box 5697
Concord CA 94524

Dated:_____

The undersigned, being duly sworn, says: That he is the owner of the aforesaid interest or estate in the property described in the foregoing notice; that he has read the same, and knows the contents thereof, and that the facts stated therein are true.

CITY OF DALY CITY, OWNER

_____
John L. Fuller, Public Works Director

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA,

COUNTY OF _____} SS.

Subscribed and sworn to (or affirmed) before me on this ___day of _____, ___20__,

by _____, proved to me on the basis of satisfactory evidence to be the person(s) who appeared before me.

Signature _____

_____
Name (Typed or Printed)
Notary Public in and for said County and State

RESOLUTION NO. _____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF DALY CITY ACCEPTING COMPLETION OF CERTAIN PROJECT IN THE DEPARTMENT OF PUBLIC WORKS

(2015-16 STREET RESURFACING)

A. The Project Manager has advised that the project set forth hereinafter has been completed in accordance with the terms of the contract with the City of Daly City and MCK Services, Inc., a California Corporation.

B. The City Council of the City of Daly City desires to acknowledge the completion of such project so that notice of completion may be given.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Daly City that pursuant to the above, the City of Daly City does hereby accept as complete the following described project:

2015-16 STREET RESURFACING

BE IT FURTHER RESOLVED by the City Council of the City of Daly City that said project be, and it is hereby accepted as complete, and at the expiration of thirty-five (35) days from this date, final payment in connection with this project be, and it is hereby authorized, provided that all statutory liens, claims and withholds are satisfied pursuant to law.

I hereby certify the foregoing to be a true copy of a Resolution adopted by the City Council of Daly City, California, at a special meeting thereof held on the _____ day of _____, 20____, by the following vote of the members thereof:

AYES, and in favor thereof, Councilmembers: _____

_____

NOES, Councilmembers: _____

ABSENT, Councilmembers: _____

_____
CITY CLERK OF THE CITY OF DALY CITY

APPROVED:

_____
MAYOR OF THE CITY OF DALY CITY

City Council Meeting Agenda Report

Item # _____

Meeting Date: February 22, 2016

Subject: Contract Amendment to the Three-Year Agreement Between the Human Services Agency of San Mateo County and the City of Daly City Providing Additional COLA and Sustainability Funds

Recommended Action

Staff recommends that the City Council authorize the City Manager to execute a contract amendment to the three-year agreement between the Human Services Agency of San Mateo County and the City of Daly City to accept additional funding in the amount of $20,938 to be allocated at the Community Services Center. The attached contract amendment provides for a one-time amount of $20,938 to provide for a COLA ($4,220) and sustainability funds ($16,718) for FY 2015-16.

Background/ Discussion

The City entered into a three-year agreement with the Human Service Agency of San Mateo County for a total of $409,713, for a term beginning July 1, 2013 through June 30, 2016. The agreement funds crisis intervention, prevention and other related human services for residents of Daly City, Colma, and Broadmoor, as described in Exhibit A of the agreement.

San Mateo County has provided support and financial commitment to the Community Services Center for nearly 40 years. Despite substantial cuts in human services funding at the state level, the County continues to make funding of eight countywide Core Service Agencies a priority. The three-year contract resulted from an extensive Safety Net Needs Assessment, requested and funded by the County Board of Supervisors. If not for the County's funding, it would be much more financially challenging to fund the estimated $408,900 Community Services Center budget.

Fiscal Impact

The one-time funds will help to defray increasing costs associated with providing the Core Service Agency for County residents.

Summary/Conclusion

Staff recommends that the City Council authorize the City Manager to execute a contract amendment to the three-year agreement between the Human Service Agency of San Mateo County and the City of Daly City to accept additional funding of $20,938.

Staff is available to provide any additional information desired by the Mayor or Councilmembers.

Respectfully submitted,

Julie Thuy Underwood
Assistant City Manager

Patricia E. Martel
City Manager

Attachments:
1) Amendment to the Agreement Between the County of San Mateo and City of Daly City- Daly City Community Service Center
2) Agreement Between the County of San Mateo and City of Daly City- Daly City Community Service Center

AMENDMENT TO AGREEMENT
BETWEEN THE COUNTY OF SAN MATEO
AND
CITY OF DALY CITY – DALY CITY COMMUNITY SERVICE CENTER

THIS THIRD AMENDMENT TO THE AGREEMENT, entered into this _____ day of _____, 20_____, by and between the COUNTY OF SAN MATEO, hereinafter called "County," and CITY OF DALY CITY - DALY CITY COMMUNITY SERVICE CENTER, hereinafter called "Contractor";

W I T N E S S E T H:

WHEREAS, pursuant to Government Code, Section 31000, County may contract with independent contractors for the furnishing of such services to or for County or any Department thereof;

WHEREAS, the parties entered into an Agreement for Core Services on June 4, 2013; and

WHEREAS, the parties amended that Agreement on April 4, 2014, to add the Cost of Living Adjustment (COLA); and

WHEREAS, the parties amend the Agreement on May 5, 2015, to provide Sustainability funding for Fiscal Year 2014-2015.

WHEREAS, the parties now wish to further amend the Agreement, to add the COLA for FY 2015-16, in the amount $4,220 and Sustainability funding in the amount of $16,718, for a total Agreement amount of $474,332.

NOW, THEREFORE, IT IS HEREBY AGREED BY THE PARTIES HERETO AS FOLLOWS:

1. Section 1 – Exhibits and Attachments - of the Agreement is amended to read as follows:

Exhibit A – Program/Project Description Revised 11/2015
Exhibit B1 – Method and Rate of Payment Revised 11/2015
Exhibit C – Contractor's Declaration Form
Exhibit D – Program Monitoring
Exhibit E – Performance Measures
Exhibit F – Clarity
Attachment I—§504 Compliance

2. Section 2 – Services to be performed by Contractor - of the Agreement is amended to read as follows:

In consideration of the payments set forth herein and in Exhibit “B1 Revised 11/2015” Contractor shall perform services for County in accordance with the terms, conditions and specifications set forth herein and in Exhibit “A Revised 11/2015” and Exhibit “F”.

3. Exhibit A Program/Project Description Revised 11/2015 and Exhibit B1 Method and Rate of Payment Revised 11/2015, replaces Exhibit A and B in its entirety.
(See Attached)

4. Section 3 – Payments – of the Agreement is amended to read as follows:

In consideration of the services provided by Contractor in accordance with all terms, conditions and specifications set forth herein and in Exhibit "A Revised 11/2015," County shall make payment to Contractor based on the rates and in the manner specified in Exhibit "B1 Revised 11/2015." The County reserves the right to withhold payment if the County determines that the quantity or quality of the work performed is unacceptable. In no event shall the County’s total fiscal obligation under this Agreement exceed **Four Hundred Seventy Four Thousand Three Hundred Thirty Two Dollars, ($474,332).**

5. All other terms and conditions of the Agreement dated June 4, 2013, and as amended on April 4, 2014, and May 5, 2015, between the County and Contractor shall remain in full force and effect.

IN WITNESS WHEREOF, the parties hereto, by their duly authorized representatives, have affixed their hands.

COUNTY OF SAN MATEO

By:_____
Iliana Rodriguez, Director, Human Services Agency

Date:_____

CITY OF DALY CITY – DALY CITY COMMUNITY SERVICE CENTER

_____
Contractor's Signature

Date:_____

Exhibit A Revised 11/2015
Program/Project Description

City of Daly City
Daly Center Community Service Center
Core Services FY 2013-16

In consideration of payments provided for in this Agreement, Contractor shall, under the general direction of the Director of the Human Services Agency (HSA), or her authorized representatives, provide services as described below:

1. CLIENTS TO BE SERVED: Low-income families, single parents, seniors, disabled individuals and other individuals needing assistance in meeting basic human needs relating to housing, food, shelter, clothing, financial support, energy assistance, advocacy, case management counseling, and follow-up. Low-income families and individuals needing help in accessing appropriate resources to meet their needs including education, employment, health, child care and legal assistance. Services will be provided in English and Spanish.

2. CLIENT SERVICES: Contractor will provide safety net services to fifteen hundred (1500) households and three thousand (3000) unduplicated individuals per year. Twelve hundred (1200) emergency services will be delivered per year. Following are the service areas: Colma, Daly City and Broadmoor.

On a quarterly basis Contractor will report the actual number of unduplicated households and individuals provided services in the following categories that apply to your Core Service Agency:

- **A.** **Contacts** with residents of the County by phone, walk-in or outreach.
- **B.** Comprehensive **Needs Assessments.**
- **C.** **Emergency Material Assistance** (food, clothing, shelter, infant needs and transportation) based on a comprehensive Needs Assessment that identifies need.
- **D.** **Emergency Shelter Services.**
- **E.** **Crisis Intervention.**
- **F.** Provision of technical assistance services including **translation or interpretation services, forms completion and letter writing.**
- **G.** **Information and Referral** to appropriate social service programs for English and non-English speakers.
- **H.** **Employment Assistance** including referral to employment or job training programs.
- **I.** **Advocacy Services.**
- **J.** **Financial Evaluation** for individuals who are applying for contractor's programs and/or screening for other financial aid programs offered to residents of this County.
- **K.** **Follow-up Services** of case intakes.
- **L.** **Housing Services** to families through the Season of Sharing Housing Assistance Fund, Housing Industry Fund, and other housing assistance programs.

3. EFFECTS OF SERVICE: Services will allow County residents in crisis to stabilize their situation over the short-term and to receive assistance in working towards long-term

solutions to emergency situations.

4. **OUTCOMES:** On a quarterly basis Contractor will collect and report data to County the outcomes of various program activities, and will continue to work with the Human Services Agency (HSA) staff to refine outcome measures.

A. **Homelessness Prevention:** All Rental Assistance and move-in costs paid will be tracked. A follow-up six months after assistance ends, will be completed to determine the clients' housing status. Client should be informed of the follow-up at the time of assistance and will provide three stable contact phone numbers of those likely to know client's whereabouts. The estimated outcome of the number of eligible households provided rental assistance will be one hundred (100) per year and the percentage of known clients still housed after six months will be 80% per year.

5. **OTHER CONTRACTOR RESPONSIBILITIES**

A. Contractor will provide a written policy to HSA for review, pursuant to which recipients of service shall have the opportunity to express and have considered their views, grievances, and complaints regarding the delivery of services.

B. Contractor agrees to report to HSA on a quarterly basis its services and activities under this contract.

C. Contractor agrees to accept appropriately referred clients from County for its contract services as part of their client base.

D. Contractor will establish written procedures and provide them to HSA for review to ensure that all Contractor employees, volunteers, consultants, subcontractors, or agents performing services under this Agreement report child abuse or neglect to a child protective agency defined in Penal Code Section 11165(k).

E. Contractor will provide HSA with a current budget which clearly states the total agency budget each year of the Agreement. In addition, Contractor will maintain all pertinent records and data collection forms that reflect activities listed in this contract for a period of three (3) years. Contractor will notify HSA within 30 working days of any changes to the agency budget and financial statements *(Non-profit Contractors will include any changes in board composition or board meeting schedules).*

F. Contractor will enter or supply client data in Core Clarity as requested by HSA.

G. Contractor will develop and maintain an agency written policy on client confidentiality and will assure that the staff is trained and follows the policy.

H. Contractor will participate in the San Mateo County homeless system redesign.

6. **SERVICE INTEGRATION:** Contractor and a designated HSA representative will coordinate service delivery so that clients receive timely and accurate services. Contractor will coordinate training to ensure that its staff is knowledgeable and up to date on the services provided by HSA, other community agencies and the current needs experienced in the community.

A. **Intake:** Contractor shall use a standard form for intake. After addressing any

emergency needs, if Contractor identifies a client as being eligible for CalWORKs or other HSA services, that client will be referred to HSA staff for further assistance. If further Core services are needed, HSA staff will refer the client back to Contractor. If the client is not eligible for HSA services, then the client remains with Contractor for services.

B. Release of Information: A signed client consent to services and release of information between Contractor and HSA will be obtained. Feedback on referrals will be timely.

7. WORKING RELATIONSHIP: Contractor will participate in decision-making on issues that impact Contractor's obligations under this Agreement. HSA encourages communication between HSA and Contractor staff.

A. Education and Training: Contractor's staff will participate in training provided by HSA as necessary to improve coordination and delivery of services.

B. Evaluation: HSA and Contractor will develop appropriate measures to assess the outcome of services.

Exhibit B1 Revised 11/2015
Method and Rate of Payment

Daly City – Daly City Community Service Center
Core Services FY 2013-16

In consideration of the services provided by Contractor and subject to the terms of the Agreement, County shall pay Contractor based on the following fee schedule and terms: This Exhibit B1 Revised 11/2015 replaces all previous versions in their entirety. County may terminate this Agreement or a portion of the services referred to in Exhibit A Revised 11/2015, based upon availability of federal, state, or county funds by providing a thirty (30) day written notice to Contractor. County reserves the right to withhold payment if County determines that the quantity or quality of the work performed is unacceptable.

Pre-Payment Terms:

1. Notification and requirements for the pre-payment for FY 2014-15 services was approved through a letter issued to qualifying agencies in August of 2014. The Clarity performance report will serve as the quarterly activity statement for funds prepaid in FY 2014-15. Any unspent funds or funds for disallowed costs for FY 2014-15 will be deducted from future allowable invoiced costs for FY 2015-16 until fully liquidated.

2. County at its discretion shall have the option of issuing one lump sum advanced payment for services in FY 2015-16. Otherwise, County will pay contractor quarterly based on the amount allocated for FY 2015-16. The amount allocated for FY 2015-16 shall be in the form of an amendment to this Agreement. Contractor shall be notified in writing in advance of the approved payment method prior to FY 2015-16. If pre-payment of services is approved by County, Contractor shall be responsible for submitting quarterly documentation of costs incurred for allowable expenses for services outlined in Exhibit A Revised 11/2015. Any unspent funds or funds for disallowed claims must be returned to the County no later than July 15, 2016.

General Payment Terms and Fees:

FY 2013-14:

1. All Payments to Contractor including COLAs have been paid in full for FY 2013-14 in the amount of $136,571 plus $2,049 for the COLA for a total of $138,620.

FY 2014-15:

1. For FY 2014-15 Contractor has been paid a total of $136,571 in general funds.
2. For FY 2014-15 Contractor has been paid a COLA of $4,097. In total, contractor has been paid $140,668.
3. The total obligation for FY 2014-15 shall not exceed $140,668.

FY 2015-16:

1. For FY 2015-16 Contractor will be paid $140,668 in general funds. This amount may be paid quarterly or in one lump sum as shown in the prepayment section above.

2. In FY 2015-16, County allocated an additional 3% COLA of $4,220 to provider calculated on the new base of $140,668. The $4,220 COLA amount may be paid quarterly or in one lump sum as shown in the prepayment section above.

3. The total obligation for FY 2015-16 shall not exceed $144,888.

Sustainability Funds

FY 2014-15

1. At the discretion of the County Manager, Contractor may be eligible to receive a one-time amount up to $33,438 during the term of the Agreement in sustainability funds should they successfully implement the use of the Core Clarity Data system and demonstrate proficiency through satisfactory Performance Measurement data. Funds shall be issued upon confirming implementation and positive review of performance data as approved by the County Manager.

FY 2015-16

1. At the discretion of the Director of the Human Services Agency, Contractor may be eligible to receive a one-time amount up to $16,718 during the term of the Agreement in sustainability funds following the evaluation of Performance Measurement data for the 1st quarter of FY 2015-16. Funds shall be issued upon confirming implementation and positive review of performance data as approved by the Director of the Human Services Agency.

Total Agreement Obligation

1. The total Agreement obligation including all services, fees and taxes for the term of the Agreement shall not exceed $474,332.

Required Quarterly Reports:

Contractor shall submit the below documentation for approval within 30 days of the end of the each quarter to San Mateo County Human Services Agency, Center on Homelessness, Beth Falls, One Davis Drive, Belmont, CA, 94002. Phone: (650) 802-7656. Email: bfalls@smchsa.org

Quarterly Reports must contain the following information:
• Client services delivered (Performance Measurement Report)
• Brief narrative describing highlights and issues from the quarter.
• Detailed Expense Report.
• Documentation of successfully funded commitments of new or increased revenues for the Fiscal Years 2013-16

AGREEMENT BETWEEN
THE
COUNTY OF SAN MATEO
AND
CITY OF DALY CITY – DALY CITY COMMUNITY SERVICE CENTER

THIS AGREEMENT, entered into this 4th day of June, 2013, by and between the COUNTY OF SAN MATEO, hereinafter called "County," and CITY OF DALY CITY – DALY CITY COMMUNITY SERVICE CENTER, hereinafter called "Contractor";

W I T N E S S E T H:

WHEREAS, pursuant to Government Code, Section 31000, County may contract with independent contractors for the furnishing of such services to or for County or any Department thereof;

WHEREAS, it is necessary and desirable that Contractor be retained for the purpose of providing Core Services.

NOW, THEREFORE, IT IS HEREBY AGREED BY THE PARTIES HERETO AS FOLLOWS:

1. Exhibits and Attachments

The following exhibits and attachments are included hereto and incorporated by reference herein:

Exhibit A—Program/Project Description
Exhibit B—Method and Rate of Payment
Exhibit C—Contractor's Declaration Form
Exhibit D—Program Monitoring
Exhibit E—Outcome Based Management (OBM) Initiative
Attachment I—§504 Compliance

2. Services to be performed by Contractor

In consideration of the payments set forth herein and in Exhibit "B," Contractor shall perform services for County in accordance with the terms, conditions and specifications set forth herein and in Exhibit "A."

oc: City Clerk
cc: CM's Files ✓

3. Payments

In consideration of the services provided by Contractor in accordance with all terms, conditions and specifications set forth herein and in Exhibit "A," County shall make payment to Contractor based on the rates and in the manner specified in Exhibit "B." The County reserves the right to withhold payment if the County determines that the quantity or quality of the work performed is unacceptable. In no event shall the County's total fiscal obligation under this Agreement exceed Four Hundred Nine Thousand Seven Hundred Thirteen Dollars, ($409,713).

4. Term and Termination

Subject to compliance with all terms and conditions, the term of this Agreement shall be from July 1, 2013 through June 30, 2016.

This Agreement may be terminated by Contractor, the Director of the Human Services Agency or his/her designee at any time without a requirement of good cause upon thirty (30) days' written notice to the other party.

In the event of termination, all finished or unfinished documents, data, studies, maps, photographs, reports, and materials (hereafter referred to as materials) prepared by Contractor under this Agreement shall become the property of the County and shall be promptly delivered to the County. Upon termination, the Contractor may make and retain a copy of such materials. Subject to availability of funding, Contractor shall be entitled to receive payment for work/services provided prior to termination of the Agreement. Such payment shall be that portion of the full payment which is determined by comparing the work/services completed to the work/services required by the Agreement.

5. Availability of Funds

The County may terminate this Agreement or a portion of the services referenced in the Attachments and Exhibits based upon unavailability of Federal, State, or County funds, by providing written notice to Contractor as soon as is reasonably possible after the County learns of said unavailability of outside funding.

6. Relationship of Parties

Contractor agrees and understands that the work/services performed under this Agreement are performed as an independent Contractor and not as an employee of the County and that Contractor acquires none of the rights, privileges, powers, or advantages of County employees.

7. Hold Harmless

Contractor shall indemnify and save harmless County, its officers, agents, employees, and servants from all claims, suits, or actions of every name, kind, and description, brought for, or on account of: (A) injuries to or death of any person, including Contractor, or (B) damage to any property of any kind whatsoever and to whomsoever belonging, (C) any sanctions, penalties, or claims of damages resulting from Contractor's failure to comply with the requirements set forth in the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and all Federal regulations promulgated thereunder, as amended, or (D) any other loss or cost, including but not limited to that caused by the concurrent active or passive negligence of County, its officers, agents, employees, or servants, resulting from the performance of any work required of Contractor or payments made pursuant to this Agreement, provided that this shall not apply to injuries or damage for which County has been found in a court of competent jurisdiction to be solely liable by reason of its own negligence or willful misconduct.

The duty of Contractor to indemnify and save harmless as set forth herein, shall include the duty to defend as set forth in Section 2778 of the California Civil Code.

8. Assignability and Subcontracting

Contractor shall not assign this Agreement or any portion thereof to a third party or subcontract with a third party to provide services required by contractor under this Agreement without the prior written consent of County. Any such assignment or subcontract without the County's prior written consent shall give County the right to automatically and immediately terminate this Agreement.

9. Insurance

The Contractor shall not commence work or be required to commence work under this Agreement unless and until all insurance required under this paragraph has been obtained and such insurance has been approved by Risk Management, and Contractor shall use diligence to obtain such insurance and to obtain such approval. The Contractor shall furnish the County with certificates of insurance evidencing the required coverage, and there shall be a specific contractual liability endorsement extending the Contractor's coverage to include the contractual liability assumed by the Contractor pursuant to this Agreement. These certificates shall specify or be endorsed to provide that thirty (30) days' notice must be given, in writing, to the County of any pending change in the limits of liability or of any cancellation or modification of the policy.

(1) **Worker's Compensation and Employer's Liability Insurance** The Contractor shall have in effect during the entire life of this Agreement Workers' Compensation and Employer's Liability Insurance providing full statutory coverage. In signing this Agreement, the Contractor certifies, as required by Section 1861 of the California Labor Code, that it is aware of the provisions of Section 3700 of the California Labor Code which requires every employer to be insured against liability for Worker's Compensation or to undertake self-insurance in accordance with the provisions of the Code, and I will comply with such provisions before commencing the performance of

the work of this Agreement.

(2) **Liability Insurance** The Contractor shall take out and maintain during the life of this Agreement such Bodily Injury Liability and Property Damage Liability Insurance as shall protect him/her while performing work covered by this Agreement from any and all claims for damages for bodily injury, including accidental death, as well as any and all claims for property damage which may arise from contractors operations under this Agreement, whether such operations be by himself/herself or by any sub-contractor or by anyone directly or indirectly employed by either of them. Such insurance shall be combined single limit bodily injury and property damage for each occurrence and shall be not less than the amount specified below.

Such insurance shall include:

(a)	Comprehensive General Liability	$1,000,000
(b)	Motor Vehicle Liability Insurance	$1,000,000
(c)	Professional Liability	$1,000,000

County and its officers, agents, employees and servants shall be named as additional insured on any such policies of insurance, which shall also contain a provision that the insurance afforded thereby to the County, its officers, agents, employees and servants shall be primary insurance to the full limits of liability of the policy, and that if the County or its officers and employees have other insurance against the loss covered by such a policy, such other insurance shall be excess insurance only.

In the event of the breach of any provision of this section, or in the event any notice is received which indicates any required insurance coverage will be diminished or canceled, the County of San Mateo at its option, may, notwithstanding any other provision of this Agreement to the contrary, immediately declare a material breach of this Agreement and suspend all further work pursuant to this Agreement.

10. Compliance with laws; payment of Permits/Licenses

All services to be performed by Contractor pursuant to this Agreement shall be performed in accordance with all applicable Federal, State, County, and municipal laws, including, but not limited to, Health Insurance Portability and Accountability Act of 1996 (HIPAA) and all Federal regulations promulgated thereunder, as amended, and the Americans with Disabilities Act of 1990, as amended, and Section 504 of the Rehabilitation Act of 1973, as amended and attached hereto and incorporated by reference herein as Attachment "I," which prohibits discrimination on the basis of handicap in programs and activities receiving any Federal or County financial assistance. Such services shall also be performed in accordance with all applicable ordinances and regulations, including, but not limited to, appropriate licensure, certification regulations, provisions pertaining to confidentiality of records, and applicable quality assurance regulations. Further, Contractor certifies that the Contractor and all of its subcontractors will adhere to all applicable provisions of Chapter 4.106 of the San Mateo County Ordinance Code, which regulates the use of disposable food service ware.

In the event of a conflict between the terms of this agreement and State, Federal, County, or municipal law or regulations, the requirements of the applicable law will take precedence over the requirements set forth in this Agreement.

Contractor will timely and accurately complete, sign, and submit all necessary documentation of compliance.

11. Non-Discrimination and Other Requirements

A. *Section 504 applies only to Contractor who are providing services to members of the public.* Contractor shall comply with § 504 of the Rehabilitation Act of 1973, which provides that no otherwise qualified handicapped individual shall, solely by reason of a disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination in the performance of this Agreement.

B. *General non-discrimination.* No person shall, on the grounds of race, color, religion, ancestry, gender, age (over 40), national origin, medical condition (cancer), physical or mental disability, sexual orientation, pregnancy, childbirth or related medical condition, marital status, or political affiliation be denied any benefits or subject to discrimination under this Agreement.

C. *Equal employment opportunity.* Contractor shall ensure equal employment opportunity based on objective standards of recruitment, classification, selection, promotion, compensation, performance evaluation, and management relations for all employees under this Agreement. Contractor's equal employment policies shall be made available to County of San Mateo upon request.

D. *Violation of Non-discrimination provisions.* Violation of the non-discrimination provisions of this Agreement shall be considered a breach of this Agreement and subject the Contractor to penalties, to be determined by the County Manager, including but not limited to

   i) termination of this Agreement;

   ii) disqualification of the Contractor from bidding on or being awarded a County contract for a period of up to 3 years;

iii) liquidated damages of $2,500 per violation;
iv) imposition of other appropriate contractual and civil remedies and sanctions, as determined by the County Manager.

To effectuate the provisions of this section, the County Manager shall have the authority to examine Contractor's employment records with respect to compliance with this paragraph and/or to set off all or any portion of the amount described in this paragraph against amounts due to Contractor under the Contract or any other Contract between Contractor and County.

Contractor shall report to the County Manager the filing by any person in any court of any complaint of discrimination or the filing by any person of any and all charges with the Equal Employment Opportunity Commission, the Fair Employment and Housing Commission or any other entity charged with the investigation of allegations within 30 days of such filing, provided that within such 30 days such entity has not notified Contractor that such charges are dismissed or otherwise unfounded. Such notification shall include the name of the complainant, a copy of such complaint, and a description of the circumstance. Contractor shall provide County with a copy of their response to the Complaint when filed.

E. *Compliance with Equal Benefits Ordinance.* With respect to the provision of employee benefits, Contractor shall comply with the County Ordinance which prohibits contractors from discriminating in the provision of employee benefits between an employee with a domestic partner and an employee with a spouse.

F. The Contractor shall comply fully with the non-discrimination requirements required by 41 CFR 60-741.5(a), which is incorporated herein as if fully set forth.

12. <u>Compliance with Contractor Employee Jury Service Ordinance</u>

Contractor shall comply with the County Ordinance with respect to provision of jury duty pay to employees and have and adhere to a written policy that provides that its employees shall receive from the Contractor, on an annual basis, no less than five days of regular pay for actual jury service in San Mateo County. The policy may provide that employees deposit any fees received for such jury service with the Contractor or that the Contractor deduct from the employees' regular pay the fees received for jury service.

13. Retention of Records, Right to Monitor and Audit

(a) CONTRACTOR shall maintain all required records for three (3) years after the COUNTY makes final payment and all other pending matters are closed, and shall be subject to the examination and/or audit of the County, a Federal grantor agency, and the State of California.

(b) Reporting and Record Keeping: CONTRACTOR shall comply with all program and fiscal reporting requirements set forth by appropriate Federal, State and local agencies, and as required by the COUNTY.

(c) CONTRACTOR agrees to provide to COUNTY, to any Federal or State department having monitoring or review authority, to COUNTY's authorized representatives, and/or their appropriate audit agencies upon reasonable notice, access to and the right to examine all records and documents necessary to determine compliance with relevant Federal, State, and local statutes, rules and regulations, and this Agreement, and to evaluate the quality, appropriateness and timeliness of services performed.

14. Merger Clause

This Agreement, including the Exhibits attached hereto and incorporated herein by reference, constitutes the sole Agreement of the parties hereto and correctly states the rights, duties, and obligations of each party as of this document's date. In the event that any term, condition, provision, requirement or specification set forth in this body of the agreement conflicts with or is inconsistent with any term, condition, provision, requirement or specification in any exhibit and/or attachment to this agreement, the provisions of this body of the agreement shall prevail. Any prior agreement, promises, negotiations, or representations between the parties not expressly stated in this document are not binding. All subsequent modifications shall be in writing and signed by the parties.

15. Controlling Law and Venue

The validity of this Agreement and of its terms or provisions, as well as the rights and duties of the parties hereunder, the interpretation, and performance of this Agreement shall be governed by the laws of the State of California. Any dispute arising out of this Agreement shall be venued either in the San Mateo County Superior Court or the United States District Court for the Northern District of California.

16. Notices

Any notice, request, demand, or other communication required or permitted hereunder shall be deemed to be properly given when both (1) transmitted via facsimile to the telephone number listed below and (2) either deposited in the United Sates mail, postage prepaid, or when deposited for overnight delivery with an established overnight courier that provides a tracking number showing confirmation of receipt for transmittal, charges prepaid, addressed to:

In the case of County, to:
County of San Mateo Human Services Agency
Carine Verdusco, Analyst
472 Harbor Boulevard, Building C
Belmont, CA 94002
FAX: (650) 596-3478

In the case of Contractor, to:
City of Daly City – Daly City Community Service Center
Patricia E. Martel, City Manager
350 90th Street – 1st Floor
Daly City, CA 94015
FAX: (650) 991-8227

In the event that the facsimile transmission is not possible, notice shall be given both by United States mail and an overnight courier as outlined above.

IN WITNESS WHEREOF, the parties hereto, by their duly authorized representatives, have affixed their hands.

COUNTY OF SAN MATEO

By: _____
President, Board of Supervisors, San Mateo County

Date: 6/4/2013

ATTEST:

By: _____
Clerk of Said Board

CITY OF DALY CITY – DALY CITY COMMUNITY SERVICE CENTER
Patricia E. Martel, City Manager
350 90th Street – 1st Floor
Daly City, CA 94015

_____
Contractor's Signature

Date: 5/14/2013

Long Form Agreement/Non Business Associate v 8/19/08

Exhibit A
Program/Project Description

City of Daly City - Daly City Community Center
Core Services FY 2013-2016

In consideration of payments provided for in this Agreement, Contractor shall, under the general direction of the Director of the Human Services Agency, or her authorized representatives, provide services as described below:

1. **CLIENTS TO BE SERVED:** Low-income families, single parents, seniors, disabled and individuals needing assistance in meeting basic human needs relating to housing, food, shelter, clothing, financial support, energy assistance, advocacy, case management counseling, and follow-up. Low-income families and individuals needing help in assessing appropriate resources to meet their needs including education, employment, health, child care and legal assistance. Services will be provided in English and Spanish.

2. **CLIENT SERVICES:** Contractor will provide safety net services to seven hundred twenty (720) unduplicated individuals and families per year for the term of this Agreement in the following service areas: Broadmoor, Colma, and Daly City.

On a quarterly basis Contractor will report the actual number of unduplicated individuals provided services in the following categories: Emergency Material Assistance, Emergency Shelter Services, and Case Management required in order to provide the preceding two services.

Definitions for and additional information regarding each category set forth below are located in the Core Services Procedure Manual, Section 15 Glossary, page 318. Contractor and County agree that the definitions set forth in the Glossary of the Core Services Manual are incorporated by reference as it is fully set forth in this Agreement. The Contractor will provide the following services, supporting activities and related information from July 1, 2013 through June 30, 2016.

A. **Contacts** with residents of the County by phone, walk-in or outreach.
B. Comprehensive **Needs Assessments.**
C. **Emergency Material Assistance** (food, clothing, shelter, infant needs and transportation) based on a comprehensive Needs Assessment that identifies need.
D. **Emergency Shelter Services.**
E. **Crisis Intervention.**
F. Provision of technical assistance services including **translation or interpretation services, forms completion and letter writing.**
G. **Information and Referral** to appropriate social service programs for English and non-English speakers.
H. **Employment Assistance** including referral to employment or job training programs.
I. **Advocacy Services.**
J. **Financial Evaluation** for individuals who are applying for contractor's programs and/or screening for other financial aid programs offered to residents of this County.

K. **Follow-up Services** of case intakes.
L. **Housing Services** to families through the Season of Sharing Housing Assistance Fund, Housing Industry Fund, and other housing assistance programs.

3. **EFFECTS OF SERVICE:** Services will allow County residents in crisis to stabilize their situation over the short-term and to receive assistance in working towards long-term solutions to emergency situations.

4. **OUTCOMES:** On a quarterly basis Contractor will collect and report data to County outcomes of various program activities, and will continue to work with the Human Services Agency (HSA) staff to refine outcome measures.

A. **Emergency Services** - For Emergency Assistance including: clothing, food, shelter vouchers and transportation, delivery of the service itself will be the outcome. The estimated outcome for the FY 2013-16 will be seven hundred twenty (720) emergency services delivered per year.

B. **Homelessness Prevention** - All Rental Assistance and move-in costs paid will be tracked. A follow-up, six months after the assistance ends, will be completed to determine housing status. Clients should be informed of follow-up at the time of assistance and three stable contact phone numbers of those likely to know client's whereabouts will be collected. The estimated outcome of the number of eligible households provided rental assistance will be 100 per year and the percentage of known clients still housed after six (6) months will be seventy (70%).

5. **OTHER CONTRACTOR RESPONSIBILITIES**

A. The Contractor will provide a written policy to HSA for review, pursuant to which recipients of service will have the opportunity to express and have considered their views, grievances, and complaints regarding the delivery of services.

B. The Contractor agrees to report to HSA on a quarterly basis its services and activities under this contract, and to accept appropriately referred clients from the County for its contract services as part of their client base.

C. The Contractor will establish written procedures and provide then to HSA for review, to ensure that all Contractor employees, volunteers, consultants, subcontractors, or agents performing services under this Agreement report child abuse or neglect to a child protective agency defined in Penal Code Section 11165(k).

D. The Contractor will provide HSA with a current budget which clearly states the total agency budget. In addition, the Contractor will maintain all pertinent records and data collection forms that reflect activities listed in this contract for a period of three (3) years. The Contractor will notify HSA within five days of any changes to the agency budget or financial statements (*Non profit Contractors will include any changes in board composition or board meeting schedules*).

E. Contractor will develop and maintain an agency written policy on confidentiality and Contractor will assure that staff is trained and follows the policy.

F. Contractor will enter or supply client data in the Homeless Management Information System (HMIS/HOPE) as requested by HSA.

6. SERVICE INTEGRATION: Contractor and a designated HSA representative will coordinate service delivery so that clients receive timely and accurate services. Contractor will coordinate training to insure that its staff is knowledgeable and up to date on the services provided by HSA, other community agencies and the current needs experienced in the community.

A. Intake: Contractor shall use a standard form for intake. After addressing any emergency needs, if Contractor identifies a client as being eligible for CalWORKs or other HSA services, that client will be referred to HSA staff for further assistance. If further Core services are needed, HSA staff will refer the client back to Contractor. If the client is not eligible for HSA services, then the client remains with Contractor for services.

B. Release of Information: A signed client consent to services and release of information between the Contractor and HSA will be obtained. Feedback on referrals will be timely.

7. WORKING RELATIONSHIP: Contractor will participate in decision-making on issues that impact Contractor's obligations under this Agreement. HSA encourages communication between HSA and Contractor staff. Contractor will meet Quarterly with the HSA Regional Program Manager to coordinate programs and to develop and monitor Contractor's progress.

A. Education and Training: Contractor's staff will participate in training provided by HSA as necessary to improve coordination and delivery of services.

B. Evaluation: HSA and Contractor will develop appropriate measures to assess the outcome of services.

Exhibit B
Method and Rate of Payment

City of Daly City – Daly City Community Center
Core Services 2013-16

In full consideration of the services provided by the Contractor pursuant to this Agreement, the County shall pay the Contractor a quarterly amount not to exceed $34,142.75 upon receipt and approval of invoice. The Contractor shall submit invoices within 30 days of the end of the service month and the County shall pay the invoices within 20 working days following receipt of invoice and required reports as shown below. The total amount shall not exceed $136,571.00 per Fiscal Year.

In any event the total amount of the Agreement for FY 2013-16 shall not exceed $409,713.00.

County may terminate this Agreement or a portion of the services referred to in Exhibit A, based upon availability of federal, state, or County funds by providing a thirty (30) day written notice to Contractor. The County reserves the right to withhold payment if the County determines that the quantity or quality of the work performed is unacceptable.

All Quarterly Reports and Invoices are to be submitted to the San Mateo County Human Services Agency Center on Homelessness, Carine Verdusco, 472 Harbor Boulevard, Building C, Belmont, CA, 94002. Phone: (650) 802-7656.

Required Reports to process invoices:

Quarterly Reports must contain the following information:
• Client services delivered
• Documentation of successfully funded commitments of new or increased revenues for the Fiscal Years 2013-16
• County OBM Outcomes Based Management Report
• Contract Service Report

Exhibit C
County of San Mateo
Contractor's Declaration Form

I. CONTRACTOR INFORMATION

Contractor Name:	City of Daly City – Daly City Community Center	Phone:	(650) 991-8007
Contact Person:	Wanda Nalls, Executive Director	Fax:	(650) 991-8227
Address:	350 90th Street – 1st Floor – Daly City, CA 94015	Number of employees:	

II. EQUAL BENEFITS (check one or more boxes)

Contractors with contracts in excess of $5,000 must treat spouses and domestic partners equally as to employee benefits.

- [X] Contractor complies with the County's Equal Benefits Ordinance by:
  - [ ] offering equal benefits to employees with spouses and employees with domestic partners.
  - [ ] offering a cash equivalent payment to eligible employees in lieu of equal benefits.
- [ ] Contractor does not comply with the County's Equal Benefits Ordinance.
- [ ] Contractor is exempt from this requirement because:
  - [ ] Contractor has no employees, does not provide benefits to employees' spouses, or the contract is for $5,000 or less.
  - [ ] Contractor is a party to a collective bargaining agreement that began on _____ (date) and expires on _____ (date), and intends to offer equal benefits when said agreement expires.

III. NON-DISCRIMINATION (check appropriate box)

- [ ] Finding(s) of discrimination have been issued against Contractor within the past year by the Equal Employment Opportunity Commission, Fair Employment and Housing Commission, or other investigative entity. Please see attached sheet of paper explaining the outcome(s) or remedy for the discrimination.
- [X] No finding of discrimination has been issued in the past year against the Contractor by the Equal Employment Opportunity Commission, Fair Employment and Housing Commission, or any other entity.

IV. EMPLOYEE JURY SERVICE (check one or more boxes)

Contractors with original or amended contracts in excess of $100,000 must have and adhere to a written policy that provides its employees living in San Mateo County up to five days regular pay for actual jury service in the County.

- [X] Contractor complies with the County's Employee Jury Service Ordinance.
- [ ] Contractor does not comply with the County's Employee Jury Service Ordinance.
- [ ] Contractor is exempt from this requirement because:
  - [ ] the contract is for $100,000 or less.
  - [ ] Contractor is a party to a collective bargaining agreement that began on _____ (date) and expires on _____ (date), and intends to comply when the collective bargaining agreement expires.
  - [ ] Contractor has no employees.
  - [ ] Contractor has no employees who live in San Mateo County.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, and that I am authorized to bind this entity contractually.

Patricia E. Martel
Signature

Patricia E. Martel
Name

5/14/2013
Date

City Manager
Title

Exhibit D
Program Monitoring

City of Daly City – Daly City Community Service Center
Core Services FY 2013-16

Contractor will provide to County on demand, all requested income and demographic data about the recipients of services under this Agreement. This data may include race, family size, income, sex and handicap status, if any, of the head of household.

Contractor will participate in regular meetings with HSA-designated staff to develop and monitor Contractor's progress by providing to HSA monthly financial statements and other required information.

Contractor will provide County with an Annual Audit Report. The Audit report must include a statement of compliance with OMB Circular A -133 "Audits of States", Local Governments and Non-Profit Organizations".

Exhibit E
Outcome Based Management Initiative

City of Daly City – Daly City Community Service Center
Core Services
FY 2013-16

Responsibilities relating to the County's OBM Initiative:

Contractor Responsibilities

Contractor will engage in activities and supply information required to implement the County's Outcome-Based Management and Budgeting (OBM) initiative. Activities include, but are not limited to:

- Attending planning and informational meetings;
- Developing program performance and outcome measurements;
- Collecting and submitting data necessary to fulfill measurement requirements;
- Participating in technical assistance and training events offered by the Human Services Agency and seeking technical assistance and training necessary to fulfill measurement requirements;
- Participating in a review of performance and outcome information; and
- Complying with OBM Implementation Guidelines as specified in memos released by the Human Services Agency.
- Contractor will participate in HOPE (Housing Our People Effectively) activities as mutually agreed upon. HOPE is a ten-year action plan that brings together the business, nonprofit, and public sector communities to address the challenging issue of homelessness at its core, rather than manage it at the margins.

County Responsibilities

County, through the Human Services Agency, will

- Provide technical assistance and support to assist Contractor's implementation of the County's Outcome-Based Management and Budgeting (OBM) initiative;
- Issue and review OBM Implementation Guidelines; and
- Conduct review of performance and outcome information.

ATTACHMENT I

Assurance of Compliance with Section 504 of the Rehabilitation Act of 1973, as Amended

The undersigned (hereinafter called the "Contractor(s)") hereby agrees that it will comply with Section 504 of the Rehabilitation Act of 1973, as amended, all requirements imposed by the applicable DHHS regulation, and all guidelines and interpretations issued pursuant thereto.

The Contractor(s) gives/give this assurance in consideration of for the purpose of obtaining contracts after the date of this assurance. The Contractor(s) recognizes/recognize and agrees/agree that contracts will be extended in reliance on the representations and agreements made in this assurance. This assurance is binding on the Contractor(s), its successors, transferees, and assignees, and the person or persons whose signatures appear below are authorized to sign this assurance on behalf of the Contractor(s).

The Contractor(s): (Check a or b)

☒ a. Employs fewer than 15 persons.

☐ b. Employs 15 or more persons and, pursuant to section 84.7 (a) of the regulation (45 C.F.R. 84.7 (a), has designated the following person(s) to coordinate its efforts to comply with the DHHS regulation.

Name of 504 Person - Type or Print

City of Daly City - Comm. Svcs Ctr.

Name of Contractor(s) - Type or Print

350 - 90th St. 1st Fl

Street Address or P.O. Box

Daly City CA 94015

City, State, Zip Code

I certify that the above information is complete and correct to the best of my knowledge.

Patricia S Martel

Signature

City Manager

Title of Authorized Official

5/14/2013

Date

*Exception: DHHS regulations state that:

"If a recipient with fewer than 15 employees finds that, after consultation with a disabled person seeking its services, there is no method of complying with (the facility accessibility regulations) other than making a significant alteration in its existing facilities, the recipient may, as an alternative, refer the handicapped person to other providers of those services that are accessible."

CITY OF DALY CITY
CHECK REGISTERS
FOR THE MONTH OF JAN 2016

HANDWRITTEN CHECK	-	NONE
CANCELLED CHECK	-	NONE
VOID CHECK	-	NONE

01/07/16

CHECKS ISSUED	-	#347549 TO #347556
CANCELLED CHECK	-	NONE
VOID CHECK	-	NONE

01/15/16

CHECKS ISSUED	-	#347557 TO #347880
CANCELLED CHECK	-	NONE
VOID CHECK	-	NONE

01/29/16

CHECKS ISSUED	-	#347881 TO #348199
CANCELLED CHECK	-	NONE
VOID CHECK	-	NONE

AUDITED Lauren Ogn FINANCE DIRECTOR

APPROVED _____ CITY MANAGER

APPROVED _____ FINANCE COMMITTEE

APPROVED _____ FINANCE COMMITTEE

Check	Payee ID.	Payee Name	Date	Check Amount	Type	Subs	Rel To	Note
AP00347549	G-ASUNCION	BRONTISKY, TRUSTEE MARTHA G	01/07/16	125.00	MW	OH		
AP00347550	G-CASTILLO	FRANCHISE TAX BOARD	01/07/16	687.24	MW	OH		
AP00347551	G-HEADMAN1	FRANCHISE TAX BOARD	01/07/16	100.00	MW	OH		
AP00347552	G-WILLIAMS	FRANCHISE TAX BOARD	01/07/16	50.00	MW	OH		
AP00347553	29200	LEGAL SHIELD	01/07/16	536.34	MW	OH		
AP00347554	19678	PERS LONG TERM CARE PROGRAM	01/07/16	964.38	MW	OH		
AP00347555	51227	STATE WATER RESOUCES CONTROL	01/07/16	2,062.00	MW	OH		
AP00347556	2798	TEAMSTERS LOCAL 856	01/07/16	4,116.00	MW	OH		

G R A N D T O T A L S:

Total Void Machine Written	0.00	Number of Checks Processed:	0
Total Void Hand Written	0.00	Number of Checks Processed:	0
Total Machine Written	8,640.96	Number of Checks Processed:	8
Total Hand Written	0.00	Number of Checks Processed:	0
Total Reversals	0.00	Number of Checks Processed:	0
Total Cancelled	0.00	Number of Checks Processed:	0
Total EFTs	0.00	Number of EFTs Processed:	0
Total EPAYs	0.00	Number of EPAYs Processed:	0
G R A N D T O T A L	8,640.96		

Check	Payee ID.	Payee Name	Date	Check Amount	Type	Subs	Rel To	Note
AP00347557	25484R	ABORDO, DANILO	01/15/16	720.00	MW	OH		
AP00347558	15222	ACTION SPORTS	01/15/16	561.54	MW	OH		
AP00347559	1514	ADAM HILL COMPANY, THE	01/15/16	6,310.07	MW	OH		
AP00347560	5034	ADAMSON POLICE PRODUCTS	01/15/16	648.57	MW	OH		
AP00347561	51228R	ALBERT, VIRGINIA	01/15/16	500.00	MW	OH		
AP00347562	6301R	ALCALDE, MARIA	01/15/16	720.00	MW	OH		
AP00347563	14004	ALERT PEST CONTROL COMPANY IN	01/15/16	2,535.00	MW	OH		
AP00347564	1025	ALHAMBRA AND SIERRA SPRINGS	01/15/16	622.90	MW	OH		
AP00347565	49642	ALL CITY MANAGEMENT SERVICES	01/15/16	7,855.26	MW	OH		
AP00347566	37095	ALL INDUSTRIAL ELECTRIC SUPPL	01/15/16	5,990.03	MW	OH		
AP00347567	40755	AMAZON	01/15/16	2,528.99	MW	OH		
AP00347568	2083	AMERICA COPY & PRINTING CO	01/15/16	605.77	MW	OH		
AP00347569	38846	AMERICAN MESSAGING	01/15/16	44.94	MW	OH		
AP00347570	14988	AMERICAN TOWER CORPORATION	01/15/16	6,621.03	MW	OH		
AP00347571	35696	AMERIPRIDE SERVICES INC	01/15/16	910.44	MW	OH		
AP00347572	23273	ANDERSON PACIFIC ENGINEERING	01/15/16	195,953.78	MW	OH		
AP00347573	43080	ANDRITZ SEPARATION INC	01/15/16	47,817.98	MW	OH		
AP00347574	46546	ANTHEM BLUE CROSS	01/15/16	641.49	MW	OH		
AP00347575	46585	ANTHEM BLUE CROSS	01/15/16	13.50	MW	OH		
AP00347576	46585	ANTHEM BLUE CROSS	01/15/16	13.10	MW	OH		
AP00347577	1259	ARAMARK UNIFORM SERVICES INC	01/15/16	429.80	MW	OH		
AP00347578	47839	ARGUELLO, ELIZABETH	01/15/16	2,250.00	MW	OH		
AP00347579	35117	ARROWHEAD SCIENTIFIC INC	01/15/16	227.22	MW	OH		
AP00347580	35028R	ASIAN AMERICAN RECOVERY SERVI	01/15/16	250.00	MW	OH		
AP00347581	50028	ASUNCION, SANDRA LYKINS	01/15/16	590.15	MW	OH		

Check	Payee ID.	Payee Name	Date	Check Amount	Type	Subs	Rel To	Note
AP00347582	1101	AT&T	01/15/16	258.21	MW	OH		
AP00347583	30152A	AT&T	01/15/16	603.84	MW	OH		
AP00347584	6413	AT&T	01/15/16	10,531.86	MW	OH		
AP00347585	23719	ATCO INTERNATIONAL	01/15/16	866.25	MW	OH		
AP00347586	12841	AVERA, PATRICK	01/15/16	326.25	MW	OH		
AP00347587	51229R	BABIERA, GLORIA	01/15/16	250.00	MW	OH		
AP00347588	1562	BAY AREA WATER SUPPLY & CONSE	01/15/16	21,273.00	MW	OH		
AP00347589	8796	BAY CITY BOILER & ENGINEERING	01/15/16	525.00	MW	OH		
AP00347590	44818	BAZDARICH, MARLENE	01/15/16	54.00	MW	OH		
AP00347591	16936	BERONIO LUMBER	01/15/16	126.54	MW	OH		
AP00347592	44418	BIG GUYS TOWING	01/15/16	60.00	MW	OH		
AP00347593	19200	BIRITE FOODSERVICE DISTRIBUTO	01/15/16	9,777.50	MW	OH		
AP00347594	22205	BLACKSTONE AUDIO INC	01/15/16	30.00	MW	OH		
AP00347595	50784	BLUE LINE CANINE LLC	01/15/16	750.00	MW	OH		
AP00347596	4451	BOUC, RUTH	01/15/16	720.00	MW	OH		
AP00347597	47641A	BRIDGES MARKETING GROUP	01/15/16	3,071.75	MW	OH		
AP00347598	21300	BRISBANE RECYCLING CO INC	01/15/16	1,004.98	MW	OH		
AP00347599	3349	BROADMOOR LANDSCAPE SUPPLY	01/15/16	529.96	MW	OH		
AP00347600	G-ASUNCION	BRONTISKY, TRUSTEE MARTHA G	01/15/16	125.00	MW	OH		
AP00347601	3064	BROWN & CALDWELL INC	01/15/16	35,179.44	MW	OH		
AP00347602	44468	BUDGET CONFERENCING INC	01/15/16	297.40	MW	OH		
AP00347603	51230R	BULLDAWGS BASKETBALL CLUB	01/15/16	250.00	MW	OH		
AP00347604	41398	BULYGO & ASSOCIATES	01/15/16	1,300.00	MW	OH		
AP00347605	5896	BUSHONG, MATTHEW	01/15/16	720.00	MW	OH		
AP00347606	33941	C & A BROWN COMPANY	01/15/16	940.33	MW	OH		

Check	Payee ID.	Payee Name	Date	Check Amount	Type	Subs	Rel To	Note
AP00347607	33981	CAGWIN & DORWARD	01/15/16	298.00	MW	OH		
AP00347608	1576	CALIFORNIA CHAMBER OF COMMERC	01/15/16	189.86	MW	OH		
AP00347609	1196	CALIFORNIA WATER SERVICE COMP	01/15/16	405.70	MW	OH		
AP00347610	41401R	CAMACHO, LOUIS	01/15/16	3,037.50	MW	OH		
AP00347611	43533	CAPE	01/15/16	45.00	MW	OH		
AP00347612	48813R	CARAGDAG, RAMIL	01/15/16	250.00	MW	OH		
AP00347613	17888	CARL WARREN & COMPANY INC	01/15/16	1,694.00	MW	OH		
AP00347614	42596	CARRIER CORPORATION	01/15/16	2,876.17	MW	OH		
AP00347615	51231R	CAYABYAB, MARK	01/15/16	250.00	MW	OH		
AP00347616	42171	CC CLASSIC STEPPERS	01/15/16	114.00	MW	OH		
AP00347617	28636	CDW GOVERNMENT INC	01/15/16	5,406.46	MW	OH		
AP00347618	2930	CED CONTRACTORS SF	01/15/16	1,598.42	MW	OH		
AP00347619	24769	CENTER POINT LARGE PRINT	01/15/16	44.25	MW	OH		
AP00347620	27643	CENTRAL CONCRETE SUPPLY CO IN	01/15/16	1,171.07	MW	OH		
AP00347621	51211R	CHINESE HOSPITAL ASSOCIATION	01/15/16	162,849.00	MW	OH		
AP00347622	48727	CINTAS CORPORATION	01/15/16	483.25	MW	OH		
AP00347623	3678	CINTAS CORPORATION #464	01/15/16	3,904.76	MW	OH		
AP00347624	14786	CIR	01/15/16	1,290.00	MW	OH		
AP00347625	30753A	CITY OF DALY CITY	01/15/16	12,500.00	MW	OH		
AP00347626	28211	CITY OF PACIFICA	01/15/16	65,995.38	MW	OH		
AP00347627	40147	CITY TOYOTA	01/15/16	38,852.61	MW	OH		
AP00347628	24868	CLARK SECURITY PRODUCTS INC	01/15/16	1,786.20	MW	OH		
AP00347629	38790	COASTSIDE FIRE PROTECTION	01/15/16	1,520.63	MW	OH		
AP00347630	G-LEMERE	CODY A.B LEMERE	01/15/16	250.00	MW	OH		
AP00347631	40627	COLOR SPOT NURSERIES INC	01/15/16	612.14	MW	OH		

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AP00347632	47244	COMCAST	01/15/16	102.36	MW	OH		
AP00347633	48294	COMCAST	01/15/16	118.85	MW	OH		
AP00347634	48645	COMCAST	01/15/16	93.85	MW	OH		
AP00347635	49055	COMCAST	01/15/16	135.33	MW	OH		
AP00347636	49446	COMCAST	01/15/16	104.02	MW	OH		
AP00347637	40882RJPA	COMER, SHERYL	01/15/16	162.19	MW	OH		
AP00347638	12578	COMPLETE LINEN SERVICE INC	01/15/16	59.08	MW	OH		
AP00347639	51232R	CONTRERAS, PEDRO	01/15/16	250.00	MW	OH		
AP00347640	51167R	COSGROVE, JOSHUA	01/15/16	460.00	MW	OH		
AP00347641	21727	COUNTY OF SAN MATEO	01/15/16	450.00	MW	OH		
AP00347642	42324	CRIME SCENE CLEANERS INC	01/15/16	280.00	MW	OH		
AP00347643	48323	CRYSTAL CREAMERY	01/15/16	663.09	MW	OH		
AP00347644	17010	CSFA	01/15/16	75.00	MW	OH		
AP00347645	28906	CSG CONSULTANTS INC	01/15/16	2,177.50	MW	OH		
AP00347646	8237	CSMFO	01/15/16	370.00	MW	OH		
AP00347647	21239R	CURRAN, JOSEPH	01/15/16	937.10	MW	OH		
AP00347648	1042	D C LOCK & SECURITY SERVICE	01/15/16	232.00	MW	OH		
AP00347649	1836	DAILY JOURNAL CORPORATION	01/15/16	162.00	MW	OH		
AP00347650	1414	DALY CITY CENTRAL CASHIER	01/15/16	758.46	MW	OH		
AP00347651	1793	DALY CITY TOOL MART	01/15/16	239.12	MW	OH		
AP00347652	1299	DEPARTMENT OF JUSTICE	01/15/16	430.00	MW	OH		
AP00347653	46826	DIRECTV LLC	01/15/16	37.99	MW	OH		
AP00347654	43302	DITAN, ROLAND L	01/15/16	897.06	MW	OH		
AP00347655	30629LAW	DOWNEY BRAND ATTORNEYS LLP	01/15/16	7,947.60	MW	OH		
AP00347656	22126	DUDLEY PERKINS CO	01/15/16	37.21	MW	OH		

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AP00347657	1061	DUNN EDWARDS CORPORATION	01/15/16	617.99	MW	OH		
AP00347658	49530	E M HUNDLEY HARDWARE CO	01/15/16	173.38	MW	OH		
AP00347659	51252	ELITE CORPORATE SERVICES INC	01/15/16	3,925.00	MW	OH		
AP00347660	40007	EMLAB P&K LLC	01/15/16	388.50	MW	OH		
AP00347661	45731	EMTRAIN	01/15/16	309.60	MW	OH		
AP00347662	49988	ENTERPRISE RENT A CAR CANADA	01/15/16	195.79	MW	OH		
AP00347663	49060R	EQUITY ONE REALTY	01/15/16	30,000.00	MW	OH		
AP00347664	2167	EVANS, GRACE A	01/15/16	720.00	MW	OH		
AP00347665	26327	EWING IRRIGATION PRODUCTS INC	01/15/16	99.71	MW	OH		
AP00347666	37186	FALCON ASSOCIATES INC	01/15/16	1,290.15	MW	OH		
AP00347667	42544	FARMER BROTHERS COFFEE	01/15/16	189.80	MW	OH		
AP00347668	37618	FARMERS INSURANCE COMPANY	01/15/16	11,288.10	MW	OH		
AP00347669	36077	FASTENAL COMPANY	01/15/16	1,688.05	MW	OH		
AP00347670	1383	FEDEX	01/15/16	81.92	MW	OH		
AP00347671	10971	FEDEX KINKOS OFFICE AND PRINT	01/15/16	166.08	MW	OH		
AP00347672	26375	FEINBERG, JEANETTE	01/15/16	229.50	MW	OH		
AP00347673	42056	FERGUSON ENTERPRISES INC 1423	01/15/16	4,465.44	MW	OH		
AP00347674	23612A	FIRST NATIONAL BANK OF NO CA	01/15/16	1,367.70	MW	OH		
AP00347675	50609R	FISHER, ROBERT	01/15/16	630.00	MW	OH		
AP00347676	51251	FISHER, ROBERT	01/15/16	4,418.30	MW	OH		
AP00347677	11813	FOLGER GRAPHICS	01/15/16	9,409.37	MW	OH		
AP00347678	G-HEADMAN1	FRANCHISE TAX BOARD	01/15/16	100.00	MW	OH		
AP00347679	G-WILLIAMS	FRANCHISE TAX BOARD	01/15/16	50.00	MW	OH		
AP00347680	49301	FRANK & GROSSMAN	01/15/16	140.00	MW	OH		
AP00347681	1282	FRED PRYOR SEMINARS	01/15/16	39.00	MW	OH		

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AP00347682	23110	GADDIS INCORPORATED	01/15/16	3,825.97	MW	OH		
AP00347683	7380	GALLIGAN-CHONG, JUDY	01/15/16	720.00	MW	OH		
AP00347684	39470	GALLS LLC	01/15/16	103.94	MW	OH		
AP00347685	51233R	GARCIA, DANILO	01/15/16	25.00	MW	OH		
AP00347686	44820	GARLASA, ELLISON	01/15/16	303.75	MW	OH		
AP00347687	48808	GATEWOOD, RUSSELL	01/15/16	450.00	MW	OH		
AP00347688	43856	GBH POLYGRAPH SERVICES	01/15/16	500.00	MW	OH		
AP00347689	37066R	GERACE, ANTHONY	01/15/16	163.45	MW	OH		
AP00347690	30509	GOODYEAR COMMERCIAL TIRE & SE	01/15/16	526.32	MW	OH		
AP00347691	27059	GOOMBAH'S EMBROIDERY	01/15/16	321.97	MW	OH		
AP00347692	50226	GOULD, LINDA	01/15/16	389.00	MW	OH		
AP00347693	31925	GOVCONNECTION INC	01/15/16	913.43	MW	OH		
AP00347694	1754	GRAINGER INC	01/15/16	2,676.93	MW	OH		
AP00347695	36985	GRAND INDUSTRIES INC	01/15/16	26,233.42	MW	OH		
AP00347696	51234R	GRAND INDUSTRIES INC	01/15/16	4,000.00	MW	OH		
AP00347697	43243R	GUEVARRA, JANET	01/15/16	250.00	MW	OH		
AP00347698	13937	GUSTAVSON, STAN	01/15/16	720.00	MW	OH		
AP00347699	7145	HALLENBECK, WAYNE	01/15/16	720.00	MW	OH		
AP00347700	12996ALAW	HANSON BRIDGETT LLP	01/15/16	910.00	MW	OH		
AP00347701	36401LAW	HANSON BRIDGETT LLP	01/15/16	877.50	MW	OH		
AP00347702	3702	HARRINGTON INDUSTRIAL PLASTIC	01/15/16	666.92	MW	OH		
AP00347703	51235	HARRIS PRECISION SHEET METAL	01/15/16	710.33	MW	OH		
AP00347704	30684	HDS WHITE CAP CONSTRUCTION SU	01/15/16	4,261.86	MW	OH		
AP00347705	49850	HELLO HOUSING	01/15/16	19,000.00	MW	OH		
AP00347706	16569	HERSTAD, ROSANNE	01/15/16	720.00	MW	OH		

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AP00347707	9049	HI TECH EVS INC SPARTAN MOTOR	01/15/16	124.87	MW	OH		
AP00347708	15857	HOME DEPOT CREDIT SERVICES	01/15/16	9,910.09	MW	OH		
AP00347709	26844	HOPKINS TECHNICAL PRODUCTS IN	01/15/16	140.26	MW	OH		
AP00347710	51236R	HYUNDAI OF SERRAMONTE	01/15/16	250.00	MW	OH		
AP00347711	12438	ICMA	01/15/16	200.00	MW	OH		
AP00347712	29585	INFOR PUBLIC SECTOR INC	01/15/16	195.00	MW	OH		
AP00347713	48933	INFOSEND INC	01/15/16	6,033.18	MW	OH		
AP00347714	14932	INTERSTATE BATTERY SYSTEM OF	01/15/16	252.50	MW	OH		
AP00347715	15006R	IZMIRIAN ROOFING	01/15/16	450.89	MW	OH		
AP00347716	13619R	JEFFERSON HIGH SCHOOL	01/15/16	1,400.00	MW	OH		
AP00347717	14416	JOHNSTONE SUPPLY	01/15/16	436.58	MW	OH		
AP00347718	50411	KAPAN KENT COMPANY INC	01/15/16	677.55	MW	OH		
AP00347719	22450	KAPCO	01/15/16	878.84	MW	OH		
AP00347720	50222AREN	KASHIWA FUDOSAN AMERICA INC	01/15/16	5,224.50	MW	OH		
AP00347721	48254A	KBA DOCUSYS INC	01/15/16	471.53	MW	OH		
AP00347722	14636R	KLATT, CAROL	01/15/16	337.20	MW	OH		
AP00347723	21358	KNOX COMPANY	01/15/16	285.58	MW	OH		
AP00347724	33914	KOFFLER ELECTRICAL MECHANICAL	01/15/16	28,081.70	MW	OH		
AP00347725	31870R	KRAUSS, GREG	01/15/16	750.00	MW	OH		
AP00347726	50735	KRJ DESIGN GROUP INC	01/15/16	18,025.00	MW	OH		
AP00347727	51238R	LAGAREJOS, ARLINDA	01/15/16	250.00	MW	OH		
AP00347728	13776	LANGUAGE LINE SERVICES	01/15/16	219.34	MW	OH		
AP00347729	8614	LC ACTION POLICE SUPPLY LTD	01/15/16	880.57	MW	OH		
AP00347730	26270	LEE, KATY	01/15/16	257.45	MW	OH		
AP00347731	33497	LEGACY MECHANICAL & ENERGY SE	01/15/16	9,706.52	MW	OH		

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AP00347732	30726	LEHR AUTO ELECTRIC	01/15/16	299.03	MW	OH		
AP00347733	49602R	LUCAS, GABRIEL	01/15/16	250.00	MW	OH		
AP00347734	27066	MANAGED HEALTH NETWORK	01/15/16	1,857.60	MW	OH		
AP00347735	19261	MARIO, MANUEL	01/15/16	720.00	MW	OH		
AP00347736	50228	MASSEY, TERESA	01/15/16	855.00	MW	OH		
AP00347737	1166	MATTHEW BENDER & COMPANY INC	01/15/16	266.07	MW	OH		
AP00347738	14277	MAZE & ASSOCIATES INC	01/15/16	1,995.00	MW	OH		
AP00347739	2667	MCCARTHY, DONALD	01/15/16	720.00	MW	OH		
AP00347740	6724	MCVEY, DONALD W	01/15/16	240.00	MW	OH		
AP00347741	51239R	MELERO, CARMEN	01/15/16	250.00	MW	OH		
AP00347742	23949	METRO MOBILE COMMUNICATIONS	01/15/16	1,545.00	MW	OH		
AP00347743	26465	MID PENINSULA BOYS & GIRLS CL	01/15/16	14,583.33	MW	OH		
AP00347744	51240R	MID-PENINSULA THE FARM INC	01/15/16	10,000.00	MW	OH		
AP00347745	49436REN	MKD CEDAR HILL LLC	01/15/16	4,279.00	MW	OH		
AP00347746	48662	MODULAR SPACE CORPORATION	01/15/16	687.96	MW	OH		
AP00347747	15396	MOSS RUBBER & EQUIPMENT CORP	01/15/16	201.28	MW	OH		
AP00347748	46655	MSC INDUSTRIAL SUPPLY CO	01/15/16	408.19	MW	OH		
AP00347749	50618	N C S LLC	01/15/16	3,550.40	MW	OH		
AP00347750	39456R	NAVARRO, SONIA	01/15/16	200.00	MW	OH		
AP00347751	44586	NCFMA	01/15/16	140.00	MW	OH		
AP00347752	22005	NEOPOST USA INC	01/15/16	4,900.10	MW	OH		
AP00347753	46852	NEWEGG BUSINESS INC	01/15/16	1,114.22	MW	OH		
AP00347754	40569	NIEMI, ERENE	01/15/16	230.00	MW	OH		
AP00347755	46186	NOBLE IMAGE INC	01/15/16	369.85	MW	OH		
AP00347756	25761	NORTHERN SAFETY CO INC	01/15/16	329.03	MW	OH		

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AP00347757	47093	O'REILLY AUTOMOTIVE INC	01/15/16	11.11	MW	OH		
AP00347758	28332	OASIS PRODUCTS INC	01/15/16	949.74	MW	OH		
AP00347759	51250R	OCAMPOS, JOSE LUIS	01/15/16	383.15	MW	OH		
AP00347760	30978	OCT WATER QUALITY ACADEMY	01/15/16	5,330.00	MW	OH		
AP00347761	42500	OFFICE DEPOT	01/15/16	1,537.88	MW	OH		
AP00347762	1055	OFFICE DEPOT INC	01/15/16	718.04	MW	OH		
AP00347763	4918	OTIS ELEVATOR COMPANY	01/15/16	2,342.07	MW	OH		
AP00347764	42965	OWEN EQUIPMENT SALES	01/15/16	1,176.69	MW	OH		
AP00347765	24767	P&D APPLIANCE COMMERCIAL PART	01/15/16	95.80	MW	OH		
AP00347766	1216	PACIFIC GAS & ELECTRIC	01/15/16	174,131.67	MW	OH		
AP00347767	1216RDA	PACIFIC GAS & ELECTRIC	01/15/16	281.49	MW	OH		
AP00347768	1080	PACIFIC NURSERIES	01/15/16	335.18	MW	OH		
AP00347769	29252	PACIFIC PRODUCE INC	01/15/16	1,036.80	MW	OH		
AP00347770	51241R	PANG, PAK	01/15/16	149.99	MW	OH		
AP00347771	38239	PAPE MACHINERY INC	01/15/16	187.80	MW	OH		
AP00347772	51242R	PARKER, SHAWN	01/15/16	105.00	MW	OH		
AP00347773	20794	PELCO SALES & SERVICE INC	01/15/16	419.67	MW	OH		
AP00347774	26120	PENGUIN RANDOM HOUSE INC	01/15/16	812.64	MW	OH		
AP00347775	29738	PENINSULA UNIFORMS & EQUIPMEN	01/15/16	80.00	MW	OH		
AP00347776	27473	PENWORTHY COMPANY, THE	01/15/16	2,107.75	MW	OH		
AP00347777	50884	PEREZ-VAUGHAN, CLAUDIA	01/15/16	165.50	MW	OH		
AP00347778	42130	PERFORMANCE TOW	01/15/16	165.00	MW	OH		
AP00347779	38072	PETERSON, NOVELLA	01/15/16	142.00	MW	OH		
AP00347780	50772	PLUMMERBUILT INC	01/15/16	11,197.90	MW	OH		
AP00347781	36106	POLYDYNE INC	01/15/16	11,833.04	MW	OH		

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AP00347782	16440	PRAXAIR DISTRIBUTION INC	01/15/16	26.05	MW	OH		
AP00347783	14431	PRAXAIR INC	01/15/16	3,066.31	MW	OH		
AP00347784	45859	PRINT EM ALL LLC	01/15/16	2,038.30	MW	OH		
AP00347785	14286	PROWS, ALLEN	01/15/16	720.00	MW	OH		
AP00347786	23759R	QUIBELL, PETER	01/15/16	165.60	MW	OH		
AP00347787	51243R	QUINTANILLA, LUIS	01/15/16	250.00	MW	OH		
AP00347788	1115	R & B COMPANY	01/15/16	7,502.43	MW	OH		
AP00347789	12539	R A METAL PRODUCTS INC	01/15/16	285.00	MW	OH		
AP00347790	49792	RAININ INSTRUMENT LLC	01/15/16	380.85	MW	OH		
AP00347791	48668JPA	RAVNTECH CORPORATION	01/15/16	4,166.67	MW	OH		
AP00347792	50803	READYREFRESH BY NESTLE	01/15/16	89.54	MW	OH		
AP00347793	2439	RECORDED BOOKS INC	01/15/16	475.85	MW	OH		
AP00347794	1687	RED WING SHOE STORE	01/15/16	185.29	MW	OH		
AP00347795	1200	REPUBLIC SERVICES OF NORTH AM	01/15/16	1,263,549.41	MW	OH		
AP00347796	47319A	RHINO NETWORK SOLUTIONS	01/15/16	165.00	MW	OH		
AP00347797	48881R	ROCKAWAY CONSTRUCTION	01/15/16	41.33	MW	OH		
AP00347798	50449	RODAS, CLAUDIA	01/15/16	490.50	MW	OH		
AP00347799	20508	RODRIGUEZ, JEFFREY	01/15/16	720.00	MW	OH		
AP00347800	36329	S AND S SUPPLIES & SOLUTIONS	01/15/16	1,348.06	MW	OH		
AP00347801	49661	SAFE RESTRAINTS INC	01/15/16	1,096.43	MW	OH		
AP00347802	1087	SAFETY KLEEN SYSTEMS INC	01/15/16	903.69	MW	OH		
AP00347803	20672A	SAN BRUNO CHAMBER OF COMMERCE	01/15/16	40.00	MW	OH		
AP00347804	51244R	SAN CARLOS PANGASINAN ASSOCIA	01/15/16	250.00	MW	OH		
AP00347805	9880	SAN DIEGO POLICE EQUIPMENT	01/15/16	634.95	MW	OH		
AP00347806	1109	SAN FRANCISCO PUBLIC	01/15/16	431,029.80	MW	OH		

Check	Payee ID.	Payee Name	Date	Check Amount	Type	Subs	Rel To	Note
AP00347807	51166	SAN MATEO COUNTY ELECTIONS	01/15/16	666.37	MW	OH		
AP00347808	1643	SAN MATEO COUNTY ENVIRONMENTA	01/15/16	928.00	MW	OH		
AP00347809	35246	SAN MATEO COUNTY SHERIFFS OFF	01/15/16	16,085.04	MW	OH		
AP00347810	9666	SAN MATEO LAWN MOWER SHOP	01/15/16	299.96	MW	OH		
AP00347811	41719	SATWORX	01/15/16	499.73	MW	OH		
AP00347812	49441	SC FUELS	01/15/16	19,052.13	MW	OH		
AP00347813	51245	SCHUETZ CONTAINER SYSTEMS INC	01/15/16	250.00	MW	OH		
AP00347814	9858	SCOTT, MICHAEL	01/15/16	720.00	MW	OH		
AP00347815	28766	SENSUS USA	01/15/16	1,074.09	MW	OH		
AP00347816	34330	SEQUEIRA, LIONEL	01/15/16	125.00	MW	OH		
AP00347817	36563A	SERRA YELLOW CAB	01/15/16	73.00	MW	OH		
AP00347818	1111	SF - WATER	01/15/16	752,310.92	MW	OH		
AP00347819	41749R	SHAH, HASSAN	01/15/16	165.00	MW	OH		
AP00347820	30523A	SHELL FLEET	01/15/16	39.98	MW	OH		
AP00347821	8782	SHERROD, RICHARD	01/15/16	1,906.44	MW	OH		
AP00347822	23742	SHOE DEPOT INC	01/15/16	1,024.80	MW	OH		
AP00347823	49695	SHRED IT USA SAN FRANCISCO	01/15/16	143.55	MW	OH		
AP00347824	28917	SIERRA CHEMICAL COMPANY	01/15/16	547.15	MW	OH		
AP00347825	38883	SIGILLO SUPPLY COMPANY	01/15/16	2,137.14	MW	OH		
AP00347826	1597	SIGNMAKERS, THE	01/15/16	510.00	MW	OH		
AP00347827	31650	SING TAO DAILY	01/15/16	200.00	MW	OH		
AP00347828	40841	SIRCHIE FINGERPRINT LABORATOR	01/15/16	96.76	MW	OH		
AP00347829	32237	SMART & FINAL STORES LLC	01/15/16	777.16	MW	OH		
AP00347830	15219	SMEAL FIRE APPARATUS CO	01/15/16	821.92	MW	OH		
AP00347831	2890	SMITH, GARY	01/15/16	465.36	MW	OH		

Check	Payee ID.	Payee Name	Date	Check Amount	Type	Subs	Rel To	Note
AP00347832	38120	SOKOL, SARITA	01/15/16	210.00	MW	OH		
AP00347833	44423	SOUTH SAN FRANCISCO TIRE SERV	01/15/16	3,824.54	MW	OH		
AP00347834	2643	SPARTAN MOTORS USA INC	01/15/16	195.00	MW	OH		
AP00347835	9481	STATE BOARD OF EQUALIZATION	01/15/16	898.58	MW	OH		
AP00347836	44772A	STATE COMPENSATION INSURANCE	01/15/16	536.42	MW	OH		
AP00347837	45112JPA	STATE COMPENSATION INSURANCE	01/15/16	555.75	MW	OH		
AP00347838	13326	STEERS, JUDITH E	01/15/16	2,346.88	MW	OH		
AP00347839	18334	SUNGARD PUBLIC SECTOR INC	01/15/16	200.00	MW	OH		
AP00347840	50574	SUNSHINE SPORTS	01/15/16	3,285.50	MW	OH		
AP00347841	50360	SUPPLYWORKS	01/15/16	5,538.86	MW	OH		
AP00347842	1953	SWEETLAND, PATRICK	01/15/16	296.30	MW	OH		
AP00347843	9227	TAM, RANDY	01/15/16	1,269.90	MW	OH		
AP00347844	51246R	TAWASHA, JAMAL	01/15/16	614.00	MW	OH		
AP00347845	48715	TDA CONSULTING INC	01/15/16	111.45	MW	OH		
AP00347846	31350R	TEMPLO NUEVA JERUSALEM	01/15/16	250.00	MW	OH		
AP00347847	31452	TOWNE FORD	01/15/16	23,191.36	MW	OH		
AP00347848	10160	TOY, STANLEY	01/15/16	720.00	MW	OH		
AP00347849	49543	TRB AND ASSOCIATES INC	01/15/16	4,818.73	MW	OH		
AP00347850	21288R	TRUJILLO, RICHARD	01/15/16	720.00	MW	OH		
AP00347851	31745	UNITED SITE SERVICES OF CALIF	01/15/16	597.73	MW	OH		
AP00347852	50490	UNITEDHEALTHCARE INSURANCE CO	01/15/16	483.27	MW	OH		
AP00347853	32209	UNIVAR USA INC	01/15/16	5,269.33	MW	OH		
AP00347854	3904	UPS	01/15/16	15.73	MW	OH		
AP00347855	7873	URBAN FARMER STORE, THE	01/15/16	21.82	MW	OH		
AP00347856	46998	UTILITY TELEPHONE INC	01/15/16	988.82	MW	OH		

Check	Payee ID.	Payee Name	Date	Check Amount	Type	Subs	Rel To	Note
AP00347857	47099JPA	UTILITY TELEPHONE INC	01/15/16	4,792.95	MW	OH		
AP00347858	30602	VANGUARD CLEANING SYSTEMS INC	01/15/16	2,125.00	MW	OH		
AP00347859	29329	VERIZON WIRELESS SERVICES LLC	01/15/16	950.25	MW	OH		
AP00347860	43288	VETERINARY PET INSURNACE COMP	01/15/16	657.29	MW	OH		
AP00347861	27181	VORTEX INDUSTRIES INC	01/15/16	308.62	MW	OH		
AP00347862	33782	WARD, DIANA L	01/15/16	127.60	MW	OH		
AP00347863	11229	WATEREUSE ASSOCIATION	01/15/16	3,698.24	MW	OH		
AP00347864	50485	WAVE	01/15/16	1,516.21	MW	OH		
AP00347865	49085	WEST COAST ARBORISTS INC	01/15/16	12,644.00	MW	OH		
AP00347866	39571	WEST COAST FRAME & COLLISION	01/15/16	67,331.16	MW	OH		
AP00347867	29517	WEST LITE SUPPLY COMPANY INC	01/15/16	1,819.97	MW	OH		
AP00347868	48519A	WESTGATE CENTER FOR LEADERSHI	01/15/16	1,095.00	MW	OH		
AP00347869	4128	WIARD, JANE	01/15/16	720.00	MW	OH		
AP00347870	21984	WONG, ANTHONY	01/15/16	1,828.06	MW	OH		
AP00347871	35692R	WONG, EARL	01/15/16	310.00	MW	OH		
AP00347872	41132	WRIGHT, CHARLAYNE	01/15/16	1,045.28	MW	OH		
AP00347873	51247R	WU, YONG WEN	01/15/16	98.00	MW	OH		
AP00347874	34537	YAMAMURA, JAIME	01/15/16	508.50	MW	OH		
AP00347875	51248R	YBONA, APRIL	01/15/16	250.00	MW	OH		
AP00347876	50122	YESCO LLC	01/15/16	42.52	MW	OH		
AP00347877	51249R	YK MASON SCAFFOLD CO	01/15/16	1,000.00	MW	OH		
AP00347878	50357R	YOUNG, CADEN	01/15/16	281.00	MW	OH		
AP00347879	44591	YUCKOS INC	01/15/16	492.00	MW	OH		
AP00347880	50358R	ZAMBRANO, ESAU	01/15/16	4,000.00	MW	OH		

Check	Payee ID.	Payee Name	Date	Check Amount	Type	Subs	Rel To	Note
		G R A N D T O T A L S:						
		Total Void Machine Written		0.00		Number of Checks Processed:		0
		Total Void Hand Written		0.00		Number of Checks Processed:		0
		Total Machine Written		3,877,778.55		Number of Checks Processed:		324
		Total Hand Written		0.00		Number of Checks Processed:		0
		Total Reversals		0.00		Number of Checks Processed:		0
		Total Cancelled		0.00		Number of Checks Processed:		0
		Total EFTs		0.00		Number of EFTs Processed:		0
		Total EPAYs		0.00		Number of EPAYs Processed:		0
		G R A N D T O T A L		3,877,778.55				

Check	Payee ID.	Payee Name	Date	Check Amount	Type	Subs	Rel To	Note
AP00347881	44634R	21ST CENTURY INSURANCE CO	01/29/16	835.31	MW	OH		
AP00347882	25269	A 1 MILMAC INC	01/29/16	14.93	MW	OH		
AP00347883	51259	A1 JANITORIAL SUPPLY	01/29/16	66.48	MW	OH		
AP00347884	40630R	ACME ROOFING COMPANY	01/29/16	275.00	MW	OH		
AP00347885	1514	ADAM HILL COMPANY, THE	01/29/16	126.76	MW	OH		
AP00347886	5034	ADAMSON POLICE PRODUCTS	01/29/16	1,006.73	MW	OH		
AP00347887	15226	AFSCME LOCAL 919	01/29/16	4,487.52	MW	OH		
AP00347888	29880	AIRGAS USA LLC	01/29/16	47.68	MW	OH		
AP00347889	1465	ALBERTSONS SAFEWAY	01/29/16	708.60	MW	OH		
AP00347890	14004	ALERT PEST CONTROL COMPANY IN	01/29/16	4,066.50	MW	OH		
AP00347891	38647R	ALFAJORA, JOSEPH	01/29/16	75.00	MW	OH		
AP00347892	37095	ALL INDUSTRIAL ELECTRIC SUPPL	01/29/16	6,962.75	MW	OH		
AP00347893	18401	ALLIED ELECTRONICS INC	01/29/16	128.06	MW	OH		
AP00347894	22544	ALLSTAR FIRE EQUIPMENT INC	01/29/16	3,951.25	MW	OH		
AP00347895	37116	ALPHA ANALYTICAL LABORATORIES	01/29/16	30,466.10	MW	OH		
AP00347896	26914	AMERICAN ASPHALT REPAIR & RES	01/29/16	52,919.19	MW	OH		
AP00347897	45439JREN	AMERICAN MEDICAL RESPONSE	01/29/16	1,021.00	MW	OH		
AP00347898	51294RJPA	AMERICAN MEDICAL RESPONSE	01/29/16	108.58	MW	OH		
AP00347899	27427	AMERICAN TEXTILE & SUPPLY INC	01/29/16	257.51	MW	OH		
AP00347900	42310	AMERINATIONAL COMMUNITY SERVI	01/29/16	278.70	MW	OH		
AP00347901	35696	AMERIPRIDE SERVICES INC	01/29/16	1,006.38	MW	OH		
AP00347902	51260R	ANDAZOLA, MILDRED	01/29/16	500.00	MW	OH		
AP00347903	47840R	ARGUELLO, ELIZABETH	01/29/16	87.11	MW	OH		
AP00347904	6314	ARNOTT, SANDIE	01/29/16	22,399.78	MW	OH		
AP00347905	35117	ARROWHEAD SCIENTIFIC INC	01/29/16	104.21	MW	OH		

Check	Payee ID.	Payee Name	Date	Check Amount	Type	Subs	Rel To	Note
AP00347906	1101	AT&T	01/29/16	109.81	MW	OH		
AP00347907	32577	AT&T	01/29/16	11,847.18	MW	OH		
AP00347908	24534A	AVELAR, TERESA	01/29/16	141.09	MW	OH		
AP00347909	12841	AVERA, PATRICK	01/29/16	84.00	MW	OH		
AP00347910	1232	BAKER & TAYLOR COMPANY INC	01/29/16	5,497.13	MW	OH		
AP00347911	2495	BARKER BLUE DIGITAL IMAGING	01/29/16	302.43	MW	OH		
AP00347912	51253RA	BARNES, SAMUEL	01/29/16	500.00	MW	OH		
AP00347913	51261R	BASILE, RICHARD	01/29/16	500.00	MW	OH		
AP00347914	46216A	BAY AREA NEWS GROUP	01/29/16	1,300.00	MW	OH		
AP00347915	1562	BAY AREA WATER SUPPLY & CONSE	01/29/16	3,990.00	MW	OH		
AP00347916	51254A	BEST EQUIPMENT CO	01/29/16	30.00	MW	OH		
AP00347917	35853	BIANCHI TRAFFIC SAFETY SERVIC	01/29/16	350.00	MW	OH		
AP00347918	19200	BIRITE FOODSERVICE DISTRIBUTO	01/29/16	2,551.72	MW	OH		
AP00347919	22205	BLACKSTONE AUDIO INC	01/29/16	22.40	MW	OH		
AP00347920	38004R	BRAAS, KELLEY	01/29/16	266.96	MW	OH		
AP00347921	27403R	BRAND, ROBERT	01/29/16	200.00	MW	OH		
AP00347922	17928	BRESNAHAN, FRANCIS	01/29/16	5,514.22	MW	OH		
AP00347923	47641A	BRIDGES MARKETING GROUP	01/29/16	1,150.00	MW	OH		
AP00347924	3349	BROADMOOR LANDSCAPE SUPPLY	01/29/16	23.15	MW	OH		
AP00347925	39468	BROADMOOR TOW LLC	01/29/16	220.00	MW	OH		
AP00347926	1059	BRODART CO	01/29/16	67.12	MW	OH		
AP00347927	G-ASUNCION	BRONTISKY, TRUSTEE MARTHA G	01/29/16	125.00	MW	OH		
AP00347928	3064	BROWN & CALDWELL INC	01/29/16	10,505.61	MW	OH		
AP00347929	4709	BSN SPORTS LLC	01/29/16	1,004.80	MW	OH		
AP00347930	46443	BUTCHER, JOANNE	01/29/16	280.80	MW	OH		

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AP00347931	48259	BWNVT MOTORS INC	01/29/16	1,299.59	MW	OH		
AP00347932	33981	CAGWIN & DORWARD	01/29/16	298.00	MW	OH		
AP00347933	42973	CAL SIGNAL CORP	01/29/16	5,326.60	MW	OH		
AP00347934	33645R	CAL STATE ROOFING COMPANY INC	01/29/16	275.00	MW	OH		
AP00347935	23173	CALIFORNIA DIESEL AND POWER	01/29/16	1,141.25	MW	OH		
AP00347936	48856R	CAMBA JR, WILLIAM	01/29/16	1,234.50	MW	OH		
AP00347937	51262R	CAPE, VICTOR	01/29/16	75.00	MW	OH		
AP00347938	32766R	CARANAY JR, ARTEMIO	01/29/16	250.00	MW	OH		
AP00347939	17888	CARL WARREN & COMPANY INC	01/29/16	1,736.00	MW	OH		
AP00347940	28636	CDW GOVERNMENT INC	01/29/16	3,362.70	MW	OH		
AP00347941	2930	CED CONTRACTORS SF	01/29/16	93.53	MW	OH		
AP00347942	42277	CEL ANALYTICAL INC	01/29/16	724.00	MW	OH		
AP00347943	30689	CENTRISYS CORPORATION	01/29/16	1,280.00	MW	OH		
AP00347944	51263R	CHAN, JOE	01/29/16	500.00	MW	OH		
AP00347945	51264R	CHAO, QIANG	01/29/16	19.95	MW	OH		
AP00347946	51255RA	CHENG, JENNY	01/29/16	300.00	MW	OH		
AP00347947	51265R	CHU, CHRISTOPHER	01/29/16	500.00	MW	OH		
AP00347948	3678	CINTAS CORPORATION #464	01/29/16	1,287.42	MW	OH		
AP00347949	48345A	CIT	01/29/16	628.10	MW	OH		
AP00347950	35395	CITY AUTO SUPPLY	01/29/16	3,814.78	MW	OH		
AP00347951	46084JPA	CITY OF BELMONT	01/29/16	8,298.00	MW	OH		
AP00347952	25602	CITY OF DALY CITY	01/29/16	4,833.00	MW	OH		
AP00347953	39528	CITY OF FOSTER CITY	01/29/16	14,219.00	MW	OH		
AP00347954	28211	CITY OF PACIFICA	01/29/16	25.00	MW	OH		
AP00347955	24868	CLARK SECURITY PRODUCTS INC	01/29/16	611.73	MW	OH		

Check	Payee ID.	Payee Name	Date	Check Amount	Type	Subs	Rel To	Note
AP00347956	18465	CLEARLITE TROPHIES	01/29/16	231.90	MW	OH		
AP00347957	G-LEMERE	CODY A.B LEMERE	01/29/16	250.00	MW	OH		
AP00347958	47243	COMCAST	01/29/16	134.47	MW	OH		
AP00347959	49055	COMCAST	01/29/16	137.51	MW	OH		
AP00347960	50579A	COMCAST	01/29/16	152.31	MW	OH		
AP00347961	12578	COMPLETE LINEN SERVICE INC	01/29/16	59.08	MW	OH		
AP00347962	30109	CORELOGIC SOLUTIONS LLC	01/29/16	300.00	MW	OH		
AP00347963	14930	COUNTY OF SAN MATEO	01/29/16	6,313.75	MW	OH		
AP00347964	49754R	COWEN, ALEXANDRA	01/29/16	250.00	MW	OH		
AP00347965	42324	CRIME SCENE CLEANERS INC	01/29/16	410.00	MW	OH		
AP00347966	48323	CRYSTAL CREAMERY	01/29/16	612.91	MW	OH		
AP00347967	28906	CSG CONSULTANTS INC	01/29/16	3,362.50	MW	OH		
AP00347968	7274	CUMMINS PACIFIC LLC	01/29/16	781.92	MW	OH		
AP00347969	25580	CWEA-MEMBERSHIP	01/29/16	164.00	MW	OH		
AP00347970	1042	D C LOCK & SECURITY SERVICE	01/29/16	66.93	MW	OH		
AP00347971	1836	DAILY JOURNAL CORPORATION	01/29/16	897.00	MW	OH		
AP00347972	1414	DALY CITY CENTRAL CASHIER	01/29/16	798.53	MW	OH		
AP00347973	2285	DALY CITY COLMA CHAMBER OF CO	01/29/16	4,102.42	MW	OH		
AP00347974	1937	DALY CITY FIREFIGHTERS UNION	01/29/16	7,806.50	MW	OH		
AP00347975	48520	DALY CITY PENINSULA PARTNERSH	01/29/16	24,818.72	MW	OH		
AP00347976	30935	DALY CITY POLICE OFFICERS BEN	01/29/16	714.00	MW	OH		
AP00347977	9290	DALY CITY POLICE OFFICERS ASS	01/29/16	12,251.00	MW	OH		
AP00347978	9290	DALY CITY POLICE OFFICERS ASS	01/29/16	200.00	MW	OH		
AP00347979	36807	DALY CITY TEST ONLY	01/29/16	80.00	MW	OH		
AP00347980	32706	DALY CITY YOUTH HEALTH CENTER	01/29/16	1,382.55	MW	OH		

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AP00347981	42706	DASH MEDICAL GLOVES INC	01/29/16	929.35	MW	OH		
AP00347982	51266R	DAVID, RONY	01/29/16	1,723.25	MW	OH		
AP00347983	51267R	DEL VALLE, HECTOR	01/29/16	250.00	MW	OH		
AP00347984	1299	DEPARTMENT OF JUSTICE	01/29/16	294.00	MW	OH		
AP00347985	42371	DIAL GLASS AND WINDOW COMPANY	01/29/16	288.00	MW	OH		
AP00347986	51268R	DIAMOND CONSTRUCTION	01/29/16	1,277.12	MW	OH		
AP00347987	9643	DONATI, ROBERT	01/29/16	720.00	MW	OH		
AP00347988	30629LAW	DOWNEY BRAND ATTORNEYS LLP	01/29/16	14,639.00	MW	OH		
AP00347989	22126	DUDLEY PERKINS CO	01/29/16	1,770.10	MW	OH		
AP00347990	21260	E B BRADLEY COMPANY INC	01/29/16	305.20	MW	OH		
AP00347991	40007	EMLAB P&K LLC	01/29/16	349.65	MW	OH		
AP00347992	3786	ENVIRONMENTAL RESOURCE ASSOCI	01/29/16	784.76	MW	OH		
AP00347993	1049	EQUIFAX INFORMATION SVCS LLC	01/29/16	65.00	MW	OH		
AP00347994	36886A	ERGOWORKS INC	01/29/16	1,605.69	MW	OH		
AP00347995	15324R	ESTONINA, FELISA	01/29/16	250.00	MW	OH		
AP00347996	10571	EVOQUA WATER TECHNOLOGIES LLC	01/29/16	491.29	MW	OH		
AP00347997	26327	EWING IRRIGATION PRODUCTS INC	01/29/16	161.53	MW	OH		
AP00347998	37186	FALCON ASSOCIATES INC	01/29/16	152.60	MW	OH		
AP00347999	42544	FARMER BROTHERS COFFEE	01/29/16	602.10	MW	OH		
AP00348000	36077	FASTENAL COMPANY	01/29/16	2,260.27	MW	OH		
AP00348001	1383	FEDEX	01/29/16	86.97	MW	OH		
AP00348002	47322	FERN ELECTRIC & CONTROL INC	01/29/16	1,247.13	MW	OH		
AP00348003	19787	FIRST CHOICE SERVICES	01/29/16	183.33	MW	OH		
AP00348004	51269	FITNESS THERAPY LLC	01/29/16	90.00	MW	OH		
AP00348005	14391	FLOWERS ELECTRIC AND SRVC INC	01/29/16	1,260.12	MW	OH		

Check	Payee ID.	Payee Name	Date	Check Amount	Type	Subs	Rel To	Note
AP00348006	46577RA	FORD, JOHN	01/29/16	295.72	MW	OH		
AP00348007	G-HEADMAN1	FRANCHISE TAX BOARD	01/29/16	62.89	MW	OH		
AP00348008	G-WILLIAMS	FRANCHISE TAX BOARD	01/29/16	50.00	MW	OH		
AP00348009	32959	G & E ENGINEERING SYSTEM INC	01/29/16	10,772.99	MW	OH		
AP00348010	23110	GADDIS INCORPORATED	01/29/16	157.53	MW	OH		
AP00348011	16251R	GARY LAM CONSTRUCTION CO	01/29/16	558.68	MW	OH		
AP00348012	25055	GILDEN, SUSANNA	01/29/16	720.00	MW	OH		
AP00348013	44013	GLOBAL IMPORTS INC	01/29/16	102.42	MW	OH		
AP00348014	34864	GOLDEN STATE FLOW MEASUREMENT	01/29/16	27,696.17	MW	OH		
AP00348015	30509	GOODYEAR COMMERCIAL TIRE & SE	01/29/16	2,864.65	MW	OH		
AP00348016	27059	GOOMBAH'S EMBROIDERY	01/29/16	809.90	MW	OH		
AP00348017	31925	GOVCONNECTION INC	01/29/16	963.33	MW	OH		
AP00348018	18532	GOW SUPPLY COMPANY INC	01/29/16	307.48	MW	OH		
AP00348019	1754	GRAINGER INC	01/29/16	595.83	MW	OH		
AP00348020	36985	GRAND INDUSTRIES INC	01/29/16	19,071.60	MW	OH		
AP00348021	29425	GRAPHTECH GRAPHICS	01/29/16	89.74	MW	OH		
AP00348022	22404	GREGS TRUCKING SERVICE INC	01/29/16	744.60	MW	OH		
AP00348023	30894	GRM	01/29/16	380.53	MW	OH		
AP00348024	51256RA	GUAN, WEI	01/29/16	150.00	MW	OH		
AP00348025	50835R	GVODICH, GLADYS	01/29/16	40.00	MW	OH		
AP00348026	19293	GYM DOCTORS	01/29/16	600.00	MW	OH		
AP00348027	2223	HACH COMPANY	01/29/16	1,258.36	MW	OH		
AP00348028	51270R	HAN, MIN	01/29/16	1,425.25	MW	OH		
AP00348029	50087	HANNA INSTRUMENTS USA	01/29/16	220.18	MW	OH		
AP00348030	36401LAW	HANSON BRIDGETT LLP	01/29/16	520.00	MW	OH		

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AP00348031	3702	HARRINGTON INDUSTRIAL PLASTIC	01/29/16	655.98	MW	OH		
AP00348032	50777RA	HCP BTC LLC	01/29/16	3,164.93	MW	OH		
AP00348033	30684	HDS WHITE CAP CONSTRUCTION SU	01/29/16	844.99	MW	OH		
AP00348034	51271R	HUANG, WAN LING	01/29/16	1,475.00	MW	OH		
AP00348035	40241R	HUBER, LARRY	01/29/16	200.00	MW	OH		
AP00348036	51272R	HUEY, YUET KEEN	01/29/16	1,151.77	MW	OH		
AP00348037	1844	HUMAN INVESTMENT PROJECT INC	01/29/16	3,449.00	MW	OH		
AP00348038	41818	HUNTINGTON COURT REPORTERS	01/29/16	151.92	MW	OH		
AP00348039	44108R	HWAY, SUSAN	01/29/16	83.28	MW	OH		
AP00348040	28121	HYDROFOCUS INC	01/29/16	2,057.75	MW	OH		
AP00348041	29585	INFOR PUBLIC SECTOR INC	01/29/16	34,760.16	MW	OH		
AP00348042	5859	INTERNATIONAL ASSOCIATION OF	01/29/16	200.00	MW	OH		
AP00348043	49733	INTERNATIONAL LABORATORY SUPP	01/29/16	162.50	MW	OH		
AP00348044	14932	INTERSTATE BATTERY SYSTEM OF	01/29/16	518.62	MW	OH		
AP00348045	1072	IRVINE & JACHENS INC	01/29/16	348.80	MW	OH		
AP00348046	20796	J J R CONSTRUCTION INC	01/29/16	8,686.63	MW	OH		
AP00348047	38914	J P COOKE COMPANY	01/29/16	99.47	MW	OH		
AP00348048	49229R	JC ONE ROOFING	01/29/16	275.00	MW	OH		
AP00348049	50816R	JEM BUILDERS	01/29/16	1,475.00	MW	OH		
AP00348050	17322R	JETTE HANSEN, JUDY	01/29/16	138.80	MW	OH		
AP00348051	10255MED	KAISER FOUNDATION HEALTH PLAN	01/29/16	1,353.00	MW	OH		
AP00348052	51274R	KAKADIA, DEEPAK	01/29/16	455.60	MW	OH		
AP00348053	48254A	KBA DOCUSYS INC	01/29/16	280.99	MW	OH		
AP00348054	51275R	KEEN CONSTRUCTION	01/29/16	575.00	MW	OH		
AP00348055	39220	KELLER CENTER, THE	01/29/16	1,200.00	MW	OH		

Check	Payee ID.	Payee Name	Date	Check Amount	Type	Subs	Rel To	Note
AP00348056	29633	KELLY MOORE PAINT COMPANY INC	01/29/16	57.09	MW	OH		
AP00348057	33914	KOFFLER ELECTRICAL MECHANICAL	01/29/16	900.00	MW	OH		
AP00348058	1108	L N CURTIS & SONS	01/29/16	730.30	MW	OH		
AP00348059	51276R	LAM, JUDY	01/29/16	124.00	MW	OH		
AP00348060	34493A	LANLOGIC INC	01/29/16	1,174.95	MW	OH		
AP00348061	40803R	LARSEN, GARRETT	01/29/16	250.00	MW	OH		
AP00348062	48008LAW	LAW OFFICES OF BURKE WILLIAMS	01/29/16	6,093.75	MW	OH		
AP00348063	1486	LEAGUE OF CALIFORNIA CITIES	01/29/16	26,925.76	MW	OH		
AP00348064	40871R	LEE FAMILY CORPORATION	01/29/16	550.00	MW	OH		
AP00348065	33497	LEGACY MECHANICAL & ENERGY SE	01/29/16	5,817.80	MW	OH		
AP00348066	29200	LEGAL SHIELD	01/29/16	520.38	MW	OH		
AP00348067	37094	LEXISNEXIS RISK DATA MANAGEME	01/29/16	510.00	MW	OH		
AP00348068	35459	LIVE OAK MEDIA	01/29/16	321.52	MW	OH		
AP00348069	29332	LORAL LANDSCAPING	01/29/16	515.00	MW	OH		
AP00348070	49874	LOU'S GLOVES INC	01/29/16	336.00	MW	OH		
AP00348071	51277R	MADAYAG, IRENE	01/29/16	650.00	MW	OH		
AP00348072	51278R	MAI, YAN XIONG	01/29/16	575.00	MW	OH		
AP00348073	1166	MATTHEW BENDER & COMPANY INC	01/29/16	1,600.93	MW	OH		
AP00348074	14277	MAZE & ASSOCIATES INC	01/29/16	2,375.00	MW	OH		
AP00348075	51279R	MCCULLOUGH, MICHAEL	01/29/16	5.00	MW	OH		
AP00348076	48543R	MCKENZIE, GARRETT	01/29/16	1,125.75	MW	OH		
AP00348077	51280R	MEDINA, LORENA	01/29/16	55.50	MW	OH		
AP00348078	36891	MEDTOX LABORATORIES INC	01/29/16	144.00	MW	OH		
AP00348079	49066	MEJIA, OLGA	01/29/16	808.00	MW	OH		
AP00348080	23949	METRO MOBILE COMMUNICATIONS	01/29/16	240.49	MW	OH		

Check	Payee ID.	Payee Name	Date	Check Amount	Type	Subs	Rel To	Note
AP00348081	49001	MGT OF AMERICA INC	01/29/16	5,578.00	MW	OH		
AP00348082	51281R	MIRANDA, EMERLINDA	01/29/16	250.00	MW	OH		
AP00348083	15396	MOSS RUBBER & EQUIPMENT CORP	01/29/16	269.46	MW	OH		
AP00348084	50421	MP WESTALAKE ASSOCIATES LP	01/29/16	218,311.21	MW	OH		
AP00348085	46655	MSC INDUSTRIAL SUPPLY CO	01/29/16	85.87	MW	OH		
AP00348086	17654	MUSSMAN, RONALD	01/29/16	1,614.23	MW	OH		
AP00348087	50872A	MV TRANSPORTATION INC	01/29/16	184,351.76	MW	OH		
AP00348088	22005	NEOPOST USA INC	01/29/16	672.30	MW	OH		
AP00348089	34131	NORTH FENCE COMPANY	01/29/16	21,320.00	MW	OH		
AP00348090	25761	NORTHERN SAFETY CO INC	01/29/16	292.96	MW	OH		
AP00348091	40765RJPA	ODLE, JOHN	01/29/16	158.25	MW	OH		
AP00348092	15337	OFFICE DEPOT	01/29/16	155.93	MW	OH		
AP00348093	42500	OFFICE DEPOT	01/29/16	3,050.36	MW	OH		
AP00348094	1055	OFFICE DEPOT INC	01/29/16	743.20	MW	OH		
AP00348095	16707	OFFICE OF THE SHERIFF CONTRA	01/29/16	850.00	MW	OH		
AP00348096	2164	OLGUIN, MARTHA A	01/29/16	720.00	MW	OH		
AP00348097	29187	ON TOUR CLIENT TRUST ACCOUNT	01/29/16	75,040.00	MW	OH		
AP00348098	51282R	OWENS, JESSICA	01/29/16	19.95	MW	OH		
AP00348099	1216	PACIFIC GAS & ELECTRIC	01/29/16	41,025.25	MW	OH		
AP00348100	1216RDA	PACIFIC GAS & ELECTRIC	01/29/16	309.08	MW	OH		
AP00348101	1080	PACIFIC NURSERIES	01/29/16	291.58	MW	OH		
AP00348102	29252	PACIFIC PRODUCE INC	01/29/16	798.05	MW	OH		
AP00348103	40268R	PACIFIC ROOFING COMPANY	01/29/16	550.00	MW	OH		
AP00348104	12628	PAN ASIAN PUBLICATIONS INC	01/29/16	61.04	MW	OH		
AP00348105	3762	PAN PACIFIC SUPPLY COMPANY	01/29/16	10,279.50	MW	OH		

Check	Payee ID.	Payee Name	Date	Check Amount	Type	Subs	Rel To	Note
AP00348106	39891	PARACLETE PRESS INC	01/29/16	85.75	MW	OH		
AP00348107	51257RA	PAREKH, BHAVIN	01/29/16	52.50	MW	OH		
AP00348108	47135	PENINSULA FAMILY SERVICE	01/29/16	6,195.00	MW	OH		
AP00348109	1936	PENINSULA PEACE OFFICERS ASSO	01/29/16	516.60	MW	OH		
AP00348110	29738	PENINSULA UNIFORMS & EQUIPMEN	01/29/16	41.26	MW	OH		
AP00348111	44334A	PENINSULA YELLOW CAB	01/29/16	908.10	MW	OH		
AP00348112	50009R	PEREZ, PHILIPP	01/29/16	160.00	MW	OH		
AP00348113	51283R	PERKINS-SMITH, ELAINE	01/29/16	250.00	MW	OH		
AP00348114	19678	PERS LONG TERM CARE PROGRAM	01/29/16	1,767.42	MW	OH		
AP00348115	5216	PEZZOLA, LOUIE	01/29/16	720.00	MW	OH		
AP00348116	30758A	PITNEY BOWES GLOBAL INC	01/29/16	194.47	MW	OH		
AP00348117	50772	PLUMMERBUILT INC	01/29/16	14,322.00	MW	OH		
AP00348118	9922	POLLARD WATER	01/29/16	479.97	MW	OH		
AP00348119	36106	POLYDYNE INC	01/29/16	8,874.78	MW	OH		
AP00348120	33845A	POSTMASTER	01/29/16	3,800.00	MW	OH		
AP00348121	14431	PRAXAIR INC	01/29/16	6,164.95	MW	OH		
AP00348122	39043	PRO FORCE LAW ENFORCEMENT	01/29/16	4,499.52	MW	OH		
AP00348123	34637	PROMOTABLES LLC	01/29/16	84.91	MW	OH		
AP00348124	49840	QUALITY CONTROL SERVICES INC	01/29/16	158.75	MW	OH		
AP00348125	1115	R & B COMPANY	01/29/16	19,521.82	MW	OH		
AP00348126	12539	R A METAL PRODUCTS INC	01/29/16	1,329.00	MW	OH		
AP00348127	51284R	RAMADHAN, EZALDEEN	01/29/16	71.00	MW	OH		
AP00348128	41727R	RAMOS, LEILANI	01/29/16	1,740.00	MW	OH		
AP00348129	48668JPA	RAVNTECH CORPORATION	01/29/16	4,166.67	MW	OH		
AP00348130	50803	READYREFRESH BY NESTLE	01/29/16	90.61	MW	OH		

Check	Payee ID.	Payee Name	Date	Check Amount	Type	Subs	Rel To	Note
AP00348131	41385	RED CLOUD INC	01/29/16	2,864.40	MW	OH		
AP00348132	1687	RED WING SHOE STORE	01/29/16	393.92	MW	OH		
AP00348133	41528	REDFLEX TRAFFIC SYSTEMS INC	01/29/16	22,080.00	MW	OH		
AP00348134	32503R	REES, JOSHUA	01/29/16	376.92	MW	OH		
AP00348135	14608	REEVES COMPANY INC	01/29/16	80.70	MW	OH		
AP00348136	37028	RMC WATER AND ENVIRONMENT	01/29/16	4,811.00	MW	OH		
AP00348137	36594R	ROHLEDER, ALEXANDER E	01/29/16	604.36	MW	OH		
AP00348138	13761	ROSS RECREATION EQUIPMENT INC	01/29/16	44,182.88	MW	OH		
AP00348139	47776R	RPC ROOFING COMPANY	01/29/16	550.00	MW	OH		
AP00348140	9274	SAN FRANCISCO CHRONICLE	01/29/16	668.20	MW	OH		
AP00348141	45136	SAN FRANCISCO DIESEL ELECTRIC	01/29/16	288.85	MW	OH		
AP00348142	41719	SATWORX	01/29/16	493.84	MW	OH		
AP00348143	49441	SC FUELS	01/29/16	10,383.59	MW	OH		
AP00348144	41081R	SCOLES, GREGORY	01/29/16	200.00	MW	OH		
AP00348145	34330	SEQUEIRA, LIONEL	01/29/16	125.00	MW	OH		
AP00348146	44095	SERVICE PRESS INC	01/29/16	80.31	MW	OH		
AP00348147	2068	SHAPE PRODUCTS COMPANY	01/29/16	371.51	MW	OH		
AP00348148	31449	SHARP ELECTRONICS CORPORATION	01/29/16	11,574.30	MW	OH		
AP00348149	23742	SHOE DEPOT INC	01/29/16	1,099.48	MW	OH		
AP00348150	49695	SHRED IT USA SAN FRANCISCO	01/29/16	280.01	MW	OH		
AP00348151	28917	SIERRA CHEMICAL COMPANY	01/29/16	1,181.22	MW	OH		
AP00348152	31650	SING TAO DAILY	01/29/16	200.00	MW	OH		
AP00348153	10214	SLOANE, CAROL	01/29/16	720.00	MW	OH		
AP00348154	38120	SOKOL, SARITA	01/29/16	192.50	MW	OH		
AP00348155	51285	SPARTAN PRECISION RIFLES	01/29/16	5,050.00	MW	OH		

Check	Payee ID.	Payee Name	Date	Check Amount	Type	Subs	Rel To	Note
AP00348156	36510	STANTEC CONSULTING INC	01/29/16	6,371.90	MW	OH		
AP00348157	25075	STAPLES CREDIT PLAN	01/29/16	90.96	MW	OH		
AP00348158	1289	STATE BOARD OF EQUALIZATION	01/29/16	8,006.00	MW	OH		
AP00348159	50386	STATE WATER RESOURCES CONTROL	01/29/16	1,455.00	MW	OH		
AP00348160	3613	STATIONARY ENGINEERS LOCAL 39	01/29/16	1,208.82	MW	OH		
AP00348161	36511	STELLA, ROBERT	01/29/16	155.00	MW	OH		
AP00348162	11936R	STRATTON, COLE	01/29/16	3,329.74	MW	OH		
AP00348163	50360	SUPPLYWORKS	01/29/16	8,085.14	MW	OH		
AP00348164	29237	SYNAGRO WEST LLC	01/29/16	15,027.71	MW	OH		
AP00348165	51286R	TAM, SAMUEL	01/29/16	5,871.64	MW	OH		
AP00348166	51287R	TAN, JANELL	01/29/16	75.00	MW	OH		
AP00348167	51288R	TAN, VICTOR	01/29/16	500.00	MW	OH		
AP00348168	2798	TEAMSTERS LOCAL 856	01/29/16	4,318.00	MW	OH		
AP00348169	3600	TEAMSTERS UNION LOCAL 856	01/29/16	65,260.00	MW	OH		
AP00348170	13852	TELECOMMUNICATIONS ENGINEERIN	01/29/16	4,814.00	MW	OH		
AP00348171	1201	THOMSON REUTERS WEST	01/29/16	2,262.85	MW	OH		
AP00348172	51273R	TJAKRA, DEVI	01/29/16	1,025.00	MW	OH		
AP00348173	8142	TRABADO, FRANCISCO	01/29/16	720.00	MW	OH		
AP00348174	26257	TRAVELCENTER TRUST ACCOUNT	01/29/16	3,441.00	MW	OH		
AP00348175	26803	TURBO DATA SYSTEMS INC	01/29/16	18,673.85	MW	OH		
AP00348176	25311	TYCO INTEGRATED SECURITY LLC	01/29/16	321.54	MW	OH		
AP00348177	47572	TYLER TECHNOLOGIES INC	01/29/16	159.00	MW	OH		
AP00348178	32422	UNION BANK	01/29/16	2,559.00	MW	OH		
AP00348179	31745	UNITED SITE SERVICES OF CALIF	01/29/16	255.84	MW	OH		
AP00348180	32209	UNIVAR USA INC	01/29/16	13,136.76	MW	OH		

Check	Payee ID.	Payee Name	Date	Check Amount	Type	Subs	Rel To	Note
AP00348181	3904	UPS	01/29/16	87.02	MW	OH		
AP00348182	5661	VALS RESTAURANT & LOUNGE	01/29/16	140.70	MW	OH		
AP00348183	40751R	VANDERWERFF, WILLEM	01/29/16	200.00	MW	OH		
AP00348184	51289R	VILLA, LINDA	01/29/16	76.00	MW	OH		
AP00348185	1579	VWR INTERNATIONAL LLC	01/29/16	375.56	MW	OH		
AP00348186	12788	WALKERS HYDRAULICS INC	01/29/16	1,664.75	MW	OH		
AP00348187	51290R	WANG, DONALD	01/29/16	59.60	MW	OH		
AP00348188	36355	WASTEWATER SOLUTIONS INC	01/29/16	8,503.13	MW	OH		
AP00348189	50485	WAVE	01/29/16	155.90	MW	OH		
AP00348190	3691	WECO INDUSTRIES LLC	01/29/16	1,331.40	MW	OH		
AP00348191	49085	WEST COAST ARBORISTS INC	01/29/16	5,560.00	MW	OH		
AP00348192	29517	WEST LITE SUPPLY COMPANY INC	01/29/16	10.36	MW	OH		
AP00348193	51291	WESTERN SCIENTIFIC CO INC	01/29/16	148.50	MW	OH		
AP00348194	1095	WESTLAKE TOUCHLESS CAR WASH &	01/29/16	132.05	MW	OH		
AP00348195	41461	WHITE, GLADYS PEBBLES	01/29/16	177.00	MW	OH		
AP00348196	47293A	YELLOW CAB BAY CITY	01/29/16	3,074.55	MW	OH		
AP00348197	50728R	YES GENERAL CONSTRUCTION	01/29/16	5,033.89	MW	OH		
AP00348198	51292R	YIP, SALLY	01/29/16	18.86	MW	OH		
AP00348199	51293R	ZHOU, GUANGGUO	01/29/16	476.29	MW	OH		

Check	Payee ID.	Payee Name	Date	Check Amount	Type	Subs	Rel To	Note
		G R A N D T O T A L S:						
		Total Void Machine Written		0.00			Number of Checks Processed:	0
		Total Void Hand Written		0.00			Number of Checks Processed:	0
		Total Machine Written		1,461,505.78			Number of Checks Processed:	319
		Total Hand Written		0.00			Number of Checks Processed:	0
		Total Reversals		0.00			Number of Checks Processed:	0
		Total Cancelled		0.00			Number of Checks Processed:	0
		Total EFTs		0.00			Number of EFTs Processed:	0
		Total EPAYs		0.00			Number of EPAYs Processed:	0
		G R A N D T O T A L		1,461,505.78				

City Council Agenda Report

Item # _____

Meeting Date: February 22, 2016

Subject: Substantial Amendment to Fiscal Year 2015-16 HUD Action

Recommended Action

1. Conduct a Public Hearing.
2. Approve a substantial amendment to the City's HUD Consolidated One-Year Action Plan for Fiscal Year 2015-16 to provide additional funding for housing rehabilitation and administration.
3. Adjust 2015-16 budget to reflect Amended 2015-16 HUD Action Plan

Background

In April of 2015, the Daly City Council adopted the HUD Consolidated Plan and One Year Action Plan for 2015-16. The plan identifies how the City will allocate 2015-16 Community Development Block Grant (CDBG) funds to various eligible activities. The City's 2015-16 HUD Action Plan allocated a total of $1,270,295 in CDBG funds for a variety of housing and community development activities. Funding allocations described in the Action Plan were based on estimated resources at the time the plan was adopted. In May of 2015 and subsequent to adoption of the 2015-16 Plan, the City refinanced its 2004 Section 108 loan that was used to finance construction of the Bayshore Community Center. The refinance resulted in a lower interest rate and reduced loan payments, resulting $116,673 of unanticipated, unallocated CDBG funds. Combined with an unanticipated housing rehab loan payoff ($53, 695) and unspent 2014-15 CDBG funds, there is a total of $230,676 in unallocated CDBG funds.

The 2015-16 Action Plan provided an allocation of $430,000 for the City's residential rehab program. Based on strong demand for this program from Daly City homeowners, these funds are entirely committed to current projects and new applicants are being placed on a waiting list.

The proposed Substantial Amendment would program up to $200,000 of unallocated CDBG funds to the City's Housing Rehabilitation Program. These additional funds would enable the City to fund an additional 3 to 4 housing rehabilitation projects during FY 2015-16.

The unallocated CDBG funds also provide an opportunity to program additional CDBG funds for Administration, thus reducing General Fund expenditures. The CDBG regulations allow up to 20% percent of loan repayments to be used for costs associated with administration of the CDBG program. The proposed Amendment thus provides for allocation of the allowable percentage of the anticipated housing rehab loan payoff for program administration and would result in General Fund savings of $10,739.

Discussion

Use of $210,739 in unallocated CDBG funds for housing rehab and program administration would constitute a substantial amendment to the City FY 2015-16 HUD Action Plan, thus requiring public notice, a 30-day review and comment period and a public hearing followed by Council action. The

draft Amendment was made available for public review at local libraries, the Daly City Community Service Center and City Hall from January 18, 2016 through February 22, 2016. Public notification on the availability and description of the draft One-Year Action Plan was printed in *The Examiner* and posted on the City's website.

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Summary/Conclusion

The Council's approval of the Fiscal Year 2015-16 HUD Action Plan Amendment as described will enable the City to utilize $210,739 in CDBG funds to carry out critically needed housing rehabilitation and administrative activities. The uses described in the FY 2015-16 HUD Action Plan Amendment are eligible under the CDBG program and demonstrate the City's commitment to housing rehabilitation and program delivery.

Staff is available to provide any additional information desired by the Mayor or City Council Members.

Respectfully submitted,

Betsy ZoBell
Housing and Community Development Supervisor

Tatum Mothershead
Economic & Community Development Director

City Council Meeting Agenda Report

Meeting Date: February 22, 2016

Subject: Adopting New Fees for the Daly City Afterschool Youth Recreation Program

Recommended Action

Staff recommends that the City Council pass a resolution adopting a proposed fee increase for the Daly City Afterschool Youth Recreation Program (AYRP). The Recreation Commission unanimously endorsed the proposed fee schedule at its regular meeting of January 26, 2016. The new fee, if adopted, would go into effect at the start of the 2016-17 academic year.

Background

The Afterschool Youth Recreation Program (AYRP) provides a safe, enriching, and educational environment for more than 300 students at 4 school sites: Panorama, Junipero Serra, Marjorie H. Tobias, and Daniel Webster. The program offers students a diversity of afterschool experiences, including silent sustained reading, journal writing, homework assistance, enrichment and cooperative play activities, fitness challenges, nutritious snacks, and social interaction.

Discussion

Due to the anticipated rise in the cost and demands of providing the program, staff is proposing to raise the monthly base fee from $53 to $64 per month. The proposed fee includes some onsite enrichment activities that required extra fees in past years, thereby reducing registration transaction processes and creating a more inclusive environment for all AYRP participants. The fee would also cover the cost of a lower staff to participant ratio.

Fiscal Impact

AYRP is an essential service that provides a safe place for students while giving students opportunities to develop healthy life skills. In Fiscal Year 2014-2015, AYRP generated $176,864 in revenue. The proposed fee increase would generate approximately $205,906 in Fiscal Year 2016-17, assuming participation rates remain constant.

School Year	Monthly Base Fee	Revenue	Direct Expenses	Estimated Annual Subsidy
2014-2015	$53	$176,863.66	$256,134.96	$79,271.30
2016-2017 (proposed)	$64	$200,906.00	$269,079.64	$68,173.64

Summary/Conclusion

Staff is available to provide any additional information desired by the Commissioners.

Respectfully Submitted,

Jennifer Der
Recreation Supervisor

Denise Brown
Recreation Services Manager

Joseph F Curran, Director
Library and Recreation Services

City Council Meeting Agenda Report

Item # _____

Meeting Date: February 22, 2016

Subject: **Planned Development PD-10-15-11781 (Preliminary Plan Review) — Subdivision of a 17.82-acre site on Carter Street for 115 Residential Lots**

Recommended Action

Approve the Master Land Use Plan and Preliminary Plan for Planned Development PD-70.

Planning Commission Discussion

On February 2, 2016, the Planning Commission voted 4-0 (Commissioner Edelman abstained) to recommend that the City Council approve the Master Land Use Plan and Preliminary Plan for Planned Development PD-10-15-11781. Howard Edelman, resident at 982 Farrier Place and representative of the Summit Ridge Homeowners Association, spoke in favor of the land use concept, indicating that the HOA's main consideration was fulfilled by the proposal because the plan reflected the existing neighborhood street pattern and lot layout. Xenia Gutowski, resident of 708 Red Leaf Court (Saddleback Village), indicated that springs running through the subject site could impact Saddleback and that she wanted to ensure that the project geology was reviewed for impacts to Saddleback. She added that the City should put up new traffic lights to alleviate the heavy traffic the project would cause on Carter Street. Durand Garcia, resident at 2 Alta Vista Way, said that he was concerned about building height of new homes. Staff indicated that new houses would sit at a substantially lower elevation than the back yards of homes on Oakridge Drive and would largely not be seen. David Beaumont, the project applicant from CKS Environmental, confirmed that an underground spring traverses Saddleback Village and that the project geotechnical review evaluated the same sub-drain condition for the proposed subdivision. He added that the project would provide a complete traffic study that included a comprehensive analysis of impacts to area intersections and potential mitigation measures.

Background

The applicant, CKS Environmental, has submitted an application to rezone to Planned Development zoning the presently-vacant 17.82-acre site generally situated on the west side of Carter Street and Steve Courter Way, between the Summit Ridge neighborhood and Saddleback Condominiums (see Attachment A – Location Map). The rezoning request would allow a 115-lot residential subdivision on a 7.93-acre portion of the site, with the 10-acre remainder of the site devoted to open space (see Attachment B – Project Plans).

At the Preliminary Plan stage, the City Council is reviewing the proposed land use, circulation, and overall site design of the Planned Development rezoning request. The Council may either grant approval of the Preliminary Plan, allowing the application to proceed to the Precise Plan stage or request that the applicant revise the Preliminary Plan prior to it proceeding to the Precise Plan stage. Preliminary Plan action does not limit the Council's ability to approve, conditionally approve, or deny the Precise Plan.

In addition to the Preliminary Plan review, the applicant is requesting approval of the Master Land Use Plan (MLUP) for the area west of Carter Street. In March 2013, the City Council adopted the 2030 General Plan which identifies the requirement for the MLUP prior to the issuance of any discretionary zoning or land use entitlement for any vacant lands west of Carter Street designated Low Density Residential (R-LD) and Open Space Preservation (OSP). The policy requires that that the MLUP be adopted by City Council and that the resulting conceptual land use designations and public roadways identified in the MLUP serve to guide future development of the area encompassed by the MLUP.

The City Council should be aware that the site presently consists of 48 separate lots and is owned by 29 different property owners who are cooperating to submit one application with three developers for both the Preliminary Plan and MLUP. As the MLUP would establish a fixed development pattern for the entire area encompassed by lands designated Low Density Residential (R-LD) and Open Space Preservation (OSP), there is one property not presently included in the proposed Planned Development rezoning. Staff is presently contemplating whether to recommend that the Planning Commission and City Council rezone this parcel to R-1 Single-Family Residential consistent with R-LD General Plan designation or allow a future annexation to the Planned Development zone.

Under the current proposal, the 48 existing lots would be re-subdivided into a total of 115 lots, consisting of one 37-lot map and two 39-lot maps. Although the current application does not include the three tentative maps, the applicant intends to submit the maps for concurrent review with the Precise Plan.

Discussion

As identified previously, the Preliminary Plan provides the City Council the opportunity to review the proposed land use, circulation, and overall site design of Planned Development rezoning request.

With regard to the land use, the subject site is identified by the General Plan Land Use Element as both Residential - Low Density, allowing between two and 14.5 dwelling units per acre, and Open Space Preservation. Although the 7.93-acre area proposed for the 115 lots would be within the density permitted by the existing Residential - Low Density designation, a General Plan amendment will be required to rectify the boundaries between the Residential - Low Density and Open Space Preservation designations identified on the General Plan Future Land Use Map.

From the standpoint of circulation, the 115 lots would be served by two primary public streets (Streets A and B) and four secondary private streets (Lanes A, B, C, and D). The public streets would generally be 32 feet wide (curb-to-curb) providing two 12-foot travel lanes and a parking lane eight feet wide, within a 41-foot right of way. Parking would be allowed on one side of the street and on the side with parking there would be a four-foot-wide sidewalk set back approximately four feet from the face of curb, allowing for a small planter area between the sidewalk and back of curb on one side of the street. The design configuration of the public streets was arrived at following suggestions at a meeting with the City Engineer and Traffic Engineer.

The four private streets are proposed to be 20 feet wide, curb-to-curb, within a 21-foot wide right of way. As is currently contemplated, these private streets serve smaller and more compact dwelling units than are proposed on the public streets. There would therefore be no on-street parking or sidewalks on the private streets serving these smaller dwelling units.

As identified in the proposed plans, there are two access points to the subject site. The primary access point would be directly onto existing Carter Street approximately 150 feet south of Saddleback Drive. This entry would serve as the northerly access for the development as Street B and Carter Street would be improved to incorporate a left-turn lane for traffic turning left off of Carter Street into the proposed development. The second access would be at the existing intersection of Steve Courter Way and Carter Street, providing connections both via Steve Courter Way to Carter Street and Martin Trail to Carter Street. Five lots would have direct access off of Steve Courter Way. The City Council should note that there is a potential for additional lots to be created in the future off of Steve Courter Way in the area labeled "Not A Part," but they are not presently part of the proposed site plan.

As is the case in the review of all new subdivisions, resident parking is a paramount concern for site plan review. According to the project site plan, there would be 63 detached single family dwelling units which will have a two-car garage and a driveway apron that can accommodate two additional vehicles, for a total of four parking spaces each. In addition, there would be 52 smaller, detached single-family row-type dwelling units, each also providing a two-car garage, 33 of which will also have a driveway apron capable of accommodating one additional vehicle. The total off-street parking count would therefore be 389 parking spaces.

In addition to the parking provided off-street, on-street parking on Streets A and B would provide 42 additional parking spaces, for a grand total of 431 total parking spaces. A detailed parking plan analysis will be provided as part of the Precise Plan package reviewed by the Planning Commission.

Master Plan Use Plan

In consideration of the MLUP, the General Plan requires that the City Council consider the topography of the area included within the MLUP boundary, the feasibility of providing utility and street access to all parcels identified for development, and any environmental constraints to development that may be present within the MLUP boundary (geologic constraints, special status species protection, etc.). Environmental constraints associated with the subject site primarily consist of topographic and geologic constraints.

The topography of the site is characterized to the west and south by sharply rising slopes, which contain a moderately sloping plateau in the site's lowest elevations located at its eastern portion. Due to its more level character and proximity to existing development and infrastructure, this area has been determined to be most suitable for development, enabling streets to be designed with more moderate grades and be better integrated with existing roadways at Carter Street and Steve Courter Way. With regard to geologic conditions, the applicant has submitted a geotechnical report which outlines the most feasible mitigation solutions which have been found feasible to undertake the

proposed plan. The report remains under review and any major issues limiting the scope of the project would be disclosed as part of the Precise Plan review.

General Plan, Zoning, and Project Density

As previously discussed, the General Plan identifies the land use designations for the subject site as Low Density Residential, which allows between two and 14.5 dwelling units per acre, and Open Space Preservation. Although the 7.93-acre area proposed for the 115 lots would be within the density permitted by the existing Residential - Low Density designation, a General Plan amendment will be required to rectify the boundaries between the Residential - Low Density and Open Space Preservation designations identified on the General Plan Future Land Use Map. It is the staff belief that the development would be appropriate in context with surrounding uses, which include Low and Medium Density Residential uses to the south, east, and north, and commercially zoned properties further to the east.

In addition to compliance with the General Plan density allowance, the proposed development would serve to implement the General Plan Housing Element, which encourages the development of infill housing on sites that are underutilized, where residential development represents the highest and best use, and where public infrastructure exists to support the intensity of the proposed development. The Housing Element identifies this site in particular as being capable of providing housing opportunities that contribute to the City's fulfillment of its Regional Housing Need Allocation.

Project Affordability

As the current review of the Preliminary Plan is intended as an analysis of the physical features associated with the proposed subdivisions (e.g., site circulation, public and private street designations, and proposed land uses), the applicant will be required to submit an affordable housing plan as part of the more detailed Precise Plan submittal package.

Environmental Assessment

Staff has reviewed the proposal under the requirements of the California Environmental Quality Act (CEQA) and has found that the project will likely require approval of a Mitigated Negative Declaration. Staff is in the process of drafting this document and will present it to the City Council during the Precise Plan review.

Recommendations

The Planning Commission recommends that the City Council do the following:

1. Approve the Master Land Use Plan; and
2. Approve the Preliminary Plan for Planned Development PD-70.

Respectfully submitted,

Michael VanLonkhuysen
Interim Planning Manager

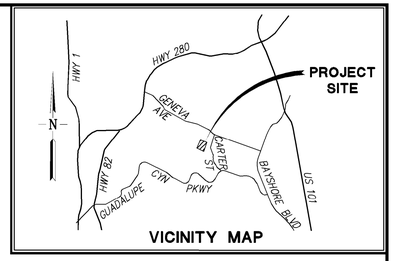
Tatum Mothershead
Interim Director of Economic and Community Development

Attachments
Attachment A – Location Map
Attachment B – Project Plans
Attachment C – Letter from Bill Kennedy

SITE
CARTER
STREET
ROBINSON DR
SADDLEBACK DR
OAK CT
WINA VISTA CT
SOUTHRIDGE WAY
ARDENDALE DR
ALTA VISTA WAY
OAKRIDGE DR
STEVE COURTER WAY
MARTIN ST
C2
R1
PD21
PD33
PD13
PRE-PD

BENCHMARK

USGS C571 HT0626, 297 FEET NORTH OF MILEPOST 5, AT THE SOUTH END OF TUNNEL 4, SET VERTICALLY IN THE WEST FACE OF THE EAST WALL OF THE TUNNEL, 6.0 FEET EAST OF THE EAST RAIL OF THE EAST TRACK, 2.6 FEET NORTH OF THE SOUTH PORTAL OF THE TUNNEL, AND 3 FEET HIGHER THAN THE TRACKS (NGVD 29 ELEV 22.54)



MASTER LAND USE PLAN

PLANNED DEVELOPMENT PRELIMINARY PLAN

POINT MARTIN II

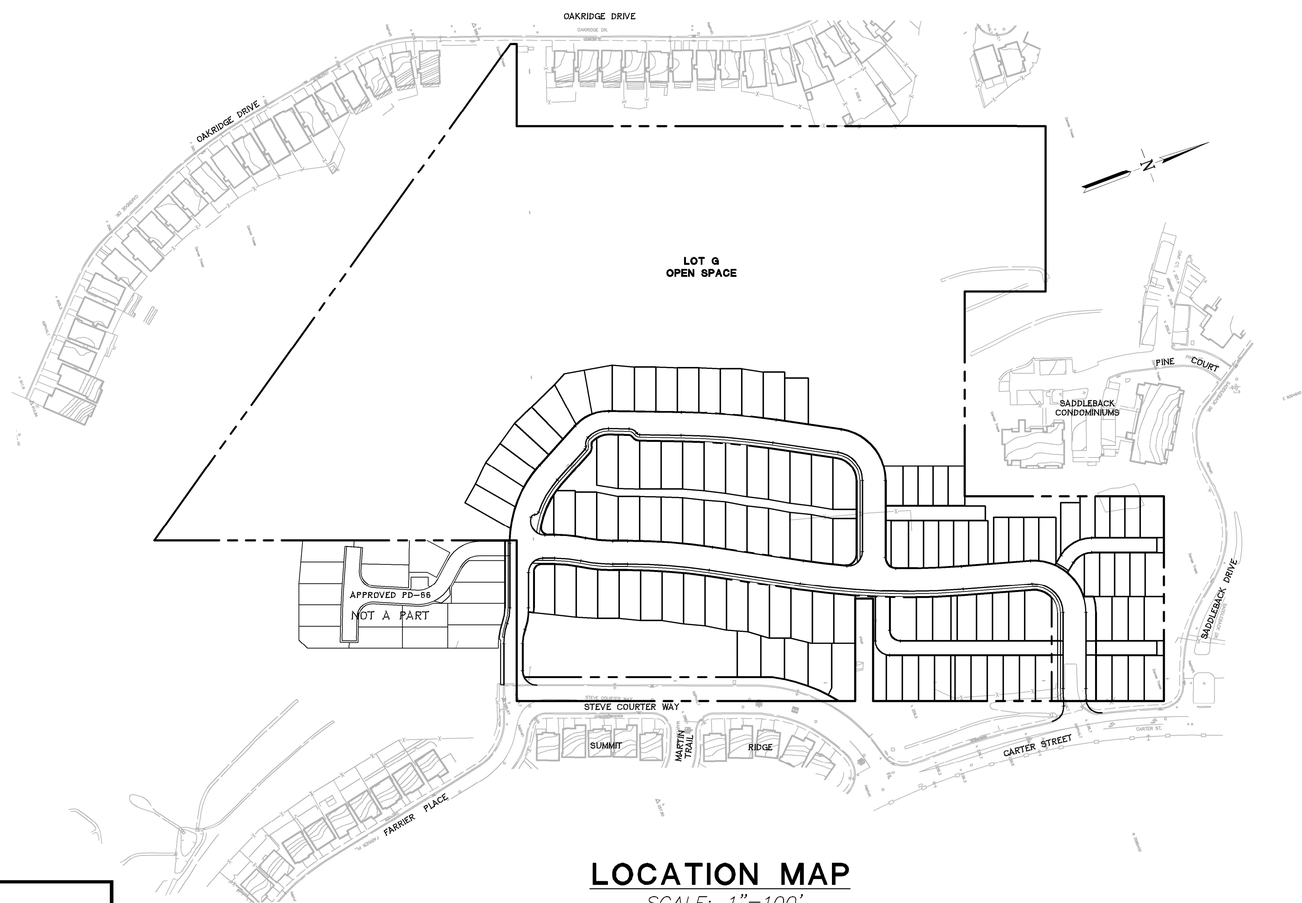
DALY CITY, SAN MATEO COUNTY, CALIFORNIA

LEGEND

PROPOSED	DESCRIPTION	EXISTING
	TRACT BOUNDARY	
	LOT LINE	
	CENTER LINE	
	EASEMENT LINE	
	CURB & GUTTER	EX FC
	MANHOLE	
	STREET LIGHT	
	FENCE	x x
	CONTOUR ELEVATIONS	130
	SPOT ELEVATION	×525.2
	UTILITY POLE	
	FIRE HYDRANT	

ABBREVIATIONS

CL	CENTER LINE
EX	EXISTING
FC	FACE OF CURB
FG	FINISHED GRADE
GB	GRADE BREAK
HP	HIGH POINT
OH	OVERHEAD UTILITY LINE
PAE	PRIVATE ACCESS EASEMENT
PPAE	PRIVATE PEDESTRIAN ACCESS EASEMENT
PSDE	PRIVATE STORM DRAIN EASEMENT
PSE	PUBLIC SERVICE EASEMENT
PUE	PUBLIC UTILITY EASEMENT
R/W	RIGHT OF WAY
RWE	ROADWAY EASEMENT
SWK	SIDEWALK
TC	TOP OF CURB
TYP	TYPICAL



LOCATION MAP

SCALE: 1"=100'

PRELIMINARY PLAN			
PLANNED DEVELOPMENT DISTRICT			
LAND ALLOCATION TABLE *DC Code 17.28.030 B.(2)(e)			
OPEN SPACE	area	9.89	Acres
RESIDENTIAL	area	7.93	Acres
TOTAL	area	17.82	Acres
Total PD Density		6.45 d/u	/ Acre
Residential Density		14.50 d/u	/ Acre

PREPARED BY:

CIVIL ENGINEER:
RUGGERI-JENSEN-AZAR
4690 CHABOT DRIVE, SUITE 200
PLEASANTON, CA 94588
(925) 227-9100
CONTACT: EDDIE SIEU
R.C.E. # 44189

LAND PLANNER/DESIGN:
CKS ENVIRONMENTAL
P.O. BOX 927
PACIFICA, CA 94044-0927
(650) 283-0942
CONTACT: DAVID BEAUMONT

CONSULTANTS

ENGINEERING GEOLOGY:	ENGEO, INC 2010 CROW CANYON PLACE, SUITE 250 SAN RAMON, CA 94583
UTILITIES DESIGN:	TARRAR UTILITY CONSULTANTS 3361 WALNUT BOULEVARD, SUITE 100 BRENTWOOD, CA 94513
TRAFFIC ENGINEERING:	RKH TRANSPORTATION ENGINEERING 837 COLUMBA LANE FOSTER CITY, CA 94404
WATER/FIRE PROTECTION ENGINEERING:	ESH CONSULTANTS 842 32ND AVENUE SAN FRANCISCO, CA 94121
SURVEYING:	RUGGERI-JENSEN-AZAR 4690 CHABOT DRIVE, SUITE 200 PLEASANTON, CA 94588

DEVELOPERS

POINT MARTIN LLC.
CARTER DEVELOPMENT INC.
MARTIN PROPERTIES TRUST

SHEET INDEX

SHEET NO	DESCRIPTION
1	TITLE SHEET
2	EXISTING CONDITION
3	MASTER PLAN
4	PLANNED DEVELOPMENT PRELIMINARY PLAN

CKS ENVIRONMENTAL
LAND-USE PLANNING
SITE PLANNING & DESIGN

RJA
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4690 CHABOT DRIVE, SUITE 200 PLEASANTON, CA 94588
PHONE: (925) 227-9100 FAX: (925) 227-9300

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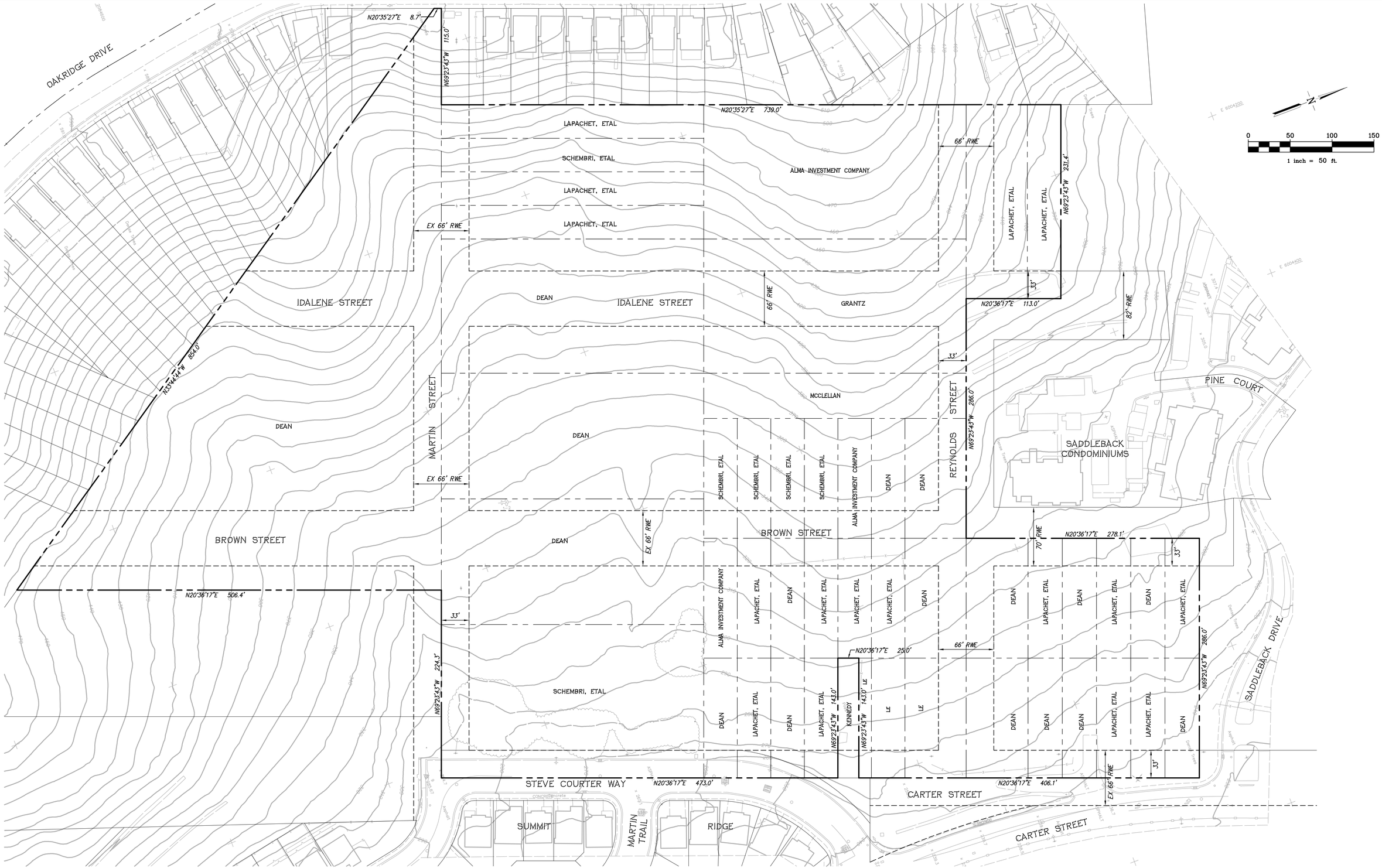

EXISTING CONDITION MAP

POINT MARTIN II

CITY OF DALY CITY, SAN MATEO COUNTY, CALIFORNIA

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DATE: OCTOBER 12, 2015 JOB NO. 151074 SHEET 2 OF 4

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LEGEND

- SINGLE FAMILY RESIDENTIAL
- STREETS
- OPEN SPACE

CKS
ENVIRONMENTAL
LAND-USE PLANNING
SITE PLANNING & DESIGN

MASTER LAND USE PLAN
POINT MARTIN II

CITY OF DALY CITY, SAN MATEO COUNTY, CALIFORNIA

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PHONE: (925) 227-9100 FAX: (925) 227-9300

DATE: OCTOBER 5, 2015 JOB NO. 151074 SHEET 3 OF 4

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LOT G
OPEN SPACE

9' WIDE OPEN-SPACE MAINTENANCE ACCESS TRAIL

SINGLE FAMILY RESIDENTIAL

STREET A (PUBLIC STREET)

SINGLE FAMILY RESIDENTIAL

LOT B

LOT A

STREET A (PUBLIC STREET)

LANE A (PRIVATE STREET)

SINGLE FAMILY RESIDENTIAL

LOT C

SINGLE FAMILY RESIDENTIAL

LANE C (PRIVATE STREET)

LOT H

STREET B (PUBLIC STREET)

SINGLE FAMILY RESIDENTIAL

APPROVED PD-66
NOT A PART

NOT A PART

NOT A PART

LOT D

SINGLE FAMILY RESIDENTIAL

LANE B (PRIVATE STREET)

LOT F

LOT E

SINGLE FAMILY RESIDENTIAL

LANE D (PRIVATE STREET)

SINGLE FAMILY RESIDENTIAL

SADDLEBACK CONDOMINIUMS

PINE COURT

SADDLEBACK DRIVE

STEVE COURTER WAY

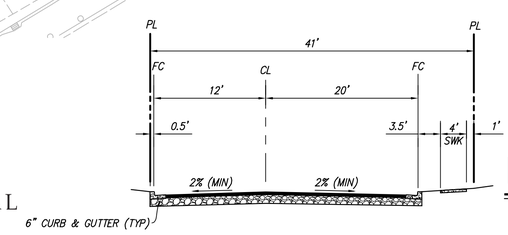
SUMMIT

MARTIN TRAIL

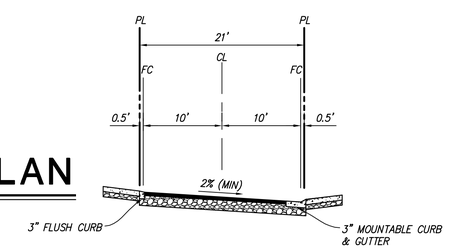
RIDGE

CARTER STREET

0 40 80 120
1 inch = 40 ft.



TYPICAL PUBLIC STREET SECTION
NOT TO SCALE



TYPICAL PRIVATE LANE SECTION
NOT TO SCALE

CKS ENVIRONMENTAL
LAND-USE PLANNING
SITE PLANNING & DESIGN

PLANNED DEVELOPMENT PRELIMINARY PLAN

POINT MARTIN II

CITY OF DALY CITY, SAN MATEO COUNTY, CALIFORNIA
FOR: MARACOR DEVELOPMENT

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PHONE: (925) 227-9100 FAX: (925) 227-9300

DATE: OCTOBER 12, 2015 JOB NO. 151074 SHEET 4 OF 4

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593 MORSE STREET
SAN JOSE, CALIFORNIA 95126

408 / 287-0491
B.KENNEDY@REALITAS.US

VIA EMAIL ONLY:
MVanLonkhuysen@DalyCity.org
TMothershead@DalyCity.org

January 5, 2016

Honorable Planning Commissioners
City of Daly City
333 90th Street
Daly City, CA 94015

SUBJECT: PLANNING COMMISSION MEETING
JANUARY 5, 2016
PLANNED DEVELOPMENT PD-10-15-11781 AND
ENVIRONMENTAL REVIEW CEQA-10-15-11782 ("POINT MARTIN PLAN")
PRELIMINARY PLAN REVIEW

Dear Honorable Planning Commissioners:

Although I support the general objective of rezoning the existing vacant 17.8 acres from pre-PD to low-density residential, the proposed Point Martin Plan fails to meet required density, circulation, private street, topography, geology, and environmental standards.

I. THE POINT MARTIN PLAN SUBSTANTIALLY UNDERSTATES THE ACTUAL DENSITY PROPOSED.

Point Martin alleges that the density proposed is 6.45 units per acre. This apparently is derived by using as a numerator the 115 units proposed and as a denominator the 17.8 acres. This, however, is seriously at variance with the actual conditions present.

Although the total acres approximates 17.8 acres, of this 17.8 acres about 11.3 acres is now—prior to re-zoning--designated by the plan the city set forth in January 2012 as open space. Effectively, then the area available for development is, not 17.8 acres, but 6.5 acres. To wit:

Total Acres:	17.8	
Designated Open Space	(11.3)	See City zone plan of 1/25/12
Actual Acres Available:	*6.5*	

The actual density, therefore, is not 6.45 units per acre, but to the contrary, 17.8. (115 ÷ 6.5.) And, as stated in the Point Martin Plan, the proposed 115 units may increase, should the area fronting Steve Courter Way be developed. If this were to occur at the relatively low density

proposed on Street B, about nine units would be added to total, not 115, but 124, resulting in a density per acre of 19.1. (124 ÷ 6.5.) This exceeds the 14.5 allowed by the General Plan Land Use Element.

A potential density of 19, moreover, is substantially above the density of the contiguous owners of the 74 units on Steve Courter Way, Farrier Place, and Martin Trail. A proposed development of significantly higher density than the existing 74 houses, and of presumed lower quality, is unlikely to receive the support of the 74 contiguous owners.

Furthermore, the area stated in the Point Martin Plan apparently includes in the 17.8 acres the abandonment of city paper streets of about 3.36 acres. Whether these streets are to be purchased from the city and at what price is not stated in the Point Martin Plan. If the assumption of the plan is that the streets are to be a gift from the city to Point Martin, then that assumption must be examined whether Daly City's citizens feel compelled to make to the Point Martin Corporation a 3.36-acre gift.

The plan, moreover, as stated in the agenda excludes one property. In fact, the plan excludes two contiguous parcels: the Le parcel, APN 005-041-250, and the Kennedy parcel, 005-041-260, each front Carter Street and each affect the proposed primary entrance just south of Saddleback Drive.

II. THE CIRCULATION PROPOSED ON THE 4 PRIVATE STREETS RESEMBLE, NOT STREETS, BUT ALLEYS.

The plan proposes four private streets that are essentially alleys, mis-named as streets. The private streets are to be 20 feet wide with a 21 foot right of way, meaning of course that a mere 6 inches separates the street from the proposed home.

Now, an active street that is six inches from a home's bedroom, kitchen, or whatever room faces the street is redolent of the sub-standard housing one might have expected at the time the Geneva Towers were built; it is not expected today.

III. INCLUSIONARY, AFFORDABLE HOUSING IS ABSENT.

Perhaps such sub-standard design can be justified if it includes a substantial amount of affordable housing at the 50% to 60% of median income levels. Such housing to be effective should be inclusionary without regard to income, race or creed.

But Point Martin is silent on the housing that it must provide for buyers that have a low-income, and that are possibly subsidized.

IV. PARKING IS PROBLEMATIC.

Parking is proposed for the 63 single-family detached units to be a two-car garage, with a two-car driveway. For the 52 smaller row-houses, however, parking is expected to be for a two-car garage, but only a one-car driveway, meaning evidently that the garage will not accommodate side-by-side vehicles. The row houses apparently will have two cars parked one behind the other in the garage, and a third car behind the two front-to-back in the garage, meaning three cars are to be parked front-bumper to back-bumper.

Although theoretically such parking is possible, the likelihood of an owner each workday morning navigating three cars parked bumper-to-bumper is less than ideal, and in effect likely will mean that at most two parking stalls, not three, are provided for the 52 row-houses.

V. GEOLOGIC PROBLEMS.

The Agenda Report, page 4, states that "the applicant has submitted a geotechnical report which outlines the most feasible mitigation solutions which have been found feasible." Now, declaring a report as feasible, and then invoking such statement as proof of geotechnical feasibility is less than a convincing tautology.

The previously prepared soils reports, which include as many as 12 to 15 borings, show in the area to be developed a number of potential landslides.

Such soil instability bears careful scrutiny, especially since the Point Martin development is downhill from twenty-two homes on Oakridge Drive, and downhill from several dozen condominiums on Saddleback's Oak Court.

The 74 contiguous homes on Farrier Place, and Martin Trail, in fact, required an excavation of over 40-feet deep to mitigate similar landslides and sub-standard soils.

Potentially active landslides cannot be dismissed by the developer by selling to Daly City commissioners a meaningless tautology.

VI. TOPOGRAPHY.

The topography of the proposed plan is not so much realistic, as it is fictitious. As a straightforward example, the proposed main entrance off Carter just south of Saddleback starts at elevation 240, and rises to an average elevation near the Saddleback condominiums of about 310. This 70-foot rise occurs over about 257 feet from Carter Street to the rear of proposed

lots 97 through 102. This rise is interrupted by the 41-foot wide public Street B. After considering that Street B must remain relatively flat, the total distance of this 70-foot rise is about 216 feet. (257 less 41.)

This is a 32% slope on average. (70 ÷ 216) Considering that the conventional maximum slope of a street is about 15%, with an absolute maximum of 18%, a 32% average slope is more than twice the convention. To think that the proposed houses can fit on this gradient is at best wishful.

VII. THE ENVIRONMENTAL ASSESSMENT SHOULD REQUIRE, NOT A NEGATIVE DECLARATION, BUT AN EIR.

The Agenda Report, page 5, states that "the project will likely require approval of a Mitigated Negative Declaration." Here the question is--not that it will likely require a negative declaration, which in any event is a given--but why the Point Martin project does not require an EIR? The question is skirted. Avoiding it is much the easiest response. But it is not a response.

The question is especially relevant, since the "Jurisdictional Delineation Report for Carter Street Property, Section 404 Waters and Wetlands of the United States," June 2002, specifically identified a "channel waters of the U.S." flowing through the project. Further, in the past, the federally protected species, Callippe silverpot butterfly (*Speyeria callippe callippe*), has been determined to be present at the site, and is endangered. Neither of these environmental damages can by the developer be brushed aside.

An EIR also would provide an examination of the landslide condition, and of the other usual and customary criteria for evaluating a proposed hillside development downhill from contiguous housing built under codes of the 1950s, and contiguous to the large open area of San Bruno Mountain Park having protected species, thereby providing assurance to Daly City of the integrity of its approval process, and insuring the City from repercussions should future environmental problems arise.

Thank you for your consideration.

Sincerely,

Bill Kennedy

cc: Michael VanLonkhuysen, Interim Planning Manager
Tatum Mothershead, Interim Director of Economic and Community Development
Saddleback Neighborhood Association

City Council Meeting Agenda Report

Item # _____

Meeting Date: February 22, 2016

Subject: **Planned Development PD-1-15-10255 (Preliminary Plan Review) — Subdivision of a 6.96-acre site at 1 Martin Street for 71 Residential Lots**

Recommended Action

Approve the Preliminary Plan for Planned Development PD-71.

Planning Commission Discussion

On February 2, 2016, the Planning Commission voted 5-0 to recommend that the City Council approve the Preliminary Plan for Planned Development PD-1-15-10255. Commissioner Edelman asked if the rainwater collected in the detention area impacted by the Martin Street roadway extension would percolate to the water table. Staff answered that it was likely that it did. He also asked if the private lanes had been reviewed by the North County Fire Authority and staff responded that they had. Commissioner Satorre indicated that Carter Street has become congested and asked if the street could be widened to accommodate the growing population in the area. Staff answered that roadway widening projects were typically identified during the General Plan update process and that no widening of Carter Street had been envisioned by the Plan's Circulation Element. Commission Sylvester commended the School District's efforts.

Background

BKF Engineers, on behalf of the Bayshore Elementary School District, has submitted an application to amend the City's General Plan, rezone to Planned Development, and subdivide a 6.96-acre property at the existing Robertson Intermediate School (see Attachment A – Location Map). The proposal includes a residential development totaling 71 single-family detached homes proposed in a "clustered courtyard" arrangement. Access to the subdivision would be provided by extending Martin Street as a public street to Linda Vista Drive, with homeowner-association owned and maintained courtyards providing access to individual homes from the Martin Street extension (see Attachment B – Project Plans).

At the Preliminary Plan stage, the City Council is reviewing the proposed land use, circulation, and overall site design of the Planned Development rezoning request. The Council may either grant approval of the Preliminary Plan, allowing the application to proceed to the Precise Plan stage or request that the applicant revise the Preliminary Plan prior to it proceeding to the Precise Plan stage. Preliminary Plan action does not limit the Council's ability to approve, conditionally approve, or deny the Precise Plan.

The City Council should be aware that the site presently occupied by the Robertson Intermediate School, which, under a proposal by the Bayshore Elementary School District, would be sold and the sale proceeds used to construct a new school on the existing Bayshore Elementary School site located at 155 Oriente Street. The new school would combine the grade levels of the elementary school and intermediate school, thereby serving students from transitional kindergarten through

eighth grade (TK-8) in a single school facility. A complete explanation of the project and the benefits of constructing the TK-8 are provided in the attached written narrative (see Attachment C – Project Narrative).

Discussion

As identified previously, the Preliminary Plan provides the City Council the opportunity to review the proposed land use, circulation, and overall site design of Planned Development rezoning request.

From the standpoint of vehicular circulation, the 71 lots would be served by five private driveways ("lanes") leading from Martin Street, which would be extended as a public street from its present easterly terminus in front of the Robertson Intermediate School, through the school property, and connected to Linda Vista Drive. The new roadway connection to Linda Vista Drive would be necessary to provide a secondary means of access to the subdivision required by the Fire Department and to provide the sewer utility connection required by the Bayshore Sanitary District.

Each of the five private driveways would provide shared access to individual homes in a "clustered courtyard" arrangement, wherein most homes face a common courtyard providing each with vehicular and pedestrian access. Lots within each courtyard would be between 1,975 and 4,245 square feet in size, and would provide living spaces ranging between approximately 1,500 and 2,500 square feet, exclusive of garage areas. The architectural concept currently proposed identifies two-story homes with traditional lap siding with hip and gables roofs. Each home would provide at least two side-by-side parking spaces, as required by the Zoning Ordinance. The project architecture would be refined in greater detail as part of the Design Review Committee review of the project.

As proposed, Martin Street would be constructed at the slightly reduced right-of-way dimension than presently exists east of Brandon Street, where the north side of the street is red-curbed for no parking. This red-curbed condition would continue on the north side of the Martin Street extension, where the street would provide two travel lanes with on-street parking on the south side of street only, adjacent to the subdivision. The five private driveways would have a width sufficient to accommodate two-way vehicular travel, but no parking. Instead, two parking spaces would be provided in the garage of each home (142 spaces) and two additional driveway spaces would be provided for ten of the proposed homes (20 spaces). Therefore, a total of 162 off-street parking are therefore proposed, exceeding the 142 spaces required by the Zoning Ordinance, i.e., two spaces per home.

Based on figures provided by the applicant, as many as 35 on-street parking spaces could be accommodated in the Martin Street extension, where the applicant would construct a sidewalk to facilitate access to these spaces by residents of the proposed homes. Staff will likely require that the applicant provide an off-site sidewalk extension to the Schwerin/Martin intersection and is currently reviewing the need for additional sidewalk connections along portions of the north side of Martin Street. Combined with the 162 spaces provided in garages and driveways, approximately 197 parking spaces would be available to residents.

As the proposed Martin Street extension transects an existing city-owned stormwater detention facility, the applicant is working with the City Engineer to ensure that the facility's capacity would be unaffected by the new roadway improvement. Staff is also in discussions with the applicant about providing benches or other pedestrian amenities in the vicinity of the detention facility, perhaps adjacent to Linda Vista Drive, as a mitigation measure to introducing the roadway through what is now a passive open space area.

General Plan, Zoning, and Project Density

The General Plan identifies the land use designation for the subject site as Residential – Low Medium Density, which allows between 14.5 and 20 dwelling units per acre, and Public Facilities. Given that the proposed development is 71 units on 6.96 acres of land, the resulting project density would be 10.2 dwelling units per acre. This density is therefore not consistent with the current General Plan land use designations and the applicant has therefore applied to amend the General Plan designation applicable to the property to Residential – Low Density, which permits between two and 14.5 dwelling units per acre. At the proposed density, the development would be appropriate in context with residential surrounding uses which are also Residential – Low Density to the south, east, and west.

In addition to compliance with the General Plan density allowance, the proposed development would serve to implement the General Plan Housing Element, which encourages the development of infill housing on sites that are underutilized, where residential development represents the highest and best use, and where public infrastructure exists to support the intensity of the proposed development.

Project Affordability

As the current review of the Preliminary Plan is intended as an analysis of the physical features associated with the proposed subdivisions (e.g., site circulation, public and private street designations, and proposed land uses), a more detailed discussion of the project affordability will be provided during the Precise Plan stage of the approval process. However, the applicant has submitted an affordable housing plan for review and the City and applicant are currently negotiating the specifics of the plan.

Environmental Assessment

Staff has reviewed the proposal under the requirements of the California Environmental Quality Act (CEQA) and has found that the project will likely require approval of a Mitigated Negative Declaration. Staff is in the process of drafting this document and will present it to the City Council during the Precise Plan review.

Recommendations

The Planning Commission recommends that the City Council do the following:

1. Approve the Preliminary Plan for Planned Development PD-71.

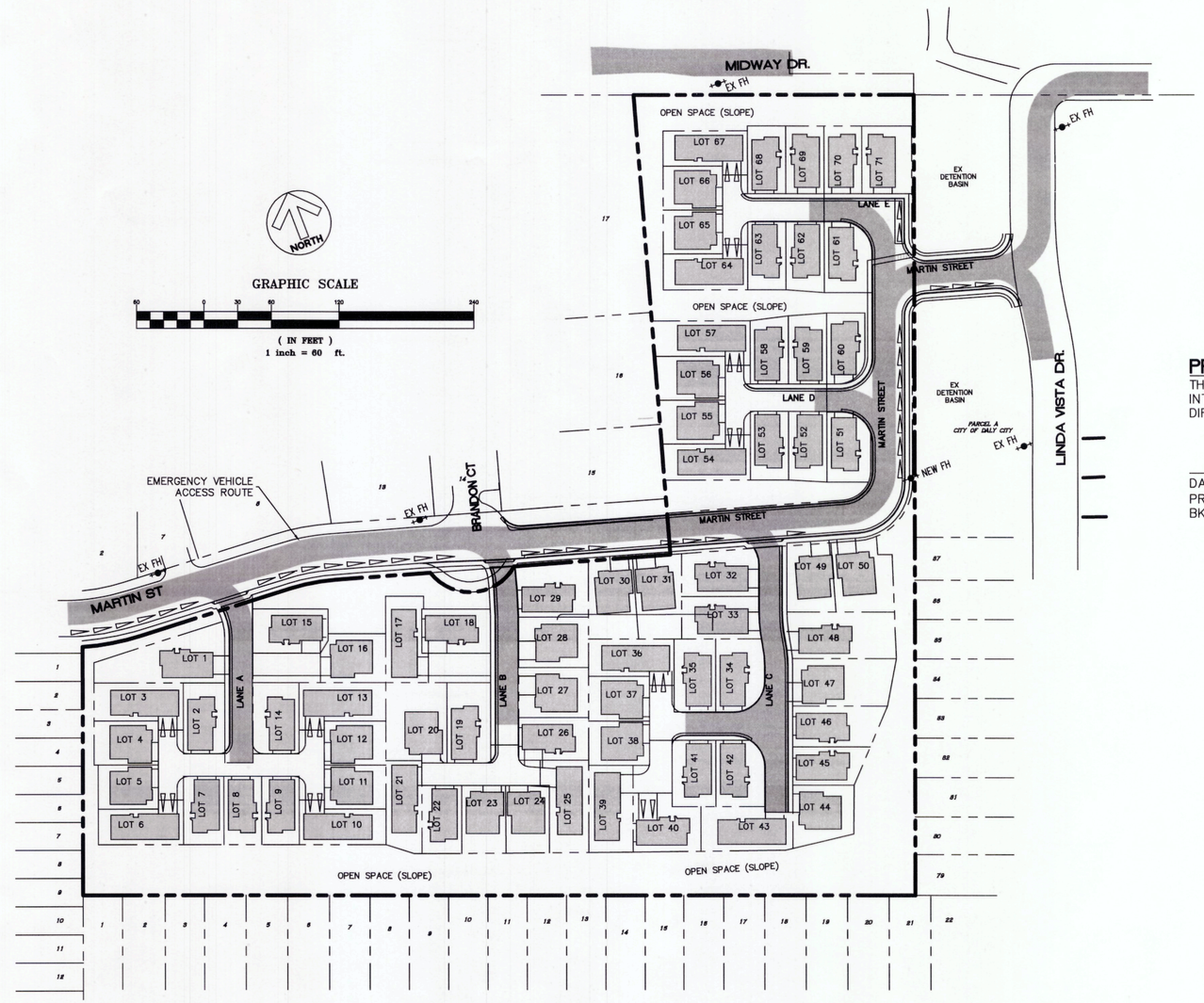
Respectfully submitted,

Michael VanLonkhuysen
Interim Planning Manager

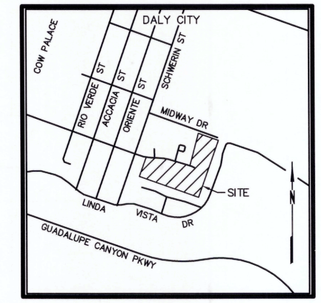
Tatum Mothershead
Interim Director of Economic and Community Development

Attachments
Attachment A – Location Map
Attachment B – Project Plans
Attachment C – Project Narrative

R1
R1
R1
MIDWAY
MARY CT
MIDWAY DR
R3
ACACIA ST
ORIENTE ST
SCHWERIN ST
MARTIN CT
BRANDON CT
MAIN ST
R1
R1
SITE
R1
LINDA VISTA DR
BAY RIDGE DR
JACQUELINE CT
JACQUELINE LN
R1
R1



PLAN
1"=60'



VICINITY MAP
NOT TO SCALE

PROJECT DATA:

THIS TENTATIVE MAP FOR THE REDEVELOPMENT OF ROBERTSON INTERMEDIATE SCHOOL HAS BEEN PREPARED BY ME OR UNDER MY DIRECTION IN ACCORDANCE WITH STANDARD ENGINEERING PRACTICE.

12.10.15

DANIEL G. SCHAEFER, P.E. RCE 51158 — DATE
PRINCIPAL/VICE PRESIDENT
BKF ENGINEERS

REGISTERED PROFESSIONAL ENGINEER
DANIEL G. SCHAEFER
No. 51158
CIVIL
STATE OF CALIFORNIA

TENTATIVE MAP ABBREVIATIONS:

ABBREVIATIONS

±	MORE OR LESS
AC	ASPHALT CONCRETE
APN	ASSESSOR'S PARCEL NUMBER
BLDG	BUILDING
CB	CATCH BASIN
CO	CLEANOUT
CONC	CONCRETE
DW	DRIVEWAY
EP	EDGE OF PAVEMENT
E	ELECTRIC
FH	FIRE HYDRANT
GI	GRATE INLET
LP	LIGHT POLE
OH	OVERHEAD
OVHG	OVERHANG
RTWL	RETAINING WALL
STLT	STREET LIGHT
TC	TOP FACE OF CURB
TYP	TYPICAL
UB	UTILITY BOX
UP	UTILITY POLE
W	WATER
WV	WATER VALVE

SHEET INDEX:

C1.0	TITLE SHEET
C2.0	EXISTING CONDITIONS
C2.1	EXISTING CONDITIONS
C2.2	EXISTING CONDITIONS
C3.0	DEMOLITION
C4.0	SITE PLAN
C4.1	SITE PLAN
C4.2	SITE PLAN
C5.0	GRADING PLAN
C6.0	UTILITY PLAN
C7.0	STORMWATER MANAGEMENT PLAN

TENTATIVE MAP NOTES:

1. OWNERS: BAYSHORE ELEMENTARY SCHOOL DISTRICT, 1 MARTIN ST, DALY CITY, CA 94014
2. SUBDIVIDER: BAYSHORE ELEMENTARY SCHOOL DISTRICT, 1 MARTIN ST, DALY CITY, CA 94014
3. ENGINEER: DAN SCHAEFER, BKF ENGINEERS, 1646 N. CALIFORNIA BLVD., STE #400, 925-940-2200, LICENSE NUMBER C51158.
4. FLOOD ZONE: THE ENTIRE SITE AND ALL PROPOSED IMPROVEMENTS ARE WITHIN FEMA ZONE X, "AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD." NATIONAL FLOOD INSURANCE PROGRAM, FLOOD INSURANCE RATE MAP, SAN MATEO COUNTY, CALIFORNIA AND INCORPORATED AREAS, MAP NUMBER 06081C0035E, EFFECTIVE DATE: OCTOBER 16, 2012.
5. EXISTING USE: PUBLIC EDUCATION
6. PROPOSED USE: SINGLE FAMILY RESIDENTIAL
7. THIS DEVELOPMENT WILL REALIGN EXISTING PUBLIC STORM DRAINS AND WATER. CONSTRUCTION OF PUBLIC UTILITIES SHALL BE COMPLETED PRIOR TO SALE OF INDIVIDUAL LOTS.
8. NEW PUBLIC SEWER MAINS WILL BE CONSTRUCTED THROUGHOUT THE SITE STREETS AND ALLEYS.
9. THE NEW THROUGH STREET IS TO BE PUBLIC. NO PARKS OR PUBLIC USE AREAS ARE PROPOSED BUT SEVERAL STEEP SLOPES AND STORMWATER TREATMENT AREAS WILL BE COMMON OPEN SPACE.
10. TREES ARE TO BE PLANTED THROUGHOUT THE SUBDIVISION. A LANDSCAPE PLANTING AND IRRIGATION PLAN FOR COMMON AREAS, PUBLIC AND PRIVATE STREETS WILL BE SUBMITTED.
11. STANDARD STREET LIGHTING IS TO BE INSTALLED ALONG THE NEW PUBLIC STREET BUT NOT WITHIN THE PRIVATE COURTS AND ALLEYS.
12. EACH RESIDENTIAL UNIT IS TO HAVE 2 COVERED SPACES FOR 142 SPACES. SOME UNITS WILL HAVE PARKING IN FRONT OF THE GARAGE AS SHOWN FOR 20 ADDITIONAL SPACES. 2 SPACES ARE PROPOSED ON LANE E. ON PUBLIC STREETS 33 SPACES WILL BE AVAILABLE ALONG THE PROJECT FRONTAGE AND BETWEEN THE SITE AND LINDA VISTA DRIVE. THE TOTAL PARKING COUNT IS 197.
13. THE SMALLEST RESIDENTIAL LOT IN THE TRACT IS 2042 SF, MORE OR LESS.
14. WATER IS TO BE PROVIDED BY CITY OF DAILY CITY WATER. CONNECTIONS ARE AT LINDA VISTA DRIVE AND MARTIN STREET.
15. STORM DRAIN FACILITIES ARE CONNECTED TO CITY OF DAILY CITY FACILITIES IN MIDWAY DRIVE.
16. THIS SITE IS PROPOSED TO BE REZONED TO RESIDENTIAL PD FROM EXISTING R1.
17. PROJECT GEOTECHNICAL REPORT: "PRELIMINARY GEOTECHNICAL INVESTIGATION, ROBERTSON SCHOOL SITE PROPOSED APARTMENTS" BY CTE CAL, INC., OCTOBER 21, 2014, CTE JOB NO. 20-2511G
18. WASTEWATER IS TO BE PROVIDED BY THE BAYSHORE SANITARY DISTRICT.

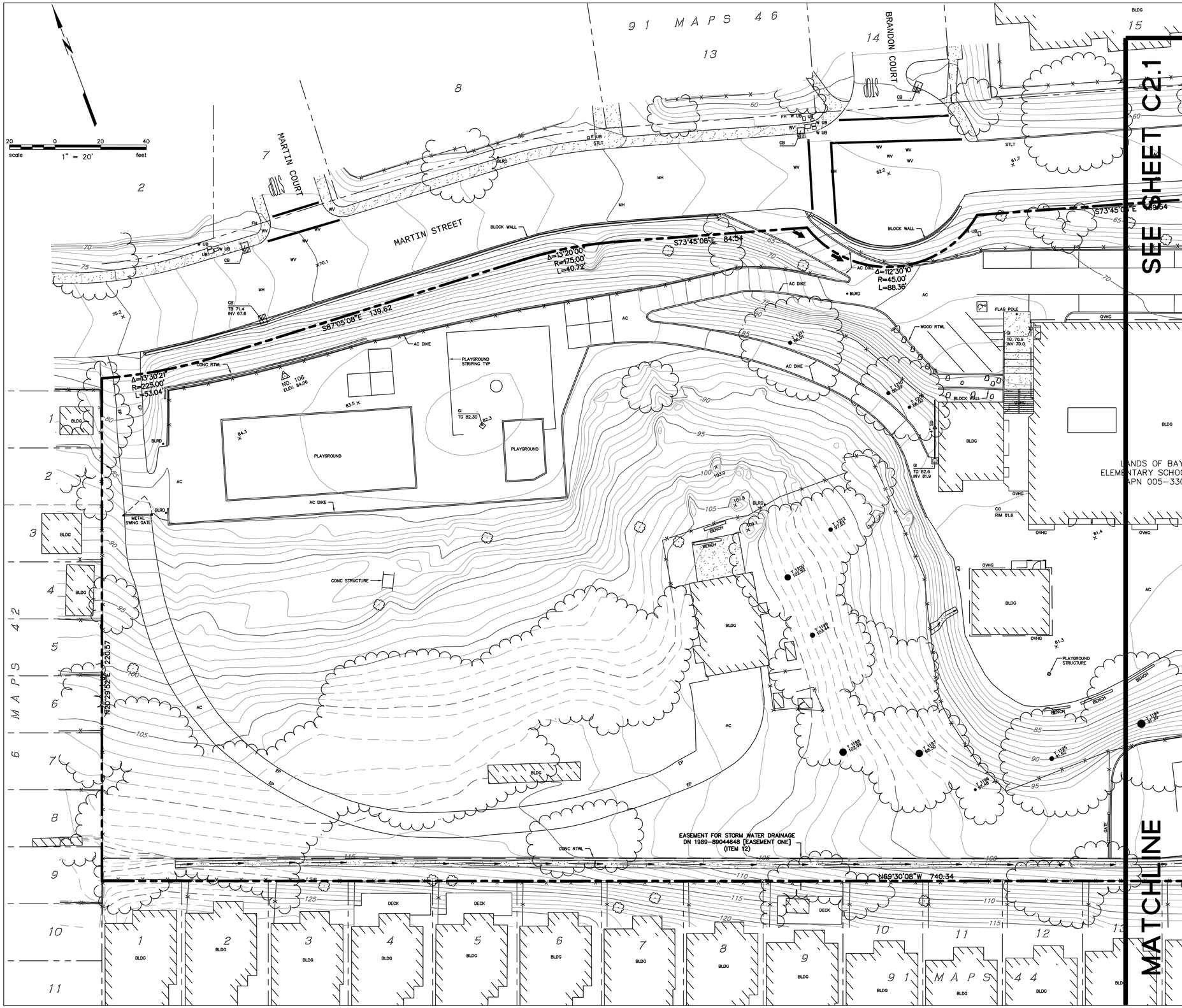
PROJECT DATA:

EXISTING APN	005-330-010
SHORT LEGAL DESCRIPTION	LOT 1 RECORD MAP BK 91, PG 44
OWNER	LANDS OF BAYSHORE ELEMENTARY SCHOOL DISTRICT
ZONING (CURRENT)	R1
ZONING (PROPOSED)	PD (PLANNED DEVELOPMENT)
GEN. PLAN (CURRENT)	"PF" PUBLIC FACILITIES, "R-HD" RESIDENTIAL HIGH DENSITY
GEN. PLAN (PROPOSED)	RESIDENTIAL – HIGH DENSITY
AREA (GROSS)	303,100 SF (6.958 AC)
AREA (NET)	290,776 SF (6.675 AC) (GROSS AREA LESS PUBLIC RIGHT OF WAY DEDICATED)
AREA OF RESIDENTIAL PD	290,776 SF
AREA OF BUILDINGS FOOTPRINT	82,374 SF
BUILDING COVERAGE	28.3%
DWELLING UNITS	71 UNITS
DENSITY (NET)	9.4 DU/AC
DWELLING SIZES	1500 SF – 2500 SF EXCLUDING GARAGE AREA
PARKING – DWELLINGS	142 IN GARAGE, 20 IN DRIVEWAY
PARKING – ON-STREET	35
PARKING – TOTAL	197
PARKING TO BEDROOM (RATIO)	0.88 STALLS/BEDROOM
OPEN SPACE	70,469 SF (1.618 AC)
NUMBER OF UNIT TYPES	PLAN A = 22 UNITS, PLAN B = 35 UNITS, PLAN C = 14 UNITS

TENTATIVE MAP REDEVELOPMENT OF ROBERTSON INTERMEDIATE SCHOOL PLANNED DEVELOPMENT

CITY OF DALY CITY, CALIFORNIA
NOVEMBER, 2015

BKF
ENGINEERS / SURVEYORS / PLANNERS
1646 N. CALIFORNIA BLVD., SUITE 400
WALNUT CREEK, CA 94596
(925) 940-2200 FAX: (925) 940-2299



SYMBOLS & LEGEND

EXISTING

- GATE VALVE
- FIRE HYDRANT
- GUY ANCHOR
- SIGN
- STREET LIGHT
- UTILITY POLE
- CATCH BASIN W/ GRATE INLET
- GRATE INLET
- MANHOLE
- CLEANOUT
- TREE
- FENCE
- FLOW LINE
- GRADE BREAK
- OVERHEAD ELECTRIC LINE
- PROPERTY LINE
- RETAINING WALL
- CONCRETE

TENTATIVE MAP
REDEVELOPMENT OF ROBERTSON INTERMEDIATE SCHOOL
PLANNED DEVELOPMENT EXISTING SITE PLAN

CITY OF DALY CITY, CALIFORNIA
NOVEMBER, 2015

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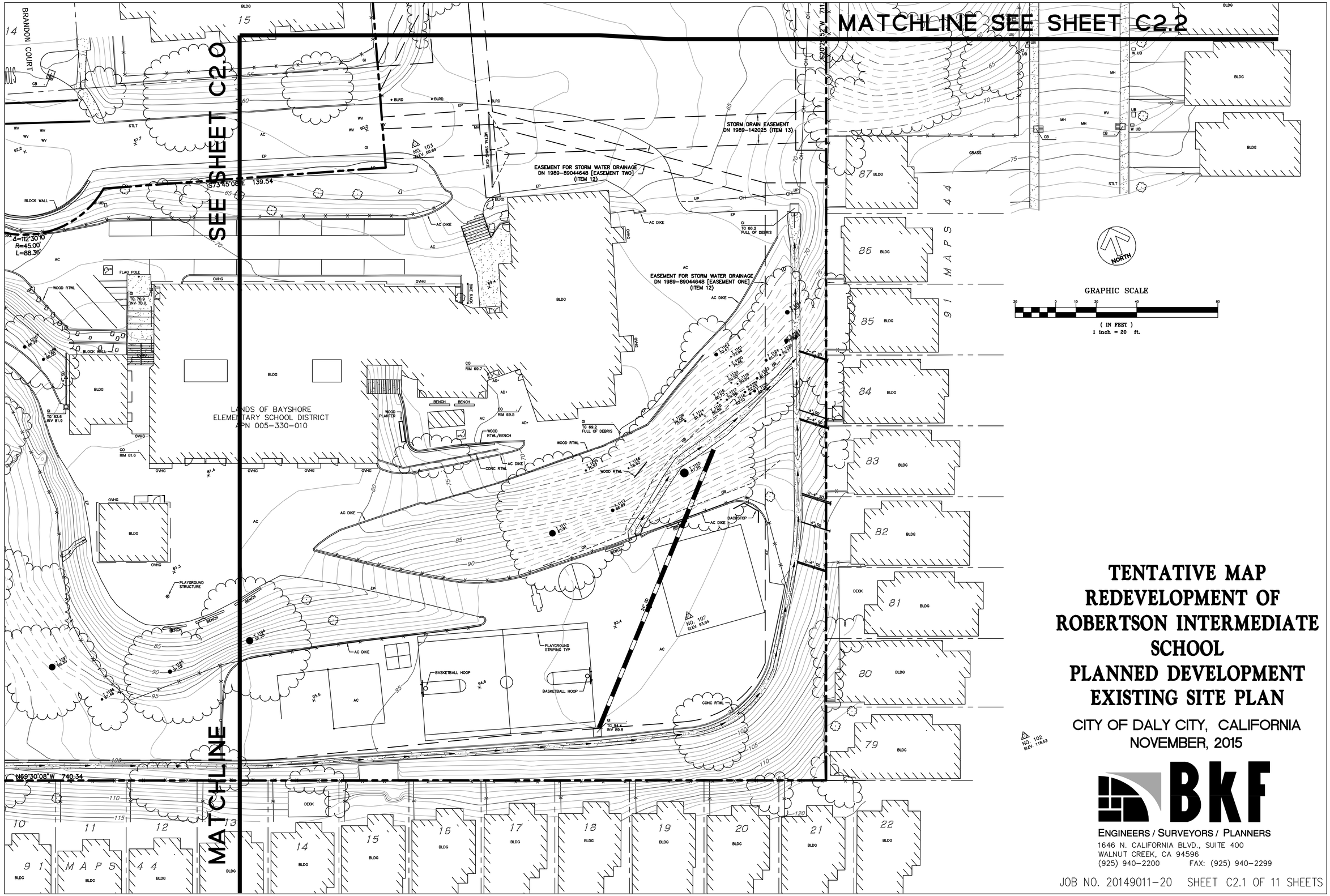
JOB NO. 20149011-20 SHEET C2.0 OF 11 SHEETS



TENTATIVE MAP
REDEVELOPMENT OF ROBERTSON INTERMEDIATE SCHOOL
PLANNED DEVELOPMENT
EXISTING SITE PLAN

CITY OF DALY CITY, CALIFORNIA
NOVEMBER, 2015

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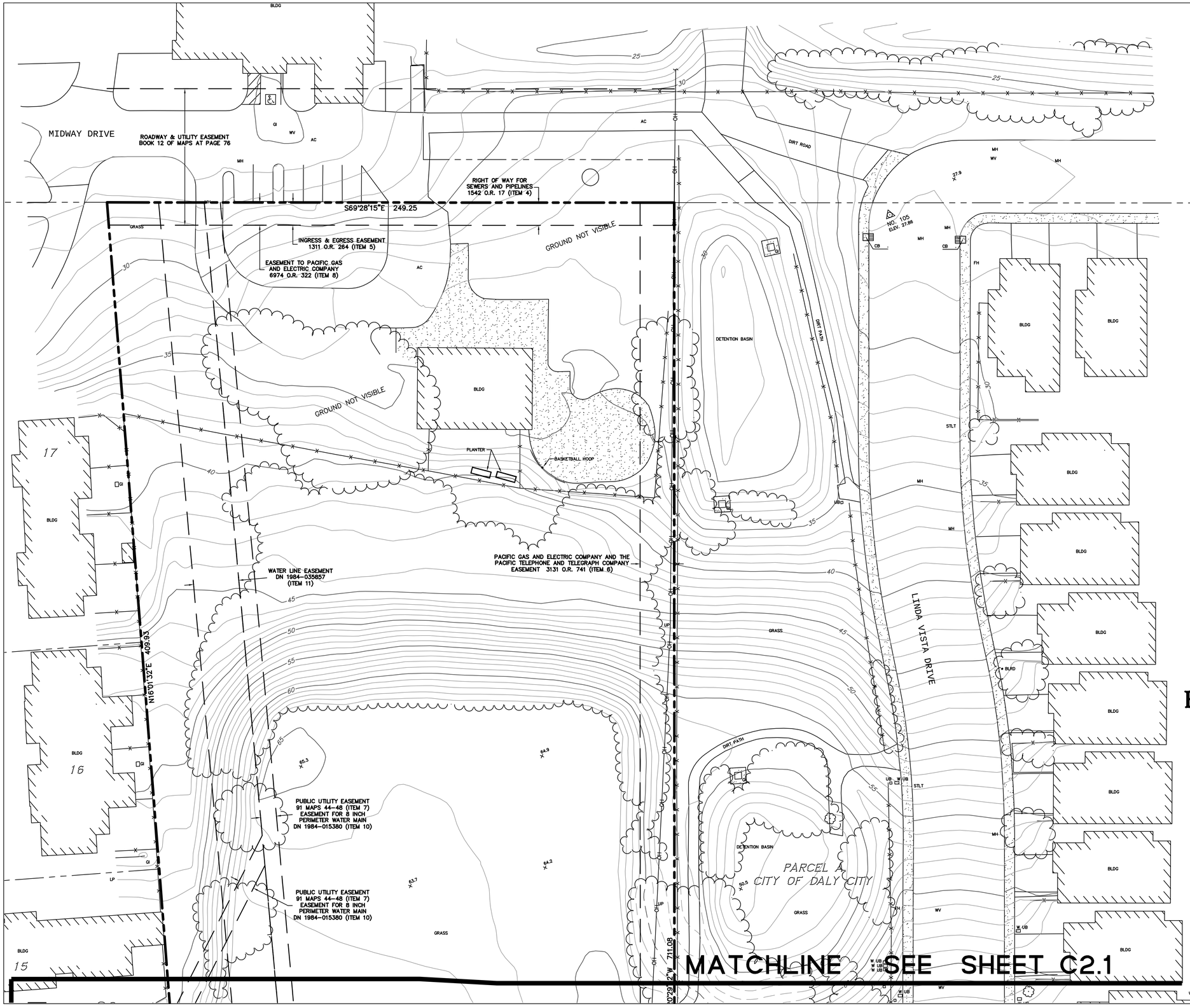

20 0 20 40
scale 1" = 20' feet

TENTATIVE MAP
REDEVELOPMENT OF ROBERTSON INTERMEDIATE SCHOOL
PLANNED DEVELOPMENT
EXISTING SITE PLAN

CITY OF DALY CITY, CALIFORNIA
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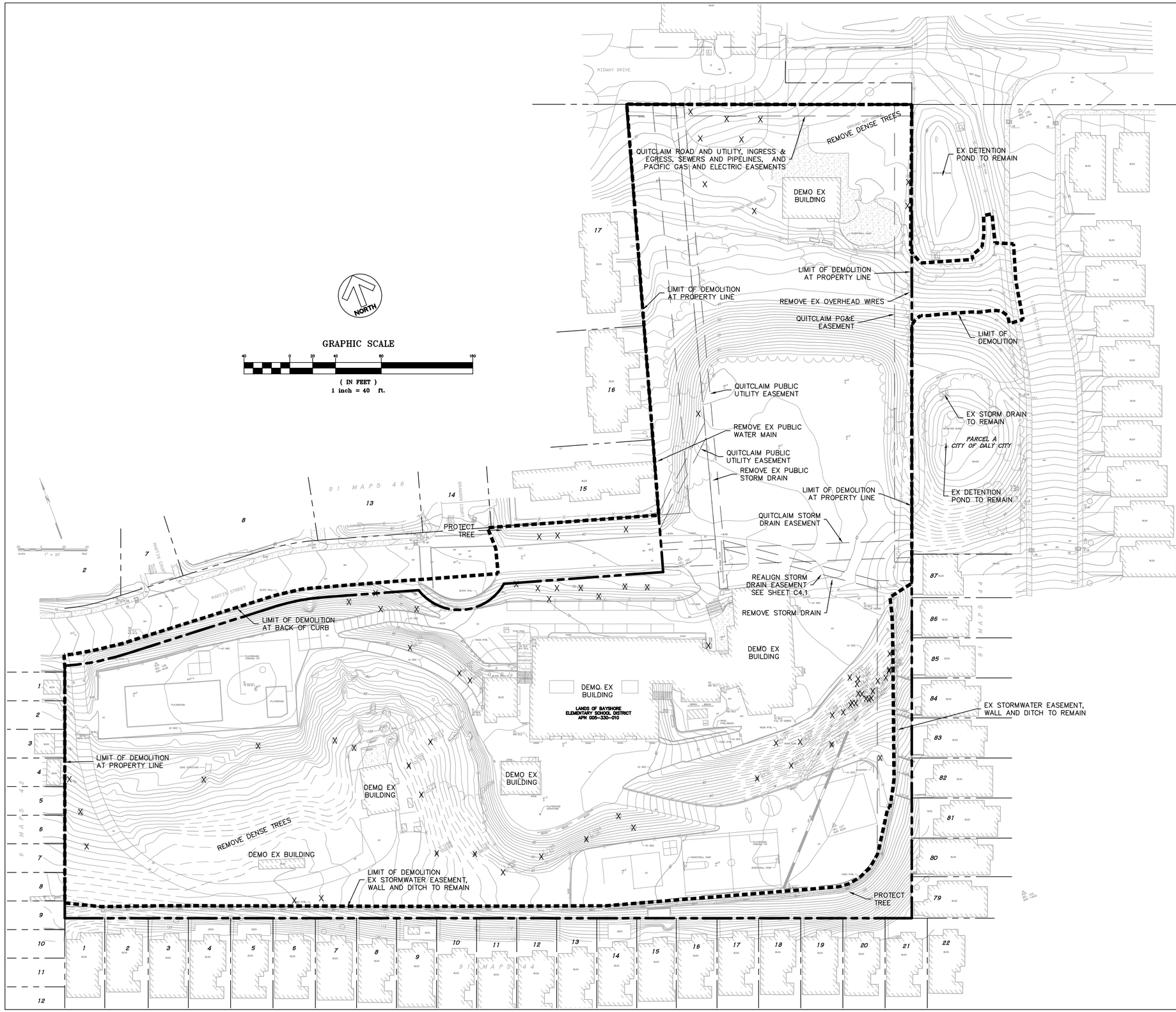

TENTATIVE MAP
REDEVELOPMENT OF ROBERTSON INTERMEDIATE SCHOOL
PLANNED DEVELOPMENT
DEMOLITION PLAN

CITY OF DALY CITY, CALIFORNIA
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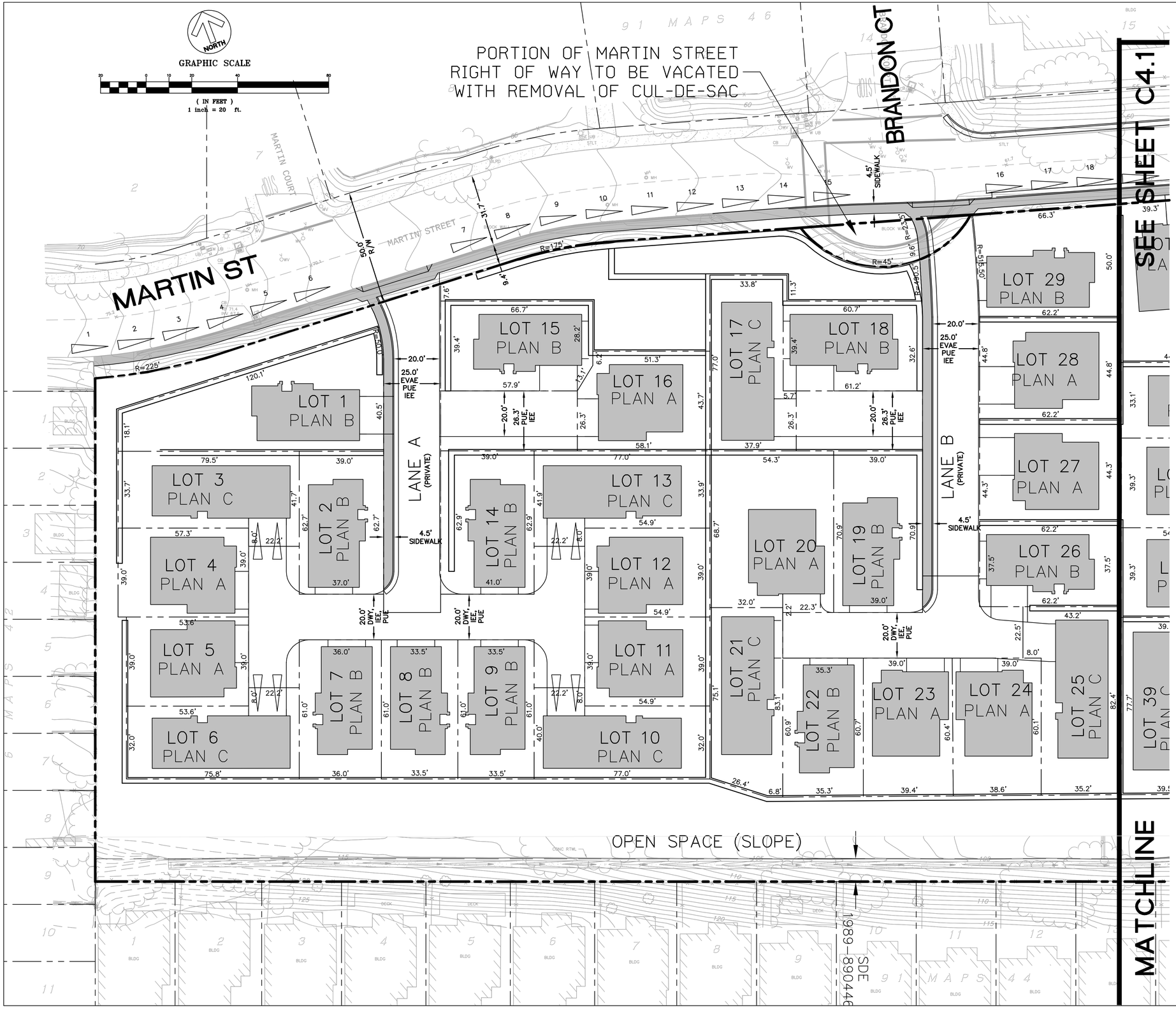

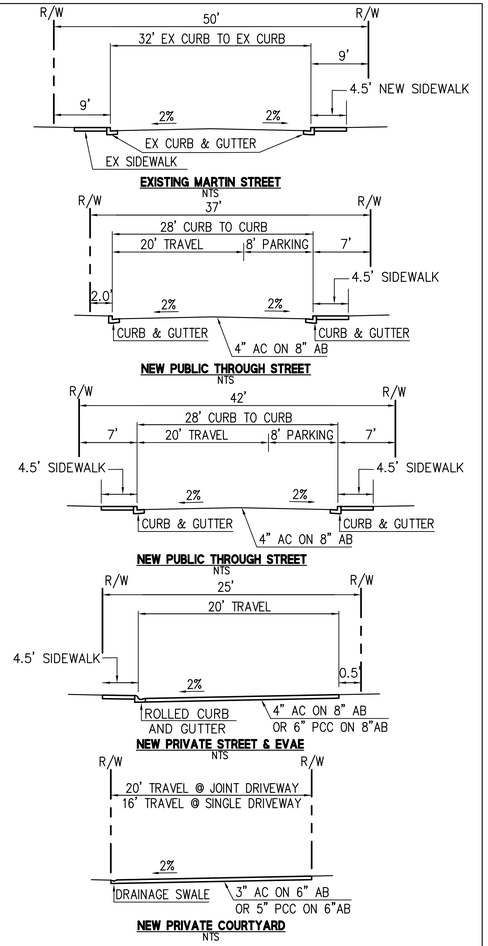

TENTATIVE MAP, PRELIM. HORIZONTAL CONTROL PLAN NOTES:

1. LENGTHS AND RADIUS SHOWN ARE FOR PROPERTY LINES, NOT FACE OF CURB.

TENTATIVE MAP REDEVELOPMENT OF ROBERTSON INTERMEDIATE SCHOOL PLANNED DEVELOPMENT HORIZONTAL CONTROL PLAN

CITY OF DALY CITY, CALIFORNIA
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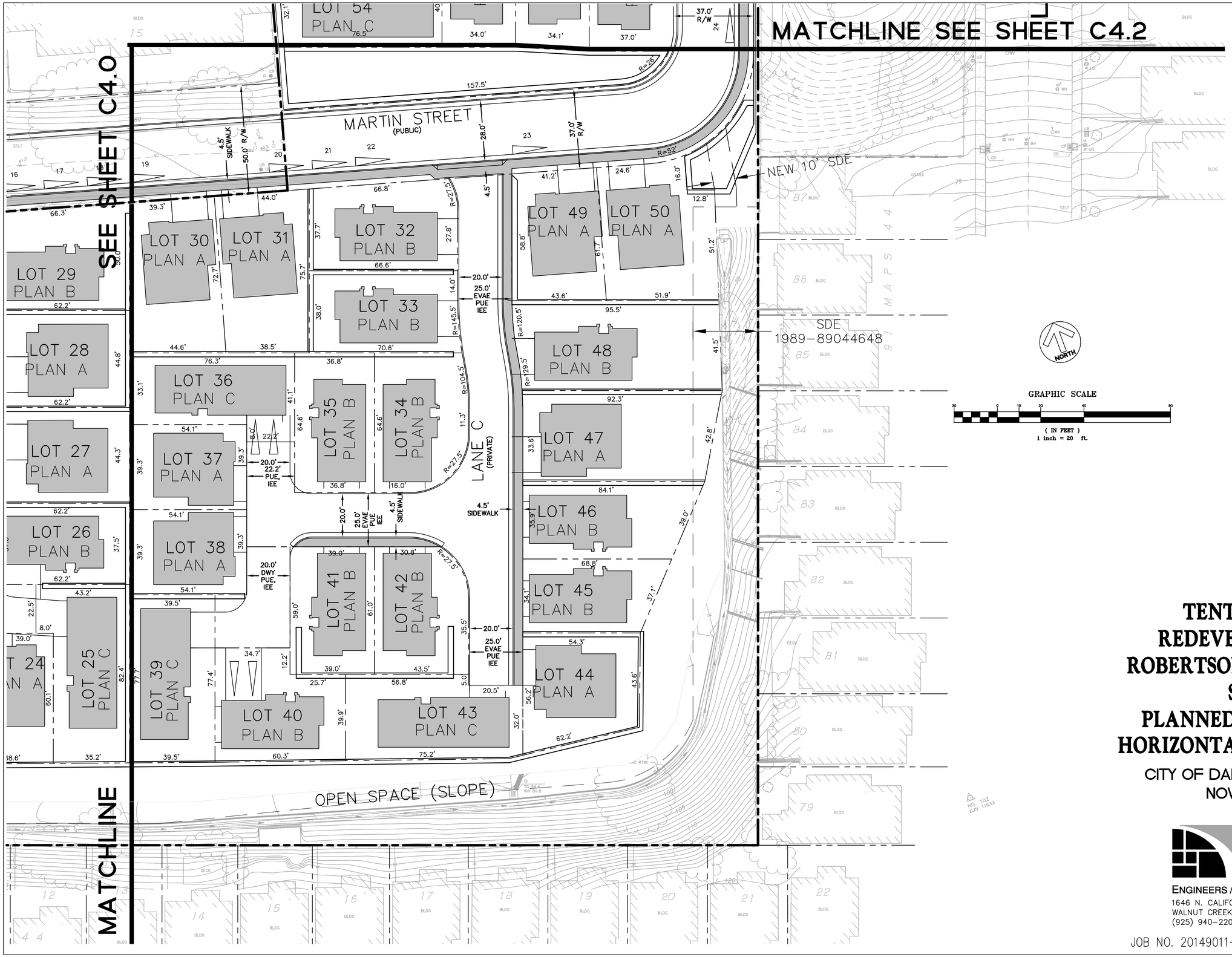

TENTATIVE MAP
REDEVELOPMENT OF ROBERTSON INTERMEDIATE SCHOOL
PLANNED DEVELOPMENT HORIZONTAL CONTROL PLAN

CITY OF DALY CITY, CALIFORNIA
NOVEMBER, 2015

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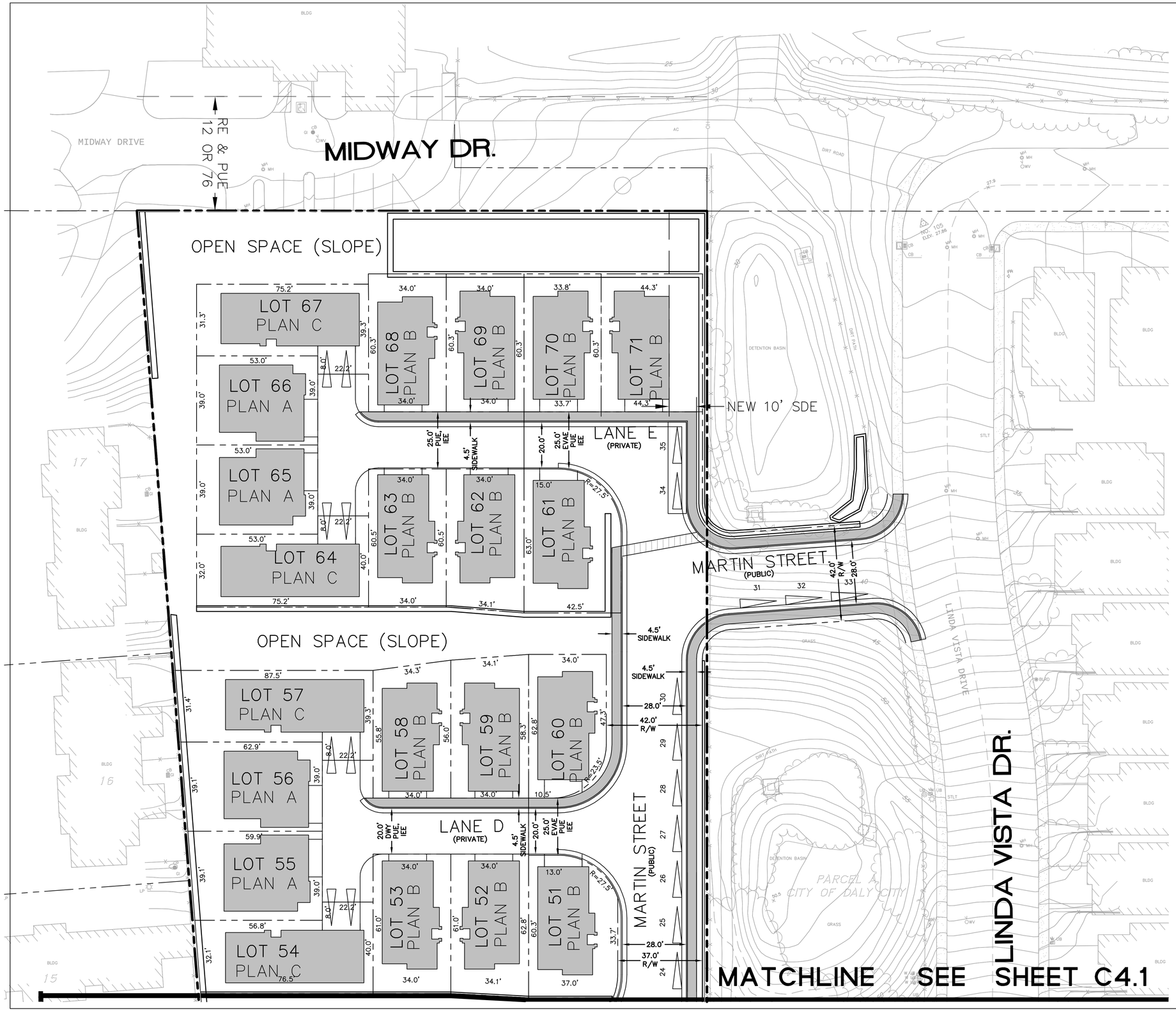

TENTATIVE MAP
REDEVELOPMENT OF ROBERTSON INTERMEDIATE SCHOOL
PLANNED DEVELOPMENT HORIZONTAL CONTROL PLAN

CITY OF DALY CITY, CALIFORNIA
NOVEMBER, 2015

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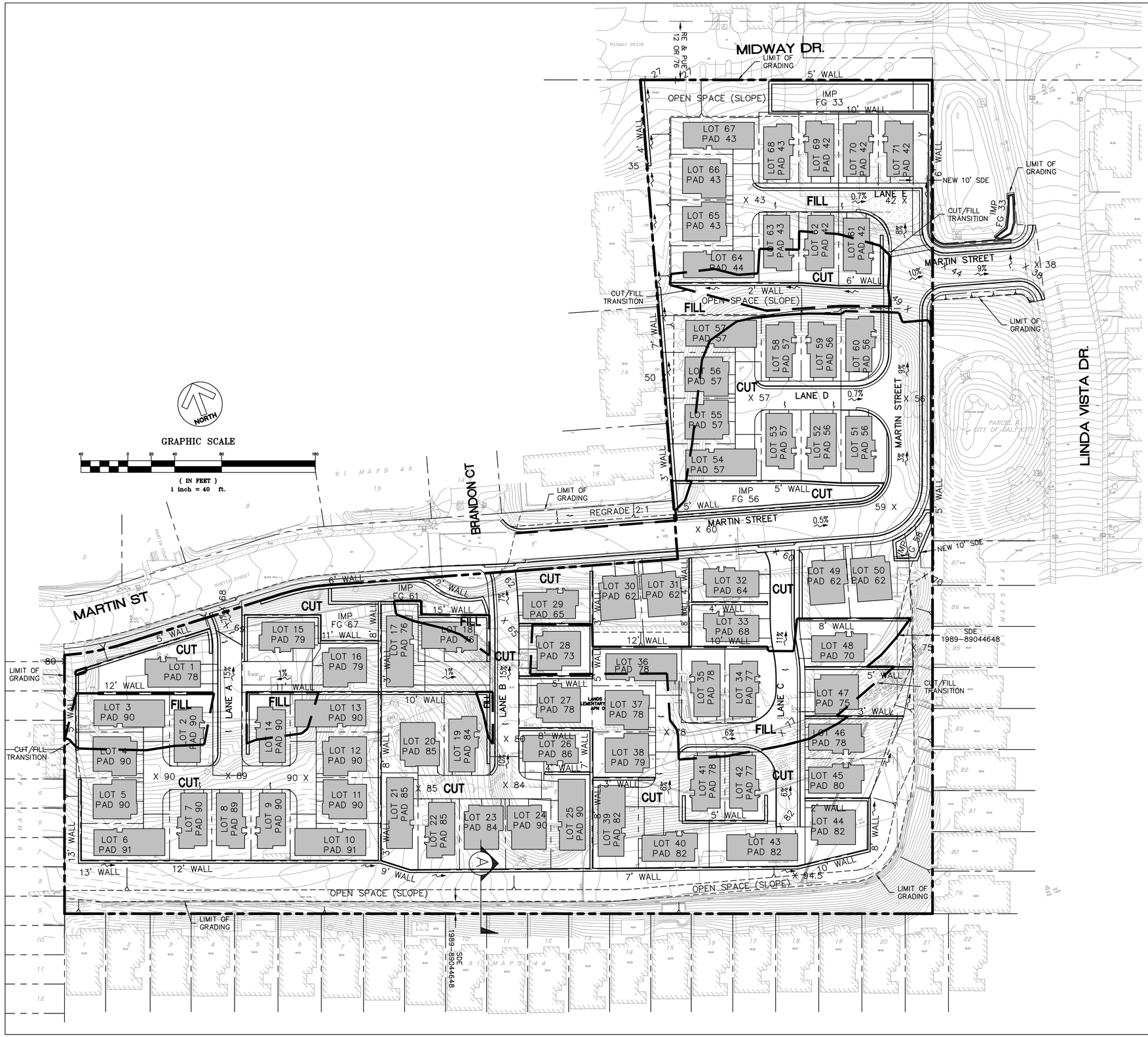

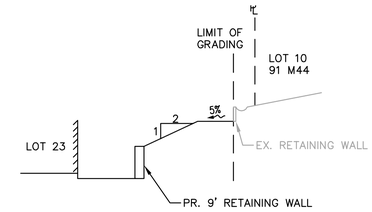

SECTION A
NTS

TENTATIVE MAP
REDEVELOPMENT OF ROBERTSON INTERMEDIATE SCHOOL
PLANNED DEVELOPMENT GRADING PLAN

CITY OF DALY CITY, CALIFORNIA
NOVEMBER, 2015

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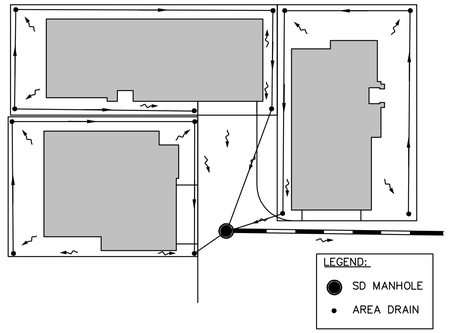
JOB NO. 20149011-20 SHEET C5.0 OF 11 SHEETS

TENTATIVE MAP, PRELIMINARY UTILITY PLAN NOTES:

1. DRY UTILITIES WILL BE SERVED FROM MARTIN STREET OR LINDA VISTA DRIVE.
2. NEW STORM DRAIN PIPES NOT LABELED FOR SIZE ARE ESTIMATED TO BE 12" DIAMETER.
3. PRELIMINARY GRATE AND INVERT ELEVATIONS HAVE BEEN PROVIDED FOR THE STORM DRAIN SYSTEM.
4. SEWER AND WATER INVERT ELEVATIONS ARE NOT SHOWN, HOWEVER, THIS SITE AND ADJACENT ROADS HAVE SUFFICIENT TOPOGRAPHY TO INSURE GRAVITY FLOW TO THE PROPOSED CONNECTION POINTS.



TYPICAL DRAINAGE DETAIL
NTS

LEGEND

- SD MANHOLE
- SD DRAINAGE INLET
- SS MANHOLE
- FIRE HYDRANT

NORTH

GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft.

TENTATIVE MAP REDEVELOPMENT OF ROBERTSON INTERMEDIATE SCHOOL PLANNED DEVELOPMENT UTILITY PLAN

CITY OF DALY CITY, CALIFORNIA
NOVEMBER, 2015

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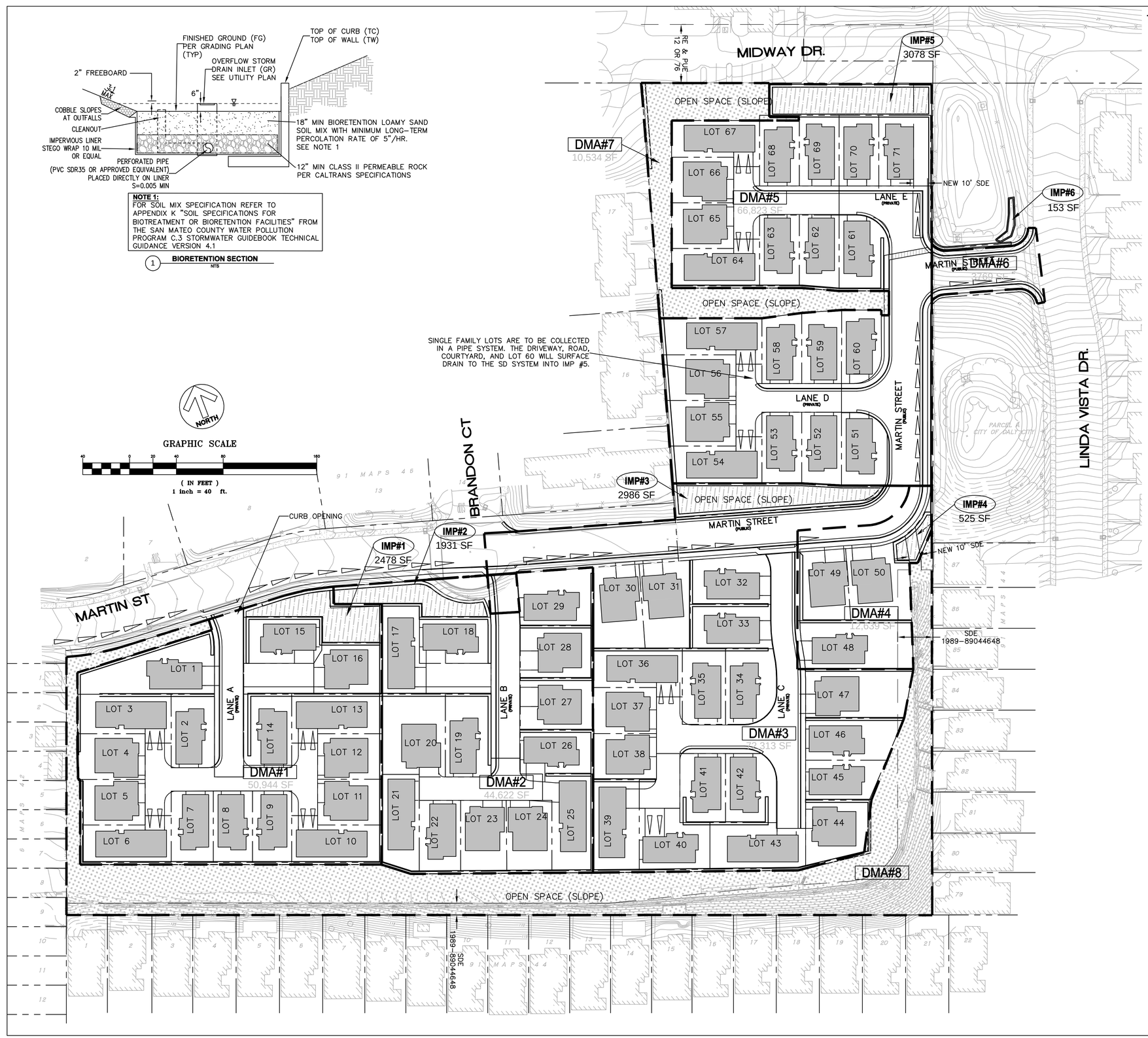
NOTE 1:
FOR SOIL MIX SPECIFICATION REFER TO APPENDIX K "SOIL SPECIFICATIONS FOR BIOTREATMENT OR BIORETENTION FACILITIES" FROM THE SAN MATEO COUNTY WATER POLLUTION PROGRAM C.3 STORMWATER GUIDEBOOK TECHNICAL GUIDANCE VERSION 4.1

1 **BIORETENTION SECTION**
NTS



TENTATIVE MAP, PRELIMINARY STORMWATER CONTROL PLAN NOTES:

1. THIS PROJECT DISTURBS MORE THAN ONE ACRE AND IS THEREFORE SUBJECT TO C.3 REQUIREMENTS.
2. THIS PROJECT IS WITHIN AN EXEMPT AREA AS SHOWN ON PAGE H-7 OF THE SAN MATEO COUNTYWIDE WATER POLLUTION PREVENTION PROGRAM C.3 STORMWATER TECHNICAL GUIDANCE VERSION 4.1 (C.3STG). HYDROMODIFICATION IS NOT REQUIRED.
3. THIS PROJECT REPLACES 50% OR MORE OF THE EXISTING IMPERVIOUS SURFACE, THEREFORE ALL IMPERVIOUS SURFACES ARE DIRECTED TO TREATMENT MEASURES.
4. THE NRCS SOIL TYPE IS 53% TYPE C AND 47% URBAN LAND (TYPE D). INFILTRATION IS NOT RECOMMENDED FOR THIS SITE PER PAGE 3-10 OF THE C.3STG BE.
5. THIS PROJECT IS NOT A "SPECIAL PROJECT" UNDER APPENDIX J OF THE C.3STG.
6. DUE TO EXISTING IMPERVIOUS SOILS, STEEP ROADS AND THE PROXIMITY OF MOTOR COURTS TO HOMES, PERVIOUS PAVEMENT IS NOT PROPOSED.
7. BIORETENTION BASINS ARE SIZED TO BE A MINIMUM OF 4% OF THEIR ENTIRE DRAINAGE COLLECTION AREA. THE TREATMENT REDUCTION FOR COMBINED TREATMENT OF PERVIOUS AREA WAS NOT APPLIED IN ORDER TO MAKE SURE THE SITE CAN BE ADEQUATELY TREATED GIVEN MINOR CHANGES IN DRAINAGE AREA MAY BE REQUIRED ON CONSTRUCTION PLANS AND HARDSCAPE WALKWAYS HAVE NOT BEEN DRAWN. APPROXIMATELY 40% OF THE TREATED DRAINAGE AREAS IS PERVIOUS.
8. FINAL DESIGN MAY MODIFY THIS PRELIMINARY STORMWATER MANAGEMENT PLAN.
9. AREAS OF THE SITE WHICH ARE OUTSIDE DMA BOUNDARIES ARE VEGETATED AND COLLECTED WATER BYPASSES TREATMENT.
10. SITE HAS SOIL TYPE C. AN IMPERVIOUS LINER SHALL BE USED UNDER BIORETENTION AREAS.

LEGEND

SYMBOL	DESCRIPTION
	IMP TREATMENT AREA BOUNDARY
	DRAINAGE MANAGEMENT AREA BOUNDARY
IMP#	INTEGRATED MANAGEMENT PRACTICES
DMA#	DRAINAGE MANAGEMENT AREA
	PARKING
	OPEN SPACE (SELF-TREATING AREAS)

STORMWATER TREATMENT SUMMARY

DMA	DRAINAGE AREA (SF)	TREATMENT	IMP	TREATMENT AREA (SF)
1	50,944	BIORETENTION	1	2478 (4.9%)
2	44,622	BIORETENTION	2	1931 (4.3%)
3	72,313	BIORETENTION	3	2986 (4.1%)
4	12,639	BIORETENTION	4	525 (4.2%)
5	66,823	BIORETENTION	5	3078 (4.6%)
6	3,769	BIORETENTION	6	153 (4.1%)
7	10,534	SELF-TREATING	N/A	–
8	41,132	SELF-TREATING	N/A	–

TENTATIVE MAP
REDEVELOPMENT OF ROBERTSON INTERMEDIATE SCHOOL
PLANNED DEVELOPMENT STORMWATER MANAGEMENT

CITY OF DALY CITY, CALIFORNIA
NOVEMBER, 2015

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PROJECT DESCRIPTION

BKF No. 20149011
January 14, 2015

Mike Van Lonkhuysen
City of Daly City Planning Division
333 90th Street
Daly City, CA 94015-1895
mvanlonkhuysen@dalycity.org

Subject: Bayshore Elementary School District's Redevelopment of Robertson School Campus

Dear Mr. Van Lonkhuysen:

PROJECT INTENT

The Bayshore Elementary School District ("District") intends to process a Planned Development entitlement application to obtain approval for redeveloping the 6.96-acre site which currently houses the Robertson Intermediate School ("Robertson Property"). Redevelopment of the Robertson Property for single-family residences fits into the residential use of the surrounding area and will enhance the value of the land. Following the recommendation of the District's Surplus Property Committee, the District intends to sell the entitled Robertson Property. Proceeds from the sale would be used to construct a state-of-the art, energy efficient 21st century learning center on the existing Bayshore Elementary School site to serve students from Transitional Kindergarten through Eighth Grade.

The benefits of such a new TK-8 School project for the Bayshore school community are multifold:

- to provide a new campus that meets current State standards and anticipated District needs;
- to reduce energy consumption and create a "green" and healthy learning environment for all students;
- to reduce the current maintenance obligations that are split between the campuses; and,
- to consolidate District Staff on one campus, which will enhance professional collaboration and shared learning opportunities for students.

The Board of Education of the District adopted Resolution 14-15 on November 18, 2014, entitled "Resolution Authorizing Expenditure of Bond Proceeds on New School Construction and Authorizing the Institution of Judicial Validation Proceedings Relating Thereto," authorizing the District's use of Measure C funds for new school construction. The Board of Education also adopted Resolution 14-16 on January 13, 2015, entitled "Resolution Declaring Robertson Intermediate School Surplus and Approving Its Sale," which also specifically authorized the Superintendent to submit a Planned Development application to the City of Daly City in order to redevelop the Robertson Property for single-family residences. In

combination with Measure C funds, the proceeds from the sale of the Robertson Property as a 71-unit residential subdivision will enable construction of a new TK-8 School on the Bayshore School site.

PROJECT DESCRIPTION

The Robertson School Property comprises roughly 6.96 acres of land bounded by the Linda Vista single-family residential subdivisions on the South and East; multifamily housing along Martin Street and Midway Drive (along the northern and northeastern boundaries, respectively), and single-family with many zero-lot lines along Schwerin Street to the west of the site.

Redeveloping the Robertson Property for residential use must take into consideration the parcel's configuration ("L" shape) and topography. The site varies in ground elevations from roughly 120 feet in the southwest corner to roughly 30 feet on the Martin Street frontage on its northern boundary. This equates to an average grade of roughly 10-percent. However, the steepest slope areas are adjacent to the Linda Vista Drive subdivision along the south boundary with existing 2:1 slopes from the rear yards into the school site.

To mitigate these conditions, the development proposes to utilize a Planned Development approach to cluster 71 homes with open space buffers around the site perimeter. The average lot size of the proposed 71-home community is 2,550 square feet.

The proposed Planned Development provides the following planning advantages:

1. Transition: By clustering 71 single-family detached homes within courtyard areas, Planned Development approach can transition between the adjacent uses and fit the 71 homes within both the site configuration and topography.

2. Open Space Buffer: An open space area is provided around and through the development to provide a buffer to the existing communities. Additionally this buffer will serve to contain the steeper slopes and grade changes through the site.

3. Massing: Houses clustered around a private courtyard have a greater presence on the courtyard than they would on a linear public street for similar-sized houses. Additionally, the home clusters generally have smaller retaining walls or no walls between units encouraging a closer community and reducing the overall massing.

4. Access: The proposed development plan provides public access linkage (pedestrian and vehicle) between Linda Vista Drive and Martin Street. The public street will have sidewalk adjacent to parking since with clustered homes the locations where pedestrians access and cross the street are well delineated. Placing the sidewalk on only one side allows more land to be open space. Each cluster group will have its own local private street access to the public road and community

parking. The private streets would be accessible for emergency vehicle access. Courtyards will provide shared access to individual homes.

5. Stormwater Treatment: The cluster format provides shared driveway courtyards to be used for access, reducing the ratio of impervious surface to dwelling units which reduces the overall treatment volume. The private roadway layout provides separated storm flows which allow for local stormwater treatment at the source.

We believe that a 71-home cluster development approach, using a Planned Development (PD) zoning and development plan will serve the District and community. We can provide additional information as requested. Please contact me at the below number if you need additional information.

Respectfully,
BKF Engineers

Daniel Schaefer, PE
Principal/Vice President
00657-00100/705807.2

City Council Meeting Agenda Report

Item # _____

Meeting Date: February 22, 2016

Subject: **Use Permit UPR-8-15-11316 and Design Review 8-15-11317 — In-N-Out Burger Restaurant and Drive-Through at 372 Gellert Boulevard**

Recommended Action

Approve Use Permit UPR-8-15-11316 and Design Review 8-15-11317.

Planning Commission Discussion

On February 2, 2016, the Planning Commission voted 4-1 to recommend that the City Council approve Use Permit UPR-8-15-11316 and Design Review 8-15-11317. Comments provided at the Planning Commission are provided in bold italics.

Project Description

The applicant, In-N-Out Burger, proposes a new drive-through restaurant at 362 Gellert Boulevard, where a Sizzler Restaurant has existed since the early 1980s (see Attachment A –Site Location). Under the proposal, the existing Sizzler restaurant would be torn down and the new 3,867 square foot In-N-Out restaurant with drive-through lane reconstructed in its place (see Attachment B – Project Plans). The restaurant would provide seating capacity for 77 people, a drive-through queuing lane that could accommodate up to eighteen cars, and a parking lot for 57 regular parking spaces and three handicap parking spaces (60 spaces total). The proposed hours of operation would be 10:00 AM to 1:00 AM Sunday through Thursday, and 10:00 AM to 1:30 AM on Friday and Saturday.

Use Permit

A restaurant with a drive-through is allowed in the C-1 Light Commercial zoning district subject to use permit approval. The purpose of the use permit is to ensure that the proposed use will not adversely affect surrounding properties and public rights-of-way. Staff has identified several potential issues associated with permitting a drive-through restaurant at the subject location, given existing traffic conditions and proximity to the existing Cypress Point residential neighborhood located upslope to the west. These issues include drive-through vehicle queue length, light and glare, odor, and noise. As discussed in subsequent sections, staff believes that each of these impact areas can be adequately addressed through Conditions of Approval.

- ***Brad Jones, resident at 309 Innisfree Drive (Cypress Point) expressed concern about the amount of traffic in the area and specifically with regard to the traffic issue at the Gellert Marketplace development. He also expressed concern about the amount of continuing construction in the area and that he would like a break from the construction noise.***

- ***Carol Conroy, resident of 308 Innisfree Drive (Cypress Point), indicated that she represented the Cypress Point neighborhood with regard to this project. She said that the neighborhood had received only last minute notice of the proposal and that most of the Cypress Point residents were unaware of it. She requested that the Planning Commission postpone any action on the new restaurant until adequate public notice could be given and property owner and businesses have the opportunity to address the Commission. She said that the neighborhood opposed the project, would suffer diminished home values, and that, at least for some of the Cypress Point homeowners, the proposed restaurant would completely eliminate any quality of the life and enjoyable use of their homes. She specifically cited the noise impacts to the neighborhood from the adjacent commercial uses. Staff responded that the Planning Division provided notice to all property owners within 300 feet of the proposed restaurant ten days prior to the meeting.***

Site Design

The proposed site plan identifies the location of the 3,867 square foot restaurant at the southerly end of the site, with the proposed drive-through lane beginning at the site's northerly end, traversing the western edge of the site, and terminating at the southeast corner of the proposed restaurant. As indicated previously, the total vehicle queue length would provide capacity for 18 full-length vehicles, exclusive of drive-aisle lanes which could accommodate vehicle overflow from the drive-through. By comparison, the existing In-N-Out restaurant located at 260 Washington Street provides a vehicle queue length for 12 vehicles, also exclusive of the drive-aisle lane leading to the queue from Sullivan Avenue.

As is the case with the existing Sizzler restaurant, two shared-access driveways would serve the In-N-Out restaurant. The first, more southerly driveway is shared with the Chinese Hospital, which recently completed construction on the parcel immediately south the subject site. The driveway provides a right-in/right-out configuration (no lefts onto Gellert are possible due to a raised median), and is also served by a left-hand turn pocket allowing north-bound vehicles on Gellert Boulevard to access both the restaurant site and Chinese Hospital using the same driveway. The second more northerly driveway is shared with the Alta Serramonte Shopping Center. This driveway is also right-in/right-out, but provides no access from northbound Gellert Boulevard. Both driveways are subject to reciprocal access easements with the respective properties they serve. Because the subject site is downslope from the existing Cypress Point neighborhood, operations at the restaurant and drive-through lane have the potential to cause adverse impacts to existing residences. These impacts include food preparation odor, vehicle noise, noise from speakers used to take orders, and glare from the drive-through menu board and exterior parking lot lighting.

The impacts could be more pronounced than those that presently exist at the site because the proposed In-N-Out restaurant would be higher-intensity in terms of projected patrons served, includes a drive-through lane that does not presently exist at the Sizzler restaurant, and because construction of the drive-through lane requires the construction of a new retaining wall between the residences and drive-through, which will in turn require the removal of several mature pine trees at the western slope of the site. Although retaining walls that would be constructed at the west side of the site adjacent to the drive-through lane would serve to partially mitigate some of the noise and

light impacts, staff is recommending the following Conditions of Approval to address impacts to the adjacent neighborhood from the proposed restaurant:

1. The applicant shall install and maintain an approved in-line kitchen emission control system. The initial emission control system shall be identified in the building permit plans and a manufacturer specification sheet shall be supplied to the Planning Division for approval concurrent with the building permit plan check submittal. The approved system shall be sized appropriately for the airflow output volume from all kitchen hoods identified in the plans for the restaurant kitchen.

2. Any exterior speakers associated with the drive-through use shall have a volume adjustment. The specific speaker model identifying volume adjustment shall be included in the building permit plan check submittal. Should the Planning Division determine that exterior speakers are causing adverse noise, as determined by the City, the applicant may be required to make adjustments to the speaker volume to comply with this Condition. No other outdoor speaker system shall be employed at the site.

3. Noise generated from the proposed drive-through shall comply with the Daly City General Plan Noise Element for nearby multifamily residential homes at no greater than 65 dB for the applicable acceptable Community Noise Exposure Level. Should noise exceed this threshold, the applicant shall undertake additional measures to reduce noise to a compliant level.

4. The use of exterior lighting shall not result in adverse glare to adjacent residential neighbors. Should the Planning Division determine that exterior lighting is causing adverse glare, as determined by the City, the applicant may be required to make adjustments to lighting, provide additional shielding to lights, or reduce or eliminate the use of certain lights to comply with this Condition. All illuminated signs on the site shall be turned off at the conclusion of the stores operating hours.

As an augmentation measure to the above requirements, staff is recommending a Condition of Approval that the project landscape plan be amended to reflect additional plantings of box-specimen trees along the western slope of the site. As presently proposed, between 10 and 12 box-specimen cherry trees would be planted at approximately 50-foot intervals to replace the pine trees proposed for removal. The recommended Condition of Approval provides that the landscape plan reflect a tree spacing of one tree each 25 feet , that a second, off-set row of trees be planted at a similar spacing to provide an increased tree density, and that an evergreen tree variety be chosen to ensure screening in the autumn and winter months. The species for all trees would need to be approved by the Planning Division as the proposed cherry variety may not be suitable as an effective screen tree.

- ***Commissioner Edelman noted that vehicular access to the site would be tight at some locations and suggested that perhaps an additional driveway at the center of property could be considered. He also suggested that, with regard to noise and light impacts to the Cypress Point neighborhood, perhaps more screening could be provided between the project drive-through and Cypress Point property line. Staff responded that the drive-through would actually be located next to a retaining wall that will be constructed to the***

west, between the drive-through lane and Cypress Point property line, and that a number of vehicles in the drive-through queue would be behind this wall. Staff furthermore had added a Condition of Approval requiring a substantial increase in the density of trees to be planted between the top of the retaining wall and property line, and that the trees would be an evergreen variety.

Parking and Circulation

The Zoning Ordinance requires that one parking space be provided for each 75 square feet of the building area for fast food restaurant uses. Based on this ratio, the applicant would be required to provide 52 parking stalls. Sixty spaces are proposed, exceeding the minimum requirement. As indicated in the project site plan, parking spaces are situated throughout the proposed parking field in a manner conducive to safe pedestrian travel from the parking lot to the store front. Additionally, a five-foot concrete pedestrian path is provided from the sidewalk adjacent to Gellert Boulevard to accommodate patrons walking to the site from the sidewalk.

With regard to on-site vehicle circulation, ensuring that adequate vehicle stacking capacity (queue) in the drive-through is provided exclusive of the City right-of-way (Gellert Boulevard) has been a paramount concern to staff. To ensure that the drive-through queue length is sufficient, the City Traffic Engineer required that the applicant provide, as a part of the traffic study prepared for the project, a vehicular queuing analysis (see Attachment C – Traffic Impact Analysis). To determine if the proposed queue length would be adequate to meet demand, the study preparer analyzed observations of drive-through lane queues at three existing In-N-Out restaurant locations in Millbrae, Redwood City, and San Carlos. (The existing Daly City In-N-Out restaurant was not included in the analysis because, due to its close proximity to Interstate 280 with higher visibility and more direct access to the freeway compared to the subject site, inclusion of the site would conservatively skew the average calculation higher than what would be expected in reality at the subject site.)

As identified in the Traffic Impact Analysis, the average peak hour (worst-case) condition queue length observed at the three restaurants was 21 cars. The applicant is proposing a car queue of 18 cars with additional area for three cars on site. The worst case queue scenario was observed at the San Carlos store on Saturdays at 12:15 PM. However, the San Carlos store is located at the US 101 interchange with higher visibility and more direct access to the freeway compared to the other two surveyed stores (Millbrae and Redwood City), which are more consistent with the proposed project.

Notwithstanding the findings of the Traffic Impact Analysis, to ensure that vehicle queue lengths are not impacting traffic flow on Gellert Boulevard, the City Traffic Engineer is recommending a Condition of Approval requiring that, should the City determine that vehicle queue length is negatively impacting traffic on Gellert Boulevard, the City shall have the authority to require that the applicant implement measures to decrease vehicle time in the queue. These may include, but not be limited to, early ordering, upgrades/changes to the order intake system, or similar measures. All of these mitigation measures are standard operating procedures for In-N-Out when the queue exceeds eight vehicles at the menu board.

As indicated previously, access to the project site from Gellert Boulevard would be provided by two right-in/right-out driveways at Gellert Boulevard, with the southerly driveway shared with the

Chinese Hospital. With specific regard to this driveway, staff has expressed concerns about the potential for vehicle conflicts, given the intensity of both uses, as vehicles entering both sites from Gellert Boulevard interface with vehicles exiting both sites. To avoid the driveway area being blocked by exiting vehicles, the Traffic Impact Analysis has recommended that stop signs, stop bars, and "Keep Clear" pavement marking be provided for the exiting approaches from the In-N-Out drive-through lane and parking aisle, and that another stop sign and stop bar pavement marking be provided for the exit approach from the Chinese Hospital.

In addition to these measures, staff met with representatives from In-N-Out and the Chinese Hospital, together, to discuss potential solutions to the potential vehicular conflict. At this meeting, it was determined that relocating the project pole sign for the In-N-Out to be proximate to the northerly driveway as a means to indicate to motorists entering the site from Gellert Boulevard that the northerly driveway was the primary access to the restaurant could be beneficial. Also, it was determined that placement of a sign at the end of the restaurant drive-through queue indicating an exit route through the northerly driveway as an alternative would be beneficial.

All of the above measures are recommended as Conditions of Approval. In addition, the City's Traffic Engineer has recommended a Condition of Approval requiring a re-evaluation of the project after a six month time period after which the condition of vehicular ingress and egress would be reviewed and additional measures undertaken, at the applicant's expense, should conditions warrant. These measures could include striping a clear-zone in Gellert Boulevard to ensure that street area in front of the southerly driveway is not blocked by traffic.

- ***Ron Volle, real estate manager for In-N-Out, clarified that vehicles waiting for the drive-through would not stack into Gellert Boulevard at any time. He said that, after the queue reaches eight or ten cars, orders would be taken from vehicles by hand and that when at the point stacking reached 18 to 20 cars, employees would begin to redirect vehicles to the site's drive aisles, which can provide substantially more stacking capacity.***

- ***Commissioner Tallerico commented on the traffic condition of the In-N-Out restaurant on Sullivan Avenue and expressed skepticism that the proposed Condition of Approval requiring a six-month review would be effective. Staff responded that there was a specific measure identified in the Conditions of Approval that would be undertaken, related to providing a "Keep Clear" zone in Gellert Boulevard, should conditions warrant. This measure, staff added, did not relate to the vehicle queue which is instead provided entirely on-site.***

- ***Commissioner Satorre suggested advancing the location of the menu order board in the drive-through queue. Mr. Volle responded that the location of the order board at approximately the eighth vehicle was based on the In-N-Out's experience with many similar drive-throughs the restaurant chain had constructed.***

- ***Commissioner Crump asked if the Serramonte Shopping Center expansion was considered in the traffic modeling included in the project traffic study. Jim Lockington, In-N-Out project manager, indicated that it was. He added that all the drive aisles on the site were sufficiently wide to accommodate vehicles stacking beyond the vehicle queue while still allowing other vehicles to pass by.***

Building Design

The exterior design style of the proposed building is a contemporary design that incorporates architectural design unique to the In-N-Out branding scheme with a textured stucco finish, Capistrano style tile roof, and red awnings. The proposed building design is compatible with the existing commercial buildings in the area, and would have generally the same architectural quality as the In-N-Out restaurant on Sullivan Avenue. Staff is however recommending Conditions of Approval that the store receive a wainscoting veneer and stucco build-up similar to the veneer included at the Sullivan Avenue location and that the site retaining walls and trash enclosure receive architectural enhancements.

Signs

There are four signage categories proposed for the site: pole sign, wall sign, directional signage and menu boards. Directional signage is not included in the square footage calculations for the overall sign area. The property has approximately 303 square feet of street frontage. Per Section 17.32.020 of the Daly City Municipal Code, lots with primary frontage of 100 feet or greater are permitted a maximum of 125 square feet of signage. Approximately 118 square feet of signage is proposed and it includes the installation of a new pole sign, two wall signs, four directional signs and menu boards (see Attachment D – Proposed Signs).

As indicated previously, staff has recommended a Condition of Approval requiring that the proposed pole sign identified near the southerly shared driveway be relocated to the be near the northerly shared driveway. Also, staff is recommending a Conditions of Approval that the sign proposed at the west elevation be either removed or limited to halo-illuminated only, so as to minimize light and glare impacts to the Cypress Point neighborhood to the west.

Environmental Assessment

The Planning Commission has reviewed the proposal under the requirement of the California Environmental Quality Act (CEQA) and has determined that the project is exempt as a new structure of less than 10,000 square feet in an urban area. To ensure that the proposed restaurant was not excluded from a Categorical Exemption, the applicant was required to complete a Traffic Impact Analysis (TIA), which has been discussed in part previously in the *Site Design* section of this staff report.

As indicated in the TIA, the proposed project is expected to generate approximately 100 additional vehicle trips during the weekday afternoon peak hours, i.e., between 4:00 PM to 6:00 PM, and 254 net trips during the Saturday Mid-Day peak hours, i.e., between 12:00 PM to 2:00 PM, after factoring credits for pass-by trips and existing site traffic. The TIA preparer estimated the new project site trip generation based on sample surveys conducted at the three previously mentioned In-N-Out restaurants in Millbrae, Redwood City, and San Carlos.

For both existing without and with project traffic conditions, the TIA forecasts that all existing intersections in the area adjacent to the proposed restaurant would operate at LOS D or better, and would therefore not significantly impact any of the study intersections. Without significant project

impacts, no off-site mitigation measures are required. The applicant will however be required to pay a fair-share contribution for traffic signal installations at the following intersections where the General Plan has identified the need for signalization:

1. SR-1 Southbound Ramps at Clarinada Avenue
2. SR-1 Northbound Ramps at Serramonte Boulevard
3. Callan Boulevard at Serramonte Boulevard

In addition to traffic concerns, staff has determined that the proposed Condition of Approval requiring the continual use of a kitchen emission control system satisfies the Bay Area Air Quality Management District (BAAQMD) recommendations for odor screening when locating new odor sources in close proximity to existing sensitive receptors such as the existing Cypress Point residential neighborhood directly to the west of the project site and the Chinese Hospital.

Findings

The Planning Commission has found that, as conditioned, the proposed project is in compliance with Title 17 (Zoning) of the Daly City Municipal Code. Approval of the proposed project would not be detrimental to the health, safety, morals, comfort and general welfare of persons residing in or working in the neighborhood, or be injurious or detrimental to the property and improvements in the neighborhood or the general welfare of the city. Approval of the proposed Use Permit UPR-8-15-11316 and Design Review DR-8-15-11317**,** as conditioned herein, is in the best interest of the public health, safety, and general welfare of the community, and that the general site, architecture, and landscape considerations have been incorporated to ensure compatibility with adjacent buildings and to provide an attractive environment. These findings are based on the following facts:

1. In accordance with Title 17 of the Daly City Municipal Code, as well as applicable State zoning enabling legislation, the City Council will conduct a public hearing on February 22, 2016; notice of said hearing was by newspaper publication on February 12, 2016, and first class mailing to property owners within 300 feet;

2. The Planning Commission has reviewed the proposal under the requirements of the California Environmental Quality Act (CEQA) and has determined the project is Categorically Exempt per Section 15303(c), New Construction or Conversion of Small Structures;

3. The project will minimize the risk to existing public improvements and adjacent private property by providing controlled stormwater runoff from the site to City facilities in full compliance with Order R-2 NPDES Permit No. CAS612008 and Order No. 2010-0014-DWQ, NPDES No. CAS000002, the statewide National Pollutant Discharge Elimination System (NPDES) General Construction Activity Storm Water Permit.

4. The subject property is zoned C-1 Light Commercial, which requires a Use Permit for the establishment of a drive-through restaurant;

5. The subject use is consistent with the General Plan and the C-1 Light Commercial and, together with the provisions for its design and operation, would not be detrimental to the health, safety, morals, comfort and general welfare of the neighborhood;

6. The project complies with applicable provisions of Design Review Section 17.45 of the Zoning Ordinance;

7. General architectural considerations including consistent building materials have been incorporated into the design and façade treatments will be applied, to ensure the compatibility of the development with its design concept and of the surrounding buildings.

Conditions of Approval

The Planning Commission recommends approval of Use Permit UPR-8-15-11316 and Design Review DR-8-15-11317, based on the following conditions as specified by each Department and Division. These conditions need to be complied with prior to, or as part of, any building permit for the proposed improvements.

A. DEPARTMENT OF ECONOMIC AND COMMUNITY DEVELOPMENT

General

1. Within ten (10) days of City Council approval, the applicant shall file with the Planning Division a Declaration of Acceptance of all conditions. Until said Declaration is filed, the use shall not be valid and no permits may be issued for this business.

2. The Use Permit and Design Review approvals shall be valid for a period of one year from the date of City Council approval. The approval shall terminate if a building permit has not been obtained and construction commenced within one-year of City Council approval of the project or if the applicant fails to obtain a valid business license.

3. The Use Permit and Design Review approvals shall be valid only in conjunction with plans submitted and approved by the City Council. Any significant modifications and changes to the plans shall be treated as an amendment and shall be subject to review by a Council Committee appointed by the Mayor.

4. The City shall reserve the right to revisit and review Use Permit UPR-8-15-11316 periodically to ascertain that no adverse impacts are being generated by the business operations in the area and along the surrounding City streets.

5. An approved litter control and site maintenance plan is required prior to building permit issuance. The plan must include a schedule of maintenance for the site and adjacent sidewalks, a graffiti abatement program, and also require that the trash and/or recycling bins stored in the trash enclosure, which must be pulled out along queuing lane drive aisle for servicing, cannot be placed or stored in such a way as to block the on-site drive aisles or create a circulation hazard.

Site Design

6. The proposed trash enclosure shall be constructed from concrete (CMU is acceptable) and shall receive design elements similar to those of the restaurant building, including color, materials, and roof design. The enclosure's doors shall receive a metal door painted with high quality enamel paint to match the enclosure's wall color. The capacity, design, and location of the structure shall be approved by both the Planning Division and Republic Waste Services prior to incorporation in the project plans that are submitted to the Building Division for permit issuance.

7. The applicant shall supply a manufacturer cut-sheet of all proposed exterior lighting fixtures, including wall fixtures, to the Planning Division prior to building permit application. The fixtures shall match or closely reflect those fixtures identified in the illumination model submitted with the use permit application.

8. The applicant shall stripe the project parking lot in conformance with the approved parking lot layout. All parking spaces shall conform to the Daly City Zoning Ordinance parking dimensions.

Building Design

9. The applicant shall install and maintain an approved in-line kitchen emission control system. The initial emission control system shall be identified in the building permit plans and a manufacturer specification sheet shall be supplied to the Planning Division for approval concurrent with the building permit plan check submittal. The approved system shall be sized appropriately for the airflow output volume from all kitchen hoods identified in the plans for the restaurant kitchen.

10. The proposed store shall receive a wainscoting veneer and stucco build-up similar to the veneer included at the Sullivan Avenue location.

11. Any new rooftop mechanical equipment shall be completely screened from street view in a manner acceptable to the Planning Division.

12. The site's retaining walls shall be constructed from smooth face block with a stucco coat and color to match the restaurant building, and shall receive a decorative cap consistent with the building architecture.

13. The trash enclosure shall be constructed from smooth face block with a stucco coat and color to match the restaurant building, shall receive metal doors painted the restaurant's primary or trim color, and shall receive a white color single-ply PVC roof. Consistent with the requirements of the North County Fire Prevention Authority (NCFPA) and the Department of Water and Wastewater Resources (DWWR), the enclosure shall be fully enclosed to prevent stormwater intrusion, receive fire sprinklers in a fashion acceptable to the NCFPA, and provide a floor drain connected to the sanitary sewer in a fashion acceptable to the DWWR. The entire floor area of the enclosure and concrete apron at the exterior front of the enclosure

shall drain to the aforesaid floor drain. Prior to submittal to the Building Division for review, the applicant shall route the enclosure design to Republic Service for dimension and operational approval and the plans shall indicate the Republic Services approval date.

14. The color and material of all retaining walls and the trash enclosure shall be specified in building permit drawings and subject to approval by the Planning Division. The retaining walls over 36 inches average shall be constructed from smooth face block with a stucco coat and color to match the restaurant primary building. All other walls may be constructed from pressure treated wood painted or stained to match the primary restaurant building color.

Landscaping

15. The project landscape plan shall be amended to reflect a tree spacing of one tree each 25 feet and that a second, off-set row of trees be planted at a similar spacing to provide an increased tree density. All trees shall be an evergreen variety and shall be approved by the Planning Division.

16. If the project landscaping exceeds the 1,000 square feet of landscaped area, it is subject to the Daly City Landscaping Ordinance and shall be required to meet all applicable requirements including water efficient irrigation and will incorporate Bay Area Friendly species that are drought tolerant. Irrigation systems will incorporate water efficiency measures and shall show the details on the building permit plans. No building permit may be issued until this condition is met.

17. All trees approved as a part of this project shall be retained in perpetuity and all diseased and/or dying trees shall be replaced immediately or upon notification by the Planning Division to do so.

18. The applicant shall provide establishment, and where necessary, long-term irrigation to all trees, shrubs, and groundcover.

19. The applicant shall triple-stake all trees and this staking shall be subject to initial inspection by the City. Trees shall remain triple-stake through the establishment period.

Operational Requirements and Restrictions

20. Any exterior speakers associated with the drive-through use shall have a volume adjustment. The specific speaker model identifying volume adjustment shall be included in the building permit plan check submittal. Should the Planning Division determine that exterior speakers are causing adverse noise, as determined by the City, the applicant may be required to make adjustments to the speaker volume to comply with this Condition. No other outdoor speaker system shall be employed at the site.

21. Noise generated from the proposed drive-through shall comply with the Daly City General Plan Noise Element for nearby multifamily residential homes at no greater than 65 dB for the applicable acceptable Community Noise Exposure Level. Should noise exceed this threshold, the applicant shall undertake additional measures to reduce noise to a compliant level.

22. The use of exterior lighting shall not result in adverse glare to adjacent residential neighbors. Should the Planning Division determine that exterior lighting is causing adverse glare, as determined by the City, the applicant may be required to make adjustments to lighting, provide additional shielding to lights, or reduce or eliminate the use of certain lights to comply with this Condition.

Stormwater Treatment

23. The applicant shall develop and submit a stormwater management plan that illustrates full compliance with Section C.3 of Order R-2-2009-0074 NPDES Permit No. CAS612008. The project must comply with Order No. 2010-0014-DWQ, NPDES No. CAS000002, the statewide National Pollutant Discharge Elimination System (NPDES) General Construction Activity Storm Water Permit.

24. Additional stormwater information and updated forms may be required during the building permit review stage when more details of the construction drawings are known. Information and/or designs that may be required if there are any changes that impact the forms submitted for the subdivision application. No building permit may be issued until acceptable storm water requirements are met.

25. The applicant shall receive approval of the stormwater management plan from a third-party reviewer appointed by the City prior to building permit submittal. The applicant shall pay the entire cost of the third-party reviewer.

26. All stormwater treatment facilities shall be inspected during construction to ensure eventual compliance with the stormwater management plan. The applicant shall pay the entire cost of these inspections.

27. The applicant shall enter into a Maintenance Agreement with the City to ensure long-term maintenance and servicing by the Property Owner of stormwater site design and treatment control measures according the approved Maintenance Plan.

28. The applicant shall arrange and pay for final inspection of installed treatment measure by municipality's Special Inspector within 45 days of installation or project construction completion, whichever comes first.

Signs

29. The project pole sign for the restaurant shall be relocated to be proximate to the northerly driveway as a means to indicate to motorists entering the site from Gellert Boulevard.

30. The applicant shall place a sign at the end of the restaurant drive-through queue indicating an exit route through the northerly driveway as an alternative. The size, design, and exact location of the sign shall be subject to Planning Division approval.

31. The applicant shall submit for sign permits to comply with the required maximum sign area of 125 square feet allowed for the site.

32. All signs at the subject property shall receive sign permits and shall remain in conformance with the Daly City Municipal Code. Banners, streamers, balloons, and any other device intended to attract visual attention shall be prohibited. Box signs shall be prohibited, except where allowed on the monument and pole sign.

33. All illuminated signs shall be turned off at the conclusion of the stores operating hours.

Site Maintenance

34. Permanent decorative trash receptacles shall be placed on-site for patron use. The quantity, location, and design of these receptacles shall be approved by the Planning Division prior to building permit issuance.

35. The site shall be maintained in a safe, sanitary and litter free condition at all times.

36. No outside storage shall be allowed, except in the approved trash enclosure area.

37. Doors to the trash enclosure area shall be kept closed except when necessary to dispose of trash or to store material to be recycled.

38. The buildings and appurtenances shall be painted as often as necessary to maintain a weatherproof coating.

39. All sidewalks, walkways, driveways, parking lot facilities, and easements within and adjacent to the property, shall be kept free of debris, including weeds.

40. All outdoor storage areas shall be screened from public view.

41. Garbage storage areas are to be kept sanitary and free of litter and debris.

42. During construction, litter and construction debris shall be put into closed containers at the end of each day. Subsequent to construction activity, all recyclable material shall be stored exclusively inside the recycling material enclosure area.

43. The accumulation of trash in the garbage dumpster or located anywhere on the premises shall be removed and disposed of in a proper manner. Motor oil that has accumulated in parking stalls and driveway areas shall be cleaned as soon as possible to prevent oil from entering the storm drain system.

44. The applicant shall submit a site maintenance program that includes maintaining the sidewalk area in front of the business prior to the issuance of any building permits.

B. BUILDING DIVISION

45. The applicant shall provide an accessible path of travel from the public way leading to the main entrance of the building.

46. The applicant and design team shall check for amendments to the California Code of Regulations that may affect the design of the building.

47. The applicant shall submit a construction waste management plan together with the permit application (CGBSC 5.408).

48. The applicant shall provide designated parking for any combination of low-emitting, fuel-efficient and carpool/vanpool vehicles.

C. ENGINEERING DIVISION

49. Stop signs, stop bars, and "Keep Clear" pavement marking shall be provided for the exiting approaches from the In-N-Out drive-through lane and parking aisle, and that another stop sign and stop bar pavement marking shall be provided for the exit approach from the Chinese Hospital.

50. Should the City Engineer determine that vehicle queue length is negatively impacting traffic on Gellert Boulevard, the City Engineer shall have the authority to require that the applicant implement measures to decrease vehicle time in the queue. These may include, but not be limited to, early ordering, upgrades/changes to the order intake system, or similar measures.

51. After six months of restaurant operations, the City Traffic Engineer shall conduct an evaluation of the project to determine the condition of vehicular ingress and egress to and from Gellert Boulevard. Based on this evaluation, the engineer shall determine if additional measures are warranted to reduce or eliminate impacts to traffic operations on Gellert Boulevard. These measures could include striping a clear-zone in Gellert Boulevard to ensure that street area in front of the southerly driveway is not blocked by traffic, which would be undertaken at the applicant's expense.

52. The applicant shall pay a fair-share contribution for traffic signal installations at the following intersections: a) SR-1 Southbound Ramps at Clarinada Avenue; b) R-1 Northbound Ramps at Serramonte Boulevard; and c) Callan Boulevard at Serramonte Boulevard. The fee shall be paid prior to building permit issuance.

D. DEPARTMENT OF WATER AND WASTEWATER RESOURCES

53. A fire flow may be required to determine if this main is adequate to supply water for this project. All costs for verification of pipe size and fire flow shall be borne by the applicant.

54. Water meters shall be located in landscaped areas only. No water meters shall be located in sidewalks or driveways.

55. Sewer System Improvements: All costs associated with any sewer system improvements required as a result of the proposed construction shall be borne by the applicant.

56. Plans shall include water conservation devices. Outdoor landscaping shall be drought tolerant, native vegetation or hardscapes. Irrigation in non-turf areas shall be drip, micro-spray or micro-jet. No water features shall be permitted.

57. A set of utility plans is required for DWWR's next review at the time of building permit application. The plans need to include the domestic, fire and irrigation service connections and the sizes of each these services.

58. Backflow Devices: Per City of Daly City Standard Drawing SS-12, due to the sewer lateral having a desired slope of less than 2%, a backflow device (swing check) shall be installed in an appropriate location within the private property. The backflow device shall be contained in a vault that shall remain accessible at all times.

59. Sewer Lateral Inspection: Applicant needs to verify the intent to abandon or reuse the existing sewer lateral. If the intent is to reuse, applicant must video inspect and perform a watertight test that is subject to review by DWWR. A DWWR representative shall be on site during the testing and televising. If the lateral is not to be used, the lateral shall be abandoned per Section 02720, 3.08 of the City of Daly City Standard Specifications and Drawings. The abandonment shall be completed prior to any demolition of the previous building or construction of the new building. All costs associated with the testing, video inspection and abandonment shall be borne by the applicant.

60. Water System Improvements: All costs associated with any water system improvements required as a result of the proposed construction shall be borne by the applicant.

61. Water Service Inspection: Applicant needs to verify the intent to abandon or reuse the existing water service. Only copper or ductile iron services shall be reused. If the intent is to reuse, applicant must provide evidence of the material type to DWWR/Engineering. If the service is not to be used, the service shall be abandoned per Section 02710, 3.15 of the City of Daly City Standard Specifications and Drawings. The abandonment shall be completed prior to any demolition of the previous building or construction of the new building. All costs associated with the abandonment shall be borne by the applicant.

62. Plans shall include water conservation devices. Indoor-All domestic fixtures shall be low flow with toilets 1.28 gpf or less and "HE" urinals 0.5 gpf or less are required.

63. A certified Distribution System Operator must be present for all hydrostatic testing, chlorination, flushing, bacteria testing and connections to the existing system, per California Department of Public Health, Operator Certification Regulations, Section 63770. The City of Daly City Engineer must receive the request for the certified Operator to be present for these operations in writing no less than six (6) working days prior to the anticipated date of work. Include in plan notes.

64. The grease interceptors required for the project must be sized per the current plumbing codes. The interceptor location and sizing calculations must be shown on the next set of drawings for review.

65. The trash enclosure will also require a sanitary drain to be installed and it must be plumbed to the grease interceptor. The floor for the enclosure must be sloped to prevent runoff and out of the enclosure.

66. Existing hydrant at the north entrance shall be set to new grade and protected by bollards.

67. All sanitary sewer laterals shall be abandoned according to Section 02720 of the Daly City Standards and Specifications.

68. Prior to demolition, all water services shall be abandoned in accordance with Section 02710 of the Daly City Standards and Specifications.

69. The applicant shall be required to verify the sewer clean out. If not provided, the applicant shall install code compliant clean outs of 18-24 inches from the building foundation to meet the requirements of the Uniform Building Code, Sanitation District Code and the Daly City Standard Specifications and Drawings.

E. NORTH COUNTY FIRE AUTHORITY

70. The project shall comply with the 2013 CFC Chapter 33 – Fire Safety During Construction and Demolition.

71. The project shall comply with 2013 CFC Chapter 9 section 904.2.1 for Commercial Hood and Duct Systems.

72. The project shall comply with 2013 CFC Chapter 8 for Interior Finish, Decorative materials and Furniture

73. Fire Sprinklers shall be required per Municipal Code, and 2013 CFC Chapter 9 Section 903.

74. The project shall comply with 2013 CFC section 903.4 and 903.4.2 Alarms as amended by DCMC 15.32.110.

75. The project shall comply with 2013 CFC Chapter 5, Section 505.1 and 2 as amended by DCMC 15.32.070.

76. Fire sprinkler underground supply mains shall be submitted on a separate permit or in conjunction with fire sprinkler submittal. All fire service backflow devices must be (RPDA) reduced pressure principle detector assemblies that are on the University of Southern California (USC) approved back flow list. be a (RPDA) reduced pressure principle detector assemblies that are on the University of Southern California (USC) approved back flow list. The submission shall be submitted to the Water Department and approved by them prior to issuing of a permit.

77. The project shall comply with fire flows per 2013 CFC Appendix B.

78. The applicant shall provide and install a key box and prior to final provide key for entry to the building. An application for a Know Box can be obtained at fire administration 10 Wembley Drive, Daly City.

79. Project shall comply with 2013 CFC Chapter 9 section 907 Fire Alarm and Detections systems.

Recommendations

The Planning Commission recommends that the City Council do the following:

1. Adopt the Findings as outlined herein;

2. Affirm the project as Categorically Exempt per Section 15303 of the California Environmental Quality Act; and

3. Approve Use Permit UPR-8-15-11316 and Design Review DR-8-15-11317, subject to the Findings and Conditions outlined herein.

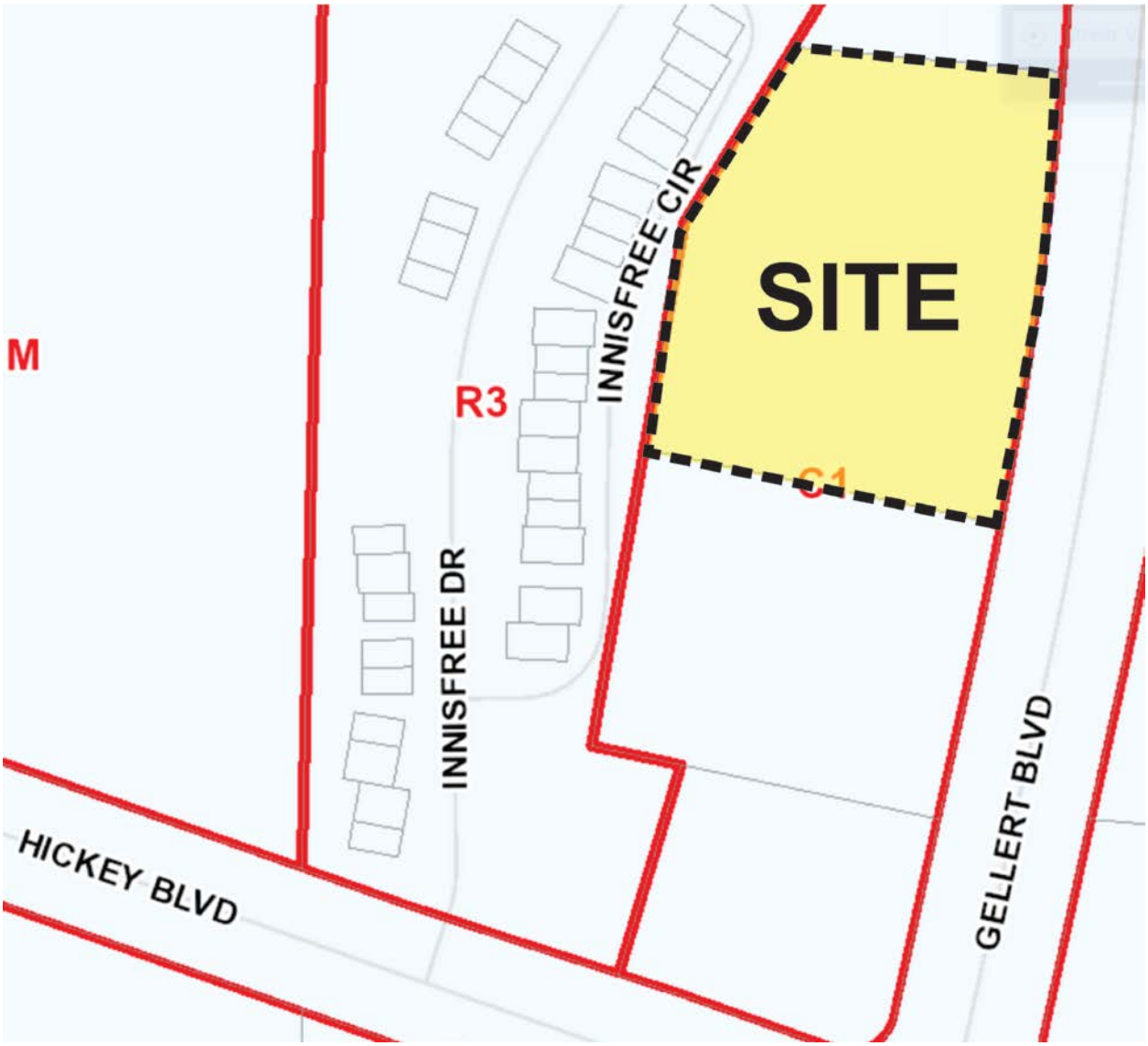
Respectfully submitted,

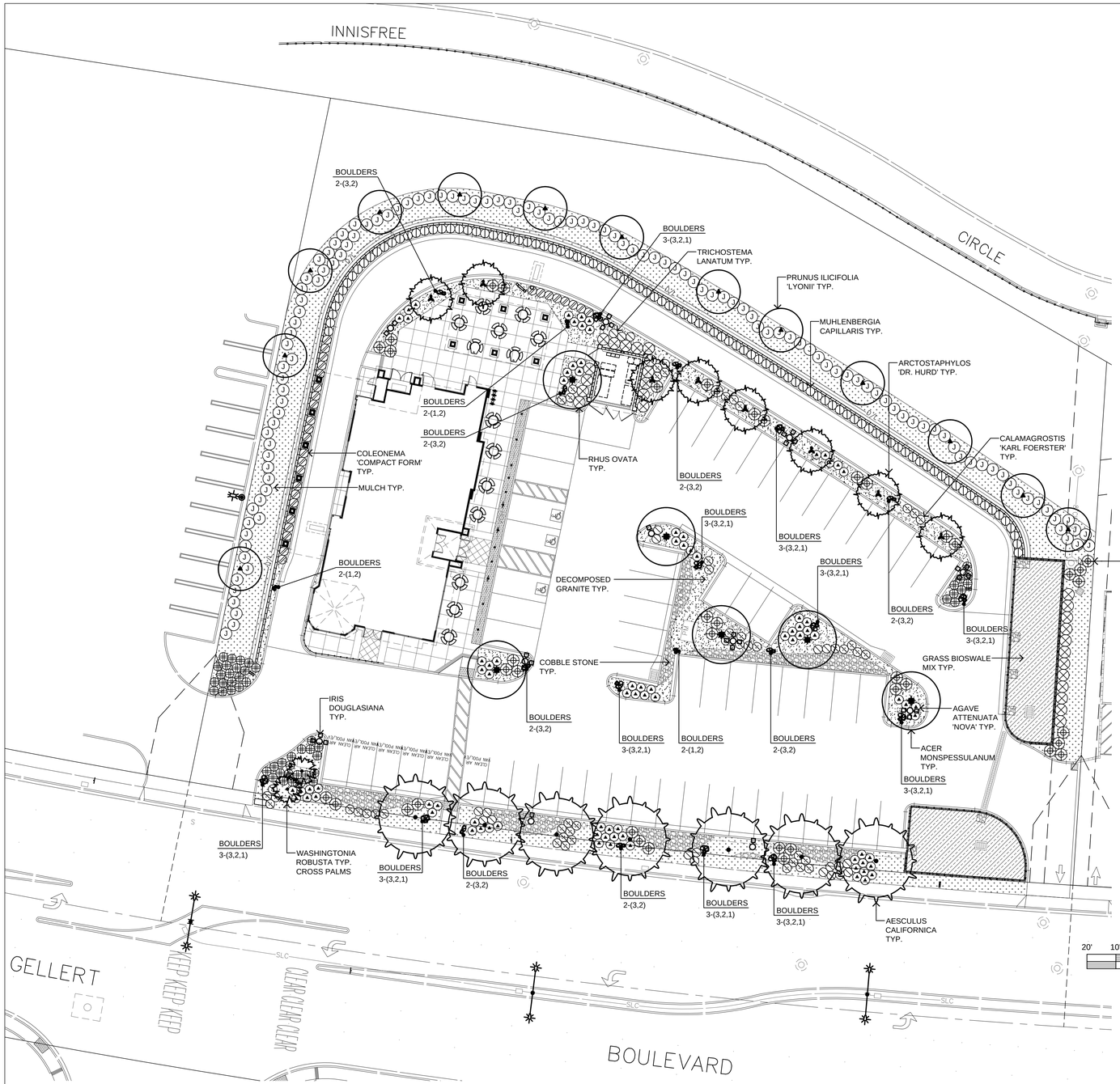
Michael Van Lonkhuysen
Interim Planning Manager

Tatum Mothershead
Interim Director Economic and Community Development

Attachments

Attachment A – Location Map
Attachment B – Project Plans
Attachment C – Traffic Impact Analysis
Attachment D – Proposed Signs

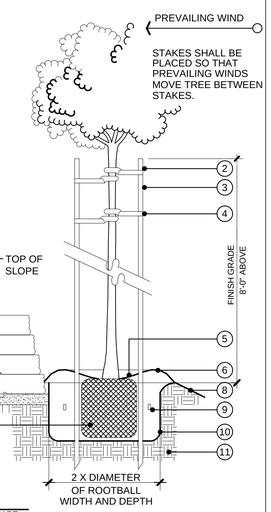

SITE
M
R3
C1
INNISFREE CIR
INNISFREE DR
HICKEY BLVD
GELLERT BLVD

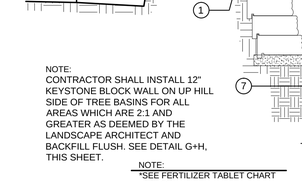


PLANTING LEGEND

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	REMARKS
TREES					
	ACER MONSPESSULANUM	MONTPELLIER MAPLE	24" BOX	PER PLAN	STANDARDS - MATCHED
	ARCTOSTAPHYLOS MANZANITA 'DR. HURD'	MANZANITA	24" BOX	PER PLAN	STANDARDS - MATCHED
	PRUNUS ILICIFOLIA 'LYONII'	CATALINA CHERRY	24" BOX	PER PLAN	STANDARDS - MATCHED
	AESCULUS CALIFORNICA	CALIFORNIA BUCKEYE	24" BOX	PER PLAN	STANDARDS - MATCHED
	WASHINGTONIA ROBUSTA	MEXICAN FAN PALM	20' BTH CROSS PALMS	PER PLAN	SKIN TRUNKS TO MIN 8' BELOW HEAD
SHRUBS					
	AGAVE ATTENUATA 'NOVA'	BLUE FOX TAIL AGAVE	5 GALLON	36" O.C.	MASS PLANTING
	CALAMAGROSTIS 'KARL FOERSTER'	FEATHER REED GRASS	5 GALLON	36" O.C.	MASS PLANTING
	COLEONEMA PULCHELLUM 'COMPACT FORM'	PINK BREATH OF HEAVEN	5 GALLON	36" O.C.	MASS PLANTING
	MUHLENBERGIA CAPILLARIS	PURPLE MUHLY	5 GALLON	36" O.C.	MASS PLANTING
	RHUS OVATA	SUGAR BUSH	5 GALLON	48" O.C.	MASS PLANTING
	RIBES 'SPOONER MESA'	SAN DIEGO EVERGREEN CURRANT	5 GALLON	48" O.C.	MASS PLANTING
	TRICHOSTEMA LANATUM	WOOLLY BLUE CURLS	5 GALLON	36" O.C.	MASS PLANTING
GROUNDCOVER					
	IRIS DOUGLASIANA	DOUGLAS IRIS	1 GALLON	36" O.C.	TRIANGULAR SPACING
	JUNIPERUS CONFERTA 'BLUE PACIFIC'	SHORE JUNIPER	1 GALLON	36" O.C.	TRIANGULAR SPACING
	GRASS BIOSWALE MIX				
	GAILS GOLD GAIL MATERIALS TEL.: (951) 667-6106	3/8" MINUS STABILIZED DECOMPOSED GRANITE			TO BE INSTALLED IN ALL PLANTERS AROUND BUILDING
	ROCK WITH WEED BARRIER AS INDICATED TO BE 4"-12" DIA. ROUNDED TIGHTLY INSTALLED.	SOUTHWEST BOULDER AND STONE TYPE: ARIZONA COBBLE TEL: 877-792-7625			
	3" THICK SHREDDED BARK MULCH				

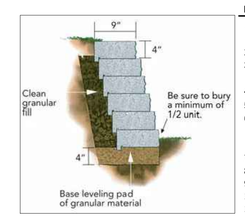
NOTE:
1. NO FLOWERING SHRUBS ADJACENT TO DRIVE-THRU
2. TREES - ALL TREES SHALL BE A MINIMUM OF 24" BOX SIZE, UNLESS INDICATED OTHERWISE PER PLAN.
3. SHRUBS - ALL SHRUBS SHALL BE A MINIMUM OF 5 GALLONS
4. CONTRACTOR SHALL ALLOT 10 - 2'X4', 20 - 3' X 3', AND 15 - 1'X 2' SIERRA SELECT BOULDERS. CONTRACTOR SHALL CONTACT IN-N-OUT PERSONNEL FOR FIELD LOCATION OF SAID BOULDERS. REFER TO BOULDER DETAIL.
5. QUANTITIES SHOWN ARE APPROXIMATE, CONTRACTOR SHALL VERIFY COUNT.
6. ALL PLANT MATERIAL SHALL BE REVIEWED AND APPROVED BY IN-N-OUT REPRESENTATIVE AND LANDSCAPE ARCHITECT.



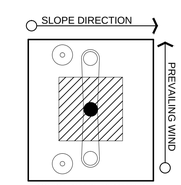


NOTE:
CONTRACTOR SHALL INSTALL 12" KEYSTONE BLOCK WALL ON UP HILL SIDE OF TREE BASINS FOR ALL AREAS WHICH ARE 2:1 AND GREATER AS DEEMED BY THE LANDSCAPE ARCHITECT AND BACKFILL FLUSH. SEE DETAIL G+H, THIS SHEET.

NOTE:
*SEE FERTILIZER TABLET CHART BELOW.
*3" MULCH SHALL BE INSTALLED.



LEGEND
1. CUT SLOPE TO CREATE LEVEL BASIN. GRADE SLOPE TO 2.5:1 AND LESS
2. ALL TREES SHALL BE TRIPLE STAKED.
3. 3"X12' LODGE POLE PINE STAKE OR APPROVED EQUAL (2 TOTAL).
4. V.I.T. 'CINCH' TIE.
5. CROWN TO BE 1" ABOVE FINISH GRADE.
6. WATERING BASIN TO BE REMOVED PRIOR TO END OF MAINTENANCE PERIOD (REMOVE BASIN IN TURF AREAS)
7. ROOTBALL.
8. FINISH GRADE.
9. PLANTING TABLET- PER SPECS.
10. PLANT PIT/ BACKFILL MIX PER SPECS.
11. UNDISTURBED NATIVE SOIL.



DOUBLE STAKE PLAN VIEW

(A) TREE ON SLOPE

NOT TO SCALE

SQUARE FOOTAGE NOTE:
TOTAL ONSITE AREA: 14,313 S.F.
TOTAL OFFSITE AREA: 1,189 S.F.
TOTAL LANDSCAPE AREA: 15,502 S.F. (100%)

24" BOX TREE NOTE:
24" BOX TREES SHALL HAVE A MINIMUM TRUNK DIAMETER OF 2" AND A HEIGHT OF 8' AT TIME OF PLANTING.

AGRONOMIC SOILS REPORT:
CONTRACTOR SHALL PROVIDE AND AGRONOMIC SOILS REPORT ONCE ALL GRADING HAS COMPLETED ONSITE.

FIBERWEB BIO BARRIER:
- CONTRACTOR SHALL INSTALL TREE ROOT BARRIERS FOR ALL TREES WITHIN 6' OF CONCRETE EDGE. INSTALL THE 24" VERSION AND SHALL BE CONTINUOUS FOR 10' ON EITHER SIDE OF TREE.
- STREET TREES AND OTHER TREES LOCATED WITHIN 10-FEET OF THE PUBLIC RIGHT-OF-WAY (WITH THE EXCEPTION OF PALM TREES) SHALL BE PROVIDED WITH A BIO BARRIER.

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INTEGRATED DESIGN GROUP, LLP.
Landscape Architecture & Planning
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Telephone: 909-946-6400 Facsimile: 909-946-6466
idg3@earthlink.net
DOUGLAS V. DIGGS
07-02-15
DATE
LICENSED LANDSCAPE ARCHITECT
DOUGLAS V. DIGGS
NO. 3581
SIGNATURE
12-31-15
RENEWAL DATE
DATE
STATE OF CALIFORNIA

IN-N-OUT BURGER
372 GELLERT BOULEVARD
DALY CITY, CA. 94015
APN: 091-542-170

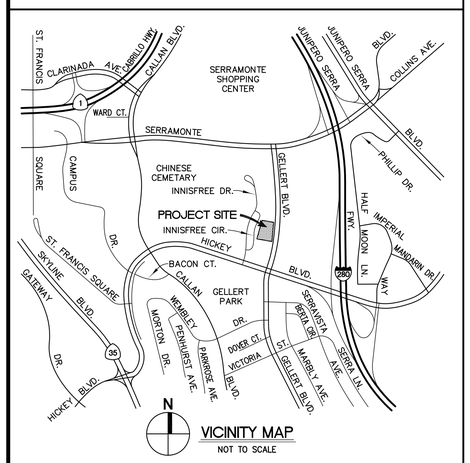
CITY ENTITLEMENT LANDSCAPE PLANTING PLAN

LP.1

JN 15007-15007 C30censp

LEGEND

- NEW 24"x36" CONCRETE DRAIN BOX WITH A FLOGARD+PLUS FOSSIL FILTER INSERT FOR PRE-TREATMENT OF STORMWATER RUNOFF.
- PROPOSED 22'-6" TALL FIXTURE HEIGHT LIGHT POLE ON TOP OF A 30" TALL 24" DIAMETER CONCRETE BASE FOR A TOTAL HEIGHT OF 25' TALL TO BE MAINTAINED BY INOB.
- PROPOSED INOB INSTALLED AND MAINTAINED DROUGHT TOLERANT LANDSCAPED PLANTER AND IRRIGATION SYSTEM ONSITE CONSISTING OF APPROXIMATELY 12,545 SQUARE FEET.
- PROPOSED INOB INSTALLED AND MAINTAINED DROUGHT TOLERANT LANDSCAPED PLANTER AND IRRIGATION SYSTEM IN GELLERT BOULEVARD RIGHT OF WAY CONSISTING OF APPROXIMATELY 1,180 SQUARE FEET.
- BIO-RETENTION AREA FOR STORMWATER RUNOFF TREATMENT CONSISTING OF APPROXIMATELY 1,745 SQUARE FEET.
- CHARCOAL GRAY TRUNCATED DOME PAVERS.
- VEHICLE DETECTOR LOOP.
- OUTDOOR SEATING PATIO TABLE WITH NO UMBRELLA.
- PROPERTY LINE.
- 1 NEW 3' TALL 18"x24" LIT "DRIVE THRU" DIRECTIONAL SIGN BY SEPARATE PERMIT.
- 2 NEW 3' TALL 18"x24" LIT "THANK YOU, DO NOT ENTER" DIRECTIONAL SIGN BY SEPARATE PERMIT.
- INOB IN-N-OUT BURGER.
- NEW SITE 3' TO 9' TALL CMU RETAINING WALL WITH A 3' TALL TSF TO MATCH EXISTING.
- ADA ACCESSIBLE PATH OF TRAVEL.
- TUBULAR STEEL FENCE (TSF).
- 4 EXPOSED HEIGHT OF CMU RETAINING WALL IN FEET.
- D/L DAYLIGHT LINE.
- 5 REFER TO PLOTTABLE EASEMENTS SHOWN ON SHEET C36.



VICINITY MAP
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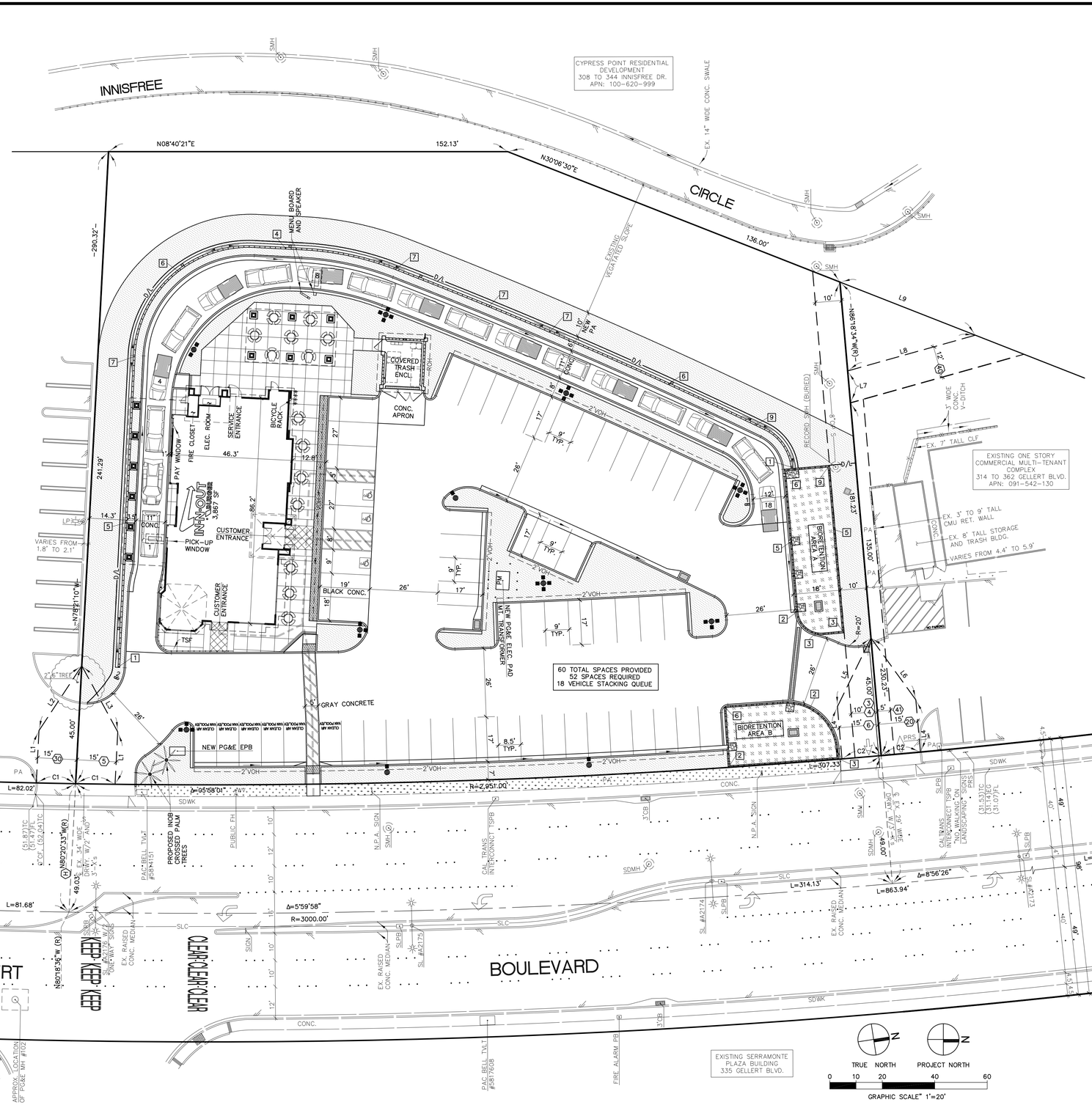

GENERAL NOTES

1. IN-N-OUT BURGER SITE AREA = 1.522 ACRES GROSS (66,291 S.F.).
2. ASSESSORS PARCEL NUMBER: 091-542-170.
3. GENERAL PLAN USE DESCRIPTION: COMMERCIAL.
4. CITY ZONING: C-1 (LIGHT COMMERCIAL DISTRICT).
5. THE STORM WATER RUNOFF FROM THE DEVELOPED IN-N-OUT BURGER PROPERTY WILL BE TREATED BY A BIORETENTION PLANTER FACILITY WITH THE OVERFLOW STORMWATER RUNOFF ENTERING DRAIN BOX INLETS AND CARRIED BY NEW AND EXISTING ONSITE UNDERGROUND STORM DRAIN PIPE TO ITS EXISTING OUTLET IN GELLERT BOULEVARD.
6. EXISTING ONSITE VEGETATED SLOPE AREA TO REMAIN UNTOUCHED IS 11,760 S.F. OR 18% OF THE GROSS SITE AREA.
7. PROPOSED CONDITION ONSITE DROUGHT TOLERANT LANDSCAPE AREA IS 12,545 S.F. PLUS 1,745 S.F. STORMWATER TREATMENT AREA WHICH EQUALS 14,290 S.F. OR 22% OF THE GROSS SITE AREA.
8. PROPOSED CONDITION DROUGHT TOLERANT LANDSCAPE AREA IN THE STREET RIGHT OF WAY IS 1,180 S.F.
9. REQUIRED NUMBER OF PARKING IS 1 SPACE PER 75 SQUARE FEET OF GROSS FLOOR AREA OR 3,867 S.F./75 S.F. = 52 SPACES.
10. IN-N-OUT BURGER BUILDING AREA = 3,867 S.F.
    INDOOR SEATING = 77 SEATS.
    OUTDOOR SEATING = 56 SEATS (14 TABLES).
11. IN-N-OUT BURGER PARKING SPACE DETAILED SUMMARY TABLE

DESCRIPTION	PROPOSED
1. STANDARD SPACES (8.5'x19')	51
2. ACCESSIBLE VAN (17'x18')	2
3. ACCESSIBLE SPACE (14'x18')	1
4. CLEAN AIR/VAN POOL/EV (8.5'x19')	6
5. TOTAL	60
6. IN-N-OUT BURGER DRIVE THRU VEHICLE QUEUE (20' LONG VEHICLE OR 360 FEET)	18
7. SHORT-TERM BICYCLE PARKING WITHIN DESIGNATED BIKE RACK (5% OF VEHICLE PARKING IS 3 MINIMUM)	4
8. LONG-TERM BICYCLE PARKING WITHIN A LOCKABLE PERMANENTLY ANCHORED LOCKER ON A CONCRETE SLAB-SERCURA MODEL OR EQUIVALENT. (5% OF A MAXIMUM OF 5 ASSOCIATE VEHICLE PARKING SPACES IS 1 MINIMUM)	0

NOTE:
REFER TO SHEET C36 FOR A COMPLETE GENERAL LEGEND OF ABBREVIATIONS AND SYMBOLS SHOWN HEREON, EASEMENT NOTES, LEGAL DESCRIPTION AND THE BOUNDARY MONUMENTS AND SURVEY CONTROL POINTS.

CURVE DATA TABLE

NO.	DELTA	RADIUS	LENGTH
C1	00°17'29"	2951.00'	15.01'
C2	00°17'28"	2951.00'	15.00'

LINE DATA TABLE

NO.	BEARING	DISTANCE
L1	N78°21'10"W	20.00'
L2	N47°51'56"W	29.57'
L3	N70°06'49"E	28.68'
L4	N86°18'34"W	20.00'
L5	N55°18'59"W	29.13'
L6	N62°41'51"E	29.13'
L7	N86°18'34"W	12.21'
L8	N06°58'01"W	50.53'
L9	N30°06'30"E	55.45'

SHEET INDEX OF CITY ENTITLEMENT DRAWINGS

NO.	SHEET TITLE
C30	CITY ENTITLEMENT NEW SITE PLAN
C31	CITY ENTITLEMENT SITE DEMOLITION PLAN
C32	CITY ENTITLEMENT GRADING AND DRAINAGE PLAN
C33	CITY ENTITLEMENT STORM DRAIN AND UTILITY PLAN
C34	CITY ENTITLEMENT EXISTING SITE PLAN
C35	CITY ENTITLEMENT C.3 STORMWATER TREATMENT SITE PLAN
C36	CITY ENTITLEMENT TOPOGRAPHY SURVEY MAP
LP.1	CITY ENTITLEMENT LANDSCAPE PLANTING PLAN

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CIVIL ENGINEER:
MSL ENGINEERING, INC.
CIVIL ENGINEERS AND LAND SURVEYORS SPECIALIZING IN SITE DEVELOPMENT
402 WEST ARROW HWY., SUITE 4, SAN DIMAS, CA. 91773
(909) 305-2395 FAX (909) 305-2397
MARK S. LAMOUREUX R.C.E. 38382 07-06-15 DATE
REGISTERED PROFESSIONAL ENGINEER MARK S. LAMOUREUX No. 38382 CIVIL STATE OF CALIFORNIA

IN-N-OUT BURGER

372 GELLERT BOULEVARD
DALY CITY, CA. 94015
APN: 091-542-170

CITY ENTITLEMENT NEW SITE PLAN

C30

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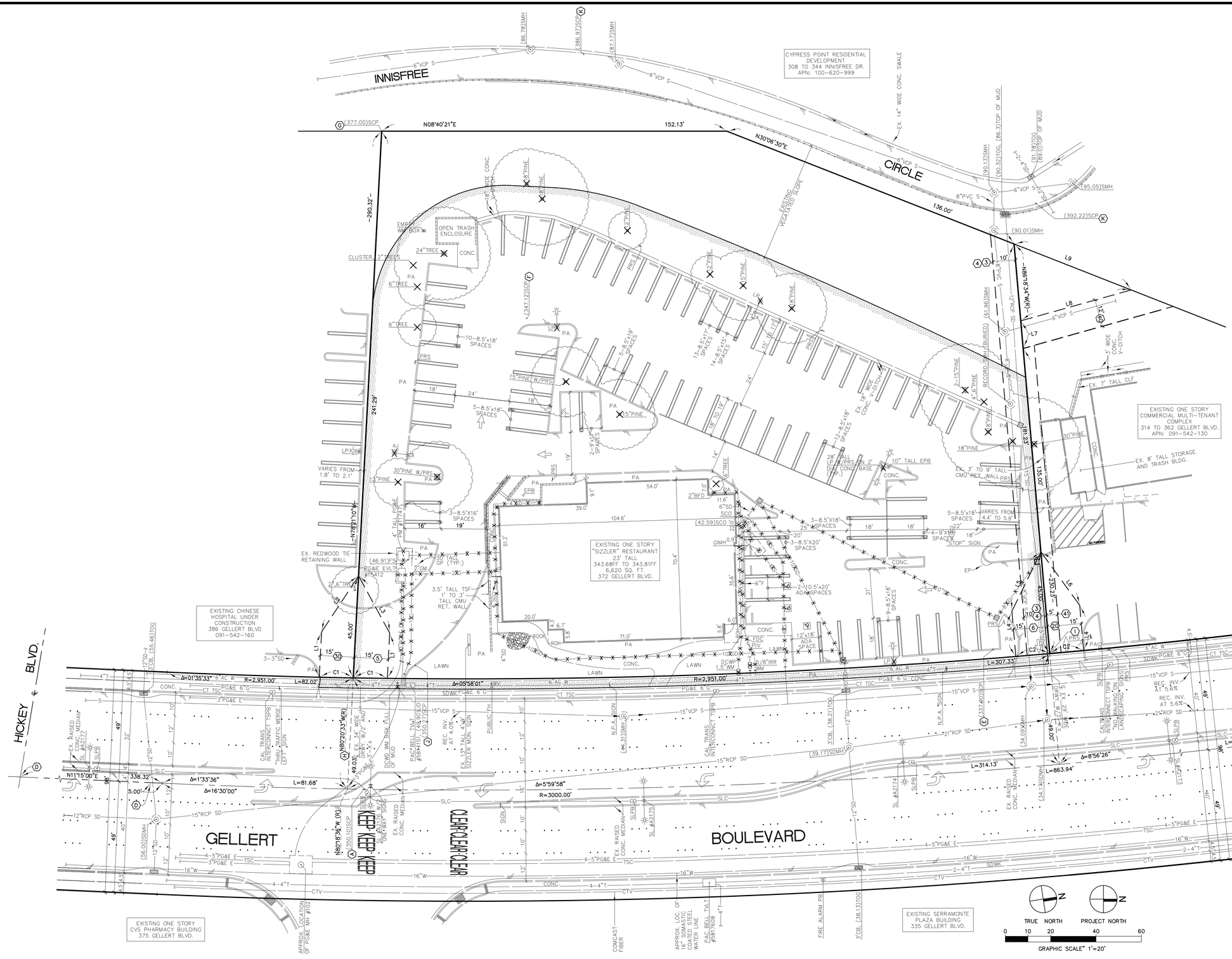

PARTIAL LEGEND

LOCATION OF EXISTING LIGHT POLE TO BE REMOVED.

LIMITS OF ONSITE AND OFFSITE STREET DEMOLITION WITH NEW SITE IMPROVEMENTS CONSISTS OF THE FOLLOWING:

AREA	IMPERVIOUS AREA	PERVIOUS AREA
ONSITE	40,983 S.F.	13,502 S.F.
OFFSITE STREET	279 S.F.	1,167 S.F.
TOTAL	41,262 S.F.	14,669 S.F.

EXISTING TREE, ROOTS AND LIMBS TO BE REMOVED (20 TREES ON SITE)

ABANDON IN PLACE EXISTING UNDERGROUND UTILITY AND STORM DRAIN PIPE WHICH ARE NOT IN CONFLICT WITH THE NEW SITE IMPROVEMENTS OR REMEDIAL GRADING.

LINE DATA TABLE

NO.	BEARING	DISTANCE
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L2	N47°51'56"W	29.57'
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L5	N55°18'59"W	29.13'
L6	N62°41'51"E	29.13'
L7	N86°18'34"W	12.21'
L8	N06°58'01"W	50.53'
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CURVE DATA TABLE

NO.	DELTA	RADIUS	LENGTH
C1	00°17'29"	2951.00'	15.01'
C2	00°17'28"	2951.00'	15.00'

NOTE:
REFER TO SHEET C36 FOR A COMPLETE GENERAL LEGEND OF ABBREVIATIONS AND SYMBOLS SHOWN HEREON, EASEMENT NOTES, LEGAL DESCRIPTION AND THE BOUNDARY MONUMENTS AND SURVEY CONTROL POINTS.

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(909) 305-2395 FAX (909) 305-2397
MARK S. LAMOUREUX R.C.E. 38382 07-06-15 DATE
REGISTERED PROFESSIONAL ENGINEER MARK S. LAMOUREUX No. 38382 CIVIL STATE OF CALIFORNIA

IN-N-OUT BURGER

372 GELLERT BOULEVARD
DALY CITY, CA. 94015
APN: 091-542-170

CITY ENTITLEMENT DEMOLITION PLAN

C31

JN 15007-15007 C31coedimo

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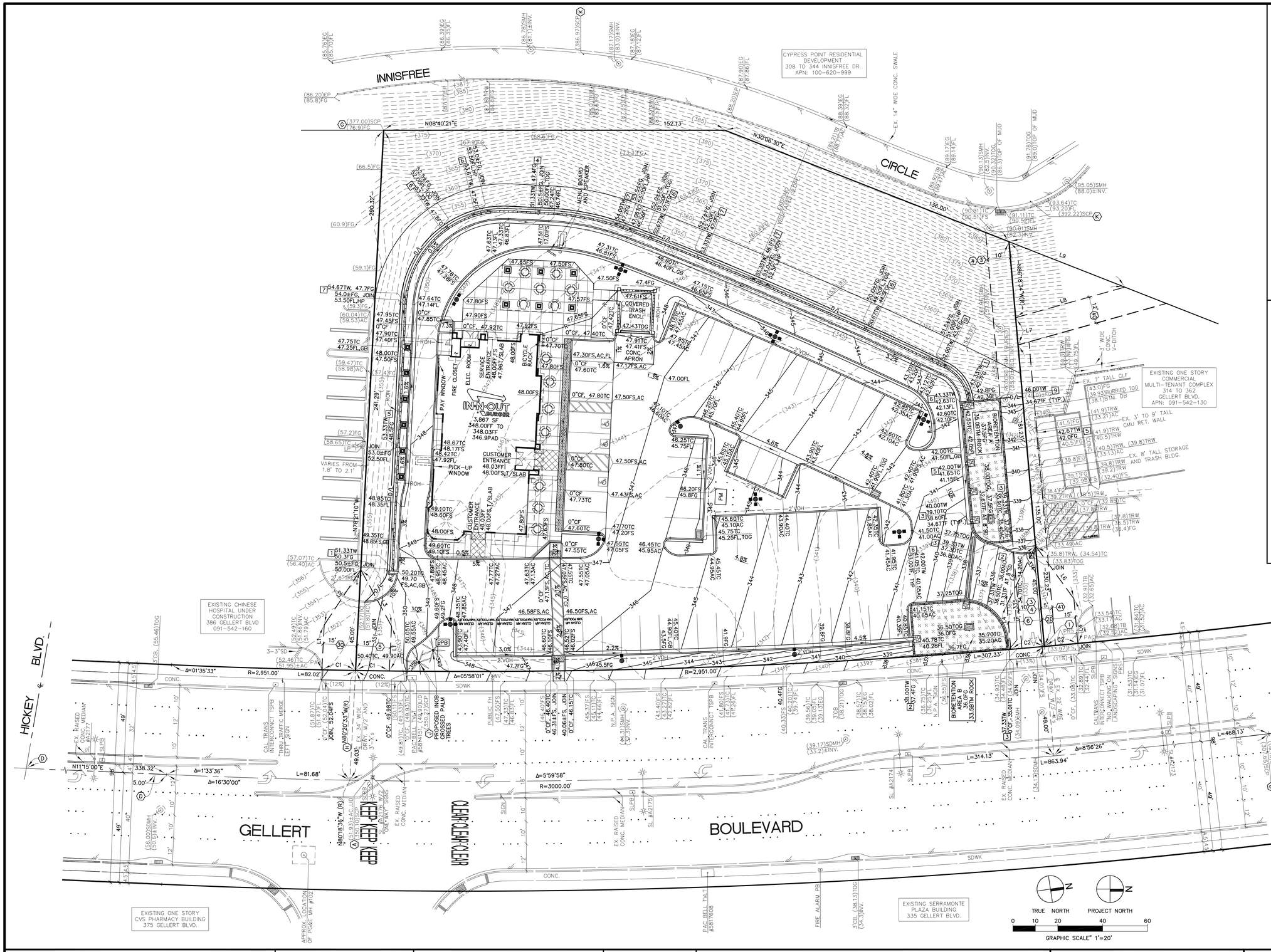

ENGINEER'S ESTIMATED EARTHWORK QUANTITIES

1. RAW CUT (INCLUDES 150 C.Y. FOOTING EXCAVATION STORM DRAIN AND UTILITY SPOILS).	1,600 CU. YDS.
2. OVEREXCAVATE THE RECOMPACTED SOIL UNDER THE NEW BUILDING, PATIO COVER AND COVERED TRASH ENCLOSURE AREA (IDENTIFIED AS THE BOTTOM OF EXCAVATED PLANE (BEP) UP TO THE PAD ELEVATION. (10,000 S.F.)	1,850 CU. YDS.
3. OVEREXCAVATE THE TOP 2 FEET OF LOOSE SOIL UNDER THE PROPOSED PAVEMENT AND EXTERIOR HARDSCAPE WITHIN THE DEVELOPED SITE. (35,000 S.F.)	2,600 CU. YDS.
4. TOTAL CUT.	6,050 CU. YDS.
5. RAW FILL.	1,800 CU. YDS.
6. SHRINKAGE OF RAW FILL USING AN ASSUMED 10% SHRINKAGE LOSS.	180 CU. YDS.
7. RECOMPACT EXISTING ONSITE SOILS FOR THE AREAS DETAILED IN ITEM NO. 2 ABOVE USING AN ASSUMED 10% SHRINKAGE LOSS INCLUDING ENGINEERED FILL (*) UNDER THE BUILDING.	2,040 CU. YDS.
8. RECOMPACT EXISTING ONSITE SOILS FOR AREAS DETAILED IN ITEM NO. 3 ABOVE USING AN ASSUMED 10% SHRINKAGE LOSS.	2,860 CU. YDS.
9. TOTAL COMPACTED FILL.	6,880 CU. YDS.
10. ESTIMATED AMOUNT OF SOIL TO IMPORT TO THE SITE.	830 CU. YDS.

(*)

NOTE:
THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THEIR OWN EARTHWORK QUANTITIES FOR BIDDING PURPOSES. THE QUANTITIES SHOWN HEREON ARE THE ENGINEER'S ESTIMATE ONLY.

NOTE:
ALL EARTHWORK SHALL BE PERFORMED IN ACCORDANCE WITH THE KRAZAN AND ASSOCIATES, INC. GEOTECHNICAL ENGINEERING INVESTIGATION REPORT PREPARED UNDER THE DIRECTION OF DAVE JAROSZ (RCE 60185 AND RGE 2698) AS THEIR PROJECT NUMBER 042- .

PARTIAL LEGEND

- NEW 24"x36" CONCRETE DRAIN BOX WITH A FLOGARD-PLUS FOSSIL FILTER INSERT FOR PRE-TREATMENT OF STORMWATER RUNOFF.
- PROPOSED 22'-6" TALL FIXTURE HEIGHT LIGHT POLE ON TOP OF A 30" TALL 24" DIAMETER CONCRETE BASE FOR A TOTAL HEIGHT OF 25' TALL TO BE MAINTAINED BY INOB.
- BIO-RETENTION AREA FOR STORMWATER RUNOFF TREATMENT CONSISTING OF APPROXIMATELY 1,745 SQUARE FEET.
- CHARCOAL GRAY TRUNCATED DOME PAVERS.
- VEHICLE DETECTOR LOOP.
- OUTDOOR SEATING PATIO TABLE WITH NO UMBRELLA.
- PROPERTY LINE.
- 1 NEW 3' TALL 18"x24" LIT "DRIVE THRU" DIRECTIONAL SIGN BY SEPARATE PERMIT.
- 2 NEW 3' TALL 18"x24" LIT "THANK YOU, DO NOT ENTER" DIRECTIONAL SIGN BY SEPARATE PERMIT.
- INOB IN-N-OUT BURGER.
- NEW SITE 3' TO 9' TALL CMU RETAINING WALL WITH A 3' TALL TSF TO MATCH EXISTING.
- TUBULAR STEEL FENCE (TSF).
- 4 EXPOSED HEIGHT OF CMU RETAINING WALL IN FEET.
- D/L DAYLIGHT LINE.
- 5 REFER TO PLOTTABLE EASEMENTS SHOWN ON SHEET C36.

NOTE:
INSTALL TEMPORARY SHORING AS REQUIRED TO CONSTRUCT DRIVE-THRU LAND AND BIORETENTION AREA RETAINING WALLS.

LINE DATA TABLE

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CURVE DATA TABLE

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NOTE:
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MARK S. LAMOUREUX R.C.E. 38382 07-06-15 DATE
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IN-N-OUT BURGER

372 GELLERT BOULEVARD
DALY CITY, CA. 94015
APN: 091-542-170

CITY ENTITLEMENT GRADING AND DRAINAGE PLAN

C32

JN 15007-15007 C32cegdp

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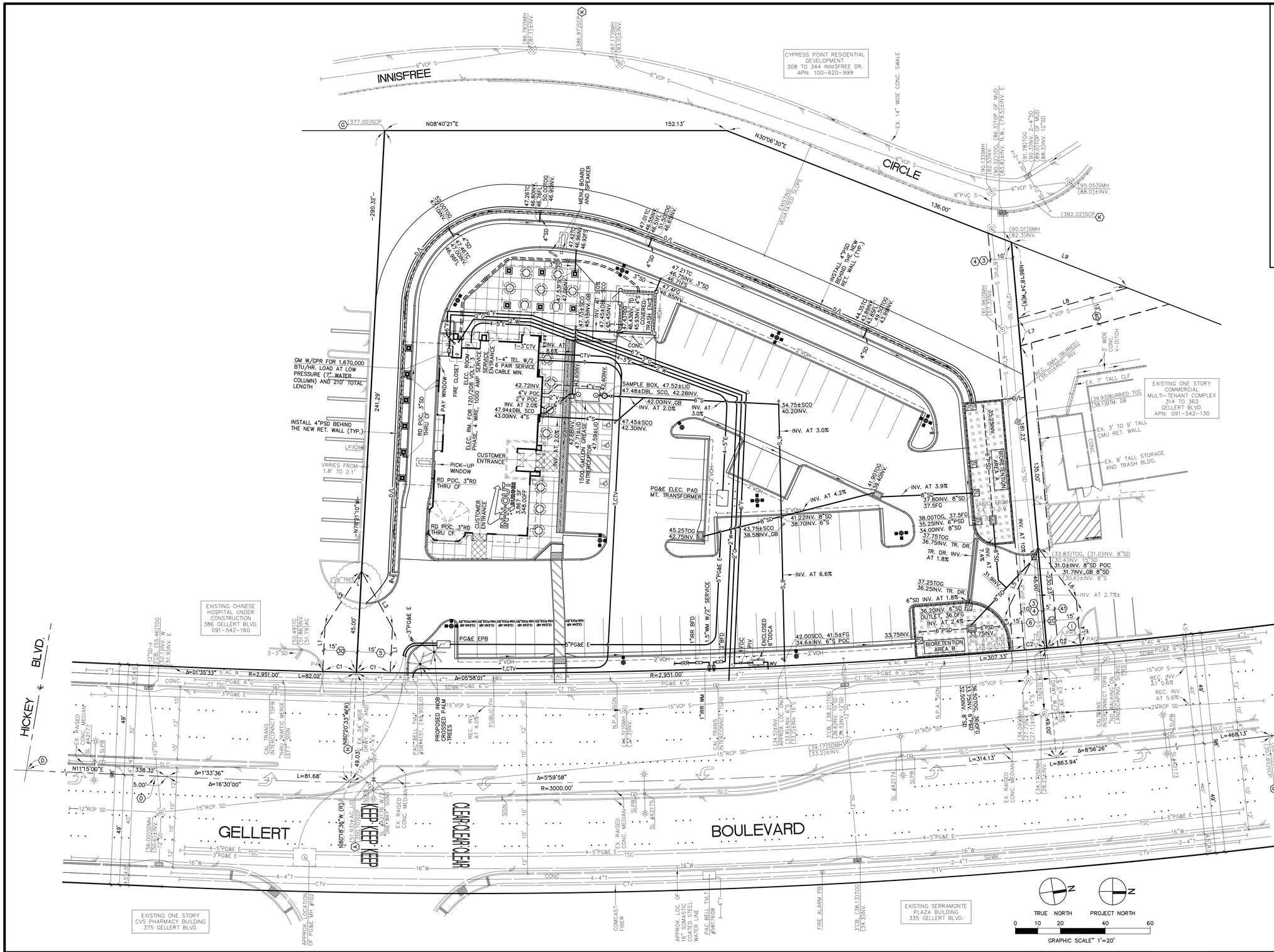

PARTIAL LEGEND

- NEW 24"x36" CONCRETE DRAIN BOX WITH A FLOGARD-PLUS FOSSIL FILTER INSERT FOR PRE-TREATMENT OF STORMWATER RUNOFF.
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- INOB IN-N-OUT BURGER.
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- TUBULAR STEEL FENCE (TSF).
- 4 EXPOSED HEIGHT OF CMU RETAINING WALL IN FEET.
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- 5 REFER TO PLOTTABLE EASEMENTS SHOWN ON SHEET C36.

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TRUE NORTH PROJECT NORTH

0 10 20 40 60

GRAPHIC SCALE 1"=20'

NOTE:
REFER TO SHEET C36 FOR A COMPLETE GENERAL LEGEND OF ABBREVIATIONS AND SYMBOLS SHOWN HEREON, EASEMENT NOTES, LEGAL DESCRIPTION AND THE BOUNDARY MONUMENTS AND SURVEY CONTROL POINTS.

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IN-N-OUT BURGER

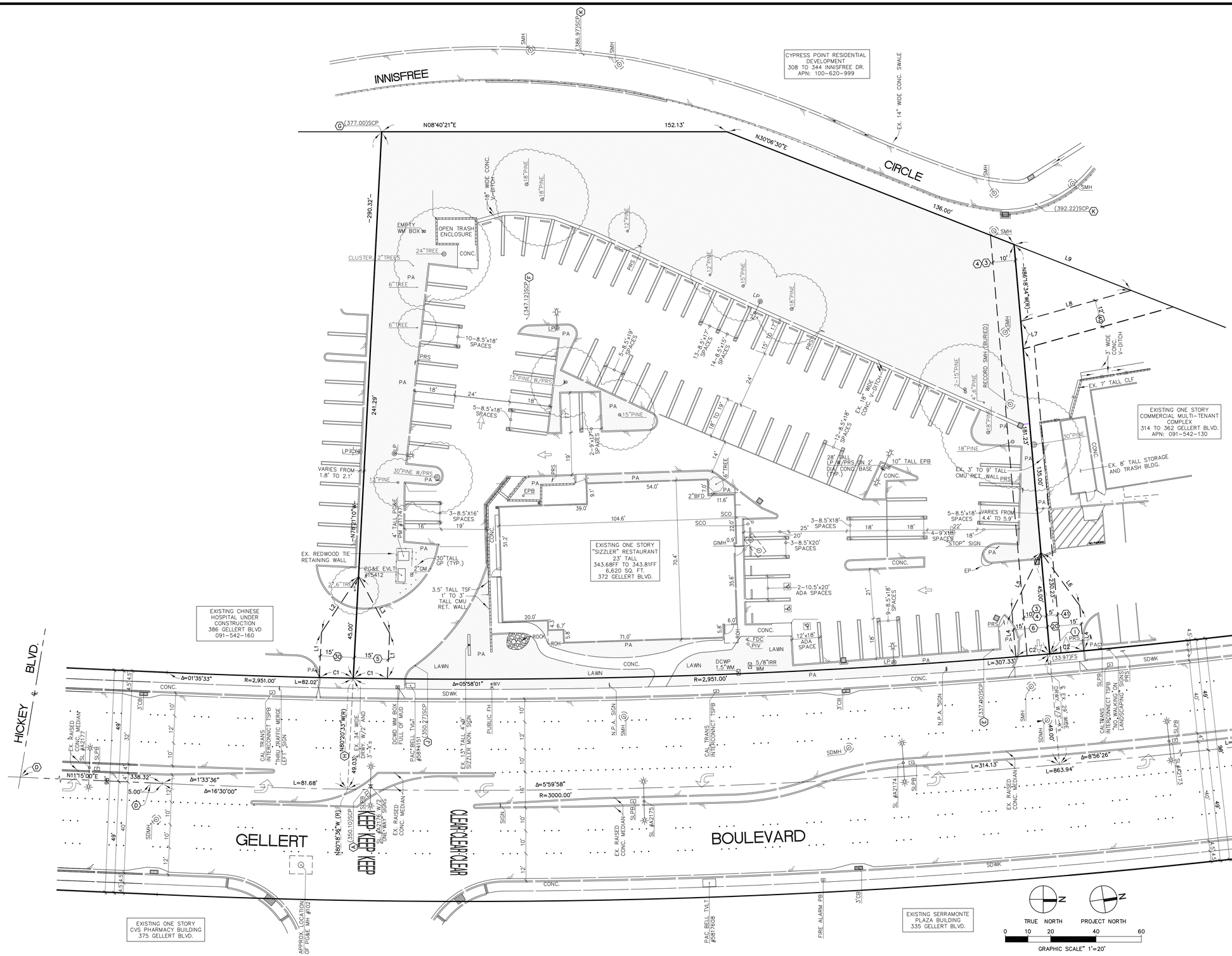
372 GELLERT BOULEVARD
DALY CITY, CA. 94015
APN: 091-542-170

CITY ENTITLEMENT STORM DRAIN AND UTILITY PLAN

C33

JN 15007-15007 C33ceutl

7/6/2015 3:31:07 PM, Aaron



GENERAL SITE NOTES

1. THE GROSS AREA OF THIS SUBJECT PROPERTY IS AS FOLLOWS: 66,291 SQ. FT. OR 1.522 ACRES.
2. THERE IS ONE SIZZLER RESTAURANT SINGLE STORY BUILDING LOCATED WITHIN THE PROPERTY CONSISTING OF 6,620 SQUARE FEET. THERE ARE AND NO PARKING STRUCTURES ON THE SITE.
3. THERE ARE 91 TOTAL PAVED STRIPED SURFACE PARKING SPACES ONSITE WITHIN THE PROPERTY WITH 3 OF THEM DESIGNATED FOR ACCESSIBLE USE AND ARE DESCRIBED AS FOLLOWS:

   2 ACCESSIBLE (NON-STANDARD) 10.5' WIDE BY 20' DEEP SPACES
   1 ACCESSIBLE (NON-STANDARD) 12' WIDE BY 18' DEEP SPACE
   3 STANDARD 8.5' WIDE BY 20' DEEP SPACES
   4 NON-STANDARD 9' WIDE BY 18' DEEP SPACES
   5 STANDARD 8.5' WIDE BY 19' DEEP SPACES
   44 NON-STANDARD 8.5' WIDE BY 18' DEEP SPACES
   2 NON-STANDARD 9' WIDE BY 17' DEEP SPACES
   13 NON-STANDARD 8.5' WIDE BY 17' DEEP SPACES
   3 NON-STANDARD 8.5' WIDE BY 16' DEEP SPACES
   14 NON-STANDARD 8.5' WIDE BY 15' DEEP SPACES

PARTIAL LEGEND

EXISTING LANDSCAPED PLANTER AND VACANT LAND AREA CONSISTING OF 25,251 S.F. OR 38% OF THE ONSITE AREA WITH 1,166 S.F. LANDSCAPED PLANTER AREA OFFSITE FOR A GROSS OF 26,417 S.F. LANDSCAPED AND VACANT LAND AREA.

LINE DATA TABLE

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MARK S. LAMOUREUX R.C.E. 38382 07-06-15 DATE
REGISTERED PROFESSIONAL ENGINEER MARK S. LAMOUREUX No. 38382 CIVIL STATE OF CALIFORNIA

IN-N-OUT BURGER

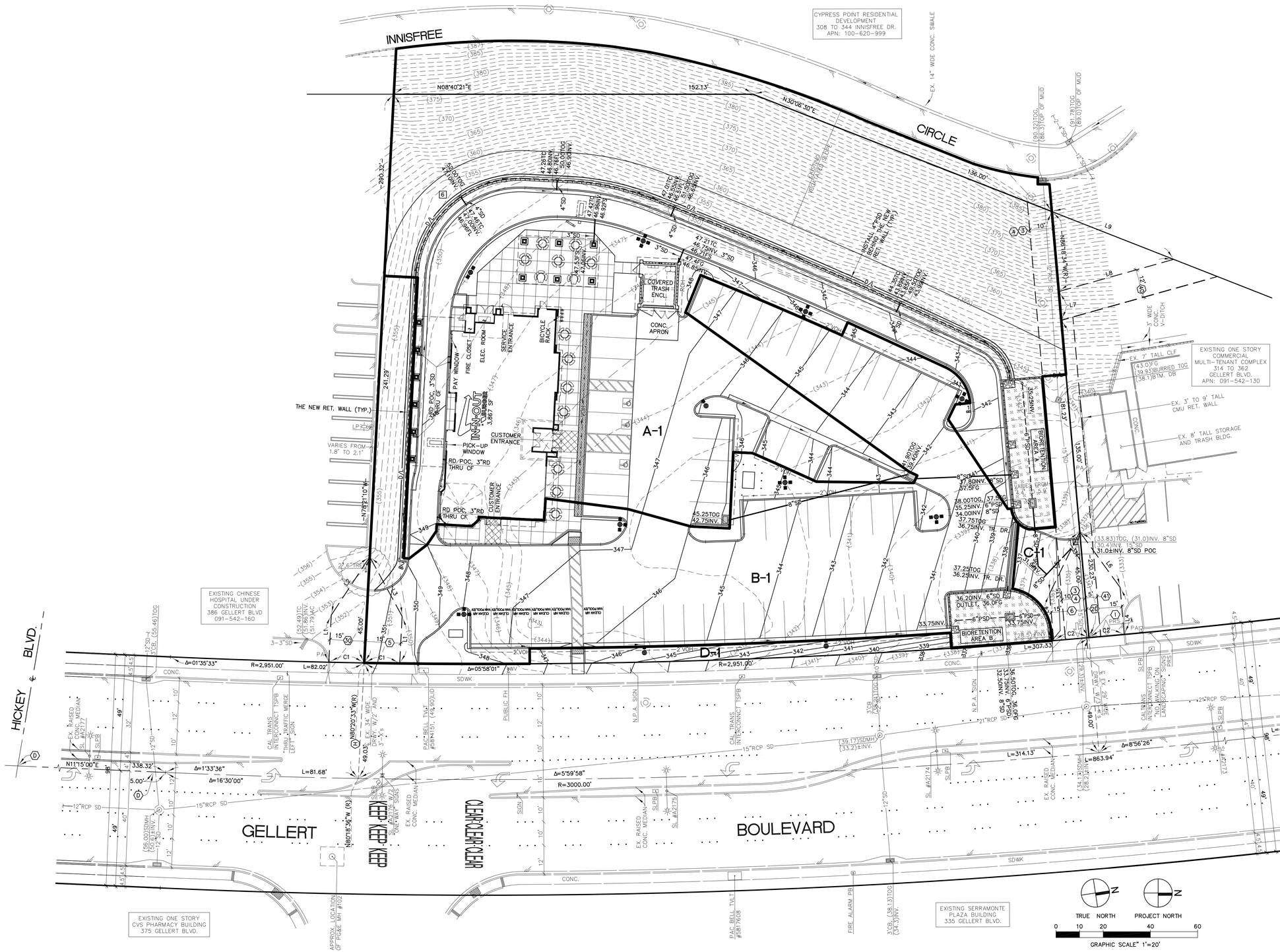
372 GELLERT BOULEVARD
DALY CITY, CA. 94015
APN: 091-542-170

CITY ENTITLEMENT EXISTING SITE PLAN

C34

JN 15007-15007 C34ceesp

7/6/2015 3:28:17 PM, Aaron



LEGEND

- NEW 24"x36" CONCRETE DRAIN BOX WITH A FLOGARD-PLUS FOSSIL FILTER INSERT FOR PRE-TREATMENT OF STORMWATER RUNOFF.
- PROPOSED INOB INSTALLED AND MAINTAINED DROUGHT TOLERANT LANDSCAPED PLANTER AND IRRIGATION SYSTEM ONSITE CONSISTING OF APPROXIMATELY 12,545 SQUARE FEET.
- PROPOSED INOB INSTALLED AND MAINTAINED DROUGHT TOLERANT LANDSCAPED PLANTER AND IRRIGATION SYSTEM IN GELLERT BOULEVARD RIGHT OF WAY CONSISTING OF APPROXIMATELY 1,180 SQUARE FEET.
- BIO-RETENTION AREA FOR STORMWATER RUNOFF TREATMENT CONSISTING OF APPROXIMATELY 1,745 SQUARE FEET.
- ℄ PROPERTY LINE.
- INOB IN-N-OUT BURGER.

DRAINAGE AREAS

ID	AREA (SF)	IMPERVIOUS (SF/%)*	PERVIOUS (SF/%)
A-1 (TOTAL)	44,053	21,683/49.2%	22,370/50.8%
A-1 (ONSITE)	40,196	21,683/53.9%	18,513/46.1%
A-1 (RE-DEV.)	28,431	21,683/76.3%	6,748/23.7%
B-1 (TOTAL/ONSITE)	23,155	19,397/83.8%	3,758/16.2%
B-1 (RE-DEV.)	21,650	19,397/89.6%	2,253/10.4%
C-1	1,780	1,780/100%	0/0%
D-1	1,160	40/3.4%	1,120/96.6%
REDEVELOPMENT AREA	53,021	42,900/80.9%	10,121/19.1%

IMPERVIOUS AREA INCLUDES BIORETENTION AREAS:
BIORETENTION AREA A = 1,000 SF
BIORETENTION AREA B = 825 SF

LINE DATA TABLE

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IN-N-OUT BURGER

372 GELLERT BOULEVARD
DALY CITY, CA. 94015
APN: 091-542-170

CITY ENTITLEMENT C.3 STORMWATER TREATMENT SITE PLAN

C35

JN 15007-15007 C35cewgmp

7/6/2015 5:12:55 PM, Aaron

LEGAL DESCRIPTION

REFERENCE: FIRST AMERICAN TITLE COMPANY NATIONAL COMMERCIAL SERVICES PRELIMINARY REPORT WITH A COMMITMENT NO. OF NCS–707934–SA1 DATED FEBRUARY 04, 2015 OUT OF THEIR IRVINE, CA. OFFICE. TITLE OFFICER IS JEFFERY PASCHAL AT 949–885–2481 (jpaschal@firstam.com).

PARCEL 1:
PARCEL B–3B AS SAID PARCEL IS SHOWN ON THAT CERTAIN MAP ENTITLED, "PARCEL MAP A SUBDIVISION OF PARCEL B–3, BLOCK 59 AS SHOWN ON THAT CERTAIN MAP ENTITLED, 'PARCEL MAP OF A RESUBDIVISION OF PARCEL B, BLOCK 59, DALY CITY, SAN MATEO COUNTY, CALIFORNIA', RECORDED IN VOLUME 27 OF MAPS, AT PAGE 42, RECORDS OF SAN MATEO COUNTY, CALIFORNIA, DALY CITY, SAN MATEO COUNTY, CALIFORNIA", WHICH MAP WAS FILED IN THE OFFICE OF THE RECORDER OF THE COUNTY OF SAN MATEO, STATE OF CALIFORNIA, ON JANUARY 22, 1976, IN BOOK 30 OF PARCEL MAPS AT PAGE 23.

(20) PARCEL 2:
A NON–EXCLUSIVE RIGHT OF WAY FOR MOTOR VEHICLES AND PEDESTRIANS OVER, ALONG AND ACROSS A STRIP OF LAND OF VARYING WIDTH ACROSS PARCEL B–2 AS SAID PARCEL IS SHOWN ON THAT CERTAIN MAP ENTITLED, "PARCEL MAP, A SUBDIVISION OF PARCEL B, BLOCK 59 AS SHOWN ON THAT CERTAIN MAP ENTITLED 'PARCEL MAP OF A RESUBDIVISION OF LOTS 1 AND 2, BLOCK 59, DALY CITY, SAN MATEO COUNTY, CALIFORNIA', RECORDED IN VOLUME 24 OF MAPS, AT PAGE 8, RECORD OF SAN MATEO COUNTY, CALIFORNIA, DALY CITY, SAN MATEO COUNTY, CALIFORNIA", WHICH MAP WAS FILED IN THE OFFICE OF THE RECORDER OF THE COUNTY OF SAN MATEO, STATE OF CALIFORNIA, ON MARCH 14, 1975, IN BOOK 27 OF PARCEL MAPS AT PAGE 42; SAID STRIP OF LAND BEING DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEAST CORNER OF AFORESAID PARCEL B–2;
THENCE FROM SAID POINT OF BEGINNING ALONG THE SOUTHERLY LINE OF PARCEL B–2 NORTH 86°18'34" WEST 45.00 FEET; LEAVING SAID LINE NORTH 62°40'26" EAST 29.13 FEET TO A POINT IN THE LINE PARALLEL WITH SAID SOUTHERLY LINE OF PARCEL B–2 AND AT RIGHT ANGLES DISTANT NORTHERLY 15.00 FEET THEREOF;
THENCE ALONG SAID PARALLEL LINE SOUTH 86°18'34" EAST 20.00 FEET TO A POINT IN THE EASTERLY LINE OF SAID PARCEL B–2;
THENCE ALONG LAST SAID LINE SOUTHERLY, FROM A TANGENT BEARING SOUTH 3°23'57" WEST, ON THE ARC OF A CURVE TO THE RIGHT WITH A RADIUS OF 2,951.00 FEET, SUBTENDING A CENTRAL ANGLE OF 0°17'29", AN ARC DISTANCE OF 15.00 FEET TO THE POINT OF BEGINNING.

(30) PARCEL 3:
A NON–EXCLUSIVE RIGHT OF WAY FOR MOTOR VEHICLES AND PEDESTRIANS OVER, ALONG AND ACROSS A STRIP OF LAND OF VARYING WIDTH ACROSS PARCEL B–3A AS SAID PARCEL IS SHOWN ON THAT CERTAIN MAP ENTITLED "PARCEL MAP, A SUBDIVISION OF PARCEL B–3, BLOCK 59 AS SHOWN ON THAT CERTAIN MAP ENTITLED, 'PARCEL MAP OF A RESUBDIVISION OF PARCEL B, BLOCK 59, DALY CITY, SAN MATEO COUNTY, CALIFORNIA', RECORDED IN VOLUME 27 OF MAPS, AT PAGE 42, RECORDS OF SAN MATEO COUNTY, CALIFORNIA, DALY CITY, SAN MATEO COUNTY, CALIFORNIA", WHICH MAP WAS FILED IN THE OFFICE OF THE RECORDER OF THE COUNTY OF SAN MATEO, STATE OF CALIFORNIA, ON JANUARY 22, 1976, IN BOOK 30 OF PARCEL MAPS AT PAGE 23; SAID STRIP OF LAND BEING DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF SAID PARCEL B–3A;
THENCE FROM SAID POINT OF BEGINNING ALONG THE NORTHERLY LINE OF PARCEL B–3A NORTH 78° 21'10" WEST 45.00 FEET; LEAVING SAID LINE SOUTH 47° 52'18" EAST 29.57 FEET;
THENCE SOUTH 78° 21'10" EAST 20.00 FEET TO A POINT IN THE EASTERLY LINE OF SAID PARCEL B–3A;
THENCE ALONG LAST SAID LINE NORTHERLY, FROM A TANGENT BEARING NORTH 9° 56'56" EAST, ON THE ARC OF A CURVE TO THE RIGHT WITH A RADIUS OF 2,951.00 FEET, SUBTENDING A CENTRAL ANGLE OF 0°17'29", AN ARC DISTANCE OF 15.01 FEET TO THE POINT OF BEGINNING.

APN: 091–542–170
JPN: 091–054–542–01.03A

RECORD PLOTTABLE EASEMENT NOTES

REFERENCE: FIRST AMERICAN TITLE COMPANY NATIONAL COMMERCIAL SERVICES PRELIMINARY REPORT WITH A COMMITMENT NO. OF NCS–707934–SA1 DATED FEBRUARY 04, 2015 OUT OF THEIR IRVINE, CA. OFFICE. TITLE OFFICER IS JEFFERY PASCHAL AT 949–885–2481 (jpaschal@firstam.com).

(3) ITEM NO. 3
A 10.00 FOOT WIDE EASEMENT IN FAVOR OF THE CITY OF DALY CITY, A MUNICIPAL CORPORATION, FOR INSTALLATION, MAINTENANCE AND OPERATION OF PIPELINES, CABLES, CONDUITS AND PUBLIC UTILITIES FACILITIES AND INCIDENTAL PURPOSES RECORDED JANUARY 22, 1976 AS INSTRUMENT NO. 33392–AJ IN BOOK/REEL 7032, PAGE/IMAGE 461 OF OFFICIAL RECORDS OF SAN MATEO COUNTY.

THIS ITEM IS SHOWN ON PARCEL MAP RECORDED JANUARY 22, 1976 IN VOLUME 30 OF MAPS AT PAGE 23 OF RECORDS OF SAN MATEO COUNTY.

(4) ITEM NO. 4
A 10.00 FOOT WIDE EASEMENT FOR PUBLIC UTILITIES AND ACCESS AND INCIDENTAL PURPOSES SHOWN OR DEDICATED ON THE MAP OF PARCEL MAP RECORDED JANUARY 22, 1976 IN VOLUME 30 OF MAPS AT PAGE 23 OF RECORDS OF SAN MATEO COUNTY.

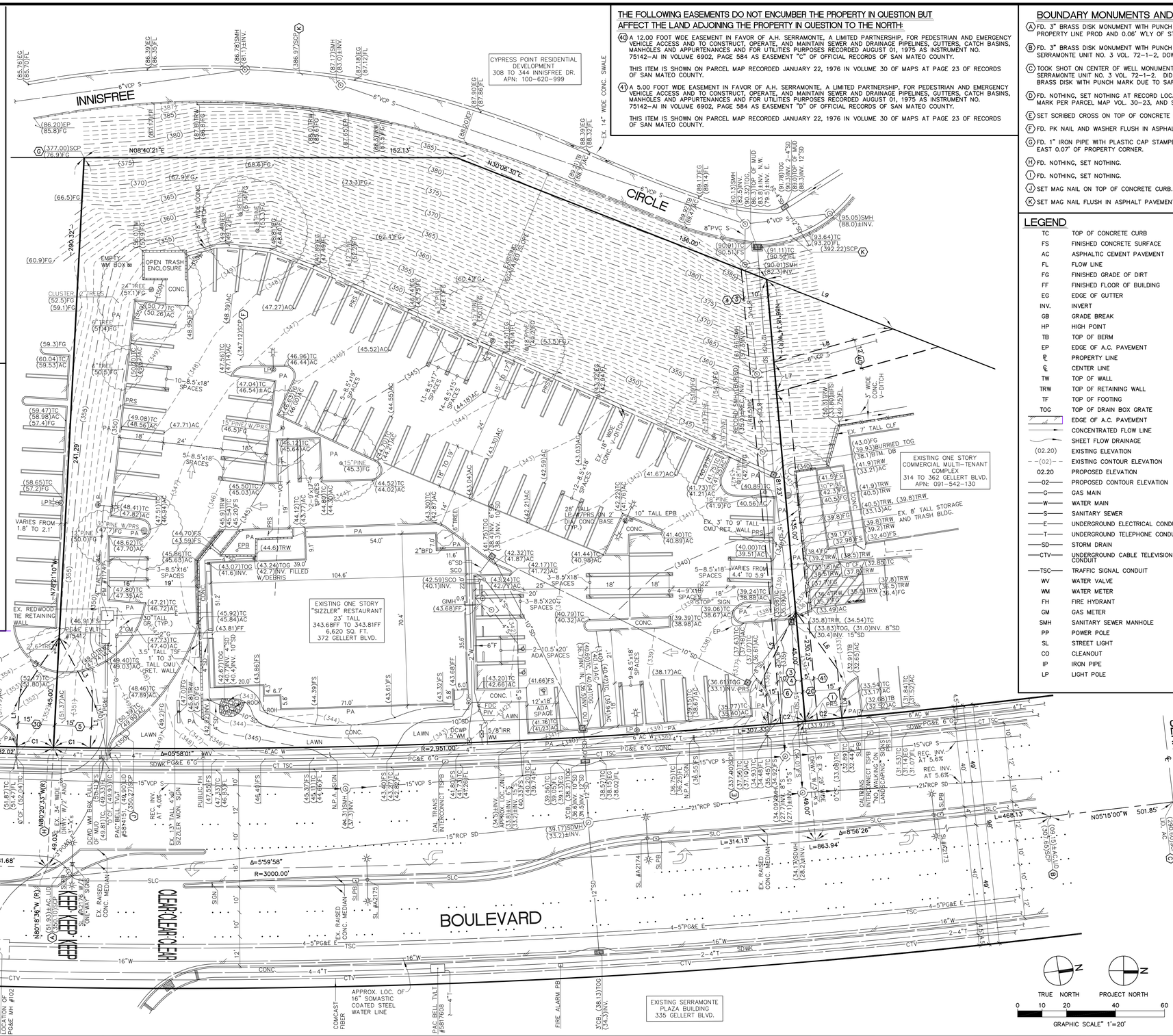
THIS ITEM IS DESCRIBED IN THE GRANT DEED TO THE CITY OF DALY CITY, A MUNICIPAL CORPORATION, RECORDED JANUARY 22, 1976 AS INSTRUMENT NO. 33392–AJ IN BOOK/REEL 7032, PAGE/IMAGE 461 OF OFFICIAL RECORDS OF SAN MATEO COUNTY.

(5) ITEM NO. 5
A NON–EXCLUSIVE EASEMENT IN FAVOR OF JANUS REALTY, INC., A CALIFORNIA CORPORATION, FOR MOTOR VEHICLES AND PEDESTRIANS AND INCIDENTAL PURPOSES RECORDED JANUARY 23, 1976 AS INSTRUMENT NO. 33784–AJ IN BOOK/REEL 7033, PAGE/IMAGE 379 OF OFFICIAL RECORDS OF SAN MATEO COUNTY.

THIS ITEM IS SHOWN ON PARCEL MAP RECORDED JANUARY 22, 1976 IN VOLUME 30 OF MAPS AT PAGE 23 OF RECORDS OF SAN MATEO COUNTY FOR THE USE OF PARCEL B–3A AS SHOWN ON SAID PARCEL MAP.

(6) ITEM NO. 6
A NON–EXCLUSIVE EASEMENT IN FAVOR OF UNIVERSITY REAL ESTATE PARTNERSHIP III, A CALIFORNIA LIMITED PARTNERSHIP, FOR MOTOR VEHICLES AND PEDESTRIANS AND INCIDENTAL PURPOSES RECORDED JULY 14, 1976 AS INSTRUMENT NO. 97664–AJ IN BOOK/REEL 7185, PAGE/IMAGE 671 OF OFFICIAL RECORDS OF SAN MATEO COUNTY.

THIS ITEM IS SHOWN ON PARCEL MAP RECORDED JANUARY 22, 1976 IN VOLUME 30 OF MAPS AT PAGE 23 OF RECORDS OF SAN MATEO COUNTY FOR THE USE OF PARCEL B–2 AS SHOWN ON PARCEL MAP RECORDED MARCH 14, 1975 IN VOLUME 27 OF MAPS AT PAGE 42 OF RECORDS OF SAN MATEO COUNTY.



THE FOLLOWING EASEMENTS DO NOT ENCUMBER THE PROPERTY IN QUESTION BUT AFFECT THE LAND ADJOINING THE PROPERTY IN QUESTION TO THE NORTH:

(40) A 12.00 FOOT WIDE EASEMENT IN FAVOR OF A.H. SERRAMONTE, A LIMITED PARTNERSHIP, FOR PEDESTRIAN AND EMERGENCY VEHICLE ACCESS AND TO CONSTRUCT, OPERATE, AND MAINTAIN SEWER AND DRAINAGE PIPELINES, GUTTERS, CATCH BASINS, MANHOLES AND APPURTENANCES AND FOR UTILITIES PURPOSES RECORDED AUGUST 01, 1975 AS INSTRUMENT NO. 75142–AI IN VOLUME 6902, PAGE 584 AS EASEMENT "C" OF OFFICIAL RECORDS OF SAN MATEO COUNTY.

THIS ITEM IS SHOWN ON PARCEL MAP RECORDED JANUARY 22, 1976 IN VOLUME 30 OF MAPS AT PAGE 23 OF RECORDS OF SAN MATEO COUNTY.

(41) A 5.00 FOOT WIDE EASEMENT IN FAVOR OF A.H. SERRAMONTE, A LIMITED PARTNERSHIP, FOR PEDESTRIAN AND EMERGENCY VEHICLE ACCESS AND TO CONSTRUCT, OPERATE, AND MAINTAIN SEWER AND DRAINAGE PIPELINES, GUTTERS, CATCH BASINS, MANHOLES AND APPURTENANCES AND FOR UTILITIES PURPOSES RECORDED AUGUST 01, 1975 AS INSTRUMENT NO. 75142–AI IN VOLUME 6902, PAGE 584 AS EASEMENT "D" OF OFFICIAL RECORDS OF SAN MATEO COUNTY.

THIS ITEM IS SHOWN ON PARCEL MAP RECORDED JANUARY 22, 1976 IN VOLUME 30 OF MAPS AT PAGE 23 OF RECORDS OF SAN MATEO COUNTY.

BOUNDARY MONUMENTS AND SURVEY CONTROL POINTS

(A) FD. 3" BRASS DISK MONUMENT WITH PUNCH MARK DOWN 22", NO REFERENCE, 7.30' N'LY OF PROPERTY LINE PROD AND 0.06' W'LY OF STREET CENTERLINE.

(B) FD. 3" BRASS DISK MONUMENT WITH PUNCH MARK PER PARCEL MAP VOL. 30–23, AND SERRAMONTE UNIT NO. 3 VOL. 72–1–2, DOWN 18".

(C) TOOK SHOT ON CENTER OF WELL MONUMENT LID PER PARCEL MAP VOL. 30–23, AND SERRAMONTE UNIT NO. 3 VOL. 72–1–2. DID NOT LIFT LID AND MEASURE DOWN TO RECORD 3" BRASS DISK WITH PUNCH MARK DUE TO SAFETY CONFLICT WITH STREET TRAFFIC PATTERNS.

(D) FD. NOTHING, SET NOTHING AT RECORD LOCATION OF 3" BRASS DISK MONUMENT WITH PUNCH MARK PER PARCEL MAP VOL. 30–23, AND SERRAMONTE UNIT NO. 3 VOL. 72–1–2.

(E) SET SCRIBED CROSS ON TOP OF CONCRETE CURB.

(F) FD. PK NAIL AND WASHER FLUSH IN ASPHALT PAVEMENT, NO REF.

(G) FD. 1" IRON PIPE WITH PLASTIC CAP STAMPED "LS 3139" UP 1", NO REF. SOUTH 78°21'10" EAST 0.07' OF PROPERTY CORNER.

(H) FD. NOTHING, SET NOTHING.

(I) FD. NOTHING, SET NOTHING.

(J) SET MAG NAIL ON TOP OF CONCRETE CURB.

(K) SET MAG NAIL FLUSH IN ASPHALT PAVEMENT.

LEGEND

TC	TOP OF CONCRETE CURB	SDMH	STORM DRAIN MANHOLE
FS	FINISHED CONCRETE SURFACE	RCP	REINFORCED CONCRETE PIPE
AC	ASPHALTIC CEMENT PAVEMENT	CLF	CHAIN LINK FENCE
FL	FLOW LINE	ICV	IRRIGATION CONTROL VALVE
FG	FINISHED GRADE OF DIRT	ICB	IRRIGATION CONTROL BOX
FF	FINISHED FLOOR OF BUILDING	GP	GUARD POST
EG	EDGE OF GUTTER	WIF	WROUGHT IRON FENCE
INV.	INVERT	ROH	BUILDING ROOF OVERHANG
GB	GRADE BREAK	TSP	TRAFFIC SIGNAL POLE
HP	HIGH POINT	PB	PULL BOX
TB	TOP OF BERM	PA	LANDSCAPED PLANTER AREA
EP	EDGE OF A.C. PAVEMENT	TPB	TELEPHONE PULL BOX
ℙ	PROPERTY LINE	TMH	TELEPHONE MANHOLE
℄	CENTER LINE	EPB	ELECTRIC PULL BOX
TW	TOP OF WALL	TSC	TRAFFIC SIGNAL CONDUIT
TRW	TOP OF RETAINING WALL	SLC	STREET LIGHT CONDUIT
TF	TOP OF FOOTING	TSPB	TRAFFIC SIGNAL PULL BOX
TOG	TOP OF DRAIN BOX GRATE	TS PED.	TRAFFIC SIGNAL PEDESTAL
	EDGE OF A.C. PAVEMENT	BF	BACKFLOW PREVENTION DEVICE
	CONCENTRATED FLOW LINE	TE	TRASH ENCLOSURE
	SHEET FLOW DRAINAGE	PM	ELECTRIC PAD MOUNT TRANSFORMER
(02.20)	EXISTING ELEVATION	CB	CATCH BASIN
– –(02)– –	EXISTING CONTOUR ELEVATION	RD	ROOF DRAIN
02.20	PROPOSED ELEVATION	PRS	PARKING REGULATION SIGN
—02—	PROPOSED CONTOUR ELEVATION	SLS	SPEED LIMIT SIGN
—G—	GAS MAIN	FP	FLAG POLE
—W—	WATER MAIN	DS	DIRECTIONAL SIGN
—S—	SANITARY SEWER	FO	FIBEROPTICS
—E—	UNDERGROUND ELECTRICAL CONDUIT	TR	PORTABLE TRASH RECEPTACLE
—T—	UNDERGROUND TELEPHONE CONDUIT	FSR	FIRE SPRINKLER RISER
—SD—	STORM DRAIN	CP	CONTAINMENT PIPE
—CTV—	UNDERGROUND CABLE TELEVISION CONDUIT	MW	MONITORING WELL
—TSC—	TRAFFIC SIGNAL CONDUIT	RW	RECLAIMED WATER
WV	WATER VALVE	RWM	RECLAIMED WATER METER
WM	WATER METER	PB	PULL BOX
FH	FIRE HYDRANT	LLL	LEASE LIMIT LINE
GM	GAS METER	T.B.M.	TEMPORARY BENCH MARK
SMH	SANITARY SEWER MANHOLE	VOH	VEHICLE OVERHANG
PP	POWER POLE	BEP	BOTTOM OF EXCAVATED PLANE
SL	STREET LIGHT	GS	GAS SERVICE
CO	CLEANOUT		
IP	IRON PIPE		
LP	LIGHT POLE		

LINE DATA TABLE

NO.	BEARING	DISTANCE
L1	N78°21'10"W	20.00'
L2	N47°51'56"W	29.57'
L3	N70°06'49"E	28.68'
L4	N86°18'34"W	20.00'
L5	N55°18'59"W	29.13'
L6	N62°41'51"E	29.13'
L7	N86°18'34"W	12.21'
L8	N06°58'01"W	50.53'
L9	N30°06'30"E	55.45'

CURVE DATA TABLE

NO.	DELTA	RADIUS	LENGTH
C1	00°17'29"	2951.00'	15.01'
C2	00°17'28"	2951.00'	15.00'

IN-N-OUT BURGER
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MSL ENGINEERING, INC.
CIVIL ENGINEERS AND LAND SURVEYORS SPECIALIZING IN SITE DEVELOPMENT
402 WEST ARROW HWY., SUITE 4, SAN DIMAS, CA. 91773
(909) 305–2395 FAX (909) 305–2397
MARK S. LAMOUREUX R.C.E. 38382 DATE 07–06–15
REGISTERED PROFESSIONAL ENGINEER MARK S. LAMOUREUX No. 38382 CIVIL STATE OF CALIFORNIA

IN-N-OUT BURGER

372 GELLERT BOULEVARD
DALY CITY, CA. 94015
APN: 091-542-170

CITY ENTITLEMENT TOPOGRAPHY SURVEY MAP

C36

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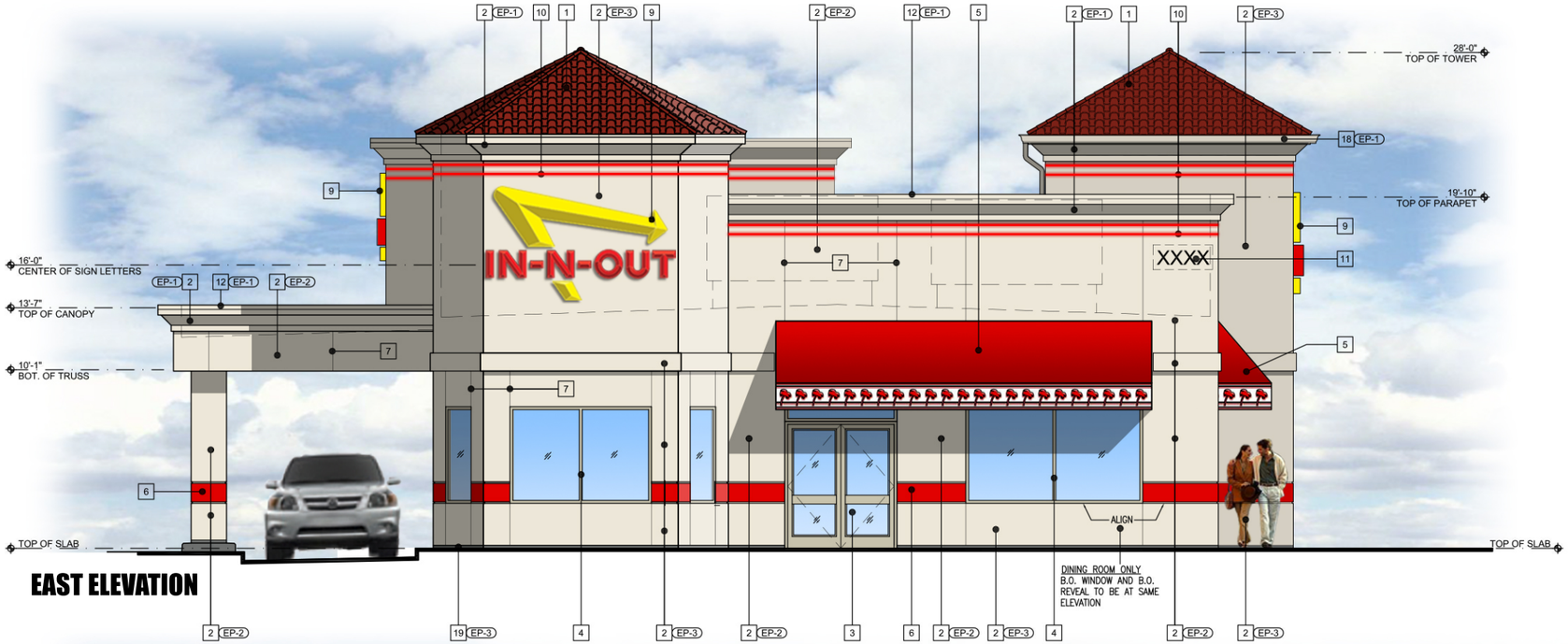

EAST ELEVATION

NORTH ELEVATION

KEY NOTES

1	TILE ROOF: EAGLE ROOFING PRODUCTS, CAPISTRANO STYLE 3125 TERRACOTTA. PROVIDE BIRD STOP AND PAINT TO MATCH TILE.
2	STUCCO: MEDIUM SAND FLOAT TEXTURE FINISH.
3	ALUMINUM STOREFRONT DOORS: CLEAR ANODIZED ALUMINUM.
4	ALUMINUM WINDOWS: CLEAR ANODIZED ALUMINUM.
5	AWNINGS: PVC COATED WICK-RESISTANT ERADICABLE POLYESTER AWNINGS WITH CUSTOM PALM TREE ERADICATED TO WHITE COLOR BY COOLEY BRITE CUSTOM RED 79-L112AA, FLAME RETARDANT PER UL-48, UL-94, NFPA 701. PROVIDE FLUORESCENT BACKLIGHTING. SEE: 5/A16.0 & 6/A16.0.
6	STUCCO BAND: PAINT (EP-4). INTEGRAL COLOR CEMENT PLASTER TO MATCH PAINT (EP-4). 1" ALUMINUM REVEAL TOP AND BOTTOM (DO NOT PAINT REVEALS). SEE DETAILS 1/A16.0 & 13/A17.0
7	1/4" WIDE METAL PENN SCREED: SEE DETAIL 4/A16.0. ALIGN CONTROL JOINTS ON DRIVE-THRU CANOPY FASCIA WITH CONTROL JOINTS ON BOTTOM OF SOFFIT.
8	SLOPED ALUMINUM WINDOWS: U.S. ALUMINUM S-010. GLASS. JOINTS TO HAVE POLISHED EDGES WITH SILICONE JOINTS. PAINT WOOD FRAME "EP-4".
9	IN-N-OUT BURGER ILLUMINATED LOGO SIGN: UNDER SEPARATE PERMIT.
10	L.E.D. DOUBLE BAND LIGHTING: UNDER SEPARATE PERMIT.
11	BUILDING ADDRESS NUMBERS TO BE 12" HIGH. 4" MIN. W/ MIN. STROKE WIDTH OF 0.5 INCH PER FIRE DEPARTMENT AND CITY JURISDICTION ADDRESS DISPLAY REQUIREMENTS: 1. ADDRESS SHALL BE DISPLAYED & VISIBLE FROM BOTH STREET DIRECTIONS OF APPROACHING VEHICLES. 2. PERMANENT NUMBERS AND LETTERS SHALL BE MADE OF DURABLE AND CLEARLY VISIBLE MATERIAL SUCH AS WOOD, METAL, CERAMIC, PLASTIC AND VINYL. (PAINTED OR GLUED ON NUMBERS ARE NOT ACCEPTABLE MATERIALS). 3. NUMBERS SHALL BE OF COLORS CONTRASTING WITH BACKGROUND TO WHICH THEY ARE ATTACHED. 4. NUMBERS SHALL BE A MINIMUM PROPORTION RATIO OF 6:1 (HEIGHT TO WIDTH). 5. NUMBERS CANNOT BE SPELLED.
12	PRIMER: GALV-ALUM PREMIUM, NON FERROUS METAL PRIMER (GA 01). FINISH COAT: RUSTOLEUM SIERRA BEYOND BY DUNN EDWARDS. COLOR TO MATCH STUCCO.
13	HOLLOW METAL DOOR: SEE SHEET A11.0 (PAINT WITH SHERWIN WILLIAMS - WATERBASE ACROLON 100 URETHANE PART A B65-720 / PART -B B65V720 - TINT TO MATCH PAINT COLOR NOTED).
14	5'-0" HIGH STUB OUT FOR Co2 LINE
15	4" MIN. HIGH WHITE LETTERING "RISER ROOM" ON RED BACKGROUND SIGN. MOUNT ON RISER ROOM DOOR
16	RECESSED KNOX BOX AT 5'-0" HIGH TO THE RIGHT OF FIRE RISER ROOM. SEE DETAIL 10/A17.0
17	RECESSED 8' FLUORESCENT LIGHT FIXTURE IN SOFFIT. SEE DETAIL 9/A17.1
18	GUTTER AND DOWNSPOUT. REFER TO DETAIL 8/A17.2
19	TEXTURE EXPOSED FOUNDATION WALL BELOW STUCCO WEEP SCREED AND PAINT TO MATCH WALL.

EXTERIOR PAINT SCHEDULE

NO.	MFR.	MODEL	COLOR #	COLOR NAME	FINISH	REMARKS
EP-1	DUNN EDWARDS	EVERSHIELD	EVSH 60 - SP 514	BONE CHINA	HIGH GLOSS	PRIME W/ D.E. EFF-STOP PREMIUM PRIMER (ESPR00)
ALT. MFR.	SHERWIN WILLIAMS	SUPER PAINT LATEX	B66W00611	IN-N-OUT BONE CHINA	HIGH GLOSS	STUCCO: PRIME W/ LOXON CONCRETE & EXT LATEX PRIMER WHITE - A24W08300. GALV METAL: PRIME W/ GALVITE HS ACRYLIC COATING - B69W20030, OFF WHITE
EP-2	DUNN EDWARDS	EVERSHIELD	EVSH 60 - SP 514	BONE CHINA	HIGH GLOSS	PRIME W/ D.E. EFF-STOP PREMIUM PRIMER (ESPR00)
ALT. MFR.	SHERWIN WILLIAMS	SUPER PAINT LATEX	A84W01151	IN-N-OUT BONE CHINA	HIGH GLOSS	SEE REMARKS FOR EP-1 ALT MFR.
EP-3	DUNN EDWARDS	EVERSHIELD	EVSH 60 - SP 514	BONE CHINA	HIGH GLOSS	PRIME W/ D.E. EFF-STOP PREMIUM PRIMER (ESPR00)
ALT. MFR.	SHERWIN WILLIAMS	SUPER PAINT LATEX	A84W01151	IN-N-OUT BONE CHINA	HIGH GLOSS	SEE REMARKS FOR EP-1 ALT MFR.
EP-4	DUNN EDWARDS	SYN-LUSTRO WATER BASE	W10-221	SAFETY RED (R BASE ONLY)	HIGH GLOSS	PRIME W/ D.E. EFF-STOP PREMIUM PRIMER (ESPR00)
ALT. MFR.	SHERWIN WILLIAMS	PRO INDUSTRIAL	B66T00604	IN-N-OUT RED	HIGH GLOSS	STUCCO: PRIME W/ LOXON CONDITIONER CLEAR A24V00100 (ONLY USED WHEN STUCCO IS PRE-COLORED RED)

IN-N-OUT BURGER

Exterior Elevations

372 Gellet Boulevard
Daly City, CA 94015

DATE: 07-30-2015
SCALE: 1/8" = 1'-0".

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14901 Quorum Drive, Suite 300
Dallas, Texas 75254 972.239.8884

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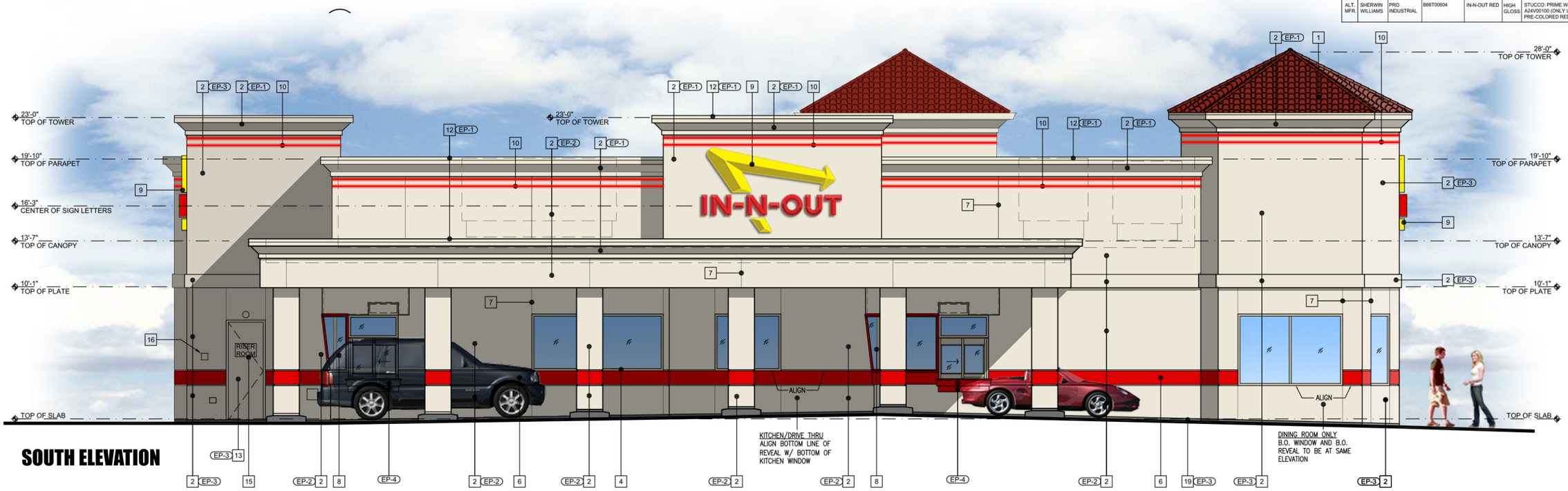
WEST ELEVATION



SOUTH ELEVATION

KEY NOTES

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IN-N-OUT BURGER

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IN-N-OUT AT 372 GELLERT BOULEVARD IN DALY CITY TRAFFIC IMPACT ANALYSIS

City of Daly City, California

January 15, 2016

Prepared for
In-N-Out Burger
13502 Hamburger Lane
Baldwin Park, California 91706

Prepared by
Michael Baker International

Prepared Under the Supervision of:
Tom Huang, TE
949-855-5754

JN: 146875

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Appendix A – Traffic Count Data Sheets ..... A
Appendix B – Existing Conditions Intersection Operations Analysis Worksheets ..... B
Appendix C – Similar In-N-Out Site Survey Data Sheets C
Appendix D – Existing Sizzler Site Survey Data Sheets ..... D
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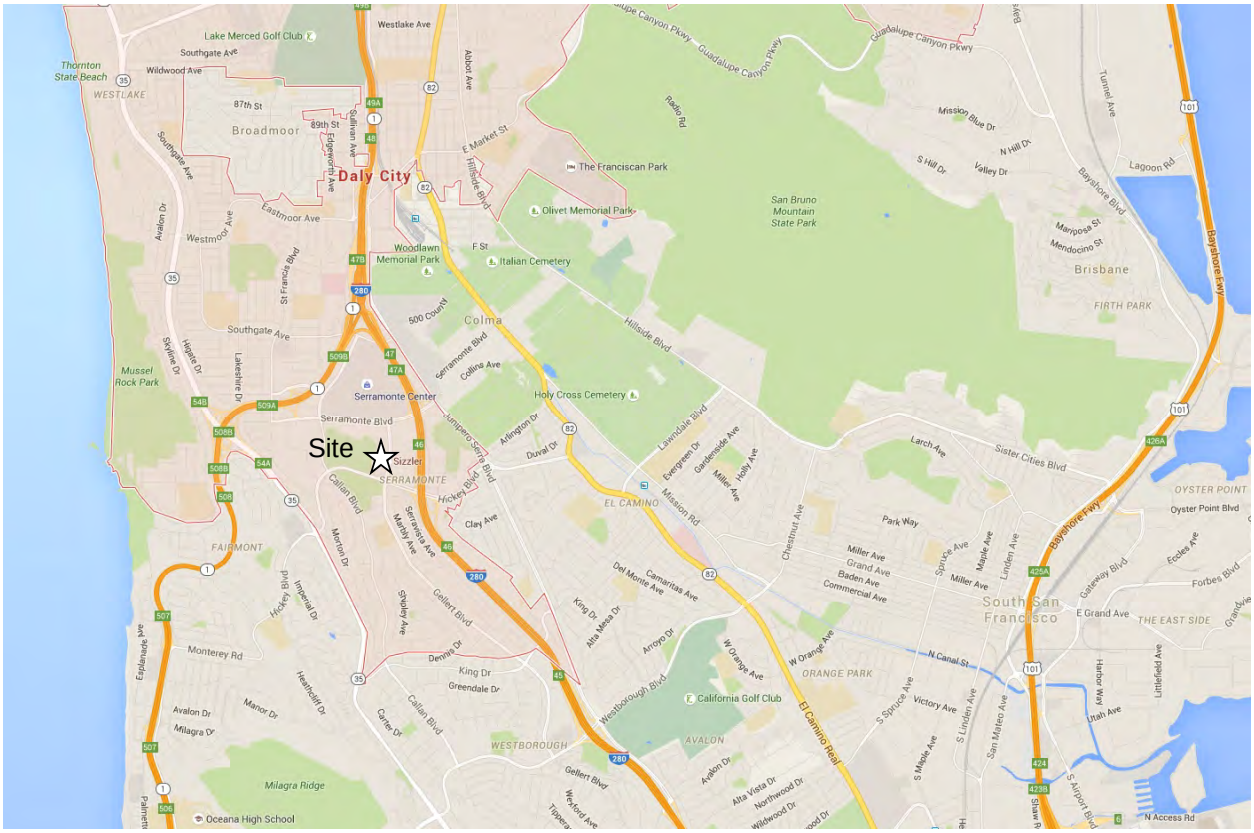
1.0 INTRODUCTION

This study analyzes the forecast traffic conditions and impacts associated with the proposed In-N-Out at 372 Gellert Boulevard in Daly City. The project site is located on the west side of Gellert Boulevard and immediately south of the existing Alto Serramonte shopping center between Serramonte Boulevard and Hickey Boulevard in the City of Daly City. Exhibit 1 shows the regional project site location.

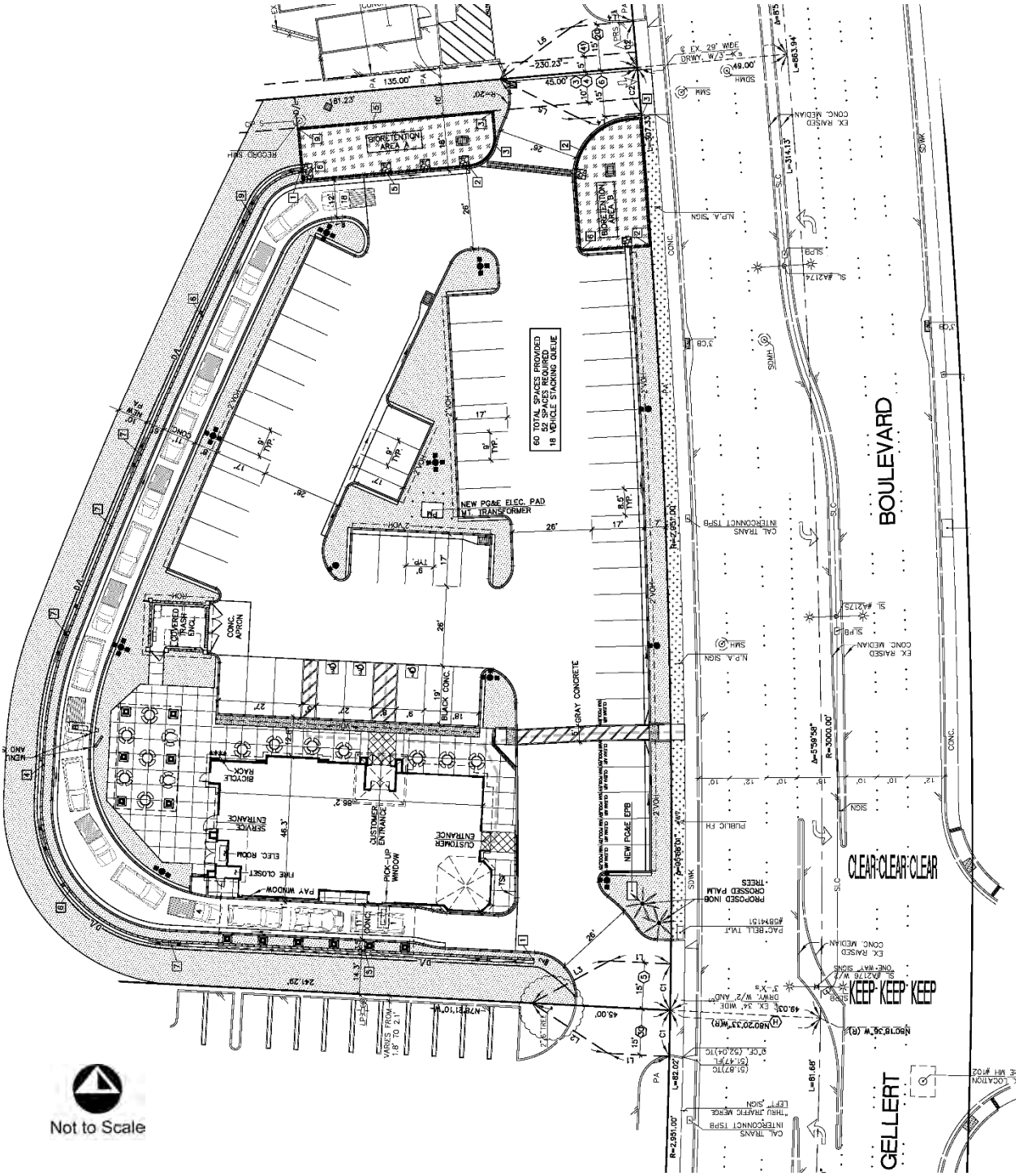
Exhibit 1 – Regional Study Area



1.1 Proposed Project

The proposed project consists of a 3,867 square foot fast-food restaurant (In-N-Out Burger) with a drive through lane. The proposed project will replace an existing and currently operational Sizzler Restaurant. The proposed project is anticipated to be completed and operational in approximately one year in 2016. Exhibit 2 shows the project site plan.

Exhibit 2 – Project Site Plan



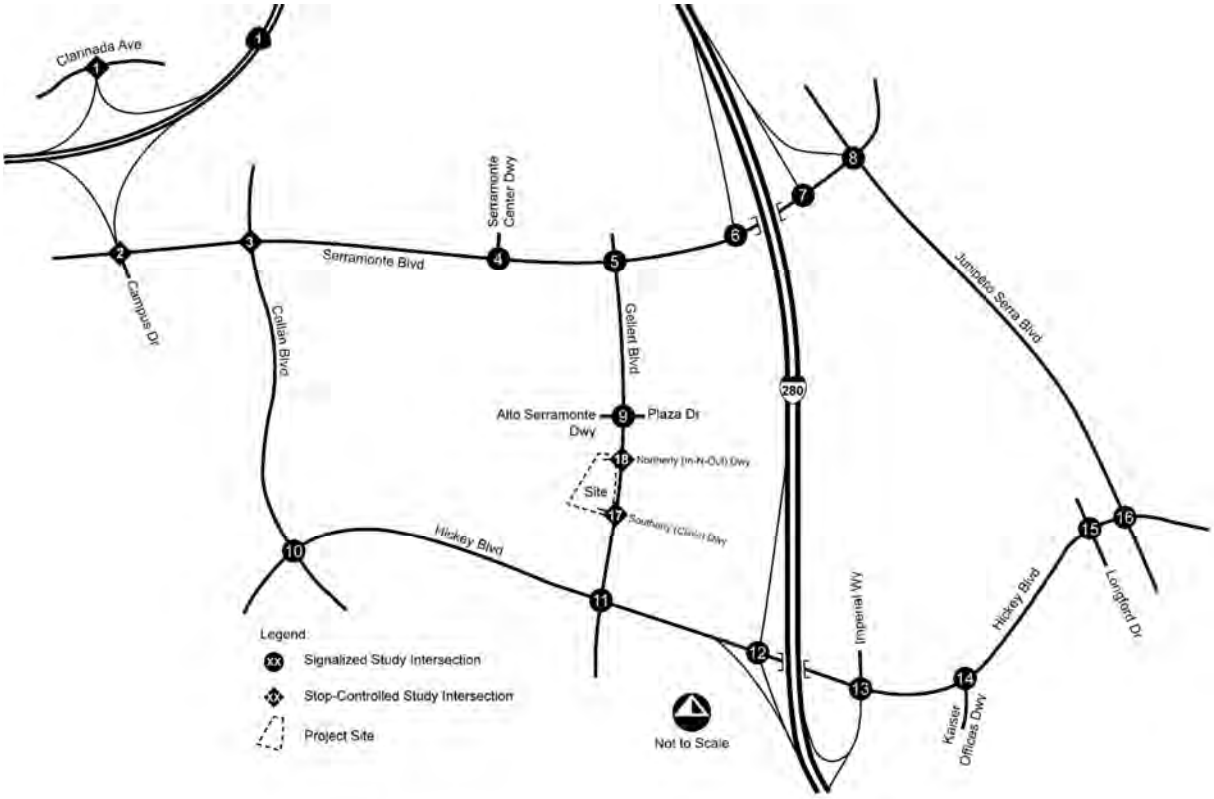
Access to the project site will continue to be provided via two shared access driveways at Gellert Boulevard. The southerly right-in/right-out/left-in only access driveway is shared with a medical office development currently under construction. The northerly right-in/right-out only access driveway is shared with the existing Alto Serramonte shopping center. Slightly further north, the

project site also has access to the signalized full access intersection that serves the Alto Serramonte shopping center and the Gellert Marketplace shopping center.

1.2 Study Area

Exhibit 3 shows the study area that includes 16 intersections located within City of Daly City, Town of Colma and City of South San Francisco.

Exhibit 3 – Project Study Area



In coordination with City staff, the following eighteen (18) intersections have been identified for analysis in this traffic study:

1. SR-1 Southbound Ramps at Clarinada Avenue – City of Daly City
2. SR-1 Northbound Ramps at Serramonte Boulevard – City of Daly City
3. Callan Boulevard at Serramonte Boulevard – City of Daly City
4. Serramonte Center Driveway at Serramonte Boulevard – City of Daly City
5. Gellert Boulevard at Serramonte Boulevard – City of Daly City
6. I-280 Southbound Off-Ramp at Serramonte Boulevard – City of Daly City
7. I-280 Northbound On-Ramp at Serramonte Boulevard – City of Daly City
8. Junipero Serra Boulevard at Serramonte Boulevard/I-280 Northbound On-Ramp – Town of Colma
9. Gellert Boulevard at Plaza Drive – City of Daly City
10. Callan Boulevard at Hickey Boulevard – City of Daly City

11. Gellert Boulevard at Hickey Boulevard – City of Daly City
12. I-280 Southbound Ramps at Hickey Boulevard – City of Daly City
13. I-280 Northbound Ramps/Imperial Way at Hickey Boulevard – City of Daly City
14. Kaiser Medical Offices Driveway at Hickey Boulevard – City of Daly City
15. Longford Drive at Hickey Boulevard – City of South San Francisco
16. Junipero Serra Boulevard at Hickey Boulevard – City of South San Francisco
17. Gellert Boulevard at Clinic (Southerly) Driveway – City of Daly City
18. Gellert Boulevard at In-N-Out (Northerly) Driveway – City of Daly City

1.3 Analysis Scenarios

The study intersections are analyzed for the following study scenarios:

- Existing conditions;
- Existing Plus Project conditions;
- Cumulative Year 2035 Without Project conditions; and
- Cumulative Year 2035 With Project conditions.

1.4 Analysis Time Period

Traffic studies usually analyze the time periods of typical weekday morning (AM) and afternoon (PM) peak hour conditions. Since the proposed fast food restaurant will not serve breakfast, this study does not analyze the AM peak hour conditions. However, the Saturday Mid-Day (MD) conditions is included in this analysis to evaluate the project's impact during the weekends. The study area intersections are analyzed for the following time periods:

- Weekday PM Peak Hour – Peak hour within 4:00 PM and 6:00 PM
- Saturday Mid-Day Peak Hour – Peak hour within 12:00 AM and 2:00 PM

2.0 ANALYSIS METHODOLOGY

This section describes the intersection analysis, performance criteria, thresholds of significance, and traffic volume forecast methodologies utilized in this traffic analysis.

2.1 Intersection Analysis Methodology

Level of service (LOS) is commonly used as a qualitative description of intersection operation and is based on the capacity of the intersection and the volume of traffic using the intersection. The Highway Capacity Manual (HCM) analysis methodology is utilized to determine the operating service levels of the study area intersections.

The 2010 HCM analysis methodology describes the operation of an intersection using a range of LOS from LOS A (free-flow conditions) to LOS F (severely congested conditions), based on the corresponding ranges of stopped delay experienced per vehicle for signalized and unsignalized intersections shown in Table 1. HCM analysis methodology is utilized in this study for the study intersections.

Table 1 – Level of Service and Delay Ranges

Level of Service	Delay (seconds/vehicle)	
	Signalized Intersections	Unsignalized Intersections
A	≤ 10.0	≤ 10.0
B	> 10.0 to ≤ 20.0	> 10.0 to ≤ 15.0
C	> 20.0 to ≤ 35.0	> 15.0 to ≤ 25.0
D	> 35.0 to ≤ 55.0	> 25.0 to ≤ 35.0
E	> 55.0 to ≤ 80.0	> 35.0 to ≤ 50.0
F	> 80.0	> 50.0

Source: *2010 Highway Capacity Manual (HCM)*

Level of service is based on the average stopped delay per vehicle for all movements of signalized intersections and all-way stop-controlled intersections; for one-way or two-way stop-controlled intersections, LOS is based on the worst stop-controlled approach.

2.2 Peak Hour Performance Criteria

The City of Daly City, Town of Colma, and City of South San Francisco have established an intersection operation standard of LOS D or better, with the exception of Junipero Serra Boulevard at Serramonte Boulevard, for which LOS E or better is considered acceptable per Table C-2 of the Town of Colma General Plan Circulation Element.

2.3 Traffic Impact Thresholds of Significance

To determine whether the addition of project-generated trips results in a significant impact at a study intersection, and thus requires mitigation, the following thresholds of significance will be utilized:

- At the intersection of Junipero Serra Boulevard and Serramonte Boulevard, a significant project impact occurs when the addition of project-generated trips causes the peak hour LOS of the study intersection to change from acceptable operation (LOS E or better) to deficient operation (LOS F); or

- At all other study intersections, a significant project impact occurs when the addition of project-generated trips causes the peak hour LOS of the study intersection to change from acceptable operation (LOS D or better) to deficient operation (LOS E or F); or

- At all study intersections, a significant project impact occurs when a study intersection is forecast to operate at a deficient LOS under pre-project conditions and the addition of project-generated trips causes an increase in the overall average intersection delay.

3.0 EXISTING CONDITIONS

This section describes the existing conditions of the study area including the existing roadway description, intersection geometry and traffic volumes.

3.1 Roadway Description

Exhibit 4 illustrates the existing intersection controls and lane geometry for the study area. The characteristics of the roadway system in the vicinity of the project site are described below:

Gellert Boulevard is a four-to six-lane divided roadway trending in a north-south direction that provides primary access to the project site located just south of Alto Serramonte Plaza. The posted speed limit is 30 miles per hour on Gellert Boulevard within the project vicinity; on-street parking is permitted south of Serravista Avenue.

Callan Boulevard is a four-lane divided roadway with a raised center median north of Serramonte Boulevard; a two-lane undivided roadway between Serramonte Boulevard and Hickey Boulevard; and a two-lane roadway with a two-way left-turn lane south of Hickey Boulevard trending in a north-south direction. The posted speed limit is 35 miles per hour on Callan Boulevard within the project vicinity; on-street parking is generally permitted.

Imperial Way is a two-lane private roadway trending in a north-south direction that provides access to residential and commercial developments. There is no posted speed limit on Imperial Way within the project vicinity; on-street parking is prohibited.

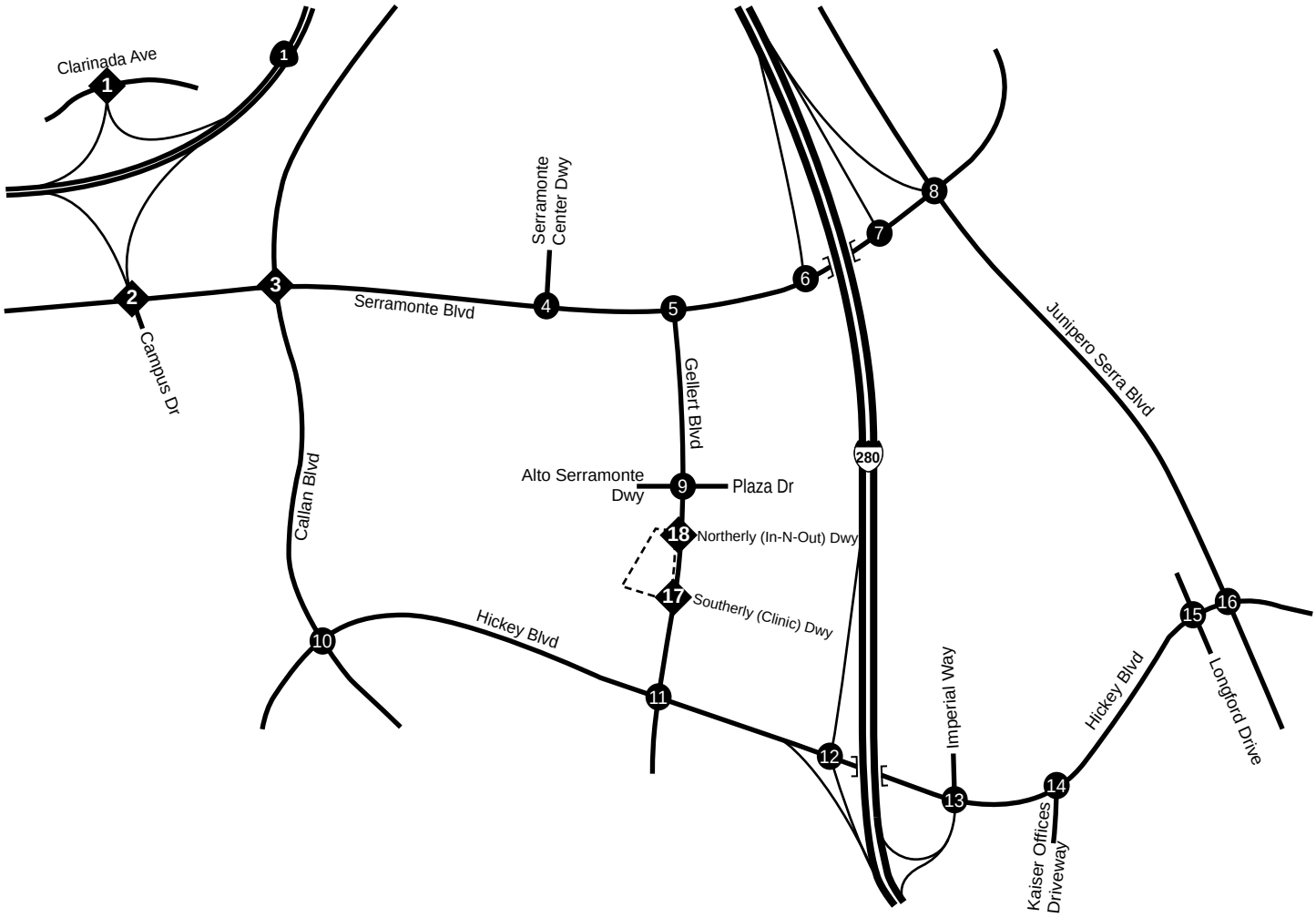
Longford Drive is a two-lane undivided roadway trending in a north-south direction. Vehicular through movement across Hickey Boulevard is restricted by a raised center median. The posted speed limit is 25 miles per hour on Longford Drive within the project vicinity; on-street parking is permitted.

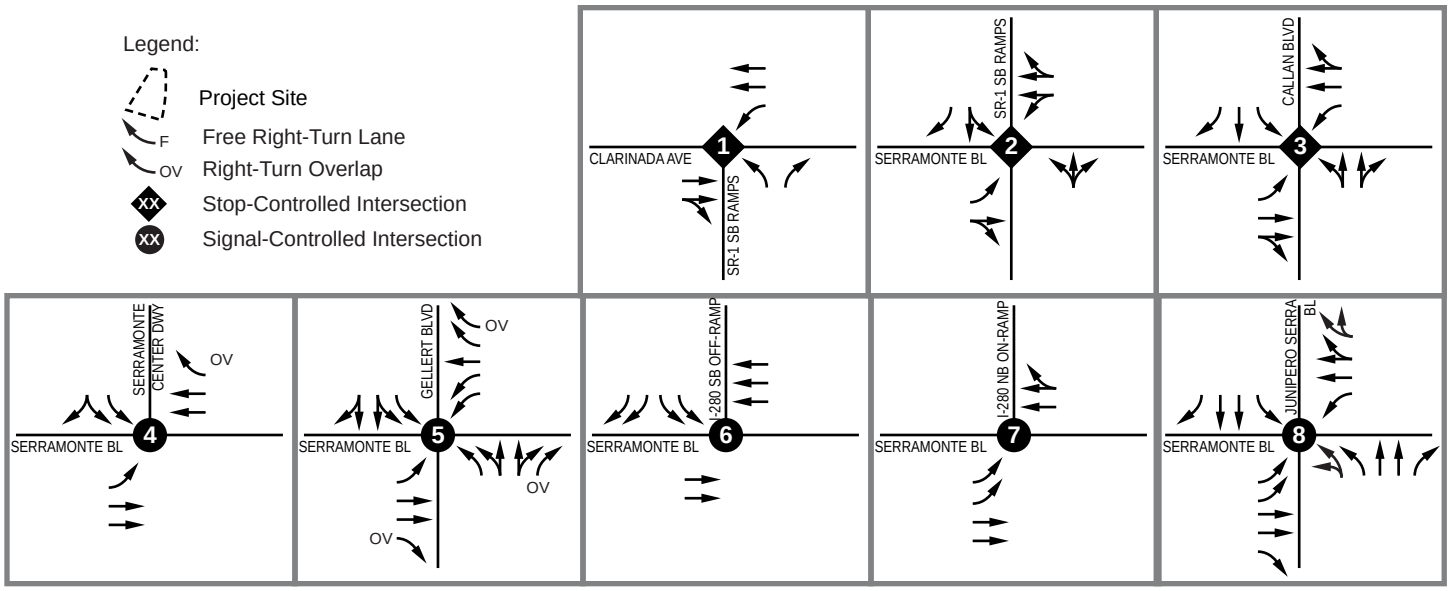
Junipero Serra Boulevard is a four-lane divided roadway with a raised center median trending in a north-south direction. The posted speed limit varies between 40 and 50 miles per hour on Junipero Serra Boulevard within the project vicinity; on-street parking is prohibited.

Clarinada Avenue is a two-lane to four-lane roadway with a raised center median trending in an east-west direction east of the SR-1 Ramps and a four-way divided roadway with a raised median. There is no posted speed limit on Clarinada Avenue within the project vicinity; on-street parking is permitted.

Serramonte Boulevard is a four-lane divided roadway with a raised center median trending in an east-west direction west of Serramonte Center Access and a six-way divided roadway with a raised center median east of Serramonte Center Access. The posted speed limit is 30 miles per hour on Serramonte Boulevard within the project vicinity; on-street parking is permitted west of Callan Boulevard.

Hickey Boulevard is a four-lane to five-lane divided roadway with a raised center median trending in an east-west direction. The posted speed limit is 35 miles per hour on Hickey Boulevard within the project vicinity; on-street parking is permitted on the north side, west of Gellert Boulevard.





Not to Scale

Michael Baker INTERNATIONAL

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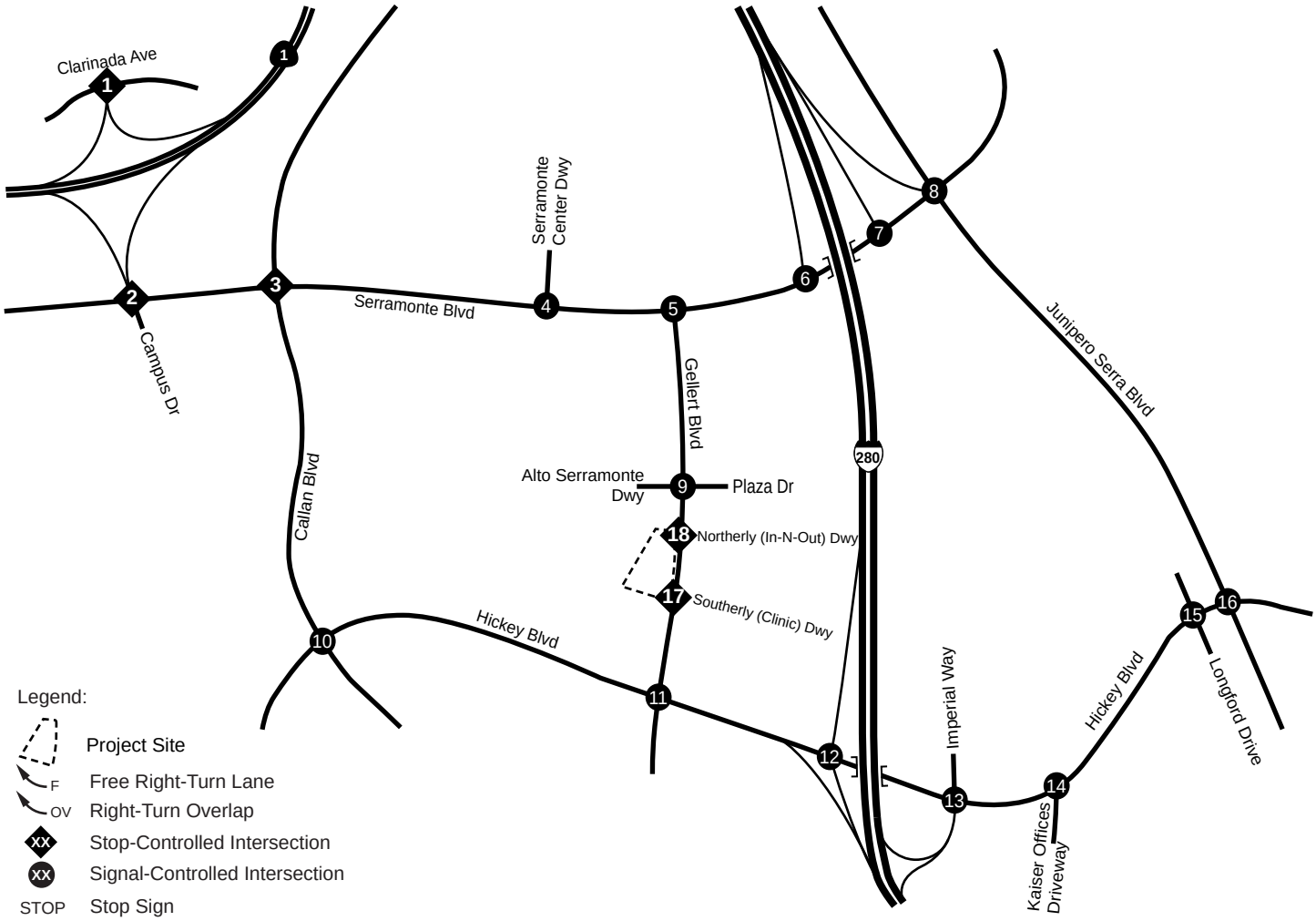
Exhibit 4 (1 of 2)
Existing Intersection Geometry

In-N-Out at 372 Gellert Boulevard in Daly City
Traffic Impact Analysis



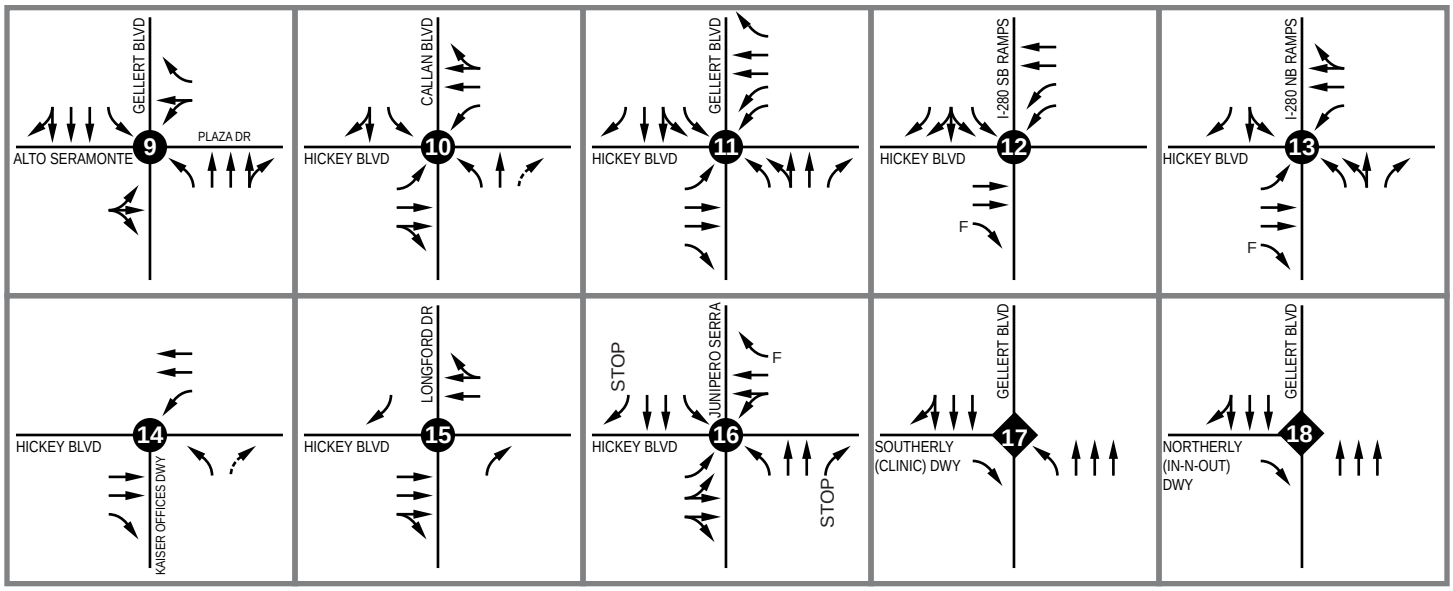


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Exhibit 4 (2 of 2)
Existing Intersection Geometry

In-N-Out at 372 Gellert Boulevard in Daly City
Traffic Impact Analysis

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3.2 Existing Conditions Traffic Volumes

To determine the existing operation of the study intersections, weekday afternoon (PM) and Saturday Mid-Day (MD) peak hour intersection movement counts were collected in June of 2015. Weekday afternoon peak period intersection counts were collected from 4:00 PM to 6:00 PM, and Saturday Mid-Day peak period intersection counts were collected from 12:00 AM to 2:00 PM. The counts used in this analysis were taken from the highest hour within the peak period counted. Exhibit 5 shows existing conditions weekday PM and Saturday MD peak hour volumes at the study intersections. Traffic count data sheets are included in Appendix A of this report.

A 24-hour roadway segment count was also collected on Gellert Boulevard adjacent to the project site (see Appendix A). There are approximately 21,680 vehicles per day on Gellert Boulevard during the weekdays and 22,847 vehicles per day during the weekends.

3.3 Existing Conditions Peak Hour Intersection Level of Service

Table 2 summarizes the intersection LOS analysis results for existing weekday PM and Saturday Mid-Day peak hour conditions. Appendix B includes the existing conditions intersection operations analysis worksheets. As shown in Table 2, all study area intersections are operating at LOS D or better.

SR-1 NB Ramps & Campus Dr / Serramonte Blvd

79/77 ↙	19/1 ↓	175/271 ↘
SR-1 NB Ramps		
↖ 143/178	← 165/145	↙ 78/7

Serramonte Blvd **2** Serramonte Blvd

221/235 ↗	153/155 →	41/3 ↘
Campus Dr		
↖ 13/0	↑ 37/6	↗ 57/10

Callan Blvd / Serramonte Blvd

104/68 ↙	243/194 ↓	124/121 ↘
Callan Blvd		
↖ 222/180	← 205/142	↙ 151/128

Serramonte Blvd **3** Serramonte Blvd

56/81 ↗	247/292 →	79/54 ↘
Callan Blvd		
↖ 91/98	↑ 231/186	↗ 121/136

Serramonte Center Dwy / Serramonte Blvd

221/205 ↙	0/0 ↓	248/295 ↘
Serramonte Center Dwy		
↖ 317/375	← 345/253	↙ 53/69

Serramonte Blvd **4** Serramonte Blvd

195/196 ↗	284/336 →	0/0 ↘
↖ 0/0	↑ 0/0	↗ 0/0

Gellert Blvd / Serramonte Blvd

55/74 ↙	291/343 ↓	392/451 ↘
Gellert Blvd		
↖ 467/634	← 311/244	↙ 534/545

Serramonte Blvd **5** Serramonte Blvd

45/51 ↗	299/335 →	221/293 ↘
Gellert Blvd		
↖ 340/333	↑ 249/319	↗ 620/719

SR-1 SB Ramps / Clarinada Ave

0/0 ↙	0/0 ↓	0/0 ↘
↖ 0/0	← 98/78	↙ 226/197

Clarinada Ave **1** Clarinada Ave

6/2 ↗	47/52 →	82/70 ↘
SR-1 SB Ramps		
↖ 458/266	↑ 0/0	↗ 256/201

Callan Blvd / Hickey Blvd

181/158 ↙	229/147 ↓	52/71 ↘
Callan Blvd		
↖ 88/83	← 517/402	↙ 67/61

Hickey Blvd **10** Hickey Blvd

128/118 ↗	340/403 →	86/48 ↘
Callan Blvd		
↖ 70/52	↑ 227/191	↗ 39/47

Gellert Blvd / Alto Serramonte Dwy & Plaza Dr

13/22 ↙	574/601 ↓	172/198 ↘
Gellert Blvd		
↖ 187/268	← 11/12	↙ 267/251

Alto Serramonte Dwy **9** Plaza Dr

57/73 ↗	21/15 →	49/63 ↘
Gellert Blvd		
↖ 162/156	↑ 646/719	↗ 118/187

Gellert Blvd / In-N-Out (Northerly) Dwy

20/11 ↙	870/904 ↓	0/0 ↘
Gellert Blvd		
↖ 0/0	← 0/0	↙ 0/0

In-N-Out (Northerly) Dwy **18**

0/0 ↗	0/0 →	17/14 ↘
Gellert Blvd		
↖ 0/0	↑ 926/1062	↗ 0/0

Gellert Blvd / Clinic (Southerly) Dwy

0/0 ↙	887/918 ↓	0/0 ↘
Gellert Blvd		
↖ 0/0	← 0/0	↙ 0/0

Clinic (Southerly) Dwy **17**

0/0 ↗	0/0 →	0/0 ↘
Gellert Blvd		
↖ 0/0	↑ 926/1062	↗ 0/0

Gellert Blvd / Hickey Blvd

181/167 ↙	299/284 ↓	419/463 ↘
Gellert Blvd		
↖ 585/616	← 430/318	↙ 461/339

Hickey Blvd **11** Hickey Blvd

126/167 ↗	309/341 →	50/49 ↘
Gellert Blvd		
↖ 84/81	↑ 237/312	↗ 288/343

XX/XX = Weekday PM / Saturday MD Peak Hour Intersection Volumes

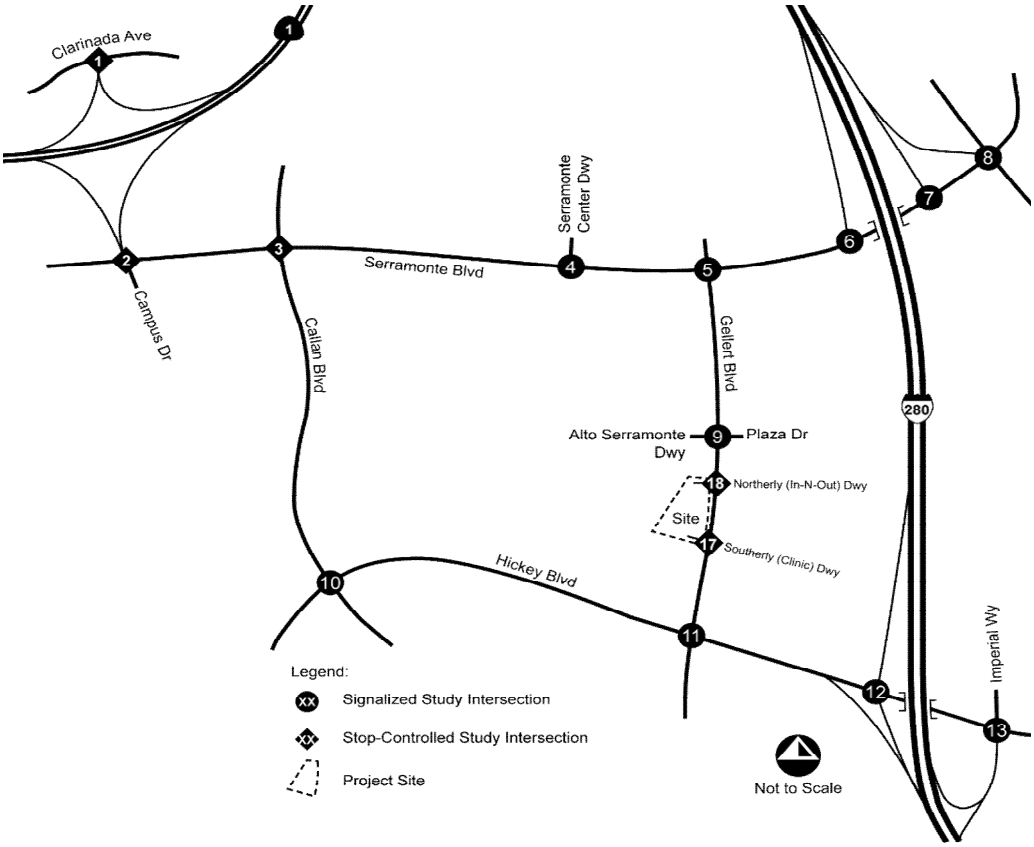
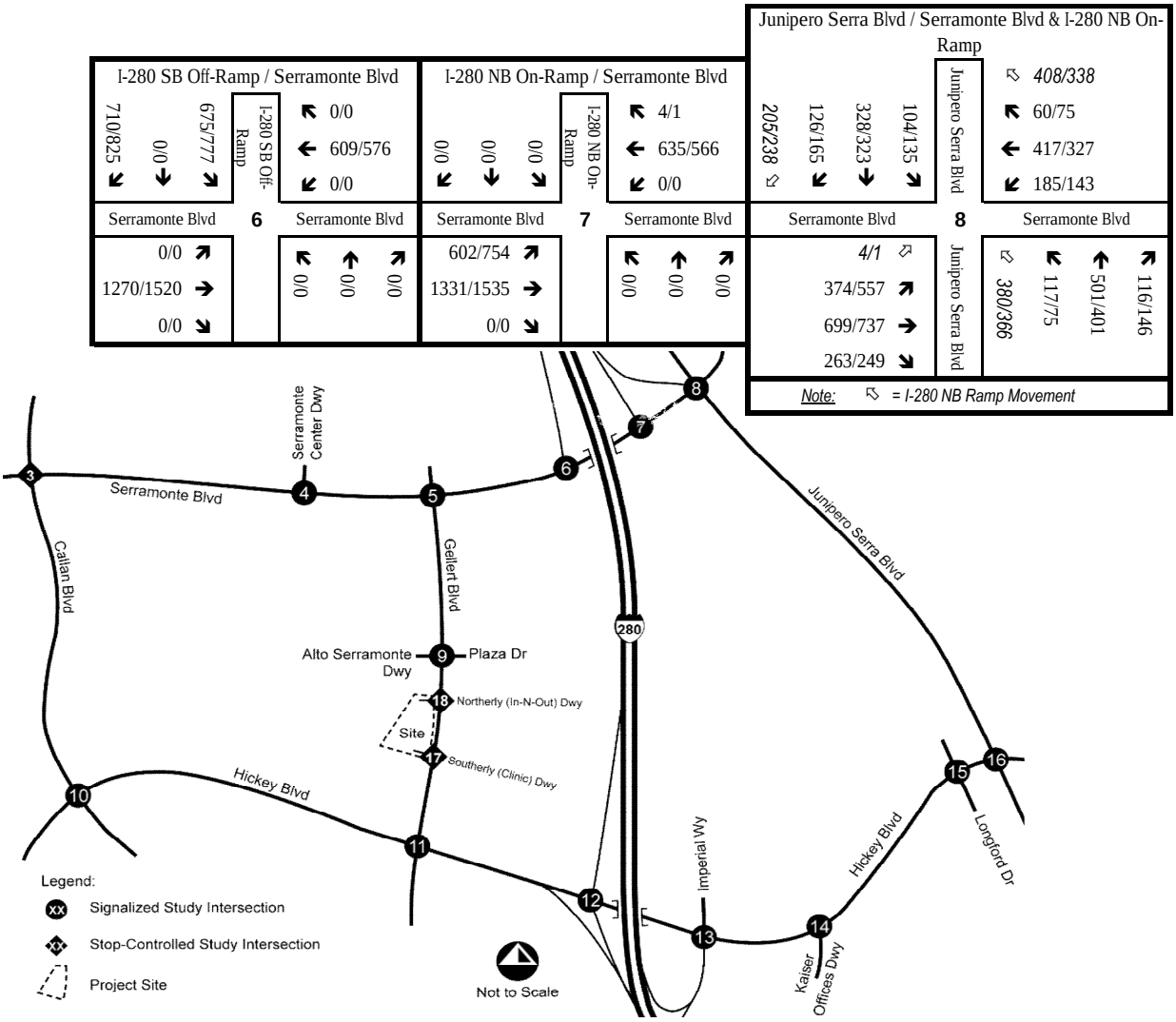


Exhibit 5 (1 of 2)

Existing Intersection Volumes



XX/XX = Weekday PM / Saturday MD Peak Hour Intersection Volumes

Exhibit 5 (2 of 2)

Existing Intersection Volumes

Table 2

Existing Conditions Intersection Analysis Summary

Intersection			Lane Geometry (L - LT - T - TR - R)*				Existing Conditions			
							Weekday PM		Saturday MD	
No.	Name	Type[1]	NB	SB	EB	WB	HCM[2]	LOS	HCM[2]	LOS
1	SR-1 SB Ramps / Clarinada Ave	AWS	1-0-0-0-1	X	0-0-1-1-0	1-0-2-0-0	25.1	D	12.8	B
2	SR-1 NB Ramps / Serramonte Blvd	AWS	0-0-1!-0-0	0-1-0-0-1	1-0-0-1-0	0-1-0-1-0	16.1	C	14.0	B
3	Callan Blvd / Serramonte Blvd	AWS	0-1-0-1-0	1-0-1-0-1	1-0-1-1-0	1-0-1-1-0	30.3	D	21.1	C
4	Serramonte Ctr Dwy / Serramonte Blvd	TS	X	1-0-1!-0-0	1-0-2-0-0	0-0-2-0-1>	12.8	B	12.0	B
5	Gellert Blvd / Serramonte Blvd	TS	1-1-0-1-1>	1-1-0-1-0	1-0-2-0-1>	2-0-1-0-2>	34.3	C	37.7	D
6	I-280 SB Off-Ramp / Serramonte Blvd	TS	X	2-0-0-0-2	0-0-2-0-0	0-0-3-0-0	17.9	B	22.2	C
7	I-280 NB On-Ramp / Serramonte Blvd	TS	X	0	2-0-2-0-0	0-0-1-1-0	7.8	A	7.3	A
8	Junipero Serra Blvd- I-280 NB On-Ramp / Serramonte Blvd	TS	2-0-2-0-1	1-0-2-0-1	2-0-2-0-1	1-0-1-2-0	37.8	D	38.7	D
9	Gellert Blvd / Alto Serramonte Dwy-Plaza Dr	TS	1-0-2-1-0	1-0-2-1-0	0-0-1!-0-0	0-1-0-0-1	19.8	B	19.4	B
10	Callan Blvd / Hickey Blvd	TS	1-0-1-0-1	1-0-0-1-0	1-0-1-1-0	1-0-1-1-0	29.3	C	25.4	C
11	Gellert Blvd / Hickey Blvd	TS	1-1-1-0-1	1-1-1-0-1	1-0-2-0-1	2-0-2-0-1	32.4	C	34.8	C
12	I-280 SB Ramps / Hickey Blvd	TS	0	1-0-1!-0-1	0-0-2-0-1f	2-0-2-0-0	16.7	B	17.2	B
13	I-280 NB Ramps / Hickey Blvd	TS	1-1-0-0-1	0-1-0-0-1	1-0-2-0-1f	1-0-1-1-0	33.6	C	31.8	C
14	Kaiser Offices Dwy / Hickey Blvd	TS	1-0-0-0-1	X	0-0-2-0-1	1-0-2-0-0	8.8	A	1.8	A
15	Longford Dr / Hickey Blvd	TS	0-0-0-0-1	0-0-0-0-1	0-0-2-1-0	0-0-1-1-0	3.5	A	3.3	A
16	Junipero Serra Blvd / Hickey Blvd	TS	1-0-2-0-1s	1-0-2-0-1s	1-1-0-1-0	0-1-1-0-1f	41.6	D	31.0	C
17	Gellert Blvd / Southerly (Clinic) Dwy	CSS: eb	1-0-3-0-0	0-0-3-0-0	0-0-0-0-1	X	n/a	n/a	n/a	n/a
18	Gellert Blvd / Northerly (In-N-Out) Dwy	CSS: eb	0-0-3-0-0	0-0-2-1-0	0-0-0-0-1	X	13.3	B	13.4	B

Note

* L - LT- T- TR - R = Left Turn - Shared Left/Thru -Right - Thru - Shared Thru-Right - Right Turn; 1! = Left-Thru-Right lane (all-way lane); X = No road; 0 = No approach lane; f = Free Right Turn; > = Right-Turn Overlap Phasing; s = Stop

[1] Intersection Type: CSS = Cross-Street Stop; eb = Eastbound Stop; TS = Traffic Signal; AWS = All-Way Stop

[2] Highway Capacity Manual (HCM) Analysis Method, Average Delay (seconds)

4.0 PROJECT TRAFFIC

This section presents the methodology behind the project traffic generation, distribution and assignment. The proposed project consists of a 3,867 square foot fast-food restaurant (In-N-Out Burger) with a drive through lane. The proposed project will replace an existing and currently operational Sizzler Restaurant. Access to the project site will continue to be provided via two shared access driveways at Gellert Boulevard. The southerly right-in/right-out/left-in only access driveway is shared with a medical office development currently under construction. The northerly right-in/right-out only access driveway is shared with the existing Alto Serramonte shopping center. Slightly further north, the project site also has access to the signalized full access that serves the Alto Serramonte shopping center and the Gellert Marketplace shopping center.

4.1 New Project Site Traffic Generation

To determine new project site trip generation of the proposed In-N-Out Burger Restaurant, trip generation sample surveys were conducted in June 2015 at the following three existing In-N-Out Restaurant locations that are similar in size and in nearby neighboring cities:

- 11 Rollins Road, Millbrae, CA 94030;
- 949 Veterans Boulevard, Redwood City, CA 94063; and
- 445 Industrial Road, San Carlos, CA 94070

The trip generation sample surveys were collected over a 24-hour period on a typical weekday and a typical Saturday. The peak hour trip generation data used in this analysis are taken from the highest hour within the weekday PM peak period (4:00 PM to 6:00 PM) and the Saturday Mid-Day peak period (12:00 PM to 2:00 PM). In-N-Out Burger site traffic survey count data sheets are included in Appendix C, and Table 3 shows the traffic survey count results and trip rate calculations.

Table 3 – In-N-Out Burger Site Traffic Survey and Trip Rate Calculation

In-N-Out Site Survey and Trip Rate Calculation								
Project			Weekday PM Peak			Saturday Mid-Day Peak		
No.	Site	Size[1]	In	Out	Total	In	Out	Total
1	Millbrae In-N-Out[2]	3.750 TSF	128	107	**235**	215	206	**421**
2	Redwood City In-N-Out[2]	3.750 TSF	66	75	**141**	152	149	**301**
3	San Carlos In-N-Out	3.750 TSF	93	80	**173**	151	143	**294**
Average Survey Trips		3.750 TSF	96	87	**183**	173	166	**339**
Average Trip Rates[3]		*1.000 TSF*	*26*	*23*	***49***	*46*	*44*	***90***
4	Daly City In-N-Out	3.867 TSF	101	89	**190**	178	170	**348**

Note Source: Observed data; see Appendix C

1 TSF = Thousand Square Feet

2 The Millbrae and Redwood City locations are not fully isolated; therefore, trip counts at the site access points likely included some trips associated with adjacent land uses, resulting in slightly overstated trip generation counts and a conservative analysis.

3 Average trip rates per thousand square feet calculated based on the average trips of the 3 survey locations.

4.2 Current Site Traffic Survey

To determine the number of trips currently generated by the current land use (Sizzler Restaurant), traffic counts were collected at the existing site driveways in June 2015 during typical weekday PM and typical Saturday Mid-Day peak periods. Table 4 shows the existing project site traffic survey results, and current site traffic count data sheets are included in Appendix D.

Table 4 – Current Site Traffic Survey Summary

Survey Location	Weekday PM Peak Hour Trips			Saturday Mid-Day Peak Hour Trips		
	In	Out	Total	In	Out	Total
Current Site Traffic (Sizzler Restaurant)	25	31	56	31	34	65

Source: Observed data; see Appendix D.

4.3 Pass-By Trip Reduction Adjustment

As documented in the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (9th Edition, 2012), a pass-by trip reduction adjustment is applicable to fast-food restaurant land uses located along busy arterial highways attracting vehicle trips already on the roadway; this is particularly the case when the roadway is experiencing peak operating conditions. For example, during the weekday PM peak hour, a motorist already traveling along Gellert Boulevard between work and home or other destinations may stop and eat at the proposed restaurant before continuing to his intended destination. A pass-by discount under this example would reduce or eliminate both the inbound trip and the outbound trip from the surrounding roadway circulation system since the vehicle was already traveling on the roadway. Without the pass-by trip discount, two trips would be generated: an inbound trip to the project site, and an outbound trip from the project site. Table 5 summarizes the pass-by trip reductions applicable to the proposed In-N-Out Burger restaurant which are conservatively lower than the pass-by trip reductions identified in the ITE Trip Generation Manual for typical fast-food restaurant land uses.

Table 5 – Pass-By Trip Reduction

Land Use	Pass-By Trip Reduction Percentage	
	Weekday PM Peak Hour	Saturday Mid-Day Peak Hour
Fast-Food Restaurant with Drive-Through	25%	10%

Note: Weekday PM peak hour pass-by trip reduction percentage shown is conservatively lower than the average pass-by percentage of 50-percent identified in ITE *Trip Generation Manual (9th Edition, 2012)*. Although the ITE *Trip Generation Manual* does not provide pass-by trip reduction for Saturday mid-day peak hour conditions, it is reasonable to assume that some percentage of the forecast Saturday mid-day peak hour trip generation will attract trips already on the roadway, especially from trips associated with the surrounding commercial retail land uses which are particularly active land uses on the weekend.

A more conservative assumption (lower pass-by trip percentage) is a made for Saturday mid-day peak hour conditions in comparison to weekday PM peak hour conditions because there tends to

be less commuter traffic on the road during the weekends that would be making detours to dine at the restaurant on their way to other destinations.

4.4 New Project Trip

Table 6 summarizes the net project traffic generation based on the observed In-N-Out Burger restaurant sites, and current site traffic surveys and applicable fast-food restaurant pass-by trip reductions shown in Tables 3 through Table 5.

Table 6 – Net Project Traffic Generation

Land Use	Weekday PM Peak			Saturday Mid-Day Peak		
	In	Out	Total	In	Out	Total
Proposed In-N-Out[1]	101	89	**190**	178	170	**348**
Current Site Traffic[2]	-25	-31	**-56**	-31	-34	**-65**
Subtotal Trips	76	58	**134**	147	136	**283**
Pass-By Trip Reduction[3]	-19	-15	**-34**	-15	-14	**-29**
Net Trips	57	43	**100**	132	122	**254**

Note

[1] Based on average In-N-Out trip generation show in Table 3.

[2] Based on existing project site traffic survey shown in Table 4.

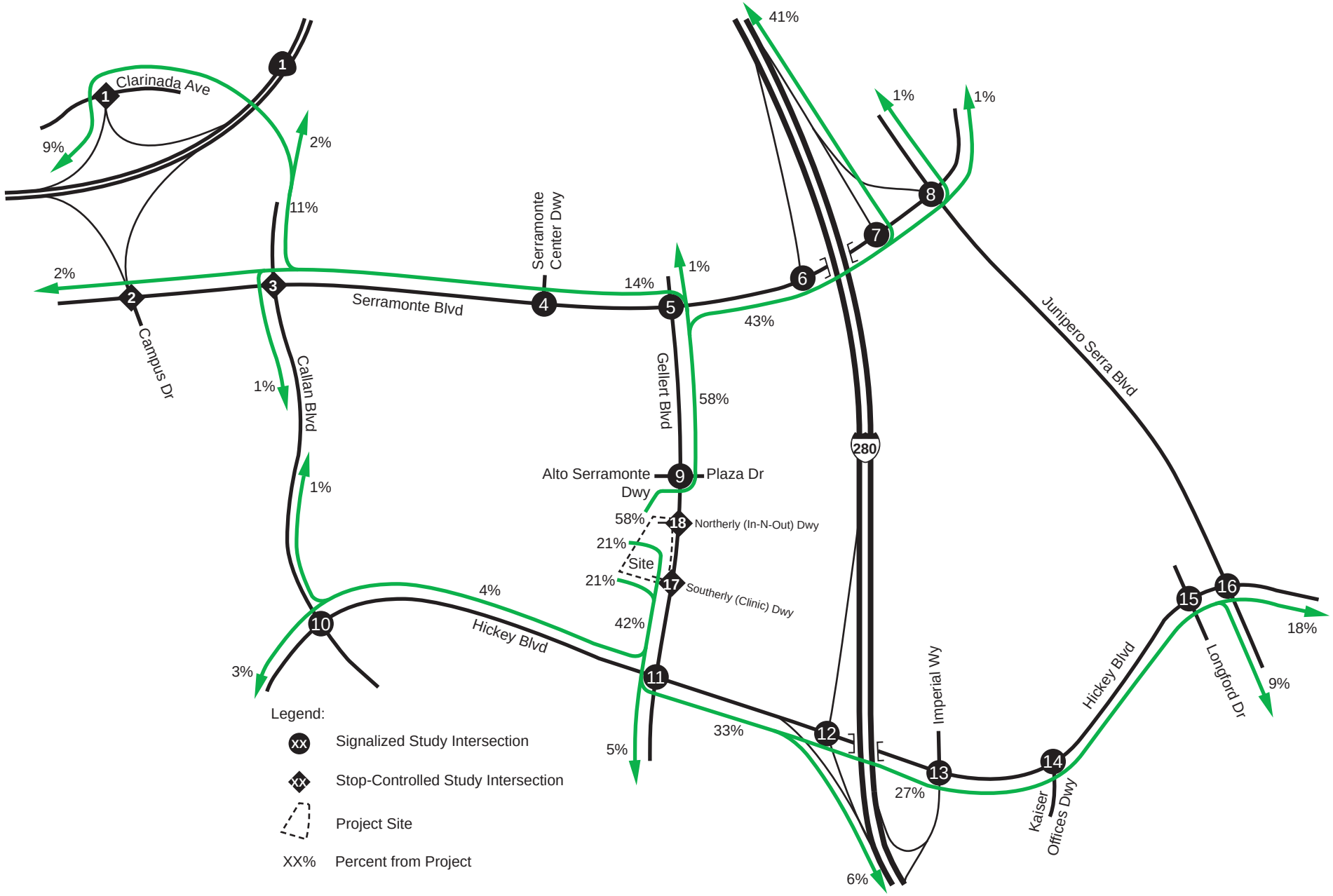
[3] Based on pass-by trip reduction shown in Table 5.

As shown in Table 6, the proposed project is forecast to generate approximately 100 net weekday PM peak hour trips and 254 net Saturday Mid-Day peak hour trips.

It should be noted that the forecast project trip generation is considered conservative since it does not account for the trip reducing potential of transit services in the project vicinity.

4.5 Project Trip Distribution

The forecast trip distribution of the proposed project is estimated based on the Daly City Travel Demand Model select zone analysis for the project traffic analysis zone. Exhibits 6 and 7 show the 2015 project trip distribution patterns for the outbound and inbound directions. Exhibits 8 and 9 show the cumulative 2035 project trip distribution patterns for the outbound and inbound directions. The distribution allocation at the project driveways are estimated based on reasonable selection of the ingress and egress points with respect to their origins or destinations.



Not to Scale

Exhibit 6
Project 2015 Outbound Trip Distribution

Michael Baker INTERNATIONAL

H:\pdata\146875\Exhibits

In-N-Out at 372 Gellert Boulevard in Daly City
Traffic Impact Analysis

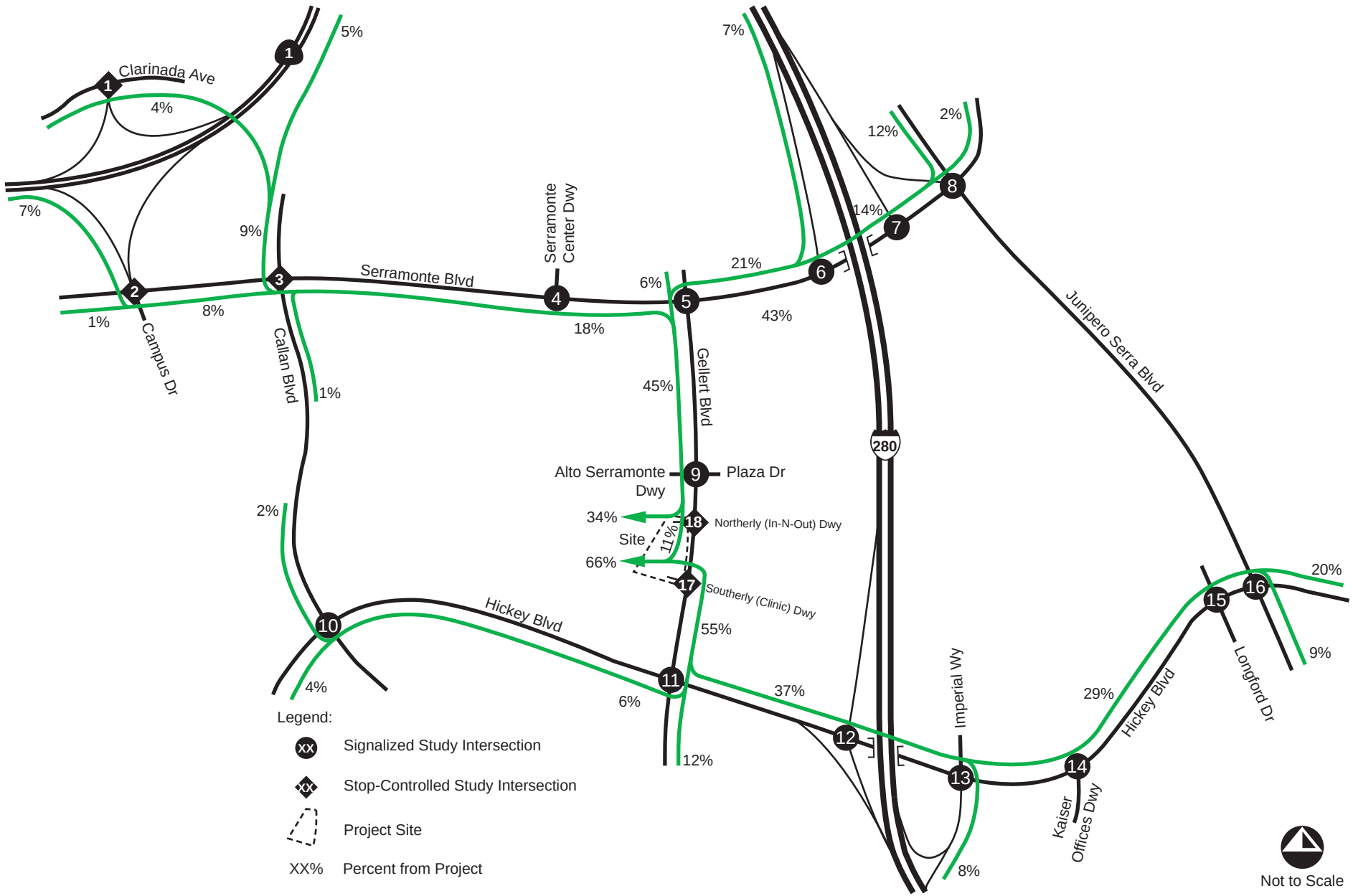


Exhibit 7
Project 2015 Inbound Trip Distribution

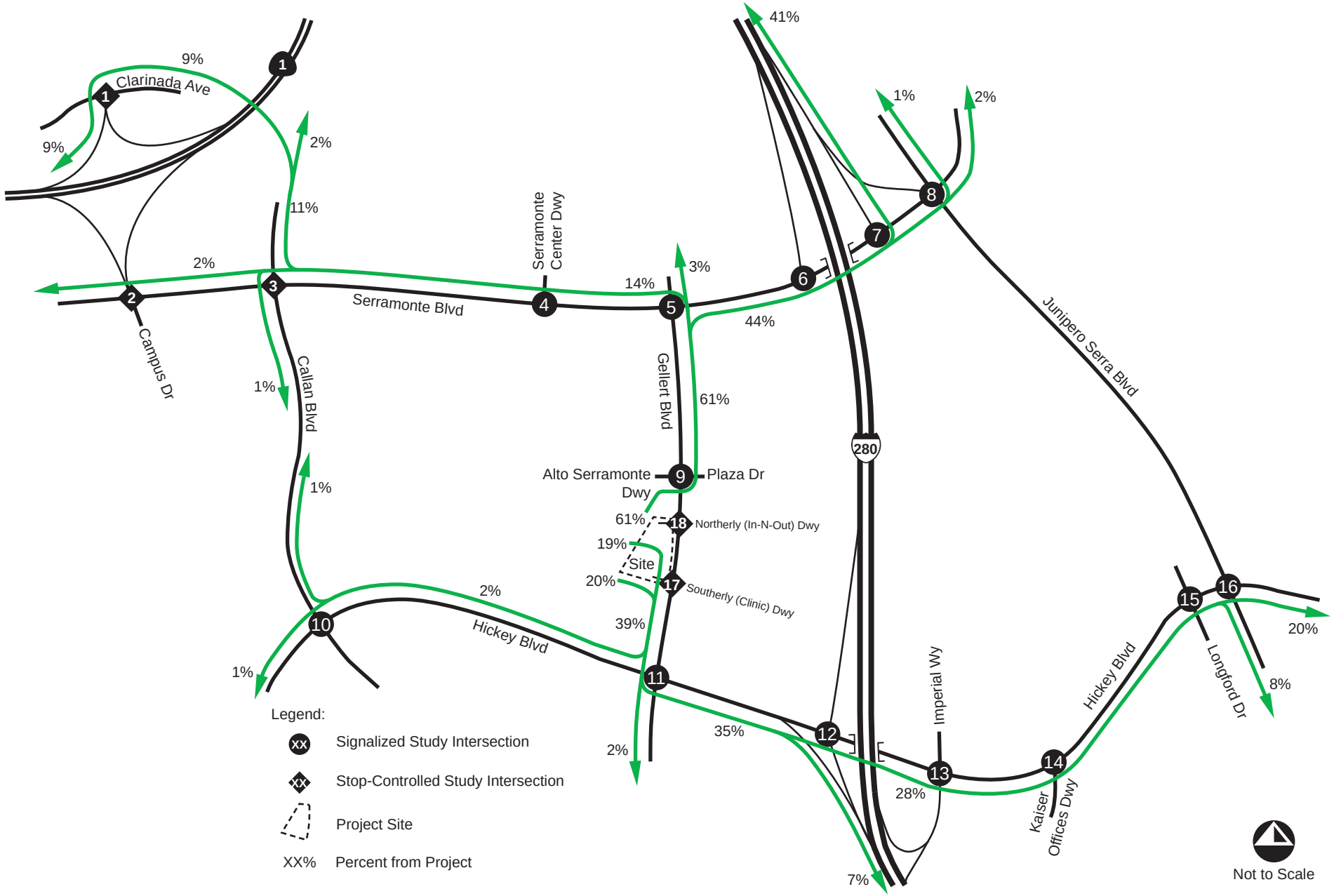


Exhibit 8
Project 2035 Outbound Trip Distribution

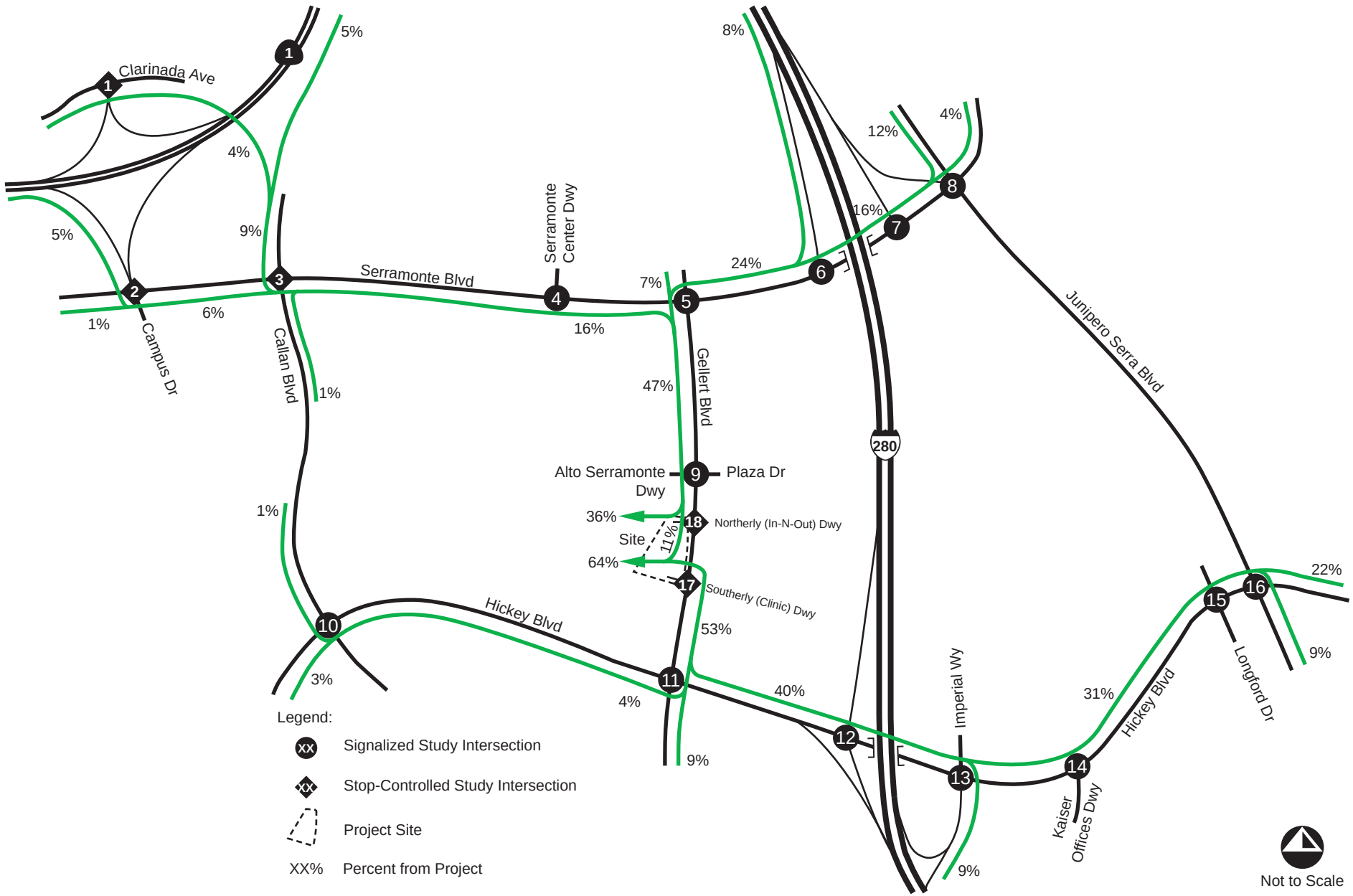


Exhibit 9
Project 2035 Inbound Trip Distribution

4.6 Project Traffic Assignment

Exhibit 10 shows the corresponding assignment of the project-only 2015 weekday PM and Saturday Mid-day peak hour intersection traffic volumes assuming the 2015 trip distribution patterns shown in Exhibits 6 and 7.

Exhibit 11 shows the corresponding assignment of the project-only 2035 weekday PM and Saturday Mid-day peak hour intersection traffic volumes assuming the 2035 trip distribution patterns shown in Exhibits 8 and 9.

It should be noted that the traffic volumes at the project driveways include the net project trips, pass-by trips and current site trips.

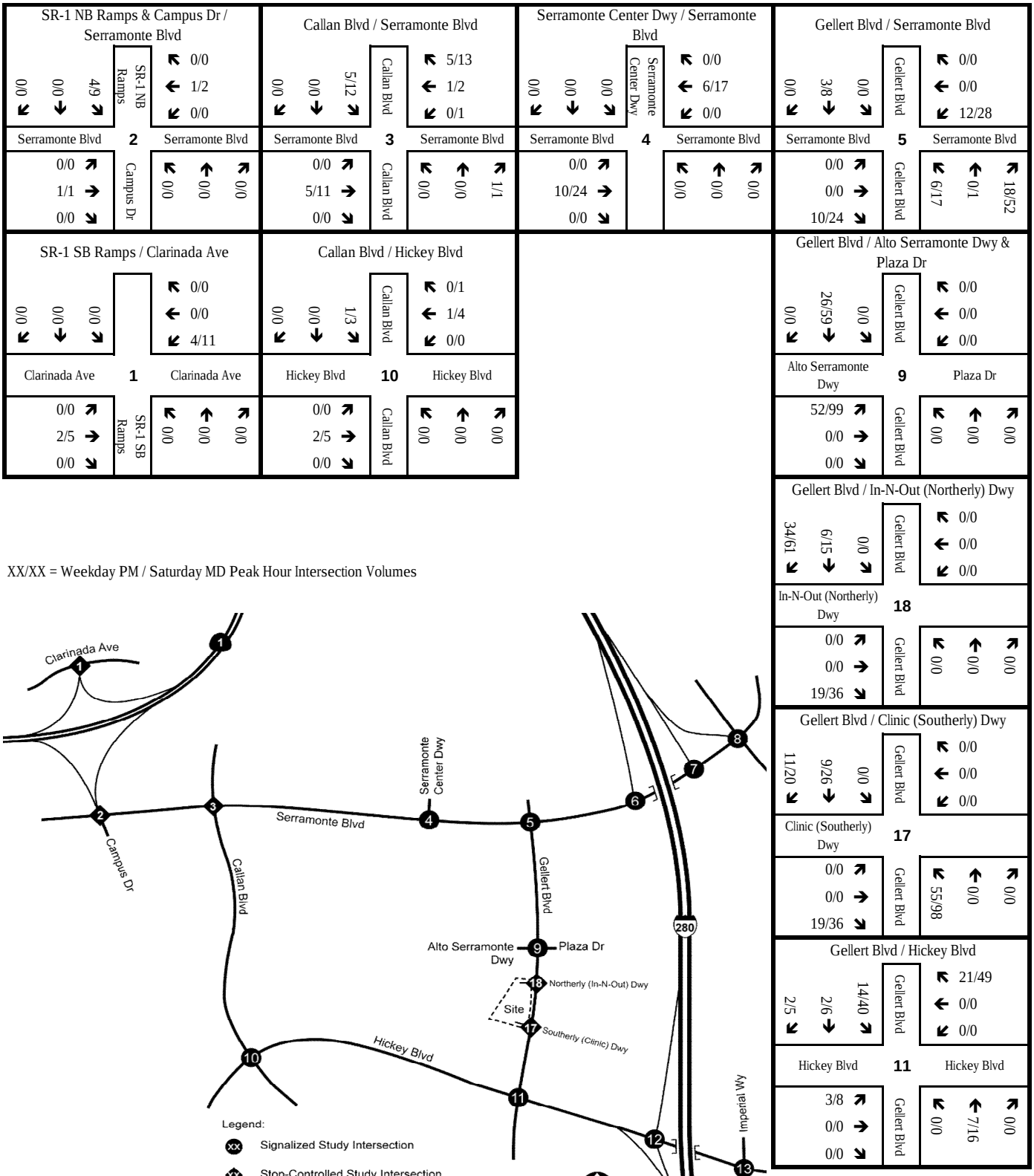


Exhibit 10 (1 of 2)

Project-Only 2015 Intersection Volumes

I-280 SB Off-Ramp / Serramonte Blvd

	I-280 SB Off-Ramp	
4/9 ↙		↖ 0/0
0/0 ↓		← 8/18
0/0 ↘		↙ 0/0

6

Serramonte Blvd		Serramonte Blvd
0/0 ↗		↖ 0/0
18/52 →		↑ 0/0
0/0 ↘		↗ 0/0

I-280 NB On-Ramp / Serramonte Blvd

	I-280 NB On-Ramp	
0/0 ↙		↖ 0/0
0/0 ↓		← 8/18
0/0 ↘		↙ 0/0

7

Serramonte Blvd		Serramonte Blvd
18/50 ↗		↖ 0/0
1/2 →		↑ 0/0
0/0 ↘		↗ 0/0

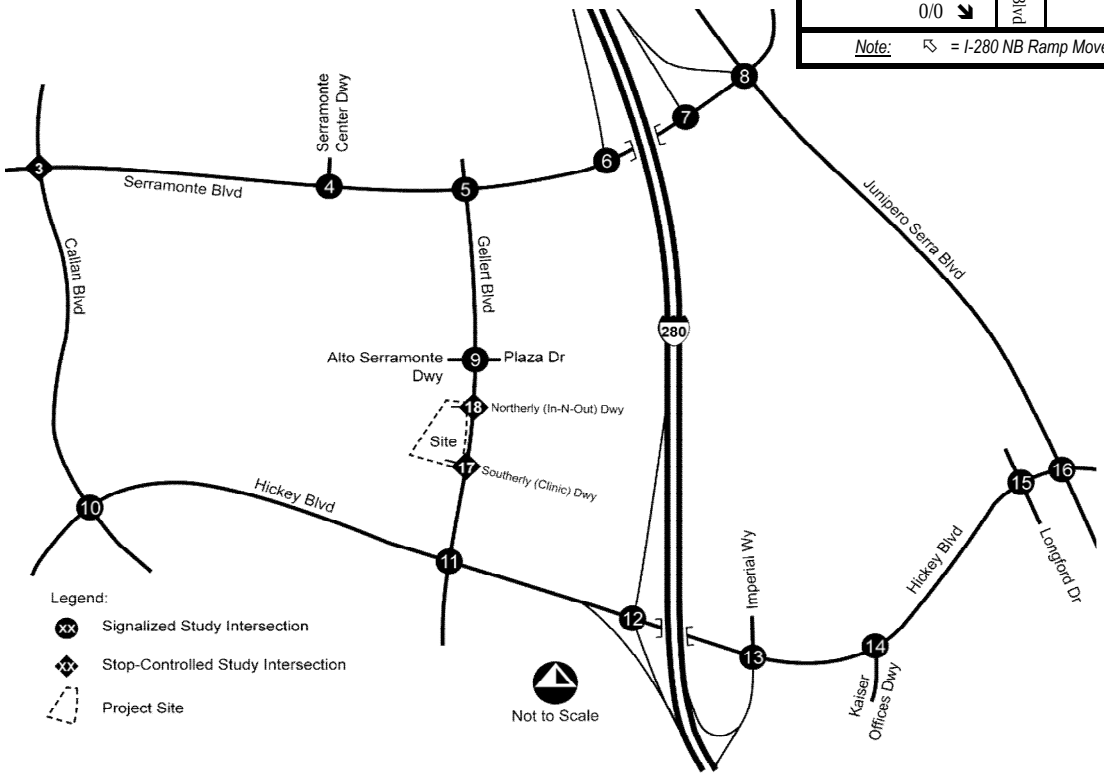
Junipero Serra Blvd / Serramonte Blvd & I-280 NB On-Ramp

	Junipero Serra Blvd	
0/0 ↙		↖ 0/0
7/16 ↓		← 1/3
0/0 ↘		↙ 0/0

8

Serramonte Blvd		Serramonte Blvd
0/0 ↖		↖ 0/0
0/1 ↗		↑ 0/0
0/1 →		↗ 0/0
0/0 ↘		Junipero Serra Blvd

Note: ↖ = *I-280 NB Ramp Movement*



XX/XX = Weekday PM / Saturday MD Peak Hour Intersection Volumes

Longford Dr / Hickey Blvd

	Longford Dr	
0/0 ↙		↖ 0/0
0/0 ↓		← 17/38
0/0 ↘		↙ 0/0

15

Hickey Blvd		Hickey Blvd
0/0 ↗		↖ 0/0
12/33 →		↑ 0/0
0/0 ↘	Longford Dr	↗ 0/0

Junipero Serra Blvd / Hickey Blvd

	Junipero Serra Blvd	
0/0 ↙		↖ 0/0
0/0 ↓		← 11/26
0/0 ↘		↙ 0/0

16

Hickey Blvd		Hickey Blvd
0/0 ↗		↖ 5/12
8/22 →		↑ 0/0
4/11 ↘	Junipero Serra Blvd	↗ 0/0

I-280 SB Ramps / Hickey Blvd

	I-280 SB Ramps	
0/0 ↙		↖ 0/0
0/0 ↓		← 21/49
0/0 ↘		↙ 0/0

12

Hickey Blvd		Hickey Blvd
0/0 ↗		↖ 0/0
12/33 →		↑ 0/0
3/7 ↘	I-280 SB Ramps	↗ 0/0

I-280 NB Ramps & Imperial Wy / Hickey Blvd

	Imperial Wy	
0/0 ↙		↖ 0/0
0/0 ↓		← 17/38
0/0 ↘		↙ 0/0

13

Hickey Blvd		Hickey Blvd
0/0 ↗		↖ 5/11
12/33 →		↑ 0/0
0/0 ↘	I-280 NB Ramps	↗ 0/0

Kaiser Medical Offices Dwy / Hickey Blvd

0/0 ↙		↖ 0/0
0/0 ↓		← 17/38
0/0 ↘		↙ 0/0

14

Hickey Blvd		Hickey Blvd
0/0 ↗		↖ 0/0
12/33 →		↑ 0/0
0/0 ↘	Kaiser Medical Offices Dwy	↗ 0/0

Exhibit 10 (2 of 2)

Project-Only 2015 Intersection Volumes

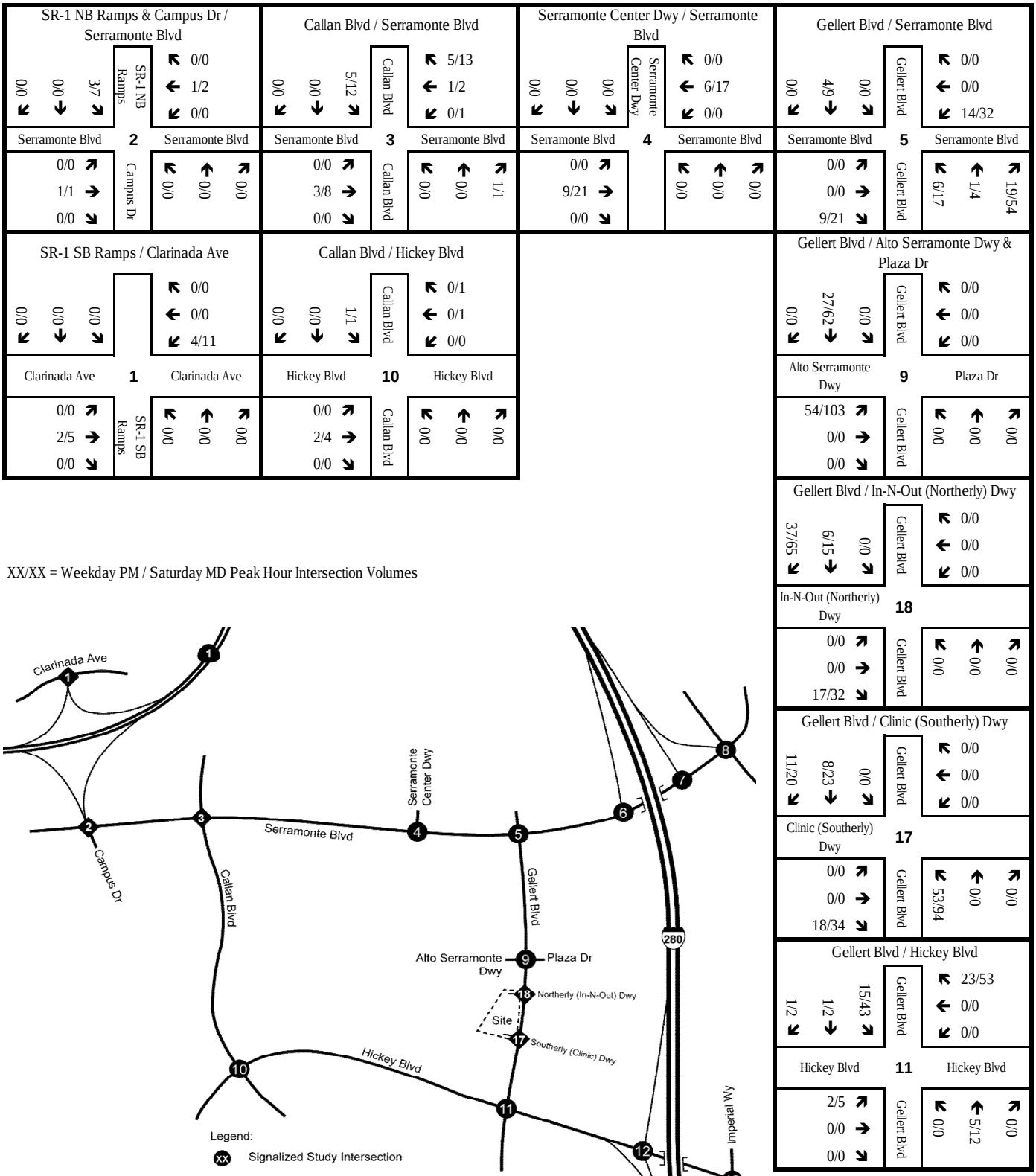


Exhibit 11 (1 of 2)

Project-Only 2035 Intersection Volumes

6 — I-280 SB Off-Ramp / Serramonte Blvd

0/0 ↗	I-280 SB Off-Ramp	0/0 ↖
19/54 →	Serramonte Blvd	9/21 ←
0/0 ↘		0/0 ↙
	Serramonte Blvd	0/0 ↖ 0/0 ↑ 0/0 ↗
	I-280 SB Off-Ramp	5/11 ↙ 0/0 ↓ 0/0 ↘

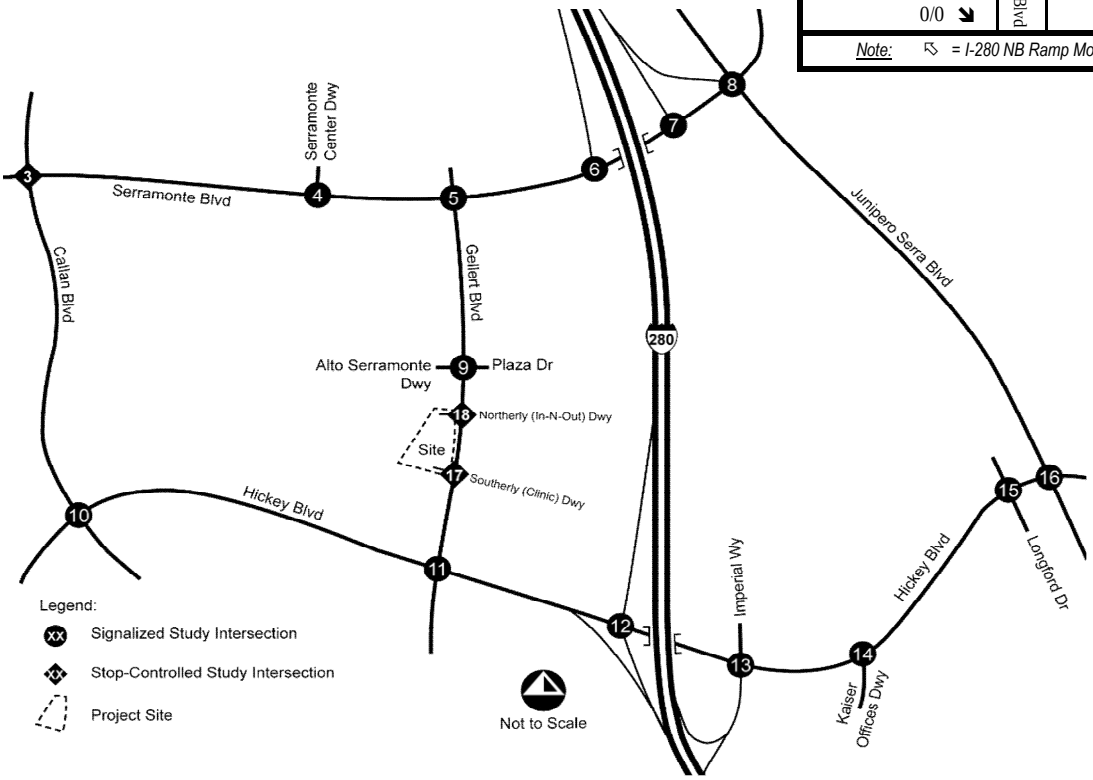
7 — I-280 NB On-Ramp / Serramonte Blvd

18/50 ↗	I-280 NB On-Ramp	0/0 ↖
1/4 →	Serramonte Blvd	9/21 ←
0/0 ↘		0/0 ↙
	Serramonte Blvd	0/0 ↖ 0/0 ↑ 0/0 ↗
	I-280 NB On-Ramp	0/0 ↙ 0/0 ↓ 0/0 ↘

8 — Junipero Serra Blvd / Serramonte Blvd & I-280 NB On-Ramp

0/0 ↗	Junipero Serra Blvd	0/0 ↖
0/1 →	Serramonte Blvd	2/5 ←
0/0 ↘		0/0 ↙
	Serramonte Blvd	0/0 ↖ 0/0 ↑ 0/0 ↗
	Junipero Serra Blvd	0/0 ↗ 7/16 ↙ 0/0 ↓ 0/0 ↘

Note: ↗ = I-280 NB Ramp Movement



XX/XX = Weekday PM / Saturday MD Peak Hour Intersection Volumes

15 — Longford Dr / Hickey Blvd

0/0 ↗	Longford Dr	0/0 ↖
12/34 →	Hickey Blvd	18/41 ←
0/0 ↘		0/0 ↙
	Hickey Blvd	0/0 ↖ 0/0 ↑ 0/0 ↗
	Longford Dr	0/0 ↙ 0/0 ↓ 0/0 ↘

16 — Junipero Serra Blvd / Hickey Blvd

0/0 ↗	Junipero Serra Blvd	0/0 ↖
9/24 →	Hickey Blvd	13/29 ←
3/10 ↘		0/0 ↙
	Hickey Blvd	5/12 ↖ 0/0 ↑ 0/0 ↗
	Junipero Serra Blvd	0/0 ↙ 0/0 ↓ 0/0 ↘

12 — I-280 SB Ramps / Hickey Blvd

0/0 ↗	I-280 SB Ramps	0/0 ↖
12/34 →	Hickey Blvd	23/53 ←
3/9 ↘		0/0 ↙
	Hickey Blvd	0/0 ↖ 0/0 ↑ 0/0 ↗
	I-280 SB Ramps	0/0 ↙ 0/0 ↓ 0/0 ↘

13 — I-280 NB Ramps & Imperial Wy / Hickey Blvd

0/0 ↗	I-280 NB Ramps	0/0 ↖
12/34 →	Hickey Blvd	18/41 ←
0/0 ↘		0/0 ↙
	Hickey Blvd	5/12 ↖ 0/0 ↑ 0/0 ↗
	Imperial Wy	0/0 ↙ 0/0 ↓ 0/0 ↘

14 — Kaiser Medical Offices Dwy / Hickey Blvd

0/0 ↗	Kaiser Medical Offices Dwy	0/0 ↖
12/34 →	Hickey Blvd	18/41 ←
0/0 ↘		0/0 ↙
	Hickey Blvd	0/0 ↖ 0/0 ↑ 0/0 ↗
		0/0 ↙ 0/0 ↓ 0/0 ↘

Exhibit 11 (2 of 2)

Project-Only 2035 Intersection Volumes

5.0 FUTURE TRAFFIC FORECAST

This section presents the future traffic forecast for each of the analysis scenarios evaluated in this study. The following future conditions are presented:

- Existing Plus Project (E+P);
- Cumulative 2035 Without Project (2035nP) conditions; and
- Cumulative 2035 With Project (2035+P) conditions.

2035nP weekday PM peak hour study intersection traffic volumes were provided by City staff as derived from the Daly City Travel Demand Model. Appendix E includes the traffic model forecast data provided by City staff.

Since the traffic model does not contain a Saturday mid-day peak hour forecast, the 2035nP conditions Saturday mid-day peak hour traffic volumes were developed by adjusting the existing Saturday mid-day traffic volumes by the growth or variation observed for the weekday PM peak hour data between the existing 2015 and the 2035nP conditions. Appendix F includes the post-processed traffic volumes for both weekday PM and Saturday MD peak hour forecast.

5.1 Existing Plus Project Conditions Traffic Volumes

Exhibit 12 shows Existing Plus Project (E+P) conditions weekday PM and Saturday Mid-Day (MD) peak hour intersection traffic volumes. E+P weekday PM peak hour forecast was provided by City staff. E+P Saturday MD peak hour traffic volumes were derived by adding project-generated 2015 trips to existing Saturday MD peak hour traffic volumes.

5.2 Cumulative 2035 Without Project Conditions Traffic Volumes

Exhibit 13 shows Cumulative 2035 Without Project (2035nP) conditions weekday PM and Saturday MD peak hour intersection traffic volumes. 2035nP weekday PM peak hour study intersection traffic volumes were provided by City staff as derived from the Daly City Travel Demand Model. The 2035nP conditions Saturday mid-day peak hour traffic volumes were developed by adjusting the existing Saturday mid-day traffic volumes by the growth or variation observed for the weekday PM peak hour data between the existing 2015 and the 2035nP conditions.

5.3 Cumulative 2035 With Project Conditions Traffic Volumes

Exhibit 14 shows Cumulative 2035 With Project (2035+P) conditions weekday PM and Saturday MD peak hour intersection traffic volumes. 2035+P weekday PM peak hour forecast was provided by City staff. 2035+P Saturday MD peak hour traffic volumes were derived by adding project-generated 2035 trips to 2035nP Saturday MD peak hour traffic volumes.

SR-1 NB Ramps & Campus Dr / Serramonte Blvd (2)

Serramonte Blvd	SR-1 NB Ramps	Serramonte Blvd
79/77 ↙	19/1 ↓	198/280 ↘
		145/178 ↖
		161/147 ←
		75/7 ↙
221/235 ↗	Campus Dr	13/0 ↖
153/156 →		37/6 ↑
42/3 ↘		58/10 ↗

Callan Blvd / Serramonte Blvd (3)

Serramonte Blvd	Callan Blvd	Serramonte Blvd
103/68 ↙	237/194 ↓	138/133 ↘
		224/193 ↖
		203/144 ←
		153/129 ↙
56/81 ↗	Callan Blvd	88/98 ↖
272/303 →		232/186 ↑
79/54 ↘		120/137 ↗

Serramonte Center Dwy / Serramonte Blvd (4)

Serramonte Blvd	Serramonte Center Dwy	Serramonte Blvd
220/205 ↙	0/0 ↓	248/295 ↘
		317/375 ↖
		348/270 ←
		53/69 ↙
195/196 ↗		0/0 ↖
323/360 →		0/0 ↑
0/0 ↘		0/0 ↗

Gellert Blvd / Serramonte Blvd (5)

Serramonte Blvd	Gellert Blvd	Serramonte Blvd
55/74 ↙	292/351 ↓	383/451 ↘
		466/634 ↖
		304/244 ←
		566/573 ↙
45/51 ↗	Gellert Blvd	350/350 ↖
315/335 →		249/320 ↑
242/317 ↘		645/771 ↗

SR-1 SB Ramps / Clarinada Ave (1)

Clarinada Ave		Clarinada Ave
0/0 ↙	0/0 ↓	0/0 ↘
		0/0 ↖
		98/78 ←
		229/208 ↙
6/2 ↗	SR-1 SB Ramps	471/266 ↖
50/57 →		0/0 ↑
83/70 ↘		256/201 ↗

Callan Blvd / Hickey Blvd (10)

Hickey Blvd	Callan Blvd	Hickey Blvd
183/158 ↙	226/147 ↓	48/74 ↘
		84/84 ↖
		486/406 ←
		67/61 ↙
127/118 ↗	Callan Blvd	69/52 ↖
355/408 →		230/191 ↑
90/48 ↘		39/47 ↗

Gellert Blvd / Alto Serramonte Dwy & Plaza Dr (9)

Alto Serramonte Dwy	Gellert Blvd	Plaza Dr
13/22 ↙	625/660 ↓	172/198 ↘
		187/268 ↖
		11/12 ←
		267/251 ↙
109/172 ↗	Gellert Blvd	162/156 ↖
21/15 →		680/719 ↑
49/63 ↘		118/187 ↗

Gellert Blvd / In-N-Out (Northerly) Dwy (18)

In-N-Out (Northerly) Dwy	Gellert Blvd	
54/72 ↙	887/919 ↓	0/0 ↘
		0/0 ↖
		0/0 ←
		0/0 ↙
0/0 ↗	Gellert Blvd	0/0 ↖
0/0 →		960/1062 ↑
53/50 ↘		0/0 ↗

Gellert Blvd / Clinic (Southerly) Dwy (17)

Clinic (Southerly) Dwy	Gellert Blvd	
11/20 ↙	929/944 ↓	0/0 ↘
		0/0 ↖
		0/0 ←
		0/0 ↙
0/0 ↗	Gellert Blvd	53/98 ↖
0/0 →		960/1062 ↑
19/36 ↘		0/0 ↗

Gellert Blvd / Hickey Blvd (11)

Hickey Blvd	Gellert Blvd	Hickey Blvd
186/172 ↙	322/290 ↓	436/503 ↘
		614/665 ↖
		388/318 ←
		449/339 ↙
130/175 ↗	Gellert Blvd	85/81 ↖
332/341 →		244/328 ↑
34/49 ↘		288/343 ↗

XX/XX = Weekday PM / Saturday MD Peak Hour Intersection Volumes

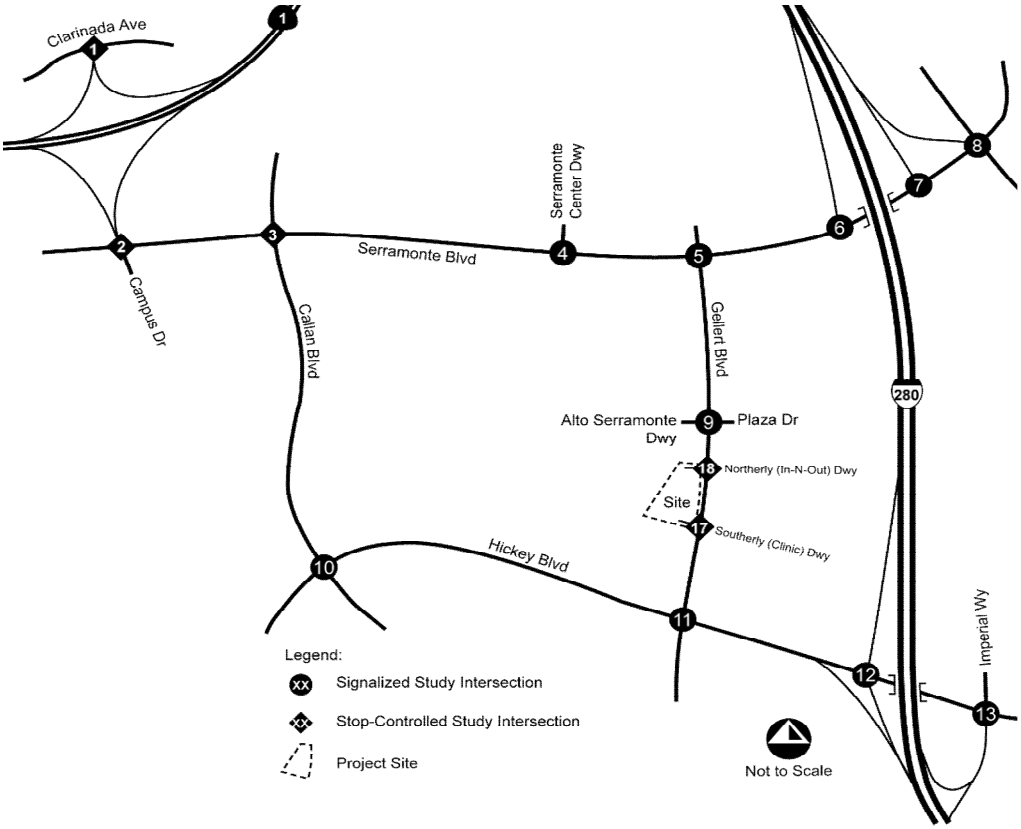
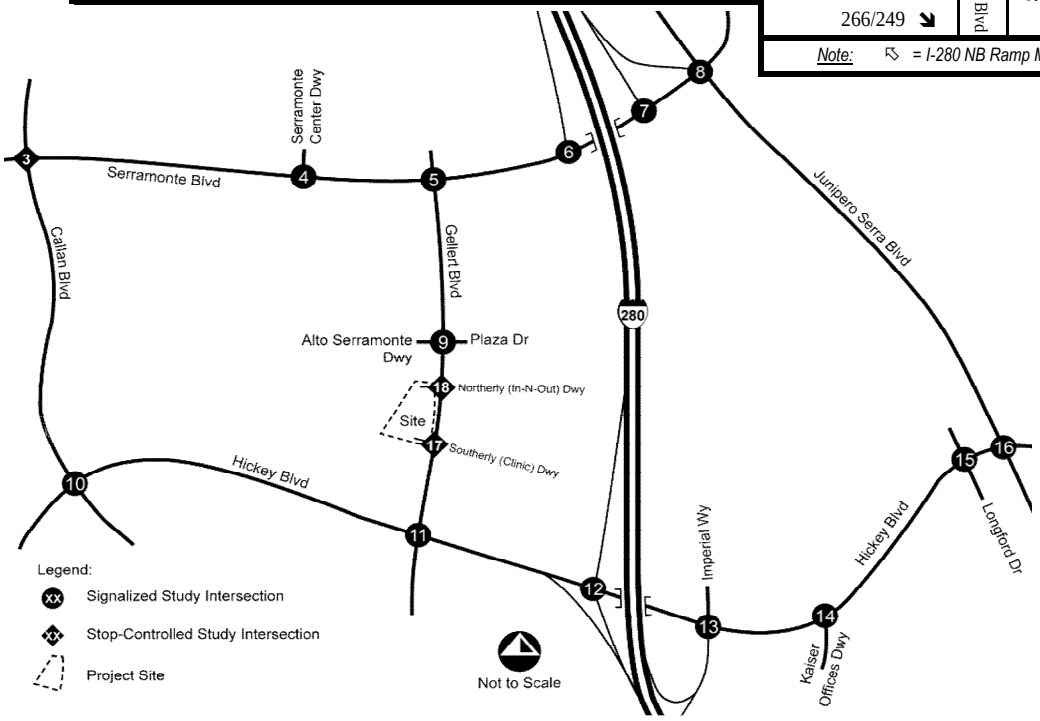


Exhibit 12 (1 of 2)

Existing Plus Project Intersection Volumes



Junipero Serra Blvd / Serramonte Blvd & I-280 NB On-Ramp (8)

Approach	Left	Through	Right
Serramonte Blvd	205/238	132/181	327/323
Junipero Serra Blvd	108/135	409/338	59/75
Serramonte Blvd	433/330	187/143	
Junipero Serra Blvd	4/1	375/558	695/738
Serramonte Blvd	266/249	376/366	108/75
Serramonte Blvd	511/401	115/146	

Note: ⇖ = I-280 NB Ramp Movement

I-280 NB On-Ramp / Serramonte Blvd (7)

Approach	Left	Through	Right
Serramonte Blvd	0/0	0/0	0/0
I-280 NB On-Ramp	4/1	650/584	0/0
Serramonte Blvd	0/0	0/0	0/0
Serramonte Blvd	624/804	1331/1537	0/0

I-280 SB Off-Ramp / Serramonte Blvd (6)

Approach	Left	Through	Right
Serramonte Blvd	718/834	0/0	666/777
I-280 SB Off-Ramp	0/0	624/594	0/0
Serramonte Blvd	0/0	0/0	0/0
Serramonte Blvd	0/0	1301/1572	0/0

Junipero Serra Blvd / Hickey Blvd (16)

Approach	Left	Through	Right
Hickey Blvd	182/234	366/283	248/219
Junipero Serra Blvd	482/421	551/490	168/115
Hickey Blvd	195/97	441/298	120/85
Junipero Serra Blvd	210/259	613/677	100/60

Longford Dr / Hickey Blvd (15)

Approach	Left	Through	Right
Hickey Blvd	24/42	0/0	0/0
Longford Dr	50/33	865/762	0/0
Hickey Blvd	0/0	0/0	75/54
Longford Dr	0/0	900/930	110/58

XX/XX = Weekday PM / Saturday MD Peak Hour Intersection Volumes

Kaiser Medical Offices Dwy / Hickey Blvd (14)

Approach	Left	Through	Right
Hickey Blvd	0/0	0/0	5/0
	6/0	807/805	52/4
Hickey Blvd	153/10	0/0	123/9
Kaiser Medical Offices Dwy	0/0	944/1016	91/8

I-280 NB Ramps & Imperial Wy / Hickey Blvd (13)

Approach	Left	Through	Right
Hickey Blvd	58/66	77/84	49/42
Imperial Wy	49/62	726/618	179/137
Hickey Blvd	553/587	57/31	263/256
I-280 NB Ramps	153/134	724/739	150/169

I-280 SB Ramps / Hickey Blvd (12)

Approach	Left	Through	Right
Hickey Blvd	231/176	6/5	188/197
I-280 SB Ramps	0/0	1207/1120	317/249
Hickey Blvd	0/0	0/0	0/0
I-280 SB Ramps	0/0	780/830	190/116

Exhibit 12 (2 of 2)

Existing Plus Project Intersection Volumes

SR-1 NB Ramps & Campus Dr / Serramonte Blvd (2)

Serramonte Blvd	SR-1 NB Ramps	Serramonte Blvd
83/81 ↙	41/2 ↓	298/461 ↘
		331/412 ↖
		228/200 ←
		194/17 ↙
319/339 ↗	Campus Dr	143/25 ↗
128/130 →		88/14 ↑
47/3 ↘		46/0 ↖

Callan Blvd / Serramonte Blvd (3)

Serramonte Blvd	Callan Blvd	Serramonte Blvd
171/112 ↙	232/185 ↓	212/207 ↘
		313/254 ↖
		514/356 ←
		218/185 ↙
100/145 ↗	Callan Blvd	114/128 ↗
390/461 →		247/199 ↑
78/53 ↘		117/126 ↖

Serramonte Center Dwy / Serramonte Blvd (4)

Serramonte Blvd	Serramonte Center Dwy	Serramonte Blvd
284/263 ↙	0/0 ↓	288/343 ↘
		436/516 ↖
		750/550 ←
		53/69 ↙
217/218 ↗		0/0 ↗
488/577 →		0/0 ↑
0/0 ↘		0/0 ↖

Gellert Blvd / Serramonte Blvd (5)

Serramonte Blvd	Gellert Blvd	Serramonte Blvd
64/86 ↙	346/408 ↓	413/475 ↘
		600/815 ↖
		550/432 ←
		688/702 ↙
47/53 ↗	Gellert Blvd	746/865 ↗
328/367 →		283/363 ↑
310/411 ↘		472/462 ↖

SR-1 SB Ramps / Clarinada Ave (1)

Clarinada Ave	SR-1 SB Ramps	Clarinada Ave
0/0 ↙	0/0 ↓	0/0 ↘
		0/0 ↖
		105/84 ←
		395/344 ↙
6/2 ↗	SR-1 SB Ramps	358/281 ↗
85/94 →		0/0 ↑
101/86 ↘		497/289 ↖

Callan Blvd / Hickey Blvd (10)

Hickey Blvd	Callan Blvd	Hickey Blvd
233/203 ↙	215/138 ↓	26/36 ↘
		113/107 ↖
		602/468 ←
		69/63 ↙
117/108 ↗	Callan Blvd	39/47 ↗
477/565 →		232/195 ↑
73/41 ↘		48/36 ↖

Gellert Blvd / Alto Serramonte Dwy & Plaza Dr (9)

Alto Serramonte Dwy	Gellert Blvd	Plaza Dr
20/34 ↙	878/919 ↓	172/198 ↘
		187/268 ↖
		10/11 ←
		249/234 ↙
59/76 ↗	Gellert Blvd	118/187 ↗
20/14 →		936/1042 ↑
47/60 ↘		161/155 ↖

Gellert Blvd / In-N-Out (Northerly) Dwy (18)

In-N-Out (Northerly) Dwy	Gellert Blvd	
20/11 ↙	1154/1202 ↓	0/0 ↘
		0/0 ↖
		0/0 ←
		0/0 ↙
0/0 ↗	Gellert Blvd	0/0 ↗
0/0 →		1215/1384 ↑
17/14 ↘		0/0 ↖

Gellert Blvd / Clinic (Southerly) Dwy (17)

Clinic (Southerly) Dwy	Gellert Blvd	
7/7 ↙	1164/1209 ↓	0/0 ↘
		0/0 ↖
		0/0 ←
		0/0 ↙
0/0 ↗	Gellert Blvd	0/0 ↗
0/0 →		1215/1384 ↑
35/35 ↘		6/6 ↖

Gellert Blvd / Hickey Blvd (11)

Hickey Blvd	Gellert Blvd	Hickey Blvd
202/186 ↙	471/447 ↓	531/587 ↘
		774/815 ↖
		525/388 ←
		599/441 ↙
117/155 ↗	Gellert Blvd	223/266 ↗
500/552 →		347/457 ↑
15/15 ↘		74/71 ↖

XX/XX = Weekday PM / Saturday MD Peak Hour Intersection Volumes

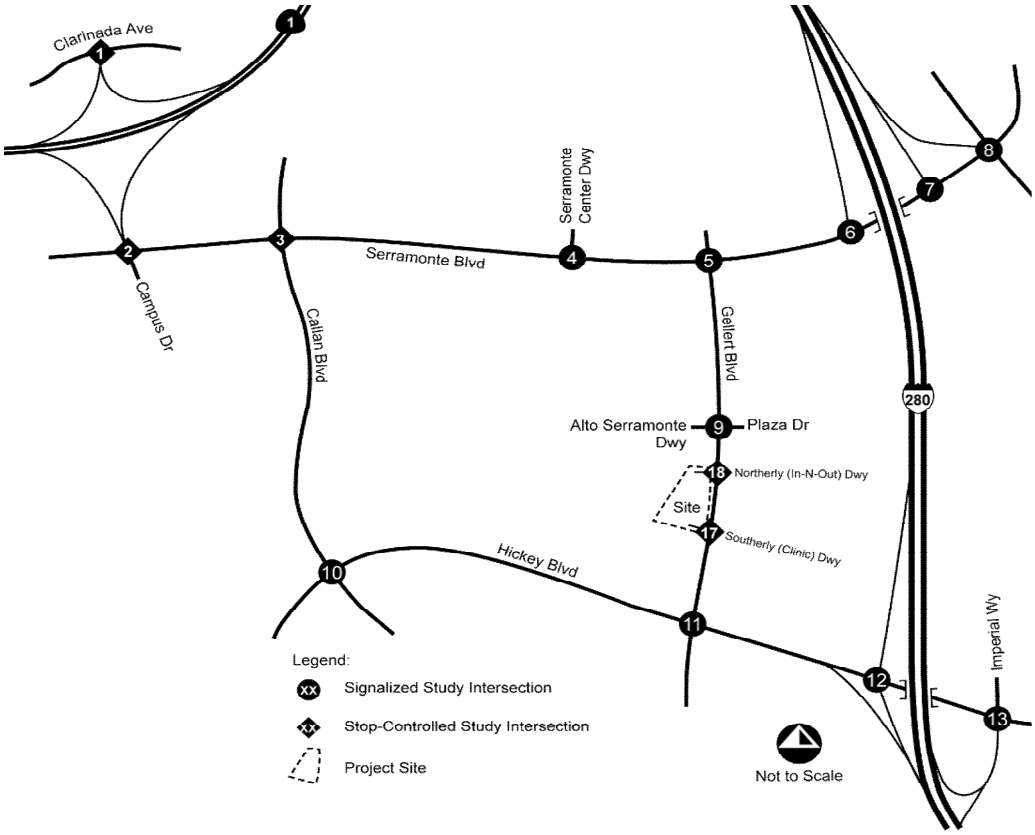


Exhibit 13 (1 of 2)

2035 Without Project Intersection Volumes

Junipero Serra Blvd / Serramonte Blvd & I-280 NB On-Ramp (8)

Serramonte Blvd	Junipero Serra Blvd	Serramonte Blvd	Junipero Serra Blvd
0/0 ↖	151/196 ↘	335/422 ↗	573/475 ↖
1447/1732 ←	352/347 ↓	592/474 ↑	135/169 ↖
0/0 ↙	171/224 ↙	203/130 ↖	762/598 ←
	205/238 ↗	532/512 ↗	529/409 ↙
	379/564 ↗		4/1 ↗
	1029/1085 →		
	358/338 ↘		

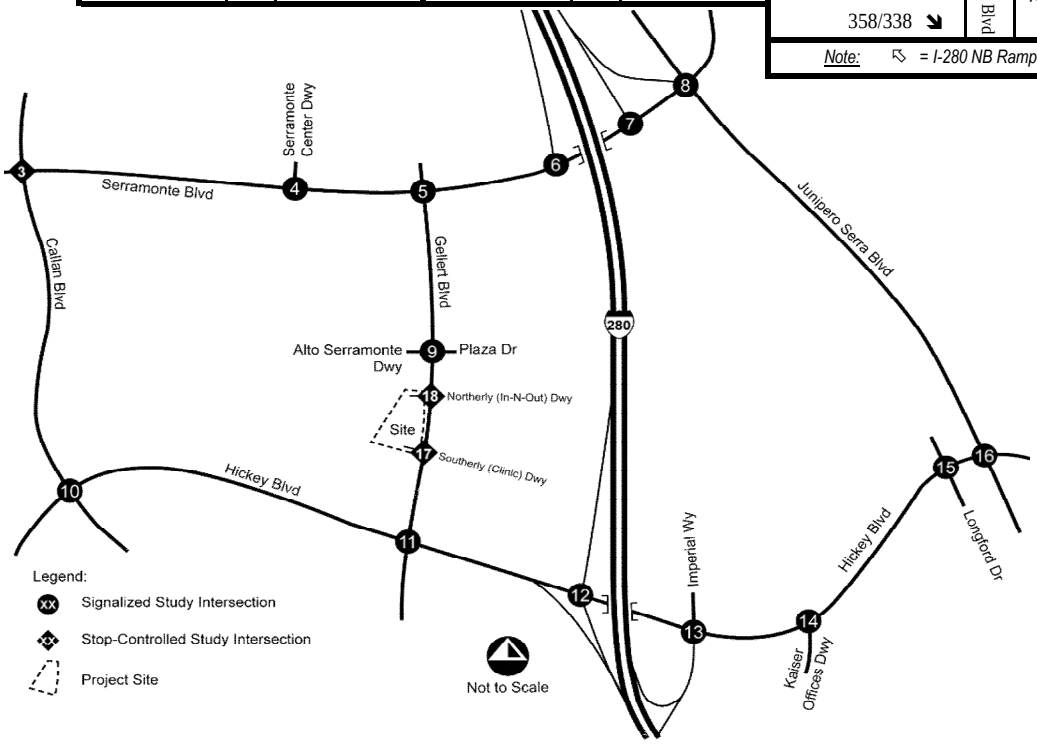
Note: ↗ = I-280 NB Ramp Movement

I-280 SB Off-Ramp / Serramonte Blvd (6)

Serramonte Blvd	I-280 SB Off-Ramp	Serramonte Blvd
0/0 ↖	743/855 ↘	0/0 ↖
1086/1027 ←	0/0 ↓	0/0 ↑
0/0 ↙	758/881 ↙	0/0 ↗

I-280 NB On-Ramp / Serramonte Blvd (7)

Serramonte Blvd	I-280 NB On-Ramp	Serramonte Blvd
4/1 ↖	0/0 ↘	550/689 ↗
1112/991 ←	0/0 ↓	1627/1876 →
0/0 ↙	0/0 ↙	0/0 ↘



Longford Dr / Hickey Blvd (15)

Hickey Blvd	Longford Dr	Hickey Blvd
0/0 ↖	0/0 ↘	50/33 ↖
1194/1206 →	0/0 ↓	956/808 ←
110/58 ↘	24/42 ↙	0/0 ↙
	0/0 ↖	
	0/0 ↑	
	75/54 ↗	

Junipero Serra Blvd / Hickey Blvd (16)

Hickey Blvd	Junipero Serra Blvd	Hickey Blvd
217/269 ↗	117/78 ↗	789/686 ↖
803/862 →	654/440 ↑	578/483 ←
196/107 ↘	255/118 ↖	150/105 ↙
	367/335 ↘	
	730/559 ↓	
	186/239 ↙	

XX/XX = Weekday PM / Saturday MD Peak Hour Intersection Volumes

I-280 SB Ramps / Hickey Blvd (12)

Hickey Blvd	I-280 SB Ramps	Hickey Blvd
0/0 ↗	383/408 ↘	0/0 ↖
778/797 →	6/5 ↓	1473/1282 ←
424/304 ↘	305/230 ↙	261/202 ↙
	0/0 ↖	
	0/0 ↑	
	0/0 ↗	

I-280 NB Ramps & Imperial Wy / Hickey Blvd (13)

Hickey Blvd	I-280 NB Ramps	Hickey Blvd	Imperial Wy	Hickey Blvd
174/153 ↗	266/261 ↗	795/795 ↖	49/42 ↘	49/62 ↖
954/935 →	52/26 ↑		77/84 ↓	754/604 ←
170/191 ↘			50/52 ↙	179/137 ↙

Kaiser Medical Offices Dwy / Hickey Blvd (14)

Hickey Blvd	Kaiser Medical Offices Dwy	Hickey Blvd
0/0 ↗	123/9 ↗	122/0 ↖
1177/1235 →	0/0 ↑	835/796 ←
91/8 ↘	153/10 ↖	52/4 ↙
	83/0 ↘	
	0/0 ↓	
	0/0 ↙	

Exhibit 13 (2 of 2)

2035 Without Project Intersection Volumes

SR-1 NB Ramps & Campus Dr / Serramonte Blvd

83/81	41/2	282/468
SR-1 NB Ramps		
325/412	215/202	195/17

Serramonte Blvd **2** Serramonte Blvd

319/339	128/131	46/3
Campus Dr		
46/0	86/14	144/25

Callan Blvd / Serramonte Blvd

171/112	230/185	221/219
Callan Blvd		
321/267	495/358	228/186

Serramonte Blvd **3** Serramonte Blvd

99/145	385/469	70/53
Callan Blvd		
117/126	246/199	115/129

Serramonte Center Dwy / Serramonte Blvd

282/263	0/0	288/343
Serramonte Center Dwy		
436/516	751/567	53/69

Serramonte Blvd **4** Serramonte Blvd

218/218	491/598	0/0
0/0	0/0	0/0

Gellert Blvd / Serramonte Blvd

64/86	352/417	407/475
Gellert Blvd		
604/815	562/432	688/734

Serramonte Blvd **5** Serramonte Blvd

47/53	321/367	323/432
Gellert Blvd		
464/479	285/367	769/919

SR-1 SB Ramps / Clarinada Ave

0/0	0/0	0/0
0/0	105/84	409/355

Clarinada Ave **1** Clarinada Ave

6/2	88/99	100/86
SR-1 SB Ramps		
511/289	0/0	358/281

Callan Blvd / Hickey Blvd

241/203	208/138	25/37
Callan Blvd		
112/108	578/469	69/63

Hickey Blvd **10** Hickey Blvd

118/108	481/569	79/41
Callan Blvd		
40/36	233/195	39/47

Gellert Blvd / Alto Serramonte Dwy & Plaza Dr

20/34	898/981	172/198
Gellert Blvd		
187/268	10/11	247/234

Alto Serramonte Dwy **9** Plaza Dr

113/179	20/14	47/60
Gellert Blvd		
161/155	951/1042	118/187

Gellert Blvd / In-N-Out (Northerly) Dwy

57/64	1135/1217	0/0
Gellert Blvd		
0/0	0/0	0/0

In-N-Out (Northerly) Dwy **18**

0/0	0/0	34/40
Gellert Blvd		
0/0	1230/1384	0/0

Gellert Blvd / Clinic (Southerly) Dwy

18/27	1151/1232	0/0
Gellert Blvd		
0/0	0/0	0/0

Clinic (Southerly) Dwy **17**

0/0	0/0	53/69
Gellert Blvd		
59/100	1230/1384	0/0

Gellert Blvd / Hickey Blvd

198/188	463/449	550/630
Gellert Blvd		
787/868	504/388	601/441

Hickey Blvd **11** Hickey Blvd

119/160	508/552	12/15
Gellert Blvd		
73/71	351/469	225/266

XX/XX = Weekday PM / Saturday MD Peak Hour Intersection Volumes

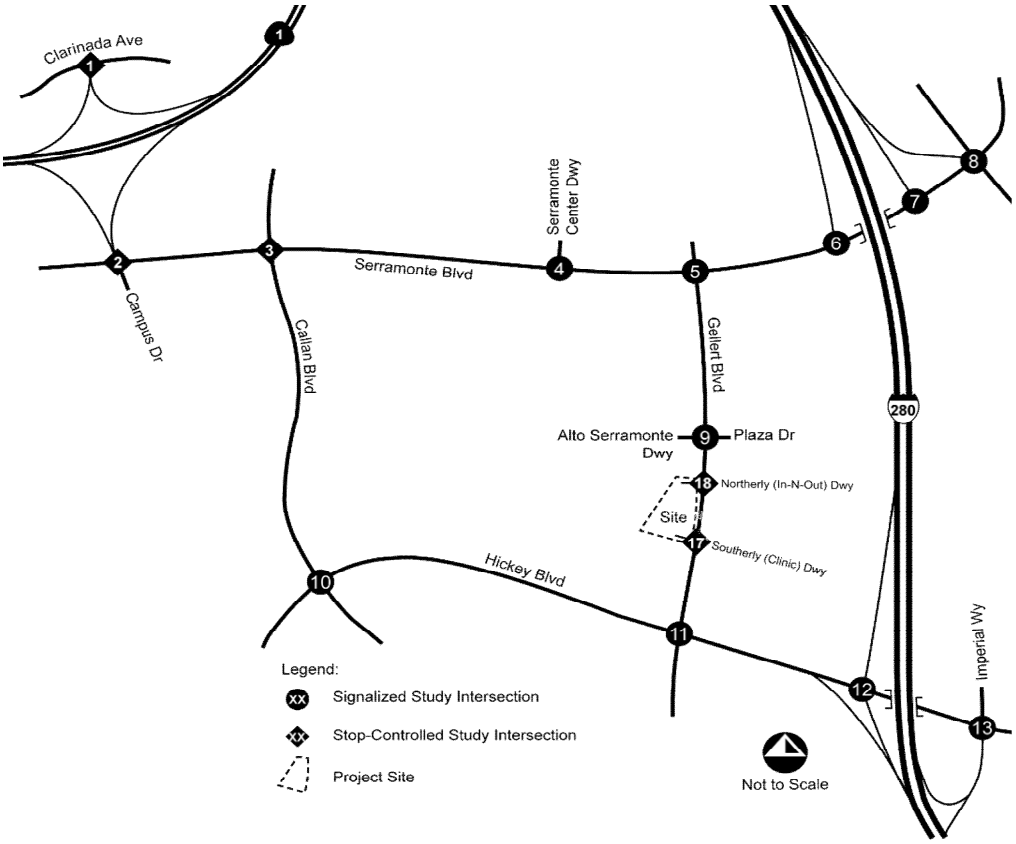


Exhibit 14 (1 of 2)

2035 With Project Intersection Volumes

Junipero Serra Blvd / Serramonte Blvd & I-280 NB On-Ramp (8)

Approach	Left	Through	Right
Serramonte Blvd	205/238	177/240	352/347
Junipero Serra Blvd	570/475	134/169	762/603
Serramonte Blvd	154/196	531/409	
Junipero Serra Blvd	4/1	377/565	1015/1087
Serramonte Blvd	360/338	524/512	209/130
Serramonte Blvd	593/474	333/422	

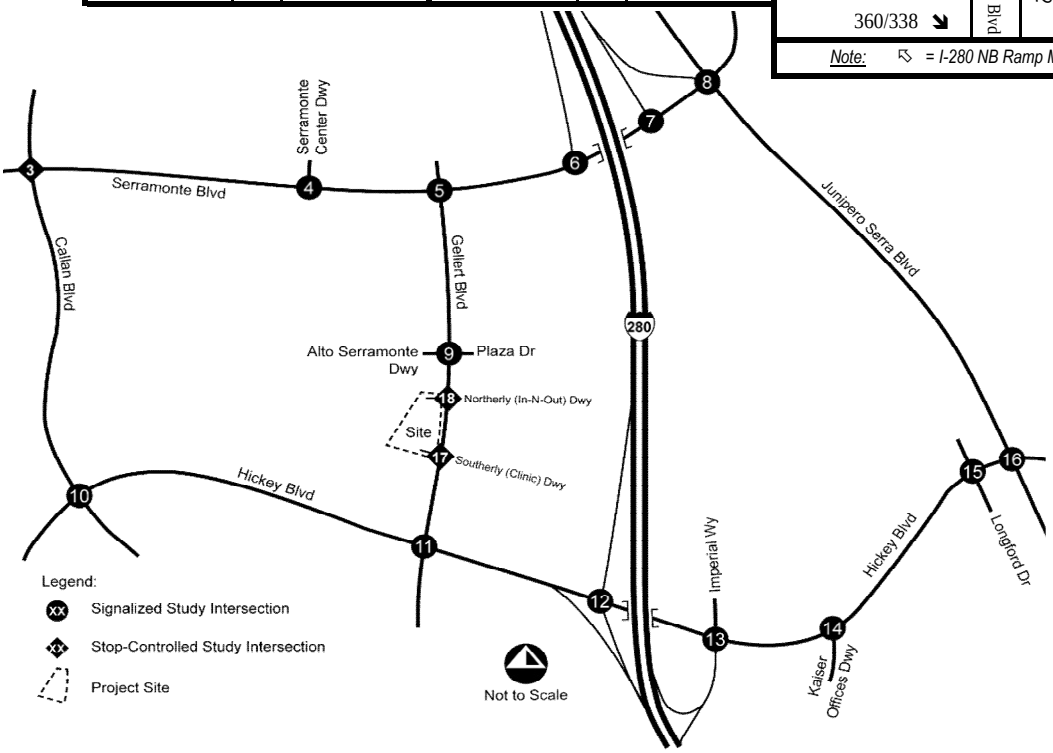
Note: ⇖ = I-280 NB Ramp Movement

I-280 NB On-Ramp / Serramonte Blvd (7)

Approach	Left	Through	Right
Serramonte Blvd	0/0	0/0	0/0
I-280 NB On-Ramp	4/1	1124/1012	0/0
Serramonte Blvd	0/0	0/0	0/0
Serramonte Blvd	576/739	1614/1880	0/0
I-280 NB On-Ramp	0/0	0/0	0/0

I-280 SB Off-Ramp / Serramonte Blvd (6)

Approach	Left	Through	Right
Serramonte Blvd	762/892	0/0	745/855
I-280 SB Off-Ramp	0/0	1098/1048	0/0
Serramonte Blvd	0/0	0/0	0/0
Serramonte Blvd	0/0	1457/1786	0/0
I-280 SB Off-Ramp	0/0	0/0	0/0



Junipero Serra Blvd / Hickey Blvd (16)

Approach	Left	Through	Right
Hickey Blvd	184/239	741/559	363/335
Junipero Serra Blvd	781/686	571/512	149/105
Hickey Blvd	214/269	808/886	200/117
Junipero Serra Blvd	266/130	662/440	113/78

Longford Dr / Hickey Blvd (15)

Approach	Left	Through	Right
Hickey Blvd	24/42	0/0	0/0
Longford Dr	50/33	957/849	0/0
Hickey Blvd	0/0	1200/1240	110/58
Longford Dr	0/0	0/0	75/54

XX/XX = Weekday PM / Saturday MD Peak Hour Intersection Volumes

Kaiser Medical Offices Dwy / Hickey Blvd (14)

Approach	Left	Through	Right
Hickey Blvd	0/0	0/0	87/0
	125/0	833/837	52/4
Hickey Blvd	0/0	1179/1269	91/8
Kaiser Medical Offices Dwy	153/10	0/0	123/9

I-280 NB Ramps & Imperial Wy / Hickey Blvd (13)

Approach	Left	Through	Right
Hickey Blvd	49/52	77/84	49/42
Imperial Wy	49/62	752/645	179/137
Hickey Blvd	174/153	961/969	172/191
I-280 NB Ramps	780/807	52/26	261/261

I-280 SB Ramps / Hickey Blvd (12)

Approach	Left	Through	Right
Hickey Blvd	312/230	6/5	375/408
I-280 SB Ramps	0/0	1460/1335	253/202
Hickey Blvd	0/0	795/831	434/313
I-280 SB Ramps	0/0	0/0	0/0

Exhibit 14 (2 of 2)

2035 With Project Intersection Volumes

6.0 FUTURE TRAFFIC ANALYSIS

This section presents the intersection operations analysis for the following future traffic scenarios, based on existing and proposed geometry:

- Existing Plus Project (E+P);
- Cumulative 2035 Without (2035nP) conditions; and
- Cumulative 2035 With Project (2035+P) conditions.

6.1 Existing Plus Project Conditions Intersection Analysis

Table 7 summarizes the weekday PM and Saturday Mid-Day (MD) peak hour intersection operations analysis results for Existing Plus Project (E+P) conditions, based on existing geometry. Appendix G includes the E+P conditions intersection operations analysis worksheets. As shown in Table 7, all study area intersections are projected to operate at acceptable LOS.

Table 7 shows that the project will not contribute to a significant project impact at the study intersections for Existing Plus Project conditions based on City's threshold criteria. No additional E+P off-site roadway improvements are needed for the project.

6.2 Cumulative 2035 Without Project Conditions Intersection Analysis

Table 8 summarizes the weekday PM and Saturday MD peak hour intersection operations analysis results for Cumulative 2035 Without Project (2035nP) conditions, based on existing and future geometry. Appendix H includes the 2035nP conditions intersection operations analysis worksheets. As shown in Table 8, all study intersections are projected to operate at acceptable LOS, except for the following two (2) intersections:

- Junipero Serra Boulevard at Serramonte Boulevard/I-280 Northbound On-Ramp [#8] – LOS F (PM)
- Junipero Serra Boulevard at Hickey Boulevard [#16] – LOS F (PM)

6.3 Cumulative 2035 With Project Conditions Intersection Analysis

Table 8 summarizes the weekday PM and Saturday MD peak hour intersection operations analysis results for Cumulative 2035 With Project (2035+P) conditions, based on existing and future geometry. Appendix I includes the 2035+P conditions intersection operations analysis worksheets. As shown in Table 8, all study intersections are projected to operate at acceptable LOS D, except for the following two (2) intersections:

- Junipero Serra Boulevard at Serramonte Boulevard/I-280 Northbound On-Ramp [#8] – LOS F (PM)
- Junipero Serra Boulevard at Hickey Boulevard [#16] – LOS F (PM)

Table 7

Existing Plus Project Conditions Intersection Analysis Summary

Intersection			Lane Geometry (L - LT - T - TR - R)*				Existing Conditions				Existing Plus Project Conditions				Project Change	
							Weekday PM		Saturday MD		Weekday PM		Saturday MD		PM	MD
No.	Name	Type[1]	NB	SB	EB	WB	HCM[2]	LOS	HCM[2]	LOS	HCM[2]	LOS	HCM[2]	LOS		
1	SR-1 SB Ramps / Clarinada Ave	AWS	1-0-0-0-1	X	0-0-1-1-0	1-0-2-0-0	25.1	D	12.8	B	27.5	D	13.1	B	2.4	0.3
2	SR-1 NB Ramps / Serramonte Blvd	AWS	0-0-1!-0-0	0-1-0-0-1	1-0-0-1-0	0-1-0-1-0	16.1	C	14.0	B	16.9	C	14.3	B	0.8	0.3
3	Callan Blvd / Serramonte Blvd	AWS	0-1-0-1-0	1-0-1-0-1	1-0-1-1-0	1-0-1-1-0	30.3	D	21.1	C	31.7	D	22.3	C	1.4	1.2
4	Serramonte Ctr Dwy / Serramonte Blvd	TS	X	1-0-1!-0-0	1-0-2-0-0	0-0-2-0-1>	12.8	B	12.0	B	12.8	B	12.4	B	0.0	0.4
5	Gellert Blvd / Serramonte Blvd	TS	1-1-0-1-1>	1-1-0-1-0	1-0-2-0-1>	2-0-1-0-2>	34.3	C	37.7	D	35.4	D	40.0	D	1.1	2.3
6	I-280 SB Off-Ramp / Serramonte Blvd	TS	X	2-0-0-0-2	0-0-2-0-0	0-0-3-0-0	17.9	B	22.2	C	18.2	B	22.9	C	0.3	0.7
7	I-280 NB On-Ramp / Serramonte Blvd	TS	X	0	2-0-2-0-0	0-0-1-1-0	7.8	A	7.3	A	8.1	A	7.5	A	0.3	0.2
8	Junipero Serra Blvd- I-280 NB On-Ramp / Serramonte Blvd	TS	2-0-2-0-1	1-0-2-0-1	2-0-2-0-1	1-0-1-2-0	37.8	D	38.7	D	37.8	D	39.0	D	0.0	0.3
9	Gellert Blvd / Alto Serramonte Dwy-Plaza Dr	TS	1-0-2-1-0	1-0-2-1-0	0-0-1!-0-0	0-1-0-0-1	19.8	B	19.4	B	20.8	C	21.6	B	1.0	2.2
10	Callan Blvd / Hickey Blvd	TS	1-0-1-0-1	1-0-0-1-0	1-0-1-1-0	1-0-1-1-0	29.3	C	25.4	C	29.5	C	25.6	C	0.2	0.2
11	Gellert Blvd / Hickey Blvd	TS	1-1-1-0-1	1-1-1-0-1	1-0-2-0-1	2-0-2-0-1	32.4	C	34.8	C	33.0	C	38.1	D	0.6	3.3
12	I-280 SB Ramps / Hickey Blvd	TS	0	1-0-1!-0-1	0-0-2-0-1f	2-0-2-0-0	16.7	B	17.2	B	16.7	B	17.2	B	0.0	0.0
13	I-280 NB Ramps / Hickey Blvd	TS	1-1-0-0-1	0-1-0-0-1	1-0-2-0-1f	1-0-1-1-0	33.6	C	31.8	C	33.9	C	32.4	C	0.3	0.6
14	Kaiser Offices Dwy / Hickey Blvd	TS	1-0-0-0-1	X	0-0-2-0-1	1-0-2-0-0	8.8	A	1.8	A	9.0	A	1.9	A	0.2	0.1
15	Longford Dr / Hickey Blvd	TS	0-0-0-0-1	0-0-0-0-1	0-0-2-1-0	0-0-1-1-0	3.5	A	3.3	A	3.6	A	3.3	A	0.1	0.0
16	Junipero Serra Blvd / Hickey Blvd	TS	1-0-2-0-1s	1-0-2-0-1s	1-1-0-1-0	0-1-1-0-1f	41.6	D	31.0	C	41.7	D	32.0	C	0.1	1.0
17	Gellert Blvd / Southerly (Clinic) Dwy	CSS: eb	1-0-3-0-0	0-0-3-0-0	0-0-0-0-1	X	n/a	n/a	n/a	n/a	13.7	B	14.3	B	n/a	n/a
18	Gellert Blvd / Northerly (In-N-Out) Dwy	CSS: eb	0-0-3-0-0	0-0-2-1-0	0-0-0-0-1	X	13.3	B	13.4	B	14.5	B	14.9	B	1.2	1.5

Note

* L - LT- T- TR - R = Left Turn - Shared Left/Thru -Right - Thru - Shared Thru-Right - Right Turn; 1! = Left-Thru-Right lane (all-way lane); X = No road; 0 = No approach lane; f = Free Right Turn; > = Right-Turn Overlap Phasing; s = Stop

[1] Intersection Type: CSS = Cross-Street Stop; eb = Eastbound Stop; TS = Traffic Signal; AWS = All-Way Stop

[2] Highway Capacity Manual (HCM) Analysis Method, Average Delay (seconds)

Table 8

Cumulative 2035 With Project Conditions Intersection Analysis Summary

Intersection			Lane Geometry (L - LT - T - TR - R)*				2035 No Project Conditions				2035 With Project Conditions				Project Change	
							Weekday PM		Saturday MD		Weekday PM		Saturday MD		PM	MD
No.	Name	Type[1]	NB	SB	EB	WB	HCM[2]	LOS	HCM[2]	LOS	HCM[2]	LOS	HCM[2]	LOS		
1	SR-1 SB Ramps / Clarinada Ave	**TS[3]**	1-0-0-0-1	X	0-0-1-1-0	1-0-2-0-0	21.0	C	15.6	B	22.0	C	15.9	B	1.0	0.3
2	SR-1 NB Ramps / Serramonte Blvd	**TS[3]**	0-0-1!-0-0	0-1-0-0-1	1-0-0-1-0	0-1-0-1-0	50.9	D	35.2	D	51.2	D	35.8	D	0.3	0.6
3	Callan Blvd / Serramonte Blvd	**TS[3]**	0-1-0-1-0	1-0-1-0-1	1-0-1-1-0	1-0-1-1-0	34.4	C	32.0	C	34.6	C	32.7	C	0.2	0.7
4	Serramonte Ctr Dwy / Serramonte Blvd	TS	X	1-0-1!-0-0	1-0-2-0-0	0-0-2-0-1>	16.1	B	15.0	B	16.2	B	15.1	B	0.1	0.1
5	Gellert Blvd / Serramonte Blvd[4]	TS	**2**-0-**1**-1-1>	**2**-0-0-1-0	1-0-2-0-1>	2-0-1-0-2>	39.4	D	46.9	D	39.7	D	48.0	D	0.3	1.1
6	I-280 SB Off-Ramp / Serramonte Blvd	TS	X	2-0-0-0-2	0-0-2-0-0	0-0-3-0-0	18.0	B	25.9	C	18.1	B	28.8	C	0.1	2.9
7	I-280 NB On-Ramp / Serramonte Blvd	TS	X	0	2-0-2-0-0	0-0-1-1-0	10.2	B	9.8	A	10.4	B	10.2	B	0.2	0.4
8	Junipero Serra Blvd- I-280 NB On-Ramp / Serramonte Blvd	TS	2-0-2-0-1	1-0-2-0-1	2-0-2-0-1	1-0-1-2-0	93.7	F	79.6	E	93.7	F	79.6	E	0.0	0.0
9	Gellert Blvd / Alto Serramonte Dwy-Plaza Dr	TS	1-0-2-1-0	1-0-2-1-0	0-0-1!-0-0	0-1-0-0-1	20.8	C	20.7	C	21.6	C	23.3	C	0.8	2.6
10	Callan Blvd / Hickey Blvd	TS	1-0-1-0-1	1-0-0-1-0	1-0-1-1-0	1-0-1-1-0	29.3	C	26.4	C	29.9	C	26.6	C	0.6	0.2
11	Gellert Blvd / Hickey Blvd[4]	TS	1-1-1-0-1	1-1-1-0-1	1-0-2-0-1	2-0-2-0-**1>**	49.0	D	52.3	D	50.2	D	54.9	D	1.2	2.6
12	I-280 SB Ramps / Hickey Blvd	TS	0	1-0-1!-0-1	0-0-2-0-1f	2-0-2-0-0	20.2	C	19.7	B	22.3	C	19.9	B	2.1	0.2
13	I-280 NB Ramps / Hickey Blvd	TS	1-1-0-0-1	0-1-0-0-1	1-0-2-0-1f	1-0-1-1-0	45.4	D	38.6	D	45.8	D	41.7	D	0.4	3.1
14	Kaiser Offices Dwy / Hickey Blvd	TS	1-0-0-0-1	X	0-0-2-0-1	1-0-2-0-0	10.4	B	2.2	A	11.4	B	4.7	A	1.0	2.5
15	Longford Dr / Hickey Blvd	TS	0-0-0-0-1	0-0-0-0-1	0-0-2-1-0	0-0-1-1-0	5.5	A	4.1	A	5.8	A	4.3	A	0.3	0.2
16	Junipero Serra Blvd / Hickey Blvd	TS	1-0-2-0-1s	1-0-2-0-1s	1-1-0-1-0	0-1-1-0-1f	83.3	F	45.8	D	84.7	F	51.1	D	1.4	5.3
	• Improvements		**2**-0-2-0-1s	**2**-0-2-0-1s	1-1-0-1-0	0-1-1-0-1f					*53.9*	*E*	*45.9*	*D*	-29.4	0.1
17	Gellert Blvd / Southerly (Clinic) Dwy	CSS: eb	1-0-3-0-0	0-0-3-0-0	0-0-0-0-1	X	16.1	C	16.6	C	16.9	C	18.8	C	n/a	n/a
18	Gellert Blvd / Northerly (In-N-Out) Dwy	CSS: eb	0-0-3-0-0	0-0-2-1-0	0-0-0-0-1	X	15.6	C	15.8	C	16.4	C	17.6	C	0.8	1.8

Note: Deficient LOS; No Project Impact — Deficient LOS; Significant Project Impact

* L - LT- T- TR - R = Left Turn - Shared Left/Thru -Right - Thru - Shared Thru-Right - Right Turn; 1! = Left-Thru-Right lane (all-way lane); X = No road; 0 = No approach lane; f = Free Right Turn; > = Right-Turn Overlap Phasing; s = Stop; **BOLD** = Improvements

1 Intersection Type: CSS = Cross-Street Stop; eb = Eastbound Stop; TS = Traffic Signal; AWS = All-Way Stop

2 Highway Capacity Manual (HCM) Analysis Method, Average Delay (seconds)

3 City's roadway improvements listed in the Circulation Element

4 Future improvements that will be completed by Serramonte Shopping Center within the next year

Table 8 shows that the project will contribute to a significant project impact at one (1) study intersection for Cumulative 2035 With Project conditions based on City's threshold criteria. The following additional 2035+P off-site roadway improvements are needed at the following intersection:

- Junipero Serra Boulevard at Hickey Boulevard [#16]
    - Provide second northbound and southbound left turn lanes

It should be noted that the future geometry includes three new traffic signals at the following locations that are listed as roadway improvements in the City's General Plan Circulation Element:

- SR-1 Southbound Ramps at Clarinada Avenue [#1];
- SR-1 Northbound Ramps at Serramonte Boulevard [#2]; and
- Callan Boulevard at Serramonte Boulevard [#3].

Although the three new traffic signal are listed in the City's General Plan Circulation Element, the developer will be expected to pay their fair share for the signalizatoin of these new traffic signals.

The future geometry at the intersection of Gellert Boulevard and Serramonte Boulevard [#5] will be completed by the Serramonte Shopping Center within the next year; which includes the following:

- The northbound approach will shift the raised center median and the new lane configuration includes:
    - Two exclusive left turn lanes;
    - One through Lane;
    - One through-right turn lane; and
    - One exclusive right turn lane.
- The southbound approach will be restriped to include two exclusive left turn lanes and one through-right turn lane.
- The traffic signal will operate with lead-lag left-turn phasing (eliminating split phasing for the northbound and southbound approaches).

The future geometry at the intersection of Gellert Boulevard and Hickey Boulevard [#11] will be completed by the Serramonte Shopping Center within the next year, and it includes a westbound right-turn overlap phasing.

At the intersection of Junipero Serra Boulevard and Hickey Boulevard [#16], the recommended improvements of providing second northbound and southbound left turn lanes are feasible because there is right-of-way available at the 12-foot wide landscaped raised center median adjacent to the existing single left turn lanes. The raised center median may be converted to a second left turn lane.

7.0 ON-SITE CIRCULATION

This section analyzes on-site parking, pedestrian circulation and access, vehicular circulation and access, including queue lengths at the project driveways.

7.1 Parking Requirements

The proposed project will provide a total of 60 parking spaces, including 57 standard parking spaces and 3 accessible parking spaces.

Table 9 summarizes the number of parking spaces required for the proposed project uses based on the off-street parking requirements specified in the City Daly City Municipal Code Section 17.34.020.

Table 9 – City Parking Code Requirements

Land Use	Square Feet	City Code Parking Requirement	Number of Parking Spaces Required Per City Code
Fast Food Restaurant or Drive-in	3,867	1 space for each 75 square feet of floor area	52
Proposed Off-Street Parking Spaces Provided			60
Sufficient Off-Street Parking?			**Yes**

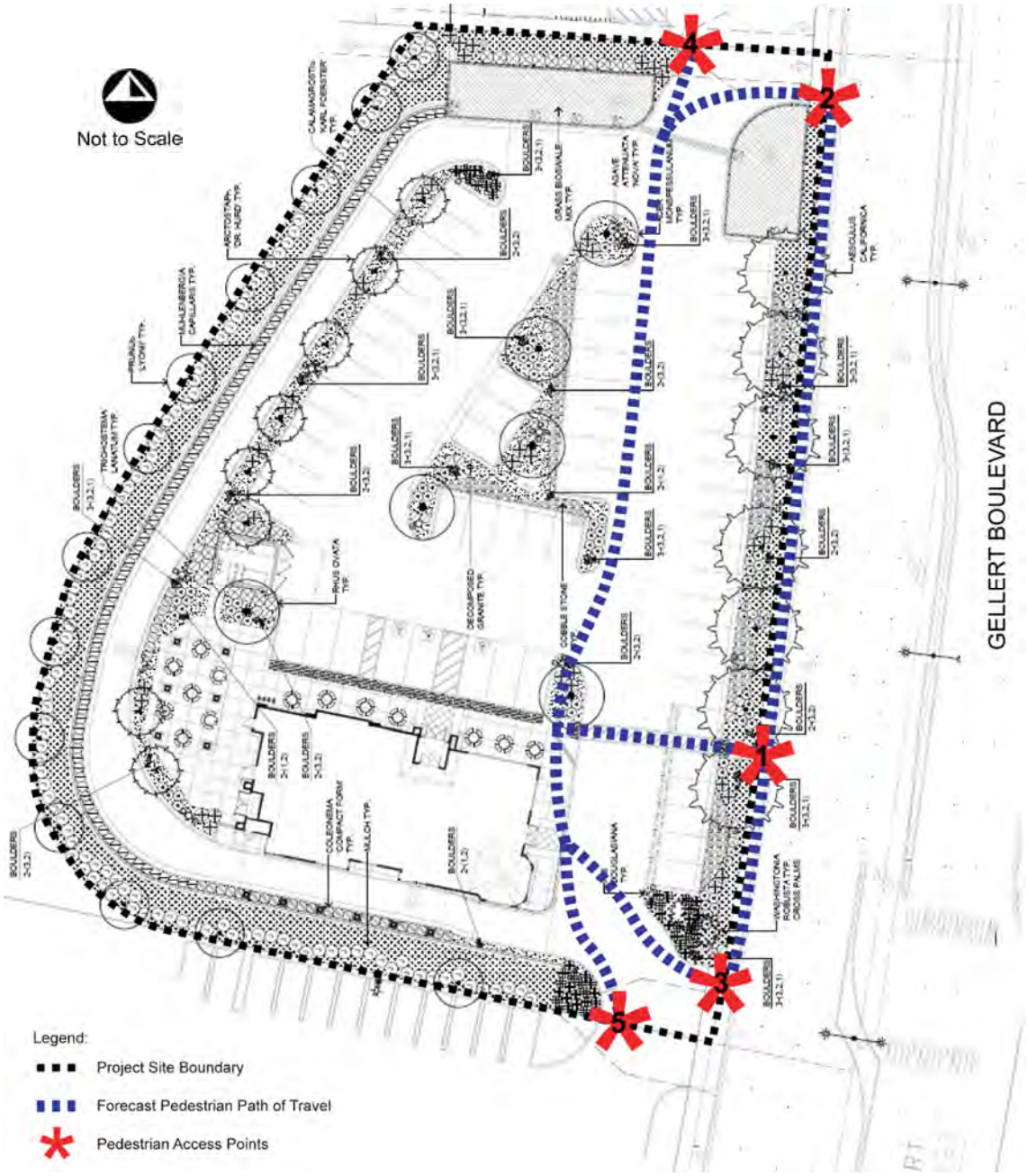
As shown in Table 9, the proposed 60 parking spaces on the project site will provide sufficient off-street parking based on the 52 parking spaces required by City's parking code requirements.

7.2 Pedestrian Circulation and Access

Exhibit 15 illustrates the on-site pedestrian access and circulation routes. Existing sidewalk with an approximate width of 5 feet is available along the west side of Gellert Boulevard adjacent to the project site with a primary pedestrian access point connecting the sidewalk to the building's main entrance via a concrete path. There are 2 other secondary pedestrian access points to the existing sidewalk on Gellert Boulevard, 1 secondary pedestrian access point to the north at the adjacent Alto Serramonte shopping center, and 1 secondary pedestrian access point to the south at the adjacent Chinese Hospital Outpatient Center. Exhibit 15 shows the various pedestrian paths of travel connecting the five pedestrian access points to the proposed building's entrances which are described below.

- Pedestrian Access Point #1 is the primary pedestrian access point and it is located at the sidewalk on Gellert Boulevard in front of the building's main entrance. The pedestrians may enter through the parking lot via a 5-foot wide concrete path connecting the sidewalk and the project's outdoor patio area which leads to the building's entrances.

Exhibit 15 – On-Site Pedestrian Circulation



- <u>Pedestrian Access Point #2</u> is located at the northerly project driveway on the sidewalk along Gellert Boulevard. The first option is for the pedestrians to continue to walk along the existing sidewalk and then enter through the parking lot via a 5-foot wide concrete path connecting the sidewalk and the project's outdoor patio area which leads to the building's entrances. The second option is that the pedestrian may enter the parking lot at the northerly driveway and then walk along the parking lot access aisle to the project's outdoor patio area.

- Pedestrian Access Point #3 is located at the southerly project driveway on the sidewalk along Gellert Boulevard. The first option is for the pedestrians to continue to walk along the existing sidewalk and then enter through the parking lot via a 5-foot wide concrete path connecting the sidewalk and the project's outdoor patio area which leads to the building's entrances. The second option is that the pedestrian may enter the parking lot at the southerly driveway and then walk to the building's entrance.

- Pedestrian Access Point #4 is located at the northerly project driveway adjacent to the Alto Serramonte shopping center. The pedestrians from the adjacent shopping center may enter the parking lot and then walk along the parking lot access aisle to the project's outdoor patio area which leads to the building's entrances.

- Pedestrian Access Point #5 is located at the southerly project driveway adjacent to the Chinese Hospital Outpatient Center. The pedestrians from the adjacent clinic may enter the site by walking pass the front of the drive-through lane to the building's entrance.

As discussed above, there are adequate pedestrian circulation features for the pedestrians to access the project building's entrances from the street and/or adjacent developments. Existing sidewalk with an approximate width of 5 feet is available along the west side of Gellert Boulevard adjacent to the project site. From the sidewalk on Gellert Boulevard, the pedestrians may enter through the parking lot via a 5-foot wide concrete path connecting the sidewalk and the project's outdoor patio area which leads to the building's entrances. From the adjacent developments to the north and south of the project site, the pedestrian may enter the parking lot and then walk along the parking lot access aisle to the project's outdoor patio area which leads to the building's entrances.

7.3 Vehicular Circulation and Access

Exhibit 16 illustrates the on-site vehicular circulation and access features. Access to the project site will continue to be provided via two shared access driveways at Gellert Boulevard. The accessibility of each driveway is described below.

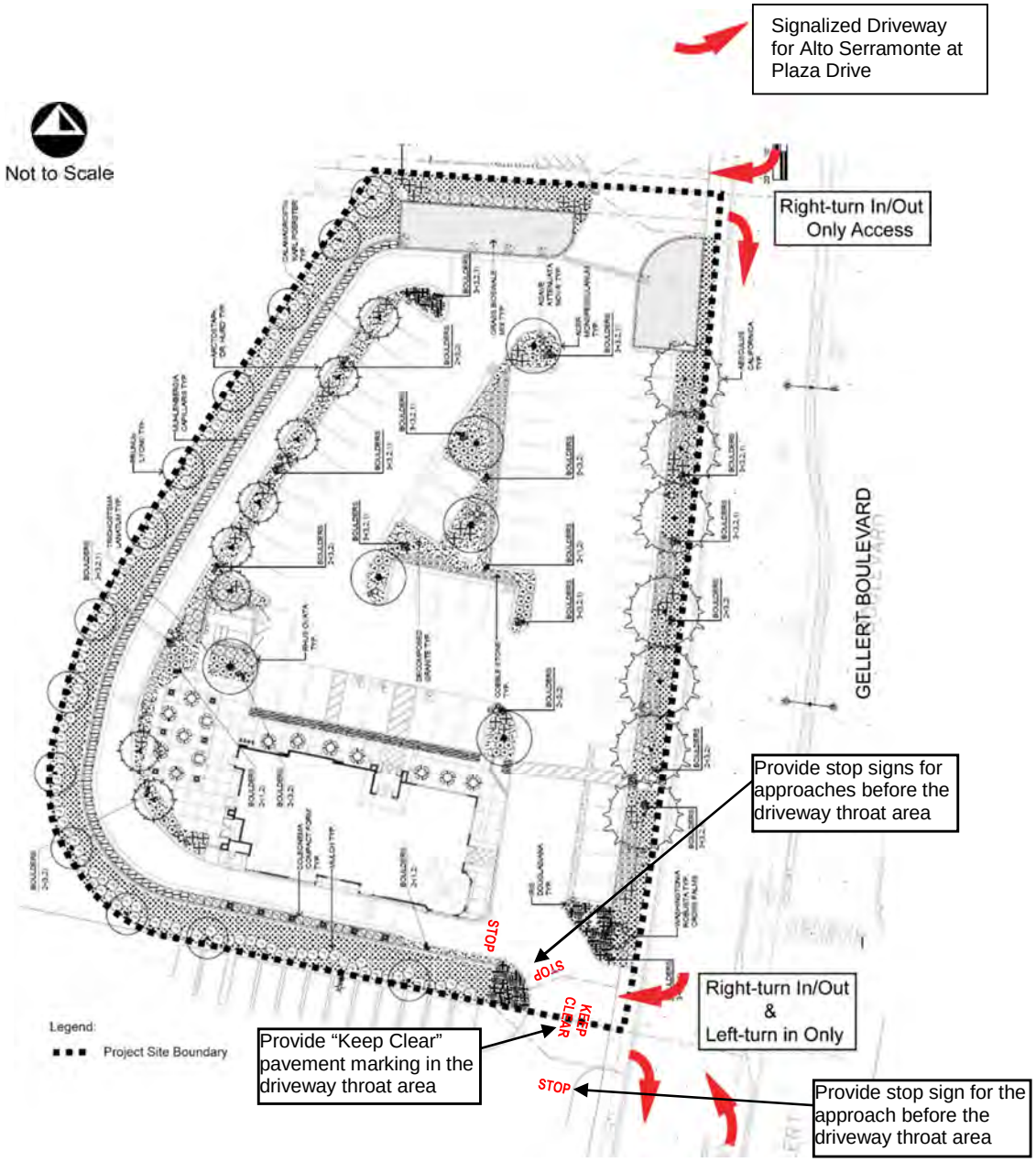
- The southerly right-in/right-out/left-in only access driveway (Intersection #17) is shared with the Chinese Hospital Outpatient Center clinic development currently under construction. This stop-controlled driveway provides all available vehicular movements in and out of the project site except for the eastbound left turn outbound movement.

- The northerly right-in/right-out only access driveway (Intersection #18) is shared with the existing Alto Serramonte shopping center. This stop-controlled driveway provides southbound right turn inbound movement and eastbound right turn outbound movement.

- Slightly further north off-site, the project site also has access to the signalized full access (Intersection #9) that serves the Alto Serramonte shopping center and the Gellert Marketplace shopping center. This signalized intersection provides full access movements.

Even though the two shared project driveways do not have direct eastbound left turn capability, the outbound vehicles from the project site are able to make eastbound left turns at the signalized full access (Intersection #9) located off-site to the north via the shared access with the adjacent Alto Serramonte shopping center at Plaza Drive.

Exhibit 16 – On-Site Vehicular Circulation



At the southerly access driveway shared with the Chinese Hospital Outpatient Center clinic development, there could be potential conflict of vehicles exiting from the In-N-Out site blocking the driveway throat area impeding the movement of the inbound vehicles accessing the clinic. To avoid the driveway throat area being blocked by exiting vehicles, "Keep Clear" pavement marking should be placed within the driveway throat area. Stop signs, stop bars and "Keep Clear" pavement marking should be provided for the exiting approaches from the In-N-Out drive-thru lane and parking aisle. Another stop sign and stop bar pavement marking should be provided for the exit approach from the clinic. It should also be noted that the inbound traffic accessing the clinic is very low (13 peak hour trips) so the occurrence of the movement conflict is low. The clinic trips are estimated based on land use code 720 (Medical-Dental Office Building) in the ITE Trip Generation Manual, 9th Edition.

7.4 Project Driveway Vehicular Queuing Analysis

Table 10 summarizes the vehicular queuing analysis for the two shared access driveways at Gellert Boulevard. Appendix J includes the queuing analysis worksheets. Since the project site also has access to the signalized full access located off-site to the north that serves the Alto Serramonte shopping center at Plaza Drive, queuing analysis for Intersection #9 is also included in this study. The southerly right-in/right-out/left-in only access driveway (Intersection #17) is shared with the Chinese Hospital Outpatient Center clinic development currently under construction. The northerly right-in/right-out only access driveway (Intersection #18) is shared with the existing Alto Serramonte shopping center.

As shown in Table 10, there are adequate storage lengths within the parking lot to accommodate the outbound queuing vehicles at both project driveways (#17 and #18) including adjacent Intersection #9. No southbound right turn queuing issue is anticipated on Gellert Boulevard at the two project driveways. At the southerly (clinic) driveway, there is adequate storage in the northbound left turn pocket on Gellert Boulevard to accommodate the northbound left turn inbound queue.

Table 10 – Project Driveway Queuing Analysis Summary

Intersection		Available Storage Length	Adequate Storage Length?	Maximum Queue Length[1]	95th Percentile Vehicular Queue			
					Existing Plus Project		2035 With Project	
No.	Name				Weekday PM	Saturday MD	Weekday PM	Saturday MD
9	Gellert Blvd / Alto Serramonte Dwy-Gellert Marketplace Dwy							
	• NB Left Turn In	225'	Yes	125'	119'	124'	119'	123'
	• SB Right Turn In	470'		275'	124'	143'	192'	255'
	• EB Left Turn Out	25' + Parking Aisle[2]	Yes	175'	110'	110'	112'	159'
17	Gellert Blvd / Southerly (Clinic) Dwy							
	• NB Left Turn In	125'	Yes	25'	6'	12'	7'	14'
	• SB Right Turn In	140'	Yes	0'	0'	0'	0'	0'
	• EB Right Turn Out	25' + Parking Aisle[2]	Yes	25'	2'	3'	5'	7'
18	Gellert Blvd / Northerly (In-N-Out) Dwy							
	• SB Right Turn In	270'	Yes	0'	0'	0'	0'	0'
	• EB Right Turn Out	25' + Parking Aisle[2]	Yes	25'	5'	4'	3'	4'

Note

[1] Maximum queue length rounded up to vehicle length of 25 feet per vehicle.

[2] For exiting traffic, the available storage length includes the 25-foot throat at the driveway and parking access aisle.

7.5 Drive-Through Lane Queuing Analysis

To evaluate the potential vehicular queue of the drive-through lane, sample survey field observations of drive-through lane queues were conducted at the following three existing In-N-Out Burger locations:

- 11 Rollins Road, Millbrae, CA 94030;
- 949 Veterans Boulevard, Redwood City, CA 94063; and
- 445 Industrial Road, San Carlos, CA 94070.

These 3 restaurants were chosen as survey site because they are comparable to the proposed project site in terms of the building size, site configuration and typical operations. The existing Daly City In-N-Out restaurant located at 260 Washington Street was not included in the analysis because it is usually busy due to its close proximity to the I-280 Freeway with higher visibility and more direct access to the freeway compared to the proposed project site at Gellert Boulevard. The existing Daly City site at Washington Street would conservatively skews the average calculation higher than what would be expected in reality at the proposed project site at 372 Gellert Boulevard in Daly City.

The vehicular queues were observed and documented in 15-minute intervals from 4:00 PM to 6:00 PM on a typical weekday and from 12:00 PM to 2:00 PM on a typical Saturday in June 2015. Table 11 summarizes the observed drive-through lane vehicular queue data collected at the three In-N-Out locations.

As shown in Table 11, the maximum observed drive-through queue at each of the three survey locations is as follows:

- Millbrae In-N-Out – 16 vehicles on a typical weekday and 15 vehicles on a typical Saturday;
- Redwood City In-N-Out – 16 vehicles on a typical weekday and 21 vehicles on a typical Saturday; and
- San Carlos In-N-Out – 17 vehicles on a typical weekday and 27 vehicles on a typical Saturday.

As shown in Table 11, the average peak vehicular queue length at the three survey locations is 16 vehicles on a typical weekday and 21 vehicles on a typical Saturday. It is important to note that the San Carlos In-N-Out location sample survey location is located at the US-101 interchange with higher visibility and more direct access to the freeway compared to the other two surveyed locations which are more consistent to the proposed project site; therefore, the San Carlos In-N-Out location is expected to generate higher trips and vehicular queues than the proposed In-N-Out location at Daly City. Notwithstanding, the observed drive-through queue data at the San Carlos In-N-Out location has been included in the average drive-through queue calculation, which conservatively skews the average calculation higher than what would be expected in reality at the proposed project site at 372 Gellert Boulevard in Daly City.

Table 11 – Summary of Drive-Through Lane Vehicular Queue Observations

Day	Time	Observed Drive-Through Queue			Average	Sufficient Drive-Through Storage Provided at Proposed Project?[1]
		Millbrae In-N-Out	Redwood City In-N-Out	San Carlos In-N-Out		
Weekday	4:00 PM	13	14	17	15	Yes
	4:15 PM	14	16	16	15	Yes
	4:30 PM	15	16	16	16	Yes
	4:4	14	15	16	15	Yes
	5:00 PM	13	14	16	14	Yes
	5:15 PM	15	14	16	15	Yes
	5:30 PM	16	15	17	16	Yes
	5:45 PM	15	15	17	16	Yes
	Maximum	16	16	17	**16**	**Yes**
Saturday	12:00 PM	14	18	23	18	Yes
	12:15 PM	15	21	27	21	No
	12:30 PM	14	20	22	19	Yes
	12:45 PM	14	18	21	18	Yes
	1:00 PM	14	21	26	20	No
	1:15 PM	13	20	23	19	Yes
	1:30 PM	14	19	24	19	Yes
	1:45 PM	15	21	21	19	Yes
	Maximum	15	21	27	**21**	**No**

[1] Based on average observed drive-through queue.

Based on the proposed project site plan shown in Exhibit 2, the proposed project provides a vehicular queue storage capacity for approximately 18 vehicles. Based on the average peak drive-through queue lengths shown in Table 11, the proposed Daly City site's drive-through storage lane is forecast to provide sufficient storage capacity during the weekday PM peak period and the Saturday mid-day (MD) peak period, except during 12:15 PM on Saturday when the drive-through storage capacity is forecast to be exceeded by 3 vehicles and during 1:00 PM on Saturday when it is forecast to be exceeded by 2 vehicles.

During the rare occasions when the drive-through lane queue exceeds the storage length by 3 vehicles, the extra vehicles will likely queue along the parking lot aisle adjacent to the "Bio-retention Area A" which will not block other parking lot aisles and the northerly project entry. During normal operating conditions, the proposed site plan does provide adequate vehicular queue storage at the drive-through lane. Nevertheless, it is recommended that In-N-Out provides personnel to take food orders at the end of the drive-thru queue during the mid-day peak period on the weekends to facilitate circulation and minimize the drive-thru queue. The standard

operational procedure for In-N-Out is to deploy associates with handheld wireless order tablets as soon as the queue exceeds 8 vehicles at the menu board, which will help facilitate efficient movements through the queue.

8.0 CONCLUSIONS

The proposed project is located at 372 Gellert Boulevard in Daly City, and it consists of a 3,867 square foot fast-food restaurant with a drive through lane. The proposed project will replace an existing and currently operational Sizzler Restaurant. It is anticipated to be completed and operational in approximately one year in 2016.

The proposed project is forecast to generate approximately 100 net weekday PM peak hour trips and 254 net Saturday Mid-Day (MD) peak hour trips including both new project trips and existing site traffic credit. New project site trip generation is estimated based on sample surveys conducted at three existing In-N-Out Restaurant locations in nearby neighbor cities. Traffic counts were collected at the existing site driveways to determine the current site traffic.

For both existing without and with project traffic conditions, all existing study intersections are operating at LOS D or better.

The results of the intersection operations analysis indicate that the proposed project will not significantly impact any of the study intersections for Existing Plus Project conditions. Without significant project impacts, no off-site mitigation measures are required for Existing Plus Project conditions.

For both Cumulative 2035 without and with project conditions, all study intersections are projected to operate at acceptable LOS, except for the following two (2) intersections:

- Junipero Serra Boulevard at Serramonte Boulevard/I-280 Northbound On-Ramp [#8] – LOS F (PM)
- Junipero Serra Boulevard at Hickey Boulevard [#16] – LOS F (PM)

The project will contribute to a significant project impact at one (1) study intersection for Cumulative 2035 With Project conditions based on City's threshold criteria. The following additional 2035 off-site roadway improvements are needed at the following intersection:

- Junipero Serra Boulevard at Hickey Boulevard [#16]
    - Provide second northbound and southbound left turn lanes

It should be noted that the future geometry includes three new traffic signals at the following locations that are listed as roadway improvements in the City's General Plan Circulation Element:

- SR-1 Southbound Ramps at Clarinada Avenue [#1];
- SR-1 Northbound Ramps at Serramonte Boulevard [#2]; and
- Callan Boulevard at Serramonte Boulevard [#3].

Although the three new traffic signal are listed in the City's General Plan Circulation Element, the developer will be expected to pay their fair share for the signalization of these new traffic signals.

The future geometry at the intersection of Gellert Boulevard and Serramonte Boulevard [#5] will be completed by the Serramonte Shopping Center within the next year; which includes the following:

- The northbound approach will shift the raised center median and the new lane configuration includes:
    - Two exclusive left turn lanes;
    - One through Lane;
    - One through-right turn lane; and
    - One exclusive right turn lane.
- The southbound approach will be restriped to include two exclusive left turn lanes and one through-right turn lane.
- The traffic signal will operate with lead-lag left-turn phasing (eliminating split phasing for the northbound and southbound approaches).

The future geometry at the intersection of Gellert Boulevard and Hickey Boulevard [#11] will be completed by the Serramonte Shopping Center within the next year, and it includes a westbound right-turn overlap phasing.

At the intersection of Junipero Serra Boulevard and Hickey Boulevard [#16], the recommended improvements of providing second northbound and southbound left turn lanes are feasible because there is right-of-way available at the 12-foot wide landscaped raised center median adjacent to the existing single left turn lanes. The raised center median may be converted to a second left turn lane.

The proposed project will provide a total of 60 parking spaces, including 57 standard parking spaces and 3 accessible parking spaces. The proposed 60 parking spaces on the project site will provide sufficient off-street parking based on the 52 parking spaces required by City's parking code requirements.

The proposed site plan provides adequate pedestrian circulation features for the pedestrians to access the project building's entrances from the street and/or adjacent developments. Existing sidewalk with an approximate width of 5 feet is available along the west side of Gellert Boulevard adjacent to the project site. From the sidewalk on Gellert Boulevard, the pedestrians may enter through the parking lot via a 5-foot wide concrete path connecting the sidewalk and the project's outdoor patio area which leads to the building's entrances. From the adjacent developments to the north and south of the project site, the pedestrian may enter the parking lot and then walk along the parking lot access aisle to the project's outdoor patio area which leads to the building's entrances.

Access to the project site will continue to be provided via two shared access driveways at Gellert Boulevard. The southerly right-in/right-out/left-in only access driveway is shared with a medical office development currently under construction. The northerly right-in/right-out only access driveway is shared with the existing Alto Serramonte shopping center. Slightly further north, the project site also has access to the signalized full access that serves the Alto Serramonte shopping center and the Gellert Marketplace shopping center. Even though the two shared project driveways do not have direct eastbound left turn capability, the outbound vehicles from the project site are able to make eastbound left turns at the signalized full access located off-site to the north via access through the adjacent Alto Serramonte shopping center.

At the southerly access driveway shared with the Chinese Hospital Outpatient Center clinic development, there could be potential conflict of vehicles exiting from the In-N-Out site blocking the driveway throat area impeding the movement of the inbound vehicles accessing the clinic. To avoid the driveway throat area being blocked by exiting vehicles, "Keep Clear" pavement marking

should be placed within the driveway throat area. Stop signs, stop bars and “Keep Clear” pavement marking should be provided for the exiting approaches from the In-N-Out drive-thru lane and parking aisle. Another stop sign and stop bar pavement marking should be provided for the exit approach from the clinic. It should also be noted that the inbound traffic accessing the clinic is very low (13 peak hour trips) so the occurrence of the movement conflict is low. The clinic trips are estimated based on land use code 720 (Medical-Dental Office Building) in the ITE Trip Generation Manual, 9th Edition.

The driveway queuing analysis shows that there are adequate storage lengths within the parking lot to accommodate the outbound queuing vehicles at both project driveways. No southbound right turn queuing issue is anticipated on Gellert Boulevard at the two project driveways. At the southerly (clinic) driveway, there is adequate storage in the northbound left turn pocket on Gellert Boulevard to accommodate the northbound left turn inbound queue.

The vehicular queue of the drive-through lane is estimated based on sample survey field observations of drive-through lane queues at three existing In-N-Out Burger locations in the neighboring cities. The average peak vehicular queue length at the three survey locations is 16 vehicles on a typical weekday and 21 vehicles on a typical Saturday. It is important to note that the San Carlos In-N-Out location sample survey location is located at the US-101 interchange with higher visibility and more direct access to the freeway compared to the other two surveyed locations which are more consistent to the proposed project site; therefore, the San Carlos In-N-Out location is expected to generate higher trips and vehicular queues than the proposed In-N-Out location at Daly City. Notwithstanding, the observed drive-through queue data at the San Carlos In-N-Out location has been included in the average drive-through queue calculation, which conservatively skews the average calculation higher than what would be expected in reality at the proposed project site in Daly City.

The proposed Daly City site’s drive-through storage lane is forecast to provide sufficient storage capacity during the weekday PM peak period and the Saturday mid-day (MD) peak period, except during 12:15 PM on Saturday when the drive-through storage capacity is forecast to be exceeded by 3 vehicles and during 1:00 PM on Saturday when it is forecast to be exceeded by 2 vehicles. During the rare occasions when the drive-through lane queue exceeds the storage length by 3 vehicles, the extra vehicles will likely queue along the parking lot aisle adjacent to the “Bio-retention Area A” which will not block other parking lot aisles and the northerly project entry. During normal operating conditions, the proposed site plan does provide adequate vehicular queue storage at the drive-through lane. Nevertheless, it is recommended that In-N-Out provides personnel to take food orders at the end of the drive-thru queue during the mid-day peak period on the weekends to facilitate circulation and minimize the drive-thru queue. The standard operational procedure for In-N-Out is to deploy associates with handheld wireless order tablets as soon as the queue exceeds 8 vehicles at the menu board, which will help facilitate efficient movements through the queue.

Appendix A – Traffic Count Data Sheets

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE:	LOCATION:	Daly City	PROJECT #:	SC0629
Sat, May 30, 15	NORTH & SOUTH:	SR-1 SB Ramps	LOCATION #:	1
	EAST & WEST:	Clarinada	CONTROL:	STOP ALL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND SR-1 SB Ramps			SOUTHBOUND SR-1 SB Ramps			EASTBOUND Clarinada			WESTBOUND Clarinada			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1	X	1	X	X	X	X	2	0	1	2	X	
AM	12:00 PM	54	0	41	0	0	0	1	17	23	35	15	0	186
	12:15 PM	59	0	68	0	0	0	1	15	23	45	22	0	233
	12:30 PM	69	0	37	0	0	0	0	11	15	45	20	0	197
	12:45 PM	71	0	40	0	0	0	1	15	18	54	23	0	222
	1:00 PM	67	0	56	0	0	0	0	11	14	53	13	0	214
	1:15 PM	62	0	37	0	0	0	0	15	13	37	11	0	175
	1:30 PM	60	0	30	0	0	0	0	11	18	45	10	0	174
	1:45 PM	65	0	44	0	0	0	0	14	19	37	12	0	191
	VOLUMES	507	0	353	0	0	0	3	109	143	351	126	0	1,592
	APPROACH %	59%	0%	41%	0%	0%	0%	1%	43%	56%	74%	26%	0%	
	APP/DEPART	860	/	0	0	/	476	255	/	481	477	/	635	0
	BEGIN PEAK HR	12:15 PM												
	VOLUMES	266	0	201	0	0	0	2	52	70	197	78	0	866
	APPROACH %	57%	0%	43%	0%	0%	0%	2%	42%	56%	72%	28%	0%	
	PEAK HR FACTOR	0.919			0.000			0.795			0.893			0.929
	APP/DEPART	467	/	0	0	/	257	124	/	264	275	/	345	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR	5:45 PM												
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.000			0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE:	LOCATION:	Daly City	PROJECT #:	SC0629
Wed, May 27, 15	NORTH & SOUTH:	SR-1 SB Ramps	LOCATION #:	1
	EAST & WEST:	Clarinada	CONTROL:	STOP ALL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND SR-1 SB Ramps			SOUTHBOUND SR-1 SB Ramps			EASTBOUND Clarinada			WESTBOUND Clarinada			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1	X	1	X	X	X	X	2	0	1	2	X	
AM	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR	1:45 PM												
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.000			0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
PM	4:00 PM	91	0	49	0	0	0	1	17	13	43	20	0	234
	4:15 PM	97	0	48	0	0	0	0	14	13	38	19	0	229
	4:30 PM	118	0	48	0	0	0	1	13	15	58	19	0	272
	4:45 PM	101	0	61	0	0	0	0	11	19	44	16	0	252
	5:00 PM	112	0	59	0	0	0	1	14	19	69	20	0	294
	5:15 PM	117	0	72	0	0	0	3	8	28	52	26	0	306
	5:30 PM	119	0	51	0	0	0	1	10	17	52	23	0	273
	5:45 PM	110	0	74	0	0	0	1	15	18	53	29	0	300
	VOLUMES	865	0	462	0	0	0	8	102	142	409	172	0	2,160
	APPROACH %	65%	0%	35%	0%	0%	0%	3%	40%	56%	70%	30%	0%	
	APP/DEPART	1,327	/	0	0	/	523	252	/	593	581	/	1,044	0
	BEGIN PEAK HR	5:00 PM												
	VOLUMES	458	0	256	0	0	0	6	47	82	226	98	0	1,173
	APPROACH %	64%	0%	36%	0%	0%	0%	4%	35%	61%	70%	30%	0%	
	PEAK HR FACTOR	0.944			0.000			0.865			0.910			0.958
	APP/DEPART	714	/	0	0	/	295	135	/	317	324	/	561	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE: Sat, May 30, 15

LOCATION: Daly City
NORTH & SOUTH: SR-1 NB Ramps
EAST & WEST: Serramonte

PROJECT #: SC0629
LOCATION #: 2
CONTROL: STOP ALL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND SR-1 NB Ramps			SOUTHBOUND SR-1 NB Ramps			EASTBOUND Serramonte			WESTBOUND Serramonte			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	0	1	0	0.5	0.5	1	1	1	0	0	2	0	
AM	12:00 PM	0	0	0	76	0	15	57	37	1	2	36	42	266
	12:15 PM	1	0	2	63	0	18	51	46	1	1	38	37	258
	12:30 PM	0	1	0	73	0	23	58	37	1	0	37	36	266
	12:45 PM	0	0	3	67	1	23	67	41	2	1	39	33	277
	1:00 PM	0	4	6	66	0	14	53	35	0	2	31	55	266
	1:15 PM	0	1	1	65	0	17	57	42	0	4	38	54	279
	1:30 PM	3	1	6	39	0	17	60	34	1	3	35	44	243
	1:45 PM	2	2	1	66	0	11	52	37	2	3	27	33	236
	VOLUMES	6	9	19	515	1	138	455	309	8	16	281	334	2,091
	APPROACH %	18%	26%	56%	79%	0%	21%	59%	40%	1%	3%	45%	53%	
	APP/DEPART	34	/	797	654	/	22	772	/	846	631	/	426	0
	BEGIN PEAK HR		12:30 PM											
	VOLUMES	0	6	10	271	1	77	235	155	3	7	145	178	1,088
	APPROACH %	0%	38%	63%	78%	0%	22%	60%	39%	1%	2%	44%	54%	
	PEAK HR FACTOR		0.400			0.909			0.893			0.859		0.975
	APP/DEPART	16	/	418	349	/	11	393	/	436	330	/	223	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		5:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE: Wed, May 27, 15

LOCATION: Daly City
NORTH & SOUTH: SR-1 NB Ramps
EAST & WEST: Serramonte

PROJECT #: SC0629
LOCATION #: 2
CONTROL: STOP ALL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND SR-1 NB Ramps			SOUTHBOUND SR-1 NB Ramps			EASTBOUND Serramonte			WESTBOUND Serramonte			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	0	1	0	0.5	0.5	1	1	1	0	0	2	0	
AM	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		1:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
PM	4:00 PM	3	3	1	48	2	15	52	31	2	6	29	35	227
	4:15 PM	4	5	1	60	3	19	45	41	5	5	35	36	259
	4:30 PM	3	6	5	44	6	15	58	37	3	5	47	41	270
	4:45 PM	4	2	9	47	3	11	64	34	7	19	42	35	277
	5:00 PM	4	11	17	42	6	22	45	36	7	16	32	39	277
	5:15 PM	4	12	15	49	8	20	70	49	14	27	40	40	348
	5:30 PM	2	5	19	43	4	16	58	31	10	17	42	28	275
	5:45 PM	3	9	6	41	1	21	48	37	10	18	51	36	281
	VOLUMES	27	53	73	374	33	139	440	296	58	113	318	290	2,214
	APPROACH %	18%	35%	48%	68%	6%	25%	55%	37%	7%	16%	44%	40%	
	APP/DEPART	153	/	783	546	/	202	794	/	745	721	/	484	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	13	37	57	175	19	79	221	153	41	78	165	143	1,181
	APPROACH %	12%	35%	53%	64%	7%	29%	53%	37%	10%	20%	43%	37%	
	PEAK HR FACTOR		0.836			0.886			0.780			0.902		0.848
	APP/DEPART	107	/	401	273	/	137	415	/	386	386	/	257	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE: Sat, May 30, 15

LOCATION: Daly City
NORTH & SOUTH: Callan
EAST & WEST: Serramonte

PROJECT #: SC0629
LOCATION #: 3
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Callan			SOUTHBOUND Callan			EASTBOUND Serramonte			WESTBOUND Serramonte			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	0	2	0	1	1	1	1	2	0	1	2	0	
AM	12:00 PM	28	51	25	32	44	15	27	76	18	24	34	42	416
	12:15 PM	24	48	35	29	58	19	19	70	15	29	34	46	426
	12:30 PM	22	39	27	30	42	19	17	78	11	36	36	49	406
	12:45 PM	11	53	29	32	42	25	25	73	14	40	41	47	432
	1:00 PM	41	46	45	30	52	5	20	71	14	23	31	38	416
	1:15 PM	29	42	23	37	46	4	14	79	11	32	44	35	396
	1:30 PM	19	56	22	29	44	13	10	64	13	28	45	42	385
	1:45 PM	16	36	41	25	44	31	14	77	5	35	30	42	396
	VOLUMES	190	371	247	244	372	131	146	588	101	247	295	341	3,273
	APPROACH %	24%	46%	31%	33%	50%	18%	17%	70%	12%	28%	33%	39%	
	APP/DEPART	808	/	872	747	/	708	835	/	1,078	883	/	615	0
	BEGIN PEAK HR		12:15 PM											
	VOLUMES	98	186	136	121	194	68	81	292	54	128	142	180	1,680
	APPROACH %	23%	44%	32%	32%	51%	18%	19%	68%	13%	28%	32%	40%	
	PEAK HR FACTOR		0.795			0.903			0.882			0.879		0.972
	APP/DEPART	420	/	453	383	/	372	427	/	547	450	/	308	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		5:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE: Wed, May 27, 15

LOCATION: Daly City
NORTH & SOUTH: Callan
EAST & WEST: Serramonte

PROJECT #: SC0629
LOCATION #: 3
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Callan			SOUTHBOUND Callan			EASTBOUND Serramonte			WESTBOUND Serramonte			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	0	2	0	1	1	1	1	2	0	1	2	0	
AM	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		1:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
PM	4:00 PM	22	40	29	44	38	7	18	50	12	28	41	38	367
	4:15 PM	13	44	32	36	64	16	26	55	11	32	41	42	412
	4:30 PM	33	54	17	28	54	17	17	56	14	25	43	52	410
	4:45 PM	21	55	26	33	55	19	18	53	15	28	56	48	427
	5:00 PM	24	44	35	34	64	28	11	61	24	39	44	61	469
	5:15 PM	30	65	35	32	52	35	13	75	22	36	47	48	490
	5:30 PM	17	62	28	31	59	25	13	60	18	41	54	55	463
	5:45 PM	20	60	23	27	68	16	19	51	15	35	60	58	452
	VOLUMES	180	424	225	265	454	163	135	461	131	264	386	402	3,490
	APPROACH %	22%	51%	27%	30%	51%	18%	19%	63%	18%	25%	37%	38%	
	APP/DEPART	829	/	976	882	/	839	727	/	944	1,052	/	731	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	91	231	121	124	243	104	56	247	79	151	205	222	1,874
	APPROACH %	21%	52%	27%	26%	52%	22%	15%	65%	21%	26%	35%	38%	
	PEAK HR FACTOR		0.852			0.935			0.868			0.944		0.956
	APP/DEPART	443	/	521	471	/	467	382	/	486	578	/	400	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE: Sat, May 30, 15

LOCATION: Daly City
NORTH & SOUTH: Serramonte Shopping Center
EAST & WEST: Serramonte

PROJECT #: SC0629
LOCATION #: 4
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ◄ W ▲ N S ▼ E ►

		NORTHBOUND Serramonte Shopping Center			SOUTHBOUND Serramonte Shopping Center			EASTBOUND Serramonte			WESTBOUND Serramonte			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	X	X	X	1	0.5	0.5	1	2	0	0	2	1	
AM	12:00 PM	0	0	0	77	0	41	46	80	0	9	56	87	396
	12:15 PM	0	0	0	67	0	42	47	82	0	13	69	95	415
	12:30 PM	0	0	0	65	0	52	52	81	0	20	75	89	434
	12:45 PM	0	0	0	74	0	55	44	84	0	9	64	95	425
	1:00 PM	0	0	0	73	0	44	55	85	0	16	56	95	424
	1:15 PM	0	0	0	83	0	54	45	86	0	24	58	96	446
	1:30 PM	0	0	0	78	0	52	50	67	0	7	63	90	407
	1:45 PM	0	0	0	76	0	48	52	85	0	16	57	94	428
	VOLUMES	0	0	0	593	0	388	391	650	0	114	498	741	3,375
	APPROACH %	0%	0%	0%	60%	0%	40%	38%	62%	0%	8%	37%	55%	
	APP/DEPART	0	/	1,130	981	/	0	1,041	/	1,357	1,353	/	888	0
	BEGIN PEAK HR		12:30 PM											
	VOLUMES	0	0	0	295	0	205	196	336	0	69	253	375	1,729
	APPROACH %	0%	0%	0%	59%	0%	41%	37%	63%	0%	10%	36%	54%	
	PEAK HR FACTOR		0.000			0.912			0.950			0.947		0.969
	APP/DEPART	0	/	570	500	/	0	532	/	700	697	/	459	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		5:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE: Wed, May 27, 15

LOCATION: Daly City
NORTH & SOUTH: Serramonte Shopping Center
EAST & WEST: Serramonte

PROJECT #: SC0629
LOCATION #: 4
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ◄ W ▲ N S ▼ E ►

		NORTHBOUND Serramonte Shopping Center			SOUTHBOUND Serramonte Shopping Center			EASTBOUND Serramonte			WESTBOUND Serramonte			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	X	X	X	1	0.5	0.5	1	2	0	0	2	1	
AM	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		1:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
PM	4:00 PM	0	0	0	58	0	43	53	69	0	11	53	67	354
	4:15 PM	0	0	0	73	0	48	42	80	0	7	78	80	408
	4:30 PM	0	0	0	59	0	39	39	63	0	8	76	86	370
	4:45 PM	0	0	0	74	0	54	57	54	0	13	74	84	410
	5:00 PM	0	0	0	63	0	57	47	73	0	15	93	90	438
	5:15 PM	0	0	0	63	0	46	57	84	0	13	91	72	426
	5:30 PM	0	0	0	48	0	64	34	73	0	12	87	71	389
	5:45 PM	0	0	0	60	0	45	38	53	0	9	101	55	361
	VOLUMES	0	0	0	498	0	396	367	549	0	88	653	605	3,156
	APPROACH %	0%	0%	0%	56%	0%	44%	40%	60%	0%	7%	49%	45%	
	APP/DEPART	0	/	970	894	/	0	916	/	1,135	1,346	/	1,051	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	0	0	0	248	0	221	195	284	0	53	345	317	1,663
	APPROACH %	0%	0%	0%	53%	0%	47%	41%	59%	0%	7%	48%	44%	
	PEAK HR FACTOR		0.000			0.916			0.849			0.903		0.949
	APP/DEPART	0	/	511	469	/	0	479	/	585	715	/	567	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE: Sat, May 30, 15

LOCATION: Daly City
NORTH & SOUTH: Gellert
EAST & WEST: Serramonte

PROJECT #: SC0629
LOCATION #: 5
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Gellert			SOUTHBOUND Gellert			EASTBOUND Serramonte			WESTBOUND Serramonte			
	LANES:	NL 1.5	NT 1	NR 1.5	SL 1.5	ST 1	SR 0.5	EL 1	ET 2	ER 1	WL 2	WT 1	WR 2	TOTAL
AM	12:00 PM	78	82	143	91	95	13	8	68	75	153	66	140	1,012
	12:15 PM	87	93	160	109	93	17	4	80	80	118	68	138	1,047
	12:30 PM	102	78	161	98	110	17	12	79	83	121	58	126	1,045
	12:45 PM	91	74	135	107	97	8	20	74	68	156	68	152	1,050
	1:00 PM	88	81	185	115	88	14	12	76	73	173	65	163	1,133
	1:15 PM	82	81	180	108	86	21	11	84	86	133	75	154	1,101
	1:30 PM	84	79	178	117	78	17	12	90	69	123	41	155	1,043
	1:45 PM	79	78	176	111	91	22	16	85	65	116	63	162	1,064
	VOLUMES	691	646	1,318	856	738	129	95	636	599	1,093	504	1,190	8,495
	APPROACH %	26%	24%	50%	50%	43%	7%	7%	48%	45%	39%	18%	43%	
	APP/DEPART	2,655	/	1,896	1,723	/	2,438	1,330	/	2,812	2,787	/	1,349	0
	BEGIN PEAK HR		1:00 PM											
	VOLUMES	333	319	719	451	343	74	51	335	293	545	244	634	4,341
	APPROACH %	24%	23%	52%	52%	40%	9%	8%	49%	43%	38%	17%	45%	
	PEAK HR FACTOR		0.968			0.969			0.938			0.887		0.958
	APP/DEPART	1,371	/	985	868	/	1,183	679	/	1,507	1,423	/	666	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		5:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE: Wed, May 27, 15

LOCATION: Daly City
NORTH & SOUTH: Gellert
EAST & WEST: Serramonte

PROJECT #: SC0629
LOCATION #: 5
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Gellert			SOUTHBOUND Gellert			EASTBOUND Serramonte			WESTBOUND Serramonte			
	LANES:	NL 1.5	NT 1	NR 1.5	SL 1.5	ST 1	SR 0.5	EL 1	ET 2	ER 1	WL 2	WT 1	WR 2	TOTAL
AM	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		1:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
PM	4:00 PM	60	64	135	79	75	13	9	63	57	133	59	105	852
	4:15 PM	68	55	124	95	82	19	12	75	74	115	60	117	896
	4:30 PM	97	75	159	80	67	12	10	56	64	144	70	100	934
	4:45 PM	72	62	142	89	63	15	11	61	70	138	69	103	895
	5:00 PM	90	76	164	105	80	15	12	73	52	133	76	109	985
	5:15 PM	95	61	144	93	69	8	11	82	63	127	86	131	970
	5:30 PM	74	61	146	95	72	19	10	74	61	145	72	114	943
	5:45 PM	81	51	166	99	70	13	12	70	45	129	77	113	926
	VOLUMES	637	505	1,180	735	578	114	87	554	486	1,064	569	892	7,401
	APPROACH %	27%	22%	51%	52%	41%	8%	8%	49%	43%	42%	23%	35%	
	APP/DEPART	2,322	/	1,444	1,427	/	2,143	1,127	/	2,466	2,525	/	1,348	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	340	249	620	392	291	55	45	299	221	534	311	467	3,824
	APPROACH %	28%	21%	51%	53%	39%	7%	8%	53%	39%	41%	24%	36%	
	PEAK HR FACTOR		0.916			0.923			0.905			0.953		0.971
	APP/DEPART	1,209	/	745	738	/	1,054	565	/	1,309	1,312	/	716	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE: Sat, May 30, 15

LOCATION: Daly City
NORTH & SOUTH: I-280 SB Off-Ramp
EAST & WEST: Serramonte

PROJECT #: SC0629
LOCATION #: 6
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND I-280 SB Off-Ramp			SOUTHBOUND I-280 SB Off-Ramp			EASTBOUND Serramonte			WESTBOUND Serramonte			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	X	X	X	2	X	2	X	2	X	X	3	X	
AM	12:00 PM	0	0	0	178	0	188	0	336	0	2	117	0	821
	12:15 PM	0	0	0	206	0	205	0	345	0	0	124	0	880
	12:30 PM	0	0	0	187	0	212	0	308	0	0	161	0	868
	12:45 PM	0	0	0	184	0	225	0	334	0	0	151	0	894
	1:00 PM	0	0	0	199	0	221	0	404	0	0	148	0	972
	1:15 PM	0	0	0	180	0	197	0	373	0	0	143	0	893
	1:30 PM	0	0	0	207	0	199	0	370	0	0	141	0	917
	1:45 PM	0	0	0	191	0	208	0	373	0	0	144	0	916
	VOLUMES	0	0	0	1,532	0	1,655	0	2,843	0	2	1,129	0	7,161
	APPROACH %	0%	0%	0%	48%	0%	52%	0%	100%	0%	0%	100%	0%	
	APP/DEPART	0	/	0	3,187	/	0	2,843	/	4,377	1,131	/	2,784	0
	BEGIN PEAK HR		1:00 PM											
	VOLUMES	0	0	0	777	0	825	0	1,520	0	0	576	0	3,698
	APPROACH %	0%	0%	0%	49%	0%	51%	0%	100%	0%	0%	100%	0%	
	PEAK HR FACTOR		0.000			0.954			0.941			0.973		0.951
	APP/DEPART	0	/	0	1,602	/	0	1,520	/	2,297	576	/	1,401	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		5:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE: Wed, May 27, 15

LOCATION: Daly City
NORTH & SOUTH: I-280 SB Off-Ramp
EAST & WEST: Serramonte

PROJECT #: SC0629
LOCATION #: 6
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND I-280 SB Off-Ramp			SOUTHBOUND I-280 SB Off-Ramp			EASTBOUND Serramonte			WESTBOUND Serramonte			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	X	X	X	2	X	2	X	2	X	X	3	X	
AM	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		1:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
PM	4:00 PM	0	0	0	194	0	186	0	298	0	1	120	0	799
	4:15 PM	0	0	0	161	0	161	0	293	0	0	126	0	741
	4:30 PM	0	0	0	177	0	184	0	292	0	0	141	0	794
	4:45 PM	0	0	0	174	0	187	0	320	0	0	142	0	823
	5:00 PM	0	0	0	164	0	168	0	344	0	0	148	0	824
	5:15 PM	0	0	0	160	0	171	0	314	0	0	178	0	823
	5:30 PM	0	0	0	160	0	151	0	308	0	0	152	0	771
	5:45 PM	0	0	0	160	0	150	0	327	0	0	161	0	798
	VOLUMES	0	0	0	1,350	0	1,358	0	2,496	0	1	1,168	0	6,373
	APPROACH %	0%	0%	0%	50%	0%	50%	0%	100%	0%	0%	100%	0%	
	APP/DEPART	0	/	0	2,708	/	0	2,496	/	3,847	1,169	/	2,526	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	0	0	0	675	0	710	0	1,270	0	0	609	0	3,264
	APPROACH %	0%	0%	0%	49%	0%	51%	0%	100%	0%	0%	100%	0%	
	PEAK HR FACTOR		0.000			0.959			0.923			0.855		0.990
	APP/DEPART	0	/	0	1,385	/	0	1,270	/	1,945	609	/	1,319	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE: Sat, May 30, 15

LOCATION: Daly City
NORTH & SOUTH: I-280 NB On-Ramp
EAST & WEST: Serramonte

PROJECT #: SC0629
LOCATION #: 7
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND I-280 NB On-Ramp			SOUTHBOUND I-280 NB On-Ramp			EASTBOUND Serramonte			WESTBOUND Serramonte			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	X	X	X	X	X	X	2	2	X	X	2	0	
AM	12:00 PM	0	0	0	0	0	0	168	357	0	1	123	1	650
	12:15 PM	0	0	0	0	0	0	168	388	0	0	115	0	671
	12:30 PM	0	0	0	0	0	0	151	359	0	0	158	1	669
	12:45 PM	0	0	0	0	0	0	153	372	0	0	158	0	683
	1:00 PM	0	0	0	0	0	0	204	396	0	0	152	0	752
	1:15 PM	0	0	0	0	0	0	188	360	0	0	136	1	685
	1:30 PM	0	0	0	0	0	0	177	404	0	0	136	0	717
	1:45 PM	0	0	0	0	0	0	185	375	0	0	142	0	702
	VOLUMES	0	0	0	0	0	0	1,394	3,011	0	1	1,120	3	5,529
	APPROACH %	0%	0%	0%	0%	0%	0%	32%	68%	0%	0%	100%	0%	
	APP/DEPART	0	/	1,391	0	/	0	4,405	/	3,012	1,124	/	1,126	0
	BEGIN PEAK HR		1:00 PM											
	VOLUMES	0	0	0	0	0	0	754	1,535	0	0	566	1	2,856
	APPROACH %	0%	0%	0%	0%	0%	0%	33%	67%	0%	0%	100%	0%	
	PEAK HR FACTOR		0.000			0.000			0.954			0.933		0.949
	APP/DEPART	0	/	751	0	/	0	2,289	/	1,535	567	/	570	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		5:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE: Wed, May 27, 15

LOCATION: Daly City
NORTH & SOUTH: I-280 NB On-Ramp
EAST & WEST: Serramonte

PROJECT #: SC0629
LOCATION #: 7
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND I-280 NB On-Ramp			SOUTHBOUND I-280 NB On-Ramp			EASTBOUND Serramonte			WESTBOUND Serramonte			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	X	X	X	X	X	X	2	2	X	X	2	0	
AM	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		1:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
PM	4:00 PM	0	0	0	0	0	0	142	351	0	0	124	0	617
	4:15 PM	0	0	0	0	0	0	142	308	0	0	129	1	580
	4:30 PM	0	0	0	0	0	0	147	322	0	0	139	0	608
	4:45 PM	0	0	0	0	0	0	176	318	0	0	136	3	633
	5:00 PM	0	0	0	0	0	0	157	348	0	0	148	1	654
	5:15 PM	0	0	0	0	0	0	152	320	0	0	177	2	651
	5:30 PM	0	0	0	0	0	0	141	325	0	0	157	1	624
	5:45 PM	0	0	0	0	0	0	152	338	0	0	153	0	643
	VOLUMES	0	0	0	0	0	0	1,209	2,630	0	0	1,163	8	5,010
	APPROACH %	0%	0%	0%	0%	0%	0%	31%	69%	0%	0%	99%	1%	
	APP/DEPART	0	/	1,207	0	/	0	3,839	/	2,630	1,171	/	1,173	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	0	0	0	0	0	0	602	1,331	0	0	635	4	2,572
	APPROACH %	0%	0%	0%	0%	0%	0%	31%	69%	0%	0%	99%	1%	
	PEAK HR FACTOR		0.000			0.000			0.957			0.892		0.983
	APP/DEPART	0	/	599	0	/	0	1,933	/	1,331	639	/	642	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE: Sat, May 30, 15

LOCATION: Daly City
NORTH & SOUTH: Junipero Serra
EAST & WEST: Serramonte

PROJECT #: SC0629
LOCATION #: 8
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Junipero Serra			SOUTHBOUND Junipero Serra			EASTBOUND Serramonte			WESTBOUND Serramonte			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	2	2	1	1	2	1	2	2	1	1	1.5	1.5	
AM	12:00 PM	25	102	26	61	92	22	135	158	66	45	77	14	823
	12:15 PM	20	91	36	38	83	35	127	197	67	39	62	17	812
	12:30 PM	27	88	22	30	70	44	145	143	75	31	88	30	793
	12:45 PM	21	84	22	42	80	41	128	194	50	46	96	23	827
	1:00 PM	26	109	37	34	91	48	139	188	73	30	79	17	871
	1:15 PM	19	90	41	36	78	40	145	156	58	38	76	20	797
	1:30 PM	15	96	37	30	77	40	122	232	53	33	79	22	836
	1:45 PM	15	106	31	35	77	37	151	161	65	42	93	16	829
	VOLUMES	168	766	252	306	648	307	1,092	1,429	507	304	650	159	6,588
	APPROACH %	14%	65%	21%	24%	51%	24%	36%	47%	17%	27%	58%	14%	
	APP/DEPART	1,186	/	2,053	1,261	/	1,470	3,028	/	1,949	1,113	/	1,116	0
	BEGIN PEAK HR		1:00 PM											
	VOLUMES	75	401	146	135	323	165	557	737	249	143	327	75	3,333
	APPROACH %	12%	64%	23%	22%	52%	26%	36%	48%	16%	26%	60%	14%	
	PEAK HR FACTOR		0.904			0.900			0.948			0.902		0.957
	APP/DEPART	622	/	1,049	623	/	721	1,543	/	1,001	545	/	562	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		5:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE: Wed, May 27, 15

LOCATION: Daly City
NORTH & SOUTH: Junipero Serra
EAST & WEST: Serramonte

PROJECT #: SC0629
LOCATION #: 8
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Junipero Serra			SOUTHBOUND Junipero Serra			EASTBOUND Serramonte			WESTBOUND Serramonte			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	2	2	1	1	2	1	2	2	1	1	1.5	1.5	
AM	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		1:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
PM	4:00 PM	10	78	44	23	97	36	101	191	61	45	78	12	776
	4:15 PM	20	111	26	30	77	30	113	126	67	50	85	21	756
	4:30 PM	20	99	29	25	83	27	87	157	77	31	95	13	743
	4:45 PM	18	123	31	31	85	27	100	146	72	35	98	25	791
	5:00 PM	30	116	26	26	84	34	96	195	58	49	92	16	822
	5:15 PM	37	133	31	29	79	29	100	144	78	41	121	14	836
	5:30 PM	27	119	34	21	69	37	91	168	69	55	97	13	800
	5:45 PM	23	133	25	28	96	26	87	192	58	40	107	17	832
	VOLUMES	185	912	246	213	670	246	775	1,319	540	346	773	131	6,356
	APPROACH %	14%	68%	18%	19%	59%	22%	29%	50%	21%	28%	62%	10%	
	APP/DEPART	1,343	/	1,840	1,129	/	1,577	2,634	/	1,753	1,250	/	1,186	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	117	501	116	104	328	126	374	699	263	185	417	60	3,290
	APPROACH %	16%	68%	16%	19%	59%	23%	28%	52%	20%	28%	63%	9%	
	PEAK HR FACTOR		0.913			0.930			0.957			0.940		0.984
	APP/DEPART	734	/	944	558	/	791	1,336	/	908	662	/	647	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE:	LOCATION:	Daly City	PROJECT #:	SC0629
Wed, May 27, 15	NORTH & SOUTH:	I-280 On-Ramp	LOCATION #:	8
	EAST & WEST:	Serramonte	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

	NORTHBOUND I-280 On-Ramp			SOUTHBOUND I-280 On-Ramp			EASTBOUND Serramonte			WESTBOUND Serramonte			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	2	1	1	2	1	2	2	1	1	1.5	1.5	
AM													
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		1:45 PM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
PM													
4:00 PM	0	68	0	61	0	0	2	0	0	0	0	96	227
4:15 PM	0	107	0	47	0	0	1	0	0	0	0	89	244
4:30 PM	0	94	0	52	0	0	1	0	0	0	0	127	274
4:45 PM	0	111	0	45	0	0	0	0	0	0	0	96	252
5:00 PM	0	76	0	43	0	0	0	0	0	0	0	105	224
5:15 PM	0	101	0	35	0	0	0	0	0	0	0	102	238
5:30 PM	0	92	0	41	0	0	0	0	0	0	0	111	244
5:45 PM	0	125	0	33	0	0	0	0	0	0	0	104	262
VOLUMES	0	774	0	357	0	0	4	0	0	0	0	830	1,965
APPROACH %	0%	100%	0%	100%	0%	0%	100%	0%	0%	0%	0%	100%	
APP/DEPART	774	/	1,965	357	/	0	4	/	0	830	/	0	0
BEGIN PEAK HR		4:00 PM											
VOLUMES	0	380	0	205	0	0	4	0	0	0	0	408	997
APPROACH %	0%	100%	0%	100%	0%	0%	100%	0%	0%	0%	0%	100%	
PEAK HR FACTOR		0.856			0.840			0.500			0.803		0.910
APP/DEPART	380	/	997	205	/	0	4	/	0	408	/	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE:	LOCATION:	Daly City	PROJECT #:	SC0629
Wed, May 27, 15	NORTH & SOUTH:	Gellert	LOCATION #:	9
	EAST & WEST:	Serramonte Plaza	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

	NORTHBOUND Gellert			SOUTHBOUND Gellert			EASTBOUND Serramonte Plaza			WESTBOUND Serramonte Plaza			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	1	3	0	0	1	0	0.5	0.5	1	
AM													
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		1:45 PM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
PM													
4:00 PM	20	140	40	36	123	6	15	4	19	58	3	42	506
4:15 PM	22	148	38	36	143	5	11	5	15	63	6	35	527
4:30 PM	32	150	33	36	131	5	14	5	17	74	2	47	546
4:45 PM	42	158	27	45	133	4	16	4	14	65	3	46	557
5:00 PM	47	181	29	43	170	1	17	5	11	67	4	49	624
5:15 PM	41	157	29	48	140	3	10	7	7	61	2	45	550
5:30 PM	29	145	32	34	141	6	17	5	16	70	3	47	545
5:45 PM	24	122	32	27	119	4	20	2	12	81	1	45	489
VOLUMES	257	1,201	260	305	1,100	34	120	37	111	539	24	356	4,344
APPROACH %	15%	70%	15%	21%	76%	2%	45%	14%	41%	59%	3%	39%	
APP/DEPART	1,718	/	1,684	1,439	/	1,907	268	/	595	919	/	158	0
BEGIN PEAK HR		4:30 PM											
VOLUMES	162	646	118	172	574	13	57	21	49	267	11	187	2,277
APPROACH %	17%	70%	13%	23%	76%	2%	45%	17%	39%	57%	2%	40%	
PEAK HR FACTOR		0.901			0.887			0.882			0.945		0.912
APP/DEPART	926	/	893	759	/	994	127	/	308	465	/	82	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE: Sat, May 30, 15

LOCATION: Daly City
NORTH & SOUTH: Gellert
EAST & WEST: Serramonte Plaza

PROJECT #: SC0629
LOCATION #: 9
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Gellert			SOUTHBOUND Gellert			EASTBOUND Serramonte Plaza			WESTBOUND Serramonte Plaza			
	LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 0	ET 1	ER 0	WL 0.5	WT 0.5	WR 1	TOTAL
AM	12:00 PM	31	205	60	55	163	4	11	3	11	70	4	51	668
	12:15 PM	34	176	36	40	162	10	21	2	16	53	4	64	618
	12:30 PM	33	154	43	43	160	3	9	7	19	70	3	55	599
	12:45 PM	41	203	54	49	173	6	16	6	17	54	5	47	671
	1:00 PM	35	169	51	55	139	7	15	3	17	71	1	73	636
	1:15 PM	38	175	35	45	166	5	18	3	17	58	4	69	633
	1:30 PM	42	172	47	49	123	4	24	3	12	68	2	79	625
	1:45 PM	35	177	44	39	141	5	17	8	13	59	3	54	595
	VOLUMES	289	1,431	370	375	1,227	44	131	35	122	503	26	492	5,045
	APPROACH %	14%	68%	18%	23%	75%	3%	45%	12%	42%	49%	3%	48%	
	APP/DEPART	2,090	/	2,065	1,646	/	1,997	288	/	769	1,021	/	214	0
	BEGIN PEAK HR		12:45 PM											
	VOLUMES	156	719	187	198	601	22	73	15	63	251	12	268	2,565
	APPROACH %	15%	68%	18%	24%	73%	3%	48%	10%	42%	47%	2%	50%	
	PEAK HR FACTOR		0.891			0.900			0.968			0.891		0.956
	APP/DEPART	1,062	/	1,065	821	/	996	151	/	395	531	/	109	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		5:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE: Sat, May 30, 15

LOCATION: Daly City
NORTH & SOUTH: I-280 On-Ramp
EAST & WEST: Serramonte

PROJECT #: SC0629
LOCATION #: 8
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND I-280 On-Ramp			SOUTHBOUND I-280 On-Ramp			EASTBOUND Serramonte			WESTBOUND Serramonte			
	LANES:	NL 2	NT 2	NR 1	SL 1	ST 2	SR 1	EL 2	ET 2	ER 1	WL 1	WT 1.5	WR 1.5	TOTAL
AM	12:00 PM	0	75	0	53	0	0	0	0	0	0	0	84	212
	12:15 PM	0	97	0	59	0	0	0	0	0	0	0	67	223
	12:30 PM	0	89	0	61	0	1	1	0	0	0	0	76	228
	12:45 PM	0	78	0	47	0	0	1	0	0	0	0	75	201
	1:00 PM	0	74	0	68	0	0	0	0	0	0	0	79	221
	1:15 PM	0	89	0	52	0	0	0	0	0	0	0	89	230
	1:30 PM	0	93	0	60	0	0	0	0	0	0	0	92	245
	1:45 PM	0	110	0	58	0	0	1	0	0	0	0	78	247
	VOLUMES	0	705	0	458	0	1	3	0	0	0	0	640	1,807
	APPROACH %	0%	100%	0%	100%	0%	0%	100%	0%	0%	0%	0%	100%	
	APP/DEPART	705	/	1,806	459	/	0	3	/	0	640	/	1	0
	BEGIN PEAK HR		1:00 PM											
	VOLUMES	0	366	0	238	0	0	1	0	0	0	0	338	943
	APPROACH %	0%	100%	0%	100%	0%	0%	100%	0%	0%	0%	0%	100%	
	PEAK HR FACTOR		0.832			0.875			0.250			0.918		0.954
	APP/DEPART	366	/	943	238	/	0	1	/	0	338	/	0	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		5:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE: Sat, May 30, 15

LOCATION: Daly City
NORTH & SOUTH: Callan
EAST & WEST: Hickey

PROJECT #: SC0629
LOCATION #: 10
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Callan			SOUTHBOUND Callan			EASTBOUND Hickey			WESTBOUND Hickey			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1	2	0	1	0.5	0.5	1	2	0	1	2	0	
AM	12:00 PM	13	44	12	19	41	33	29	102	12	14	73	30	422
	12:15 PM	8	39	10	11	31	34	35	96	15	11	97	23	410
	12:30 PM	7	38	5	16	38	43	29	104	9	19	109	19	436
	12:45 PM	10	47	14	12	35	39	33	95	13	9	100	18	425
	1:00 PM	18	65	19	31	37	42	33	103	12	16	94	24	494
	1:15 PM	17	41	9	12	37	34	23	101	14	17	99	22	426
	1:30 PM	7	48	10	13	44	27	27	101	15	14	95	20	421
	1:45 PM	13	42	8	11	42	34	27	77	17	18	84	17	390
	VOLUMES	93	364	87	125	305	286	236	779	107	118	751	173	3,424
	APPROACH %	17%	67%	16%	17%	43%	40%	21%	69%	10%	11%	72%	17%	
	APP/DEPART	544	/	770	716	/	480	1,122	/	1,041	1,042	/	1,133	0
	BEGIN PEAK HR		12:30 PM											
	VOLUMES	52	191	47	71	147	158	118	403	48	61	402	83	1,781
	APPROACH %	18%	66%	16%	19%	39%	42%	21%	71%	8%	11%	74%	15%	
	PEAK HR FACTOR		0.711			0.855			0.961			0.929		0.901
	APP/DEPART	290	/	390	376	/	224	569	/	553	546	/	614	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		5:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE: Wed, May 27, 15

LOCATION: Daly City
NORTH & SOUTH: Callan
EAST & WEST: Hickey

PROJECT #: SC0629
LOCATION #: 10
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Callan			SOUTHBOUND Callan			EASTBOUND Hickey			WESTBOUND Hickey			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1	2	0	1	0.5	0.5	1	2	0	1	2	0	
AM	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		1:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
PM	4:00 PM	10	46	8	11	37	27	25	95	22	6	113	23	423
	4:15 PM	22	43	7	18	57	39	21	94	21	13	112	21	468
	4:30 PM	14	46	4	19	38	30	24	113	20	18	134	26	486
	4:45 PM	19	39	6	21	46	37	29	85	22	18	124	23	469
	5:00 PM	14	64	9	15	54	53	35	86	24	23	134	25	536
	5:15 PM	26	65	11	16	53	43	39	74	17	15	126	22	507
	5:30 PM	16	53	11	10	65	45	26	95	17	16	134	23	511
	5:45 PM	14	45	8	11	57	40	28	85	28	13	123	18	470
	VOLUMES	135	401	64	121	407	314	227	727	171	122	1,000	181	3,870
	APPROACH %	23%	67%	11%	14%	48%	37%	20%	65%	15%	9%	77%	14%	
	APP/DEPART	600	/	807	842	/	676	1,125	/	936	1,303	/	1,451	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	70	227	39	52	229	181	128	340	86	67	517	88	2,024
	APPROACH %	21%	68%	12%	11%	50%	39%	23%	61%	16%	10%	77%	13%	
	PEAK HR FACTOR		0.824			0.947			0.955			0.923		0.944
	APP/DEPART	336	/	441	462	/	368	554	/	445	672	/	770	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE:	LOCATION:	Daly City	PROJECT #:	SC0629
Sat, May 30, 15	NORTH & SOUTH:	Gellert	LOCATION #:	11
	EAST & WEST:	Hickey	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Gellert			SOUTHBOUND Gellert			EASTBOUND Hickey			WESTBOUND Hickey			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1.5	1.5	1	1.5	1.5	1	1	2	1	2	2	1	
AM	12:00 PM	21	97	78	97	71	25	53	97	12	92	66	159	868
	12:15 PM	23	68	89	131	82	36	32	73	9	98	83	154	878
	12:30 PM	23	76	82	96	68	45	39	94	16	62	72	146	819
	12:45 PM	17	84	79	133	70	43	44	69	11	92	67	150	859
	1:00 PM	18	84	93	103	64	43	52	105	13	87	96	166	924
	1:15 PM	18	61	86	120	78	43	36	87	7	84	71	153	844
	1:30 PM	16	63	72	116	44	39	47	88	12	69	75	147	788
	1:45 PM	15	65	70	131	65	38	28	63	6	92	74	153	800
	VOLUMES	151	598	649	927	542	312	331	676	86	676	604	1,228	6,780
	APPROACH %	11%	43%	46%	52%	30%	18%	30%	62%	8%	27%	24%	49%	
	APP/DEPART	1,398	/	2,153	1,781	/	1,274	1,093	/	2,276	2,508	/	1,077	0
	BEGIN PEAK HR		12:15 PM											
	VOLUMES	81	312	343	463	284	167	167	341	49	339	318	616	3,480
	APPROACH %	11%	42%	47%	51%	31%	18%	30%	61%	9%	27%	25%	48%	
	PEAK HR FACTOR		0.944			0.918			0.819			0.912		0.942
	APP/DEPART	736	/	1,096	914	/	658	557	/	1,155	1,273	/	571	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		5:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE:	LOCATION:	Daly City	PROJECT #:	SC0629
Wed, May 27, 15	NORTH & SOUTH:	Gellert	LOCATION #:	11
	EAST & WEST:	Hickey	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Gellert			SOUTHBOUND Gellert			EASTBOUND Hickey			WESTBOUND Hickey			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1.5	1.5	1	1.5	1.5	1	1	2	1	2	2	1	
AM	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		1:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
PM	4:00 PM	22	62	43	105	76	25	30	68	10	99	104	137	781
	4:15 PM	22	58	63	99	57	34	31	93	10	98	84	163	812
	4:30 PM	18	58	84	115	80	41	34	92	9	110	117	147	905
	4:45 PM	28	56	71	92	71	42	37	74	18	103	95	134	821
	5:00 PM	19	58	67	112	80	51	30	63	15	126	108	159	888
	5:15 PM	19	65	66	100	68	47	25	80	8	122	110	145	855
	5:30 PM	14	66	58	108	78	35	36	77	7	129	126	137	871
	5:45 PM	15	51	60	100	60	41	35	60	12	131	80	117	762
	VOLUMES	157	474	512	831	570	316	258	607	89	918	824	1,139	6,695
	APPROACH %	14%	41%	45%	48%	33%	18%	27%	64%	9%	32%	29%	40%	
	APP/DEPART	1,143	/	1,853	1,717	/	1,554	954	/	1,968	2,881	/	1,320	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	84	237	288	419	299	181	126	309	50	461	430	585	3,469
	APPROACH %	14%	39%	47%	47%	33%	20%	26%	64%	10%	31%	29%	40%	
	PEAK HR FACTOR		0.952			0.925			0.898			0.939		0.958
	APP/DEPART	609	/	938	899	/	799	485	/	1,025	1,476	/	707	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE: Sat, May 30, 15

LOCATION: Daly City
NORTH & SOUTH: I-280 SB Ramps
EAST & WEST: Hickey

PROJECT #: SC0629
LOCATION #: 12
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND I-280 SB Ramps			SOUTHBOUND I-280 SB Ramps			EASTBOUND Hickey			WESTBOUND Hickey			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	x	x	x	1.5	0.5	1.5	x	2	1	2	2	x	
AM	12:00 PM	0	0	0	33	0	37	0	230	19	79	232	0	630
	12:15 PM	0	0	0	36	1	44	0	233	18	60	252	0	644
	12:30 PM	0	0	0	56	0	45	0	198	29	71	283	0	682
	12:45 PM	0	0	0	54	2	41	0	155	31	56	261	0	600
	1:00 PM	0	0	0	51	2	46	0	211	31	62	275	0	678
	1:15 PM	0	0	0	48	0	45	0	208	36	85	241	0	663
	1:30 PM	0	0	0	45	1	50	0	234	33	75	263	0	701
	1:45 PM	0	0	0	32	0	43	0	189	31	58	285	0	638
	VOLUMES	0	0	0	355	6	351	0	1,658	228	546	2,092	0	5,236
	APPROACH %	0%	0%	0%	50%	1%	49%	0%	88%	12%	21%	79%	0%	
	APP/DEPART	0	/	0	712	/	780	1,886	/	2,013	2,638	/	2,443	0
	BEGIN PEAK HR	12:15 PM												
	VOLUMES	0	0	0	197	5	176	0	797	109	249	1,071	0	2,604
	APPROACH %	0%	0%	0%	52%	1%	47%	0%	88%	12%	19%	81%	0%	
	PEAK HR FACTOR	0.000			0.383			1.332			0.951			0.707
	APP/DEPART	0	/	0	378	/	363	906	/	994	1,320	/	1,247	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR	5:45 PM												
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.000			0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE: Wed, May 27, 15

LOCATION: Daly City
NORTH & SOUTH: I-280 SB Ramps
EAST & WEST: Hickey

PROJECT #: SC0629
LOCATION #: 12
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND I-280 SB Ramps			SOUTHBOUND I-280 SB Ramps			EASTBOUND Hickey			WESTBOUND Hickey			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	x	x	x	1.5	0.5	1.5	x	2	1	2	2	x	
AM	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR	1:45 PM												
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.000			0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
PM	4:00 PM	0	0	0	39	1	43	0	255	22	89	279	0	728
	4:15 PM	0	0	0	42	2	62	0	219	22	72	264	0	683
	4:30 PM	0	0	0	55	3	59	0	229	31	85	291	0	753
	4:45 PM	0	0	0	42	0	64	0	198	38	69	324	0	735
	5:00 PM	0	0	0	44	2	61	0	164	42	72	296	0	681
	5:15 PM	0	0	0	44	1	49	0	187	41	95	320	0	737
	5:30 PM	0	0	0	50	1	53	0	175	39	89	309	0	716
	5:45 PM	0	0	0	39	2	45	0	164	36	71	231	0	588
	VOLUMES	0	0	0	355	12	436	0	1,591	271	642	2,314	0	5,621
	APPROACH %	0%	0%	0%	44%	1%	54%	0%	85%	15%	22%	78%	0%	
	APP/DEPART	0	/	0	803	/	925	1,862	/	1,946	2,956	/	2,750	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	0	0	0	185	6	233	0	778	152	321	1,231	0	2,906
	APPROACH %	0%	0%	0%	44%	1%	55%	0%	84%	16%	21%	79%	0%	
	PEAK HR FACTOR	0.000			0.436			1.775			0.995			0.810
	APP/DEPART	0	/	0	424	/	479	930	/	963	1,552	/	1,464	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE: Sat, May 30, 15

LOCATION: Daly City
NORTH & SOUTH: I-280 NB Ramps
EAST & WEST: Hickey

PROJECT #: SC0629
LOCATION #: 13
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND I-280 NB Ramps			SOUTHBOUND I-280 NB Ramps			EASTBOUND Hickey			WESTBOUND Hickey			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1.5	0.5	1	1	0.5	0.5	1	2	1	1	2	0	
AM	12:00 PM	152	10	69	15	14	20	31	164	39	38	150	14	716
	12:15 PM	135	10	66	15	14	27	35	177	46	31	136	16	708
	12:30 PM	131	16	45	6	32	19	31	182	40	45	155	14	716
	12:45 PM	133	13	45	9	23	19	30	141	32	25	145	15	630
	1:00 PM	146	5	56	7	21	17	42	182	49	25	156	10	716
	1:15 PM	140	9	70	14	19	18	36	171	46	37	122	13	695
	1:30 PM	138	8	74	10	24	12	30	195	45	33	141	18	728
	1:45 PM	152	9	56	11	20	19	26	158	29	42	161	21	704
	VOLUMES	1,127	80	481	87	167	151	261	1,370	326	276	1,166	121	5,613
	APPROACH %	67%	5%	28%	21%	41%	37%	13%	70%	17%	18%	75%	8%	
	APP/DEPART	1,688	/	384	405	/	765	1,957	/	1,942	1,563	/	2,522	0
	BEGIN PEAK HR		1:00 PM											
	VOLUMES	576	31	256	42	84	66	134	706	169	137	580	62	2,843
	APPROACH %	67%	4%	30%	22%	44%	34%	13%	70%	17%	18%	74%	8%	
	PEAK HR FACTOR		0.981			0.941			0.924			0.869		0.976
	APP/DEPART	863	/	184	192	/	388	1,009	/	1,006	779	/	1,265	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		5:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE: Wed, May 27, 15

LOCATION: Daly City
NORTH & SOUTH: I-280 NB Ramps
EAST & WEST: Hickey

PROJECT #: SC0629
LOCATION #: 13
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND I-280 NB Ramps			SOUTHBOUND I-280 NB Ramps			EASTBOUND Hickey			WESTBOUND Hickey			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1.5	0.5	1	1	0.5	0.5	1	2	1	1	2	0	
AM	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		1:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
PM	4:00 PM	159	15	76	9	21	17	32	191	28	42	175	12	777
	4:15 PM	154	19	69	10	18	15	39	169	33	44	154	12	736
	4:30 PM	146	13	66	11	19	14	45	184	40	58	173	15	784
	4:45 PM	117	16	50	19	19	17	36	176	49	35	222	10	766
	5:00 PM	117	9	52	11	23	16	28	148	40	48	189	20	701
	5:15 PM	158	8	54	4	18	20	43	175	40	41	217	22	800
	5:30 PM	131	6	51	12	23	20	49	155	32	55	183	25	742
	5:45 PM	114	12	43	17	18	17	47	155	28	28	169	14	662
	VOLUMES	1,096	98	461	93	159	136	319	1,353	290	351	1,482	130	5,968
	APPROACH %	66%	6%	28%	24%	41%	35%	16%	69%	15%	18%	75%	7%	
	APP/DEPART	1,655	/	470	388	/	798	1,962	/	1,909	1,963	/	2,791	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	576	63	261	49	77	63	152	720	150	179	724	49	3,063
	APPROACH %	64%	7%	29%	26%	41%	33%	15%	70%	15%	19%	76%	5%	
	PEAK HR FACTOR		0.900			0.859			0.950			0.891		0.977
	APP/DEPART	900	/	227	189	/	404	1,022	/	1,032	952	/	1,400	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE:	LOCATION:	Daly City	PROJECT #:	SC0629
Sat, May 30, 15	NORTH & SOUTH:	Kaiser	LOCATION #:	14
	EAST & WEST:	Hickey	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Kaiser			SOUTHBOUND Kaiser			EASTBOUND Hickey			WESTBOUND Hickey			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	0	X	0	X	X	X	X	2	1	1	2	X	
AM	12:00 PM	6	0	6	0	0	0	0	248	4	0	195	0	459
	12:15 PM	8	0	1	0	0	0	0	252	5	4	175	0	445
	12:30 PM	3	0	4	0	0	0	0	222	5	3	210	0	447
	12:45 PM	2	0	4	0	0	0	0	195	2	0	180	0	383
	1:00 PM	2	0	3	0	0	0	0	245	1	1	191	0	443
	1:15 PM	3	0	2	0	0	0	0	252	1	1	166	0	425
	1:30 PM	2	0	1	0	0	0	0	270	3	1	190	0	467
	1:45 PM	3	0	3	0	0	0	0	216	3	1	220	0	446
	VOLUMES	29	0	24	0	0	0	0	1,900	24	11	1,527	0	3,515
	APPROACH %	55%	0%	45%	0%	0%	0%	0%	99%	1%	1%	99%	0%	
	APP/DEPART	53	/	0	0	/	35	1,924	/	1,924	1,538	/	1,556	0
	BEGIN PEAK HR		1:00 PM											
	VOLUMES	10	0	9	0	0	0	0	983	8	4	767	0	1,781
	APPROACH %	53%	0%	47%	0%	0%	0%	0%	99%	1%	1%	99%	0%	
	PEAK HR FACTOR		0.792			0.000			0.908			0.872		0.953
	APP/DEPART	19	/	0	0	/	12	991	/	992	771	/	777	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		5:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE:	LOCATION:	Daly City	PROJECT #:	SC0629
Wed, May 27, 15	NORTH & SOUTH:	Kaiser	LOCATION #:	14
	EAST & WEST:	Hickey	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Kaiser			SOUTHBOUND Kaiser			EASTBOUND Hickey			WESTBOUND Hickey			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	0	X	0	X	X	X	X	2	1	1	2	X	
AM	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		1:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
PM	4:00 PM	30	0	31	0	0	0	0	243	33	24	200	0	561
	4:15 PM	25	0	28	0	0	0	0	227	21	13	187	0	501
	4:30 PM	59	0	39	0	0	0	0	244	19	9	189	0	559
	4:45 PM	39	0	25	0	0	0	0	223	18	6	229	0	540
	5:00 PM	43	0	33	0	0	0	0	197	12	5	216	0	506
	5:15 PM	54	0	34	0	0	0	0	220	12	7	228	0	555
	5:30 PM	34	0	29	0	0	0	0	201	14	3	226	0	507
	5:45 PM	23	0	16	0	0	0	0	201	10	2	183	0	435
	VOLUMES	307	0	235	0	0	0	0	1,756	139	69	1,658	0	4,164
	APPROACH %	57%	0%	43%	0%	0%	0%	0%	93%	7%	4%	96%	0%	
	APP/DEPART	542	/	0	0	/	208	1,895	/	1,991	1,727	/	1,965	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	153	0	123	0	0	0	0	937	91	52	805	0	2,161
	APPROACH %	55%	0%	45%	0%	0%	0%	0%	91%	9%	6%	94%	0%	
	PEAK HR FACTOR		0.704			0.000			0.931			0.912		0.963
	APP/DEPART	276	/	0	0	/	143	1,028	/	1,060	857	/	958	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE: Sat, May 30, 15

LOCATION: Daly City
NORTH & SOUTH: Longford
EAST & WEST: Hickey

PROJECT #: SC0629
LOCATION #: 15
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Longford			SOUTHBOUND Longford			EASTBOUND Hickey			WESTBOUND Hickey			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	X	X	1	X	X	1	X	3	0	X	2	0	
AM	12:00 PM	0	0	12	0	0	8	0	223	19	0	184	4	450
	12:15 PM	0	0	19	0	0	7	0	240	15	0	172	3	456
	12:30 PM	0	0	13	0	0	17	0	223	8	0	196	8	465
	12:45 PM	0	0	19	0	0	6	0	195	12	0	173	6	411
	1:00 PM	0	0	15	0	0	6	0	203	17	0	176	4	421
	1:15 PM	0	0	16	0	0	8	0	232	13	0	175	8	452
	1:30 PM	0	0	15	0	0	12	0	254	18	0	171	10	480
	1:45 PM	0	0	8	0	0	16	0	208	10	0	202	11	455
	VOLUMES	0	0	117	0	0	80	0	1,778	112	0	1,449	54	3,590
	APPROACH %	0%	0%	100%	0%	0%	100%	0%	94%	6%	0%	96%	4%	
	APP/DEPART	117	/	54	80	/	112	1,890	/	1,895	1,503	/	1,529	0
	BEGIN PEAK HR		1:00 PM											
	VOLUMES	0	0	54	0	0	42	0	897	58	0	724	33	1,808
	APPROACH %	0%	0%	100%	0%	0%	100%	0%	94%	6%	0%	96%	4%	
	PEAK HR FACTOR		0.844			0.656			0.878			0.888		0.942
	APP/DEPART	54	/	33	42	/	58	955	/	951	757	/	766	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		5:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE: Wed, May 27, 15

LOCATION: Daly City
NORTH & SOUTH: Longford
EAST & WEST: Hickey

PROJECT #: SC0629
LOCATION #: 15
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Longford			SOUTHBOUND Longford			EASTBOUND Hickey			WESTBOUND Hickey			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	X	X	1	X	X	1	X	3	0	X	2	0	
AM	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		1:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
PM	4:00 PM	0	0	16	0	0	7	0	225	25	0	208	13	494
	4:15 PM	0	0	10	0	0	5	0	240	23	0	196	8	482
	4:30 PM	0	0	20	0	0	7	0	248	27	0	185	5	492
	4:45 PM	0	0	23	0	0	6	0	213	25	0	228	14	509
	5:00 PM	0	0	15	0	0	7	0	214	32	0	203	17	488
	5:15 PM	0	0	17	0	0	4	0	213	26	0	241	14	515
	5:30 PM	0	0	16	0	0	17	0	204	21	0	188	10	456
	5:45 PM	0	0	17	0	0	5	0	203	18	0	200	11	454
	VOLUMES	0	0	134	0	0	58	0	1,760	197	0	1,649	92	3,890
	APPROACH %	0%	0%	100%	0%	0%	100%	0%	90%	10%	0%	95%	5%	
	APP/DEPART	134	/	92	58	/	197	1,957	/	1,894	1,741	/	1,707	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	0	0	75	0	0	24	0	888	110	0	857	50	2,004
	APPROACH %	0%	0%	100%	0%	0%	100%	0%	89%	11%	0%	94%	6%	
	PEAK HR FACTOR		0.815			0.857			0.907			0.889		0.973
	APP/DEPART	75	/	50	24	/	110	998	/	963	907	/	881	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE: Sat, May 30, 15

LOCATION: Daly City
NORTH & SOUTH: Junipero Serra
EAST & WEST: Hickey

PROJECT #: SC0629
LOCATION #: 16
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Junipero Serra			SOUTHBOUND Junipero Serra			EASTBOUND Hickey			WESTBOUND Hickey			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1	2	1	1	2	1	1.5	1.5	1	0	2	1	
AM	12:00 PM	22	69	23	63	86	53	59	157	18	30	117	97	794
	12:15 PM	22	74	28	62	89	39	68	174	16	19	117	110	818
	12:30 PM	26	68	25	52	60	53	58	164	15	29	132	101	783
	12:45 PM	19	80	16	52	71	51	39	169	9	33	109	109	757
	1:00 PM	24	69	24	68	74	62	65	141	13	14	103	97	754
	1:15 PM	12	83	19	55	77	47	62	180	9	35	126	100	805
	1:30 PM	22	74	21	47	62	52	71	188	14	33	110	106	800
	1:45 PM	27	72	21	49	70	73	61	146	13	33	125	118	808
	VOLUMES	174	589	177	448	589	430	483	1,319	107	226	939	838	6,319
	APPROACH %	19%	63%	19%	31%	40%	29%	25%	69%	6%	11%	47%	42%	
	APP/DEPART	940	/	1,911	1,467	/	968	1,909	/	1,921	2,003	/	1,519	0
	BEGIN PEAK HR		1:00 PM											
	VOLUMES	85	298	85	219	283	234	259	655	49	115	464	421	3,167
	APPROACH %	18%	64%	18%	30%	38%	32%	27%	68%	5%	12%	46%	42%	
	PEAK HR FACTOR		0.975			0.902			0.882			0.906		0.980
	APP/DEPART	468	/	978	736	/	468	963	/	950	1,000	/	771	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		5:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

DATE: Wed, May 27, 15

LOCATION: Daly City
NORTH & SOUTH: Junipero Serra
EAST & WEST: Hickey Rev1

PROJECT #: SC0629
LOCATION #: 16
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Junipero Serra			SOUTHBOUND Junipero Serra			EASTBOUND Hickey Rev1			WESTBOUND Hickey Rev1			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1	2	1	1	2	1	1.5	1.5	1	0	2	1	
AM	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		1:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
PM	4:00 PM	41	57	14	62	81	60	61	168	15	26	129	109	823
	4:15 PM	31	75	29	52	79	53	54	171	23	28	129	106	830
	4:30 PM	35	68	24	66	85	52	58	198	12	30	112	117	857
	4:45 PM	43	88	30	48	75	59	66	153	21	46	146	130	905
	5:00 PM	42	81	28	66	105	39	58	151	25	36	150	111	892
	5:15 PM	62	118	29	48	90	47	57	149	23	41	157	131	952
	5:30 PM	34	120	34	65	87	45	49	150	24	40	123	110	881
	5:45 PM	46	124	37	61	87	51	45	160	18	48	125	132	934
	VOLUMES	334	731	225	468	689	406	448	1,300	161	295	1,071	946	7,074
	APPROACH %	26%	57%	17%	30%	44%	26%	23%	68%	8%	13%	46%	41%	
	APP/DEPART	1,290	/	2,124	1,563	/	1,233	1,909	/	1,971	2,312	/	1,746	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	184	443	128	240	369	182	209	610	90	165	555	484	3,659
	APPROACH %	24%	59%	17%	30%	47%	23%	23%	67%	10%	14%	46%	40%	
	PEAK HR FACTOR		0.903			0.942			0.971			0.915		0.961
	APP/DEPART	755	/	1,133	791	/	672	909	/	969	1,204	/	885	0

Saturday, May 30, 2015 CITY: Daily City PROJECT: SC0629

327 Gellerd Blvd

Prepaired by AimTD LLC tel. 951 249 3226

AM Period	IN1		OUT1			PM Period	IN1		OUT1		
00:00	0		0			12:00	4		10		
00:15	0		0			12:15	4		2		
00:30	0		0			12:30	1		2		
00:45	0	0	0	0		12:45	2	11	0	14	25
01:00	0		0			13:00	0		7		
01:15	0		0			13:15	2		4		
01:30	0		0			13:30	0		2		
01:45	0	0	0	0		13:45	0	2	2	15	17
02:00	0		0			14:00	0		0		
02:15	0		0			14:15	0		0		
02:30	0		0			14:30	0		0		
02:45	0	0	0	0		14:45	0	0	0	0	
03:00	0		0			15:00	0		0		
03:15	0		0			15:15	0		0		
03:30	0		0			15:30	0		0		
03:45	0	0	0	0		15:45	0	0	0	0	
04:00	0		0			16:00	0		0		
04:15	0		0			16:15	0		0		
04:30	0		0			16:30	0		0		
04:45	0	0	0	0		16:45	0	0	0	0	
05:00	0		0			17:00	0		0		
05:15	0		0			17:15	0		0		
05:30	0		0			17:30	0		0		
05:45	0	0	0	0		17:45	0	0	0	0	
06:00	0		0			18:00	0		0		
06:15	0		0			18:15	0		0		
06:30	0		0			18:30	0		0		
06:45	0	0	0	0		18:45	0	0	0	0	
07:00	0		0			19:00	0		0		
07:15	0		0			19:15	0		0		
07:30	0		0			19:30	0		0		
07:45	0	0	0	0		19:45	0	0	0	0	
08:00	0		0			20:00	0		0		
08:15	0		0			20:15	0		0		
08:30	0		0			20:30	0		0		
08:45	0	0	0	0		20:45	0	0	0	0	
09:00	0		0			21:00	0		0		
09:15	0		0			21:15	0		0		
09:30	0		0			21:30	0		0		
09:45	0	0	0	0		21:45	0	0	0	0	
10:00	0		0			22:00	0		0		
10:15	0		0			22:15	0		0		
10:30	0		0			22:30	0		0		
10:45	0	0	0	0		22:45	0	0	0	0	
11:00	0		0			23:00	0		0		
11:15	0		0			23:15	0		0		
11:30	0		0			23:30	0		0		
11:45	0	0	0	0		23:45	0	0	0	0	
Total Vol.	0		0		**0**		13		29		**42**

Daily Totals

	AM			PM		
				IN1	OUT1	**Combined**
						42
Split %			**0.0%**	31.0%	69.0%	**100.0%**
Peak Hour	11:45	11:45	**11:45**	12:00	13:00	**12:00**
Volume	9	14	**23**	11	15	**25**
P.H.F.	0.56	0.35	**0.41**	0.63	0.54	**0.41**

pacific@aimtd.com Tell. 951 249 3226

Wednesday, May 27, 2015 CITY: Daily City PROJECT: SC0629

327 Gellerd Blvd

Prepaired by AimTD LLC tel. 951 249 3226

AM Period	IN1		OUT1			PM Period	IN1		OUT1		
00:00	0		0			12:00	0		0		
00:15	0		0			12:15	0		0		
00:30	0		0			12:30	0		0		
00:45	0	0	0	0		12:45	0	0	0	0	
01:00	0		0			13:00	0		0		
01:15	0		0			13:15	0		0		
01:30	0		0			13:30	0		0		
01:45	0	0	0	0		13:45	0	0	0	0	
02:00	0		0			14:00	0		0		
02:15	0		0			14:15	0		0		
02:30	0		0			14:30	0		0		
02:45	0	0	0	0		14:45	0	0	0	0	
03:00	0		0			15:00	0		0		
03:15	0		0			15:15	0		0		
03:30	0		0			15:30	0		0		
03:45	0	0	0	0		15:45	0	0	0	0	
04:00	0		0			16:00	7		6		
04:15	0		0			16:15	7		6		
04:30	0		0			16:30	6		3		
04:45	0	0	0	0		16:45	0	20	2	17	37
05:00	0		0			17:00	1		3		
05:15	0		0			17:15	0		9		
05:30	0		0			17:30	1		6		
05:45	0	0	0	0		17:45	1	3	5	23	26
06:00	0		0			18:00	1		2		
06:15	0		0			18:15	0		0		
06:30	0		0			18:30	0		0		
06:45	0	0	0	0		18:45	0	1	0	2	3
07:00	0		0			19:00	0		0		
07:15	0		0			19:15	0		0		
07:30	0		0			19:30	0		0		
07:45	0	0	0	0		19:45	0	0	0	0	
08:00	0		0			20:00	0		0		
08:15	0		0			20:15	0		0		
08:30	0		0			20:30	0		0		
08:45	0	0	0	0		20:45	0	0	0	0	
09:00	0		0			21:00	0		0		
09:15	0		0			21:15	0		0		
09:30	0		0			21:30	0		0		
09:45	0	0	0	0		21:45	0	0	0	0	
10:00	0		0			22:00	0		0		
10:15	0		0			22:15	0		0		
10:30	0		0			22:30	0		0		
10:45	0	0	0	0		22:45	0	0	0	0	
11:00	0		0			23:00	0		0		
11:15	0		0			23:15	0		0		
11:30	0		0			23:30	0		0		
11:45	0	0	0	0		23:45	0	0	0	0	
Total Vol.					**0**		24		42		**66**

Daily Totals

	AM			PM		
				IN1	OUT1	**Combined**
						66
Split %			**0.0%**	36.4%	63.6%	**100.0%**
Peak Hour				15:45	17:00	**16:00**
Volume				20	23	**37**
P.H.F.				0.75	0.64	

pacific@aimtd.com Tell. 951 249 3226

Saturday, May 30, 2015 CITY: Daly City PROJECT: SC0629

ADT Gellert Blv between Dwy1 and Dwy2 Sat **Prepared by AimTD tel. 951 249 3226**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	12		29					12:00	296		243				
00:15	20		33					12:15	242		237				
00:30	14		20					12:30	227		251				
00:45	5	51	12	94			145	12:45	286	1051	254	985			2036
01:00	11		15					13:00	249		249				
01:15	10		20					13:15	249		254				
01:30	9		16					13:30	257		220				
01:45	8	38	13	64			102	13:45	247	1002	237	960			1962
02:00	8		13					14:00	234		240				
02:15	7		6					14:15	233		240				
02:30	9		12					14:30	182		203				
02:45	9	33	6	37			70	14:45	229	878	238	921			1799
03:00	7		11					15:00	263		230				
03:15	5		9					15:15	277		232				
03:30	12		6					15:30	201		207				
03:45	6	30	4	30			60	15:45	201	942	240	909			1851
04:00	3		5					16:00	225		228				
04:15	4		8					16:15	236		234				
04:30	12		6					16:30	189		220				
04:45	9	28	6	25			53	16:45	215	865	235	917			1782
05:00	6		7					17:00	175		219				
05:15	6		11					17:15	201		241				
05:30	14		13					17:30	208		219				
05:45	17	43	14	45			88	17:45	187	771	192	871			1642
06:00	9		18					18:00	193		218				
06:15	29		35					18:15	185		221				
06:30	21		25					18:30	189		202				
06:45	36	95	32	110			205	18:45	164	731	183	824			1555
07:00	46		49					19:00	152		198				
07:15	28		44					19:15	144		183				
07:30	61		40					19:30	161		160				
07:45	68	203	56	189			392	19:45	131	588	160	701			1289
08:00	69		69					20:00	118		162				
08:15	76		79					20:15	120		151				
08:30	106		70					20:30	103		155				
08:45	104	355	95	313			668	20:45	107	448	154	622			1070
09:00	115		130					21:00	94		177				
09:15	115		141					21:15	88		136				
09:30	184		137					21:30	90		116				
09:45	171	585	148	556			1141	21:45	84	356	114	543			899
10:00	163		159					22:00	73		91				
10:15	197		174					22:15	52		83				
10:30	196		187					22:30	40		52				
10:45	214	770	214	734			1504	22:45	26	191	56	282			473
11:00	218		218					23:00	30		46				
11:15	247		221					23:15	27		40				
11:30	242		222					23:30	27		30				
11:45	217	924	236	897			1821	23:45	14	98	26	142			240
Total Vol.		3155		3094			**6249**			7921		8677			**16598**

Daily Totals

NB	SB	EB	WB	**Combined**
11076	11771			**22847**

	AM			**PM**		
Split %	50.5%	49.5%	**27.4%**	47.7%	52.3%	**72.6%**
Peak Hour	11:15	11:45	**11:45**	12:00	12:30	**12:00**
Volume	1002	967	**1949**	1051	1008	**2036**
P.H.F.	0.85	0.96	**0.90**	0.84	0.99	**0.94**

pacific@aimtd.com Tell. 951 249 3226

Wednesday, May 27, 2015 CITY: Daly City PROJECT: SC0629

ADT Gellert Blv between Dwy1 and Dwy2 **Prepared by AimTD tel. 951 249 3226**

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	14		26					12:00	181		212				
00:15	16		32					12:15	182		190				
00:30	19		24					12:30	173		219				
00:45	14	63	18	100			163	12:45	194	730	194	815			1545
01:00	10		6					13:00	208		221				
01:15	8		10					13:15	206		227				
01:30	6		6					13:30	204		234				
01:45	2	26	15	37			63	13:45	218	836	210	892			1728
02:00	10		6					14:00	204		222				
02:15	2		3					14:15	205		199				
02:30	4		4					14:30	200		208				
02:45	4	20	4	17			37	14:45	214	823	208	837			1660
03:00	3		5					15:00	229		213				
03:15	2		4					15:15	223		221				
03:30	6		5					15:30	189		248				
03:45	4	15	8	22			37	15:45	219	860	245	927			1787
04:00	6		9					16:00	199		193				
04:15	5		5					16:15	204		226				
04:30	13		13					16:30	220		239				
04:45	15	39	20	47			86	16:45	221	844	244	902			1746
05:00	14		10					17:00	246		271				
05:15	18		11					17:15	227		242				
05:30	14		15					17:30	207		241				
05:45	27	73	23	59			132	17:45	177	857	227	981			1838
06:00	28		31					18:00	185		218				
06:15	37		42					18:15	176		220				
06:30	39		39					18:30	156		197				
06:45	37	141	47	159			300	18:45	141	658	154	789			1447
07:00	45		52					19:00	152		177				
07:15	63		83					19:15	149		158				
07:30	65		87					19:30	162		173				
07:45	71	244	100	322			566	19:45	127	590	145	653			1243
08:00	78		99					20:00	112		162				
08:15	101		105					20:15	104		138				
08:30	101		133					20:30	83		133				
08:45	130	410	104	441			851	20:45	65	364	134	567			931
09:00	102		112					21:00	119		196				
09:15	127		112					21:15	93		169				
09:30	125		141					21:30	85		136				
09:45	157	511	143	508			1019	21:45	64	361	93	594			955
10:00	139		179					22:00	60		99				
10:15	167		177					22:15	52		86				
10:30	172		174					22:30	42		69				
10:45	171	649	207	737			1386	22:45	37	191	57	311			502
11:00	171		173					23:00	37		54				
11:15	156		167					23:15	24		34				
11:30	165		188					23:30	21		33				
11:45	189	681	201	729			1410	23:45	20	102	25	146			248
Total Vol.		2872		3178			**6050**			7216		8414			**15630**

Daily Totals

NB	SB	EB	WB	**Combined**
10088	11592			**21680**

	AM			**PM**		
Split %	47.5%	52.5%	**27.9%**	46.2%	53.8%	**72.1%**
Peak Hour	11:45	11:45	**11:45**	16:30	16:45	**16:30**
Volume	725	822	**1547**	914	998	**1910**
P.H.F.	0.96	0.94	**0.98**	0.95	0.92	**0.92**

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Appendix B – Existing Conditions Intersection Operations Analysis Worksheets

Intersection	
Intersection Delay, s/veh	25.1
Intersection LOS	D

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Vol, veh/h	6	47	82	0	226	98	0	458	256
Peak Hour Factor	0.96	0.96	0.96	0.92	0.96	0.96	0.92	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	49	85	0	235	102	0	477	267
Number of Lanes	0	2	0	0	1	2	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	3	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	3
HCM Control Delay	11.8	15.6	32
HCM LOS	B	C	D

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3
Vol Left, %	100%	0%	0%	0%	100%	0%	0%
Vol Thru, %	0%	0%	100%	22%	0%	100%	100%
Vol Right, %	0%	100%	0%	78%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	458	256	30	106	226	49	49
LT Vol	458	0	0	0	226	0	0
Through Vol	0	0	30	24	0	49	49
RT Vol	0	256	0	82	0	0	0
Lane Flow Rate	477	267	31	110	235	51	51
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	0.894	0.41	0.066	0.22	0.503	0.102	0.077
Departure Headway (Hd)	6.743	5.539	7.753	7.191	7.695	7.184	5.414
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	534	648	459	496	466	497	656
Service Time	4.503	3.298	5.547	4.985	5.472	4.962	3.19
HCM Lane V/C Ratio	0.893	0.412	0.068	0.222	0.504	0.103	0.078
HCM Control Delay	43.1	12.1	11.1	12	18.1	10.8	8.6
HCM Lane LOS	E	B	B	B	C	B	A
HCM 95th-tile Q	10.3	2	0.2	0.8	2.8	0.3	0.2

Intersection	
Intersection Delay, s/veh	16.1
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Vol, veh/h	0	221	153	41	0	78	165	143	0	13	37	57	0	175	19	79
Peak Hour Factor	0.92	0.85	0.85	0.85	0.92	0.85	0.85	0.85	0.92	0.85	0.85	0.85	0.92	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	260	180	48	0	92	194	168	0	15	44	67	0	206	22	93
Number of Lanes	0	1	1	0	0	0	2	0	0	0	1	0	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	17.1	15.3	13.8	16.5
HCM LOS	C	C	B	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	12%	100%	0%	49%	0%	90%	0%
Vol Thru, %	35%	0%	79%	51%	37%	10%	0%
Vol Right, %	53%	0%	21%	0%	63%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	107	221	194	161	226	194	79
LT Vol	13	221	0	78	0	175	0
Through Vol	37	0	153	83	83	19	0
RT Vol	57	0	41	0	143	0	79
Lane Flow Rate	126	260	228	189	265	228	93
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.273	0.546	0.437	0.387	0.492	0.508	0.176
Departure Headway (Hd)	7.794	7.559	6.895	7.385	6.681	8.013	6.834
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	461	478	523	487	539	450	524
Service Time	5.849	5.304	4.64	5.132	4.428	5.76	4.58
HCM Lane V/C Ratio	0.273	0.544	0.436	0.388	0.492	0.507	0.177
HCM Control Delay	13.8	19.1	14.9	14.7	15.8	18.8	11
HCM Lane LOS	B	C	B	B	C	C	B
HCM 95th-tile Q	1.1	3.2	2.2	1.8	2.7	2.8	0.6

Intersection	
Intersection Delay, s/veh	30.3
Intersection LOS	D

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Vol, veh/h	0	56	247	79	0	151	205	222	0	91	231	121	0	124	243	104
Peak Hour Factor	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	58	257	82	0	157	214	231	0	95	241	126	0	129	253	108
Number of Lanes	0	1	2	0	0	1	2	0	0	0	2	0	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	3	3
HCM Control Delay	23.6	34.3	31.4	29.8
HCM LOS	C	D	D	D

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	44%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	56%	49%	0%	100%	51%	0%	100%	24%	0%	100%	0%
Vol Right, %	0%	51%	0%	0%	49%	0%	0%	76%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	207	237	56	165	161	151	137	290	124	243	104
LT Vol	91	0	56	0	0	151	0	0	124	0	0
Through Vol	116	116	0	165	82	0	137	68	0	243	0
RT Vol	0	121	0	0	79	0	0	222	0	0	104
Lane Flow Rate	215	246	58	172	168	157	142	302	129	253	108
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.635	0.688	0.188	0.527	0.5	0.479	0.413	0.831	0.402	0.751	0.3
Departure Headway (Hd)	10.628	10.049	11.583	11.063	10.707	10.963	10.444	9.889	11.194	10.681	9.961
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	340	360	310	326	336	329	345	366	322	339	361
Service Time	8.392	7.813	9.352	8.832	8.475	8.728	8.209	7.654	8.963	8.449	7.73
HCM Lane V/C Ratio	0.632	0.683	0.187	0.528	0.5	0.477	0.412	0.825	0.401	0.746	0.299
HCM Control Delay	30.3	32.4	17	25.6	23.8	23.5	20.4	46.5	21.3	39.7	17
HCM Lane LOS	D	D	C	D	C	C	C	E	C	E	C
HCM 95th-tile Q	4.1	4.9	0.7	2.9	2.7	2.5	2	7.5	1.9	5.8	1.2

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	195	284	53	345	317	248	221
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95		0.95	1.00	0.97	
Frt	1.00	1.00		1.00	0.85	0.93	
Flt Protected	0.95	1.00		0.99	1.00	0.97	
Satd. Flow (prot)	1770	3539		3516	1583	3272	
Flt Permitted	0.95	1.00		0.87	1.00	0.97	
Satd. Flow (perm)	1770	3539		3070	1583	3272	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	205	299	56	363	334	261	233
RTOR Reduction (vph)	0	0	0	0	149	178	0
Lane Group Flow (vph)	205	299	0	419	185	316	0
Turn Type	Prot	NA	Perm	NA	pm+ov	Prot	
Protected Phases	7	4		8	6	6	
Permitted Phases			8		8		
Actuated Green, G (s)	11.7	29.5		13.3	25.1	11.8	
Effective Green, g (s)	11.7	29.5		13.3	25.1	11.8	
Actuated g/C Ratio	0.23	0.59		0.26	0.50	0.23	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	411	2075		811	931	767	
v/s Ratio Prot	c0.12	0.08			0.05	c0.10	
v/s Ratio Perm				c0.14	0.07		
v/c Ratio	0.50	0.14		0.52	0.20	0.41	
Uniform Delay, d1	16.8	4.7		15.8	7.0	16.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	
Incremental Delay, d2	1.0	0.0		0.6	0.1	0.4	
Delay (s)	17.7	4.7		16.3	7.1	16.7	
Level of Service	B	A		B	A	B	
Approach Delay (s)		10.0		12.2		16.7	
Approach LOS		B		B		B	

Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	50.3	Sum of lost time (s)	13.5
Intersection Capacity Utilization	47.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	299	221	534	311	467	340	249	620	392	291	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95	1.00	0.97	1.00	0.88	0.91	0.86	0.91	0.91	0.91	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.92	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	
Satd. Flow (prot)	1770	3539	1583	3433	1863	2787	1610	2944	1441	1610	3284	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	
Satd. Flow (perm)	1770	3539	1583	3433	1863	2787	1610	2944	1441	1610	3284	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	46	308	228	551	321	481	351	257	639	404	300	57
RTOR Reduction (vph)	0	0	68	0	0	226	0	169	74	0	8	0
Lane Group Flow (vph)	46	308	160	551	321	255	316	443	245	250	503	0
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Split	NA	pm+ov	Split	NA	
Protected Phases	7	4	2	3	8	6	2	2	3	6	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	5.4	16.4	40.7	20.1	31.1	53.9	24.3	24.3	44.4	22.8	22.8	
Effective Green, g (s)	5.4	16.4	40.7	20.1	31.1	53.9	24.3	24.3	44.4	22.8	22.8	
Actuated g/C Ratio	0.05	0.16	0.40	0.20	0.31	0.53	0.24	0.24	0.44	0.22	0.22	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	94	571	704	679	570	1478	385	704	629	361	736	
v/s Ratio Prot	0.03	0.09	0.05	c0.16	c0.17	0.04	c0.20	0.15	0.08	c0.16	0.15	
v/s Ratio Perm			0.05			0.05			0.09			
v/c Ratio	0.49	0.54	0.23	0.81	0.56	0.17	0.82	0.63	0.39	0.69	0.68	
Uniform Delay, d1	46.8	39.1	20.1	38.9	29.6	12.3	36.6	34.6	19.4	36.2	36.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.0	1.0	0.2	7.3	1.3	0.1	13.1	1.8	0.4	5.7	2.6	
Delay (s)	50.7	40.1	20.2	46.3	30.8	12.4	49.7	36.4	19.8	41.8	38.7	
Level of Service	D	D	C	D	C	B	D	D	B	D	D	
Approach Delay (s)		33.2			30.6			35.5			39.8	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	34.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	101.6	Sum of lost time (s)	18.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	1270	609	0	675	710
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5
Lane Util. Factor		0.95	0.91		0.97	0.88
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	5085		3433	2787
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	5085		3433	2787
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	0	1283	615	0	682	717
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1283	615	0	682	717
Turn Type		NA	NA		Prot	Prot
Protected Phases		4	8		6	6
Permitted Phases						
Actuated Green, G (s)		51.0	51.0		30.0	30.0
Effective Green, g (s)		51.0	51.0		30.0	30.0
Actuated g/C Ratio		0.57	0.57		0.33	0.33
Clearance Time (s)		4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		2005	2881		1144	929
v/s Ratio Prot		c0.36	0.12		0.20	c0.26
v/s Ratio Perm						
v/c Ratio		0.64	0.21		0.60	0.77
Uniform Delay, d1		13.3	9.6		25.0	26.9
Progression Factor		1.00	0.00		1.00	1.00
Incremental Delay, d2		1.6	0.2		0.8	4.0
Delay (s)		14.8	0.2		25.8	31.0
Level of Service		B	A		C	C
Approach Delay (s)		14.8	0.2		28.4	
Approach LOS		B	A		C	

Intersection Summary			
HCM 2000 Control Delay	17.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	88.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Volume (vph)	602	1331	635	4	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5			
Lane Util. Factor	0.97	0.95	0.95			
Frt	1.00	1.00	1.00			
Flt Protected	0.95	1.00	1.00			
Satd. Flow (prot)	3433	3539	3536			
Flt Permitted	0.95	1.00	1.00			
Satd. Flow (perm)	3433	3539	3536			
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	614	1358	648	4	0	0
RTOR Reduction (vph)	0	0	1	0	0	0
Lane Group Flow (vph)	614	1358	651	0	0	0
Turn Type	Prot	NA	NA			
Protected Phases	7	4	8			
Permitted Phases						
Actuated Green, G (s)	39.5	90.0	41.5			
Effective Green, g (s)	39.5	90.0	41.5			
Actuated g/C Ratio	0.44	1.00	0.46			
Clearance Time (s)	4.5	4.5	4.5			
Vehicle Extension (s)	3.0	3.0	3.0			
Lane Grp Cap (vph)	1506	3539	1630			
v/s Ratio Prot	0.18	c0.38	0.18			
v/s Ratio Perm						
v/c Ratio	0.41	0.38	0.40			
Uniform Delay, d1	17.3	0.0	16.0			
Progression Factor	0.86	1.00	1.00			
Incremental Delay, d2	0.1	0.3	0.7			
Delay (s)	15.0	0.3	16.8			
Level of Service	B	A	B			
Approach Delay (s)		4.8	16.8		0.0	
Approach LOS		A	B		A	

Intersection Summary			
HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	88.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	4	374	699	263	185	417	408	60	117	380	501	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5	4.5	4.5			4.5	4.5	4.5
Lane Util. Factor		0.97	0.95	1.00	1.00	0.91	0.91			0.97	0.95	1.00
Frt		1.00	1.00	0.85	1.00	0.95	0.85			1.00	1.00	0.85
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	1.00
Satd. Flow (prot)		3433	3539	1583	1770	3230	1441			3433	3539	1583
Flt Permitted		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	1.00
Satd. Flow (perm)		3433	3539	1583	1770	3230	1441			3433	3539	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.92	0.98	0.98	0.98
Adj. Flow (vph)	4	382	713	268	189	426	416	61	127	388	511	118
RTOR Reduction (vph)	0	0	0	196	0	0	0	0	0	0	0	69
Lane Group Flow (vph)	0	386	713	72	189	622	281	0	0	515	511	49
Turn Type	Prot	Prot	NA	Perm	Prot	NA	Perm		Prot	Prot	NA	Perm
Protected Phases	7	7	4		3	8			5	5	2	
Permitted Phases				4			8					2
Actuated Green, G (s)		15.6	26.9	26.9	15.2	26.5	26.5			20.1	31.1	31.1
Effective Green, g (s)		15.6	26.9	26.9	15.2	26.5	26.5			20.1	31.1	31.1
Actuated g/C Ratio		0.16	0.27	0.27	0.15	0.26	0.26			0.20	0.31	0.31
Clearance Time (s)		4.5	4.5	4.5	4.5	4.5	4.5			4.5	4.5	4.5
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)		532	946	423	267	850	379			685	1094	489
v/s Ratio Prot		c0.11	c0.20		0.11	0.19				c0.15	0.14	
v/s Ratio Perm				0.05			0.20					0.03
v/c Ratio		0.73	0.75	0.17	0.71	0.73	0.74			0.75	0.47	0.10
Uniform Delay, d1		40.5	33.8	28.3	40.6	33.8	33.9			37.9	28.1	24.8
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00
Incremental Delay, d2		4.9	3.4	0.2	8.3	3.3	7.6			4.7	0.3	0.1
Delay (s)		45.3	37.3	28.5	48.9	37.1	41.5			42.6	28.4	24.9
Level of Service		D	D	C	D	D	D			D	C	C
Approach Delay (s)			37.8			40.3					34.4	
Approach LOS			D			D					C	

Intersection Summary			
HCM 2000 Control Delay	37.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	100.6	Sum of lost time (s)	18.0
Intersection Capacity Utilization	72.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR	SBR2
Lane Configurations				
Volume (vph)	104	328	126	205
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5
Lane Util. Factor	1.00	0.95		1.00
Frt	1.00	0.96		0.85
Flt Protected	0.95	1.00		1.00
Satd. Flow (prot)	1770	3392		1583
Flt Permitted	0.95	1.00		1.00
Satd. Flow (perm)	1770	3392		1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.92
Adj. Flow (vph)	106	335	129	223
RTOR Reduction (vph)	0	0	0	178
Lane Group Flow (vph)	106	464	0	45
Turn Type	Prot	NA		Perm
Protected Phases	1	6		
Permitted Phases				6
Actuated Green, G (s)	9.4	20.4		20.4
Effective Green, g (s)	9.4	20.4		20.4
Actuated g/C Ratio	0.09	0.20		0.20
Clearance Time (s)	4.5	4.5		4.5
Vehicle Extension (s)	3.0	3.0		3.0
Lane Grp Cap (vph)	165	687		321
v/s Ratio Prot	0.06	c0.14		
v/s Ratio Perm				0.03
v/c Ratio	0.64	0.68		0.14
Uniform Delay, d1	44.0	37.0		32.9
Progression Factor	1.00	1.00		1.00
Incremental Delay, d2	8.3	2.6		0.2
Delay (s)	52.3	39.7		33.1
Level of Service	D	D		C
Approach Delay (s)		39.5		
Approach LOS		D		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	57	21	49	267	11	187	162	646	118	172	574	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5	4.5	4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frt		0.95			1.00	0.85	1.00	0.98		1.00	1.00	
Flt Protected		0.98			0.95	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1727			1777	1583	1770	4967		1770	5069	
Flt Permitted		0.74			0.68	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1314			1271	1583	1770	4967		1770	5069	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	63	23	54	293	12	205	178	710	130	189	631	14
RTOR Reduction (vph)	0	37	0	0	0	141	0	41	0	0	4	0
Lane Group Flow (vph)	0	103	0	0	305	64	178	799	0	189	641	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		18.2			18.2	18.2	9.4	15.8		10.5	16.9	
Effective Green, g (s)		18.2			18.2	18.2	9.4	15.8		10.5	16.9	
Actuated g/C Ratio		0.31			0.31	0.31	0.16	0.27		0.18	0.29	
Clearance Time (s)		4.5			4.5	4.5	4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		412			398	496	286	1353		320	1477	
v/s Ratio Prot							0.10	c0.16		c0.11	0.13	
v/s Ratio Perm		0.08			c0.24	0.04						
v/c Ratio		0.25			0.77	0.13	0.62	0.59		0.59	0.43	
Uniform Delay, d1		14.8			18.0	14.2	22.6	18.3		21.8	16.7	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.3			8.6	0.1	4.2	0.7		2.9	0.2	
Delay (s)		15.1			26.5	14.4	26.8	19.0		24.7	16.9	
Level of Service		B			C	B	C	B		C	B	
Approach Delay (s)		15.1			21.6			20.4			18.6	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	19.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	58.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	57.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	128	340	86	67	517	88	70	227	39	52	229	181
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	8	12	12	12
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	0.98		1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3433		1770	3462		1770	1863	1372	1770	1739	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3433		1770	3462		1770	1863	1372	1770	1739	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	136	362	91	71	550	94	74	241	41	55	244	193
RTOR Reduction (vph)	0	31	0	0	22	0	0	0	29	0	46	0
Lane Group Flow (vph)	136	422	0	71	622	0	74	241	12	55	391	0
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	9.0	20.8		2.7	14.5		4.3	18.8	18.8	2.5	17.0	
Effective Green, g (s)	9.0	20.8		2.7	14.5		4.3	18.8	18.8	2.5	17.0	
Actuated g/C Ratio	0.14	0.33		0.04	0.23		0.07	0.30	0.30	0.04	0.27	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	253	1137		76	799		121	557	410	70	470	
v/s Ratio Prot	c0.08	0.12		0.04	c0.18		0.04	c0.13		0.03	c0.22	
v/s Ratio Perm									0.01			
v/c Ratio	0.54	0.37		0.93	0.78		0.61	0.43	0.03	0.79	0.83	
Uniform Delay, d1	25.0	16.0		30.0	22.6		28.4	17.7	15.6	29.9	21.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.2	0.2		80.4	4.8		8.8	0.5	0.0	42.6	11.9	
Delay (s)	27.2	16.2		110.3	27.5		37.3	18.2	15.6	72.5	33.5	
Level of Service	C	B		F	C		D	B	B	E	C	
Approach Delay (s)		18.7			35.7			21.9			37.8	
Approach LOS		B			D			C			D	

Intersection Summary				
HCM 2000 Control Delay	29.3	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.74			
Actuated Cycle Length (s)	62.8	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	66.2%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	126	309	50	461	430	585	84	237	288	419	299	181
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.91	0.91	1.00	0.91	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00
Satd. Flow (prot)	1770	3539	1583	3433	3539	1583	1610	3384	1583	1610	3327	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00
Satd. Flow (perm)	1770	3539	1583	3433	3539	1583	1610	3384	1583	1610	3327	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	131	322	52	480	448	609	88	247	300	436	311	189
RTOR Reduction (vph)	0	0	42	0	0	457	0	0	249	0	0	143
Lane Group Flow (vph)	131	322	10	480	448	152	79	256	51	244	503	46
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	13.1	17.3	17.3	17.8	22.0	22.0	15.3	15.3	15.3	22.2	22.2	22.2
Effective Green, g (s)	13.1	17.3	17.3	17.8	22.0	22.0	15.3	15.3	15.3	22.2	22.2	22.2
Actuated g/C Ratio	0.14	0.19	0.19	0.20	0.24	0.24	0.17	0.17	0.17	0.25	0.25	0.25
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	255	675	302	674	859	384	271	571	267	394	815	387
v/s Ratio Prot	0.07	c0.09		c0.14	0.13		0.05	c0.08		c0.15	0.15	
v/s Ratio Perm			0.01			0.10			0.03			0.03
v/c Ratio	0.51	0.48	0.03	0.71	0.52	0.40	0.29	0.45	0.19	0.62	0.62	0.12
Uniform Delay, d1	35.8	32.6	29.8	34.0	29.7	28.7	32.9	33.9	32.3	30.4	30.4	26.6
Progression 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
Incremental Delay, d2	1.7	0.5	0.0	3.6	0.6	0.7	0.6	0.6	0.3	2.9	1.4	0.1
Delay (s)	37.6	33.2	29.9	37.6	30.3	29.4	33.5	34.4	32.7	33.3	31.8	26.7
Level of Service	D	C	C	D	C	C	C	C	C	C	C	C
Approach Delay (s)		34.0			32.2			33.5			31.2	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM 2000 Control Delay	32.4	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.57			
Actuated Cycle Length (s)	90.6	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	61.0%	ICU Level of Service	B	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	778	152	321	1231	0	0	0	0	185	6	233
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0	4.5	4.5					4.5	4.5	4.5
Lane Util. Factor		0.95	1.00	0.97	0.95					0.95	0.91	0.95
Frt		1.00	0.85	1.00	1.00					1.00	0.90	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.99	1.00
Satd. Flow (prot)		3539	1583	3433	3539					1681	1498	1504
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.99	1.00
Satd. Flow (perm)		3539	1583	3433	3539					1681	1498	1504
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	0	960	188	396	1520	0	0	0	0	228	7	288
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	960	188	396	1520	0	0	0	0	182	174	167
Turn Type		NA	Free	Prot	NA					Split	NA	Perm
Protected Phases		4		3	8					6	6	
Permitted Phases			Free									6
Actuated Green, G (s)		55.4	110.0	22.5	82.4					18.6	18.6	18.6
Effective Green, g (s)		55.4	110.0	22.5	82.4					18.6	18.6	18.6
Actuated g/C Ratio		0.50	1.00	0.20	0.75					0.17	0.17	0.17
Clearance Time (s)		4.5		4.5	4.5					4.5	4.5	4.5
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1782	1583	702	2651					284	253	254
v/s Ratio Prot		0.27		0.12	c0.43					0.11	c0.12	
v/s Ratio Perm			0.12									0.11
v/c Ratio		0.54	0.12	0.56	0.57					0.64	0.69	0.66
Uniform Delay, d1		18.6	0.0	39.3	6.1					42.6	43.0	42.7
Progression Factor		1.00	1.00	0.68	0.34					1.00	1.00	1.00
Incremental Delay, d2		1.2	0.2	0.9	0.8					4.9	7.6	6.0
Delay (s)		19.8	0.2	27.7	2.9					47.5	50.5	48.7
Level of Service		B	A	C	A					D	D	D
Approach Delay (s)		16.6			8.0			0.0			48.9	
Approach LOS		B			A			A			D	

Intersection Summary				
HCM 2000 Control Delay	16.7	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.62			
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.5	
Intersection Capacity Utilization	51.1%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	152	720	150	179	724	49	576	63	261	49	77	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00		0.98	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3506		1681	1701	1583		1827	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00		0.98	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3506		1681	1701	1583		1827	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	155	735	153	183	739	50	588	64	266	50	79	64
RTOR Reduction (vph)	0	0	81	0	4	0	0	0	203	0	0	57
Lane Group Flow (vph)	155	735	72	183	785	0	323	329	63	0	129	7
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	13.7	37.8	37.8	15.7	39.8		25.9	25.9	25.9		12.6	12.6
Effective Green, g (s)	13.7	37.8	37.8	15.7	39.8		25.9	25.9	25.9		12.6	12.6
Actuated g/C Ratio	0.12	0.34	0.34	0.14	0.36		0.24	0.24	0.24		0.11	0.11
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	220	1216	543	252	1268		395	400	372		209	181
v/s Ratio Prot	0.09	0.21		c0.10	c0.22		0.19	c0.19			c0.07	
v/s Ratio Perm			0.05						0.04			0.00
v/c Ratio	0.70	0.60	0.13	0.73	0.62		0.82	0.82	0.17		0.62	0.04
Uniform Delay, d1	46.2	29.9	24.8	45.1	28.9		39.8	39.9	33.5		46.4	43.3
Progression Factor	1.30	0.56	0.38	1.32	0.53		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	8.5	1.9	0.4	9.6	2.2		12.4	12.8	0.2		5.3	0.1
Delay (s)	68.7	18.7	9.8	69.3	17.4		52.2	52.7	33.7		51.7	43.4
Level of Service	E	B	A	E	B		D	D	C		D	D
Approach Delay (s)		24.8			27.2			47.0			49.0	
Approach LOS		C			C			D			D	

Intersection Summary				
HCM 2000 Control Delay	33.6	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.71			
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	65.5%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	937	91	52	805	153	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	1770	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	976	95	54	839	159	128
RTOR Reduction (vph)	0	34	0	0	0	108
Lane Group Flow (vph)	976	61	54	839	159	20
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	70.2	70.2	9.2	83.9	17.1	17.1
Effective Green, g (s)	70.2	70.2	9.2	83.9	17.1	17.1
Actuated g/C Ratio	0.64	0.64	0.08	0.76	0.16	0.16
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2258	1010	148	2699	275	246
v/s Ratio Prot	c0.28		0.03	c0.24	c0.09	
v/s Ratio Perm		0.04				0.01
v/c Ratio	0.43	0.06	0.36	0.31	0.58	0.08
Uniform Delay, d1	9.9	7.5	47.6	4.1	43.1	39.7
Progression Factor	0.28	0.01	1.04	0.35	1.00	1.00
Incremental Delay, d2	0.5	0.1	1.5	0.3	2.9	0.1
Delay (s)	3.3	0.1	50.9	1.7	46.0	39.9
Level of Service	A	A	D	A	D	D
Approach Delay (s)	3.0			4.7	43.3	
Approach LOS	A			A	D	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	49.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	888	110	0	857	50	0	0	75	0	0	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5				4.5			4.5
Lane Util. Factor		0.91			0.95				1.00			1.00
Frt		0.98			0.99				0.86			0.86
Flt Protected		1.00			1.00				1.00			1.00
Satd. Flow (prot)		5001			3510				1611			1611
Flt Permitted		1.00			1.00				1.00			1.00
Satd. Flow (perm)		5001			3510				1611			1611
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	915	113	0	884	52	0	0	77	0	0	25
RTOR Reduction (vph)	0	6	0	0	2	0	0	0	72	0	0	24
Lane Group Flow (vph)	0	1022	0	0	934	0	0	0	5	0	0	1
Turn Type		NA			NA				Perm			Perm
Protected Phases		4			8							
Permitted Phases									2			6
Actuated Green, G (s)		94.5			94.5				6.5			6.5
Effective Green, g (s)		94.5			94.5				6.5			6.5
Actuated g/C Ratio		0.86			0.86				0.06			0.06
Clearance Time (s)		4.5			4.5				4.5			4.5
Vehicle Extension (s)		3.0			3.0				3.0			3.0
Lane Grp Cap (vph)		4296			3015				95			95
v/s Ratio Prot		0.20			c0.27							
v/s Ratio Perm									c0.00			0.00
v/c Ratio		0.24			0.31				0.05			0.02
Uniform Delay, d1		1.4			1.5				48.8			48.7
Progression Factor		0.78			0.61				1.00			1.00
Incremental Delay, d2		0.1			0.1				0.2			0.1
Delay (s)		1.2			1.0				49.0			48.8
Level of Service		A			A				D			D
Approach Delay (s)		1.2			1.0			49.0			48.8	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	3.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	36.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	209	610	90	165	555	484	184	443	128	240	369	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.0	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.91	0.91			0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.98			1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1610	3322			3499	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	1.00			0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1610	3322			3499	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	218	635	94	172	578	504	192	461	133	250	384	190
RTOR Reduction (vph)	0	9	0	0	0	0	0	0	90	0	0	149
Lane Group Flow (vph)	196	742	0	0	750	504	192	461	43	250	384	41
Turn Type	Split	NA		Split	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						Free			2			6
Actuated Green, G (s)	29.8	29.8			23.5	110.0	14.9	19.5	19.5	19.2	23.8	23.8
Effective Green, g (s)	29.8	29.8			23.5	110.0	14.9	19.5	19.5	19.2	23.8	23.8
Actuated g/C Ratio	0.27	0.27			0.21	1.00	0.14	0.18	0.18	0.17	0.22	0.22
Clearance Time (s)	4.5	4.5			4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	436	899			747	1583	239	627	280	308	765	342
v/s Ratio Prot	0.12	c0.22			c0.21		0.11	c0.13		c0.14	0.11	
v/s Ratio Perm						0.32			0.03			0.03
v/c Ratio	0.45	0.82			1.00	0.32	0.80	0.74	0.15	0.81	0.50	0.12
Uniform Delay, d1	33.3	37.6			43.2	0.0	46.1	42.8	38.3	43.7	37.9	34.7
Progression Factor	0.43	0.50			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.3	8.4			33.9	0.5	17.5	7.5	1.2	14.9	0.5	0.2
Delay (s)	17.5	27.1			77.2	0.5	63.6	50.3	39.5	58.6	38.4	34.8
Level of Service	B	C			E	A	E	D	D	E	D	C
Approach Delay (s)		25.1			46.4			51.7			43.7	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	41.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	77.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	12.8
Intersection LOS	B

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Vol, veh/h	2	52	70	0	197	78	0	266	201
Peak Hour Factor	0.93	0.93	0.93	0.92	0.93	0.93	0.92	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	56	75	0	212	84	0	286	216
Number of Lanes	0	2	0	0	1	2	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	3	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	3
HCM Control Delay	10.4	12.8	13.5
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3
Vol Left, %	100%	0%	0%	0%	100%	0%	0%
Vol Thru, %	0%	0%	100%	27%	0%	100%	100%
Vol Right, %	0%	100%	0%	73%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	266	201	28	96	197	39	39
LT Vol	266	0	0	0	197	0	0
Through Vol	0	0	28	26	0	39	39
RT Vol	0	201	0	70	0	0	0
Lane Flow Rate	286	216	30	103	212	42	42
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	0.513	0.315	0.057	0.181	0.407	0.075	0.054
Departure Headway (Hd)	6.452	5.249	6.85	6.328	6.922	6.415	4.655
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	561	685	522	566	521	558	767
Service Time	4.184	2.982	4.602	4.08	4.665	4.157	2.397
HCM Lane V/C Ratio	0.51	0.315	0.057	0.182	0.407	0.075	0.055
HCM Control Delay	15.8	10.4	10	10.5	14.4	9.7	7.7
HCM Lane LOS	C	B	A	B	B	A	A
HCM 95th-tile Q	2.9	1.3	0.2	0.7	2	0.2	0.2

Intersection	
Intersection Delay, s/veh	14
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Vol, veh/h	0	235	155	3	0	7	145	178	0	0	6	10	0	271	1	77
Peak Hour Factor	0.92	0.98	0.98	0.98	0.92	0.98	0.98	0.98	0.92	0.98	0.98	0.98	0.92	0.98	0.98	0.98
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	240	158	3	0	7	148	182	0	0	6	10	0	277	1	79
Number of Lanes	0	1	1	0	0	0	2	0	0	0	1	0	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	13.7	12.4	10.3	16.1
HCM LOS	B	B	B	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	100%	0%	9%	0%	100%	0%
Vol Thru, %	38%	0%	98%	91%	29%	0%	0%
Vol Right, %	62%	0%	2%	0%	71%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	16	235	158	80	251	272	77
LT Vol	0	235	0	7	0	271	0
Through Vol	6	0	155	73	73	1	0
RT Vol	10	0	3	0	178	0	77
Lane Flow Rate	16	240	161	81	256	278	79
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.032	0.453	0.281	0.146	0.421	0.545	0.128
Departure Headway (Hd)	6.996	6.799	6.277	6.475	5.924	7.068	5.853
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	508	528	571	552	606	511	611
Service Time	5.089	4.561	4.039	4.238	3.687	4.825	3.61
HCM Lane V/C Ratio	0.031	0.455	0.282	0.147	0.422	0.544	0.129
HCM Control Delay	10.3	15.1	11.5	10.4	13	18	9.5
HCM Lane LOS	B	C	B	B	B	C	A
HCM 95th-tile Q	0.1	2.3	1.1	0.5	2.1	3.2	0.4

Intersection	
Intersection Delay, s/veh	21.1
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Vol, veh/h	0	81	292	54	0	128	142	180	0	98	186	136	0	121	194	68
Peak Hour Factor	0.92	0.97	0.97	0.97	0.92	0.97	0.97	0.97	0.92	0.97	0.97	0.97	0.92	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	84	301	56	0	132	146	186	0	101	192	140	0	125	200	70
Number of Lanes	0	1	2	0	0	1	2	0	0	0	2	0	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	3	3
HCM Control Delay	20.2	20.8	23.1	20.2
HCM LOS	C	C	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	51%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	49%	41%	0%	100%	64%	0%	100%	21%	0%	100%	0%
Vol Right, %	0%	59%	0%	0%	36%	0%	0%	79%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	191	229	81	195	151	128	95	227	121	194	68
LT Vol	98	0	81	0	0	128	0	0	121	0	0
Through Vol	93	93	0	195	97	0	95	47	0	194	0
RT Vol	0	136	0	0	54	0	0	180	0	0	68
Lane Flow Rate	197	236	84	201	156	132	98	234	125	200	70
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.524	0.585	0.236	0.538	0.407	0.371	0.26	0.587	0.354	0.54	0.175
Departure Headway (Hd)	9.588	8.915	10.159	9.643	9.386	10.109	9.594	9.022	10.226	9.715	9
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	376	404	352	373	382	355	374	398	351	370	397
Service Time	7.369	6.696	7.946	7.43	7.172	7.896	7.38	6.809	8.017	7.506	6.79
HCM Lane V/C Ratio	0.524	0.584	0.239	0.539	0.408	0.372	0.262	0.588	0.356	0.541	0.176
HCM Control Delay	22.5	23.6	16.1	23.2	18.5	18.8	15.7	24	18.6	23.4	13.7
HCM Lane LOS	C	C	C	C	C	C	C	C	C	C	B
HCM 95th-tile Q	2.9	3.6	0.9	3.1	1.9	1.7	1	3.6	1.6	3.1	0.6

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	196	336	69	253	375	295	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95		0.95	1.00	0.97	
Frt	1.00	1.00		1.00	0.85	0.94	
Flt Protected	0.95	1.00		0.99	1.00	0.97	
Satd. Flow (prot)	1770	3539		3502	1583	3294	
Flt Permitted	0.95	1.00		0.81	1.00	0.97	
Satd. Flow (perm)	1770	3539		2863	1583	3294	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	202	346	71	261	387	304	211
RTOR Reduction (vph)	0	0	0	0	142	154	0
Lane Group Flow (vph)	202	346	0	332	245	361	0
Turn Type	Prot	NA	Perm	NA	pm+ov	Prot	
Protected Phases	7	4		8	6	6	
Permitted Phases			8		8		
Actuated Green, G (s)	8.8	26.3		13.0	26.1	13.1	
Effective Green, g (s)	8.8	26.3		13.0	26.1	13.1	
Actuated g/C Ratio	0.18	0.54		0.27	0.54	0.27	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	321	1923		768	1000	891	
v/s Ratio Prot	c0.11	0.10			0.07	c0.11	
v/s Ratio Perm				c0.12	0.09		
v/c Ratio	0.63	0.18		0.43	0.25	0.41	
Uniform Delay, d1	18.3	5.6		14.6	5.9	14.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	
Incremental Delay, d2	3.8	0.0		0.4	0.1	0.3	
Delay (s)	22.1	5.6		15.0	6.0	14.8	
Level of Service	C	A		B	A	B	
Approach Delay (s)		11.7		10.2		14.8	
Approach LOS		B		B		B	

Intersection Summary			
HCM 2000 Control Delay	12.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	48.4	Sum of lost time (s)	13.5
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	335	293	545	244	634	333	319	719	451	343	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95	1.00	0.97	1.00	0.88	0.91	0.86	0.91	0.91	0.91	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.92	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	
Satd. Flow (prot)	1770	3539	1583	3433	1863	2787	1610	2954	1441	1610	3279	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	
Satd. Flow (perm)	1770	3539	1583	3433	1863	2787	1610	2954	1441	1610	3279	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	53	349	305	568	254	660	347	332	749	470	357	77
RTOR Reduction (vph)	0	0	63	0	0	182	0	164	63	0	10	0
Lane Group Flow (vph)	53	349	242	568	254	478	312	578	311	301	593	0
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Split	NA	pm+ov	Split	NA	
Protected Phases	7	4	2	3	8	6	2	2	3	6	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	6.4	16.9	39.5	19.2	29.7	54.0	22.6	22.6	41.8	24.3	24.3	
Effective Green, g (s)	6.4	16.9	39.5	19.2	29.7	54.0	22.6	22.6	41.8	24.3	24.3	
Actuated g/C Ratio	0.06	0.17	0.39	0.19	0.29	0.53	0.22	0.22	0.41	0.24	0.24	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	112	592	689	652	547	1490	360	660	596	387	788	
v/s Ratio Prot	0.03	c0.10	0.08	c0.17	0.14	0.08	0.19	c0.20	0.10	c0.19	0.18	
v/s Ratio Perm			0.07			0.09			0.12			
v/c Ratio	0.47	0.59	0.35	0.87	0.46	0.32	0.87	0.88	0.52	0.78	0.75	
Uniform Delay, d1	45.7	38.8	21.7	39.7	29.1	13.2	37.7	37.8	22.1	35.8	35.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.1	1.5	0.3	12.2	0.6	0.1	19.1	12.5	0.8	9.5	4.1	
Delay (s)	48.8	40.4	22.0	51.9	29.8	13.3	56.9	50.3	23.0	45.3	39.7	
Level of Service	D	D	C	D	C	B	E	D	C	D	D	
Approach Delay (s)		33.1			30.9			44.6			41.5	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	37.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	101.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	1520	576	0	777	825
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5
Lane Util. Factor		0.95	0.91		0.97	0.88
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	5085		3433	2787
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	5085		3433	2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1600	606	0	818	868
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1600	606	0	818	868
Turn Type		NA	NA		Prot	Prot
Protected Phases		4	8		6	6
Permitted Phases						
Actuated Green, G (s)		48.6	48.6		32.4	32.4
Effective Green, g (s)		48.6	48.6		32.4	32.4
Actuated g/C Ratio		0.54	0.54		0.36	0.36
Clearance Time (s)		4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1911	2745		1235	1003
v/s Ratio Prot		c0.45	0.12		0.24	c0.31
v/s Ratio Perm						
v/c Ratio		0.84	0.22		0.66	0.87
Uniform Delay, d1		17.4	10.8		24.2	26.8
Progression Factor		1.00	0.01		1.00	1.00
Incremental Delay, d2		4.6	0.2		1.3	7.9
Delay (s)		21.9	0.3		25.6	34.7
Level of Service		C	A		C	C
Approach Delay (s)		21.9	0.3		30.3	
Approach LOS		C	A		C	

Intersection Summary			
HCM 2000 Control Delay	22.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	97.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Volume (vph)	754	1535	566	1	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5			
Lane Util. Factor	0.97	0.95	0.95			
Frt	1.00	1.00	1.00			
Flt Protected	0.95	1.00	1.00			
Satd. Flow (prot)	3433	3539	3538			
Flt Permitted	0.95	1.00	1.00			
Satd. Flow (perm)	3433	3539	3538			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	794	1616	596	1	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	794	1616	597	0	0	0
Turn Type	Prot	NA	NA			
Protected Phases	7	4	8			
Permitted Phases						
Actuated Green, G (s)	45.5	90.0	35.5			
Effective Green, g (s)	45.5	90.0	35.5			
Actuated g/C Ratio	0.51	1.00	0.39			
Clearance Time (s)	4.5	4.5	4.5			
Vehicle Extension (s)	3.0	3.0	3.0			
Lane Grp Cap (vph)	1735	3539	1395			
v/s Ratio Prot	0.23	c0.46	0.17			
v/s Ratio Perm						
v/c Ratio	0.46	0.46	0.43			
Uniform Delay, d1	14.3	0.0	19.9			
Progression Factor	0.80	1.00	1.00			
Incremental Delay, d2	0.1	0.3	1.0			
Delay (s)	11.6	0.3	20.8			
Level of Service	B	A	C			
Approach Delay (s)		4.0	20.8		0.0	
Approach LOS		A	C		A	

Intersection Summary			
HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	97.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	1	557	737	249	143	327	338	75	75	366	401	146
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5	4.5	4.5			4.5	4.5	4.5
Lane Util. Factor		0.97	0.95	1.00	1.00	0.91	0.91			0.97	0.95	1.00
Frt		1.00	1.00	0.85	1.00	0.95	0.85			1.00	1.00	0.85
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	1.00
Satd. Flow (prot)		3433	3539	1583	1770	3208	1441			3433	3539	1583
Flt Permitted		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	1.00
Satd. Flow (perm)		3433	3539	1583	1770	3208	1441			3433	3539	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1	580	768	259	149	341	352	78	78	381	418	152
RTOR Reduction (vph)	0	0	0	181	0	0	0	0	0	0	0	110
Lane Group Flow (vph)	0	581	768	78	149	531	240	0	0	459	418	42
Turn Type	Prot	Prot	NA	Perm	Prot	NA	Perm		Prot	Prot	NA	Perm
Protected Phases	7	7	4		3	8			5	5	2	
Permitted Phases				4			8					2
Actuated Green, G (s)		21.6	30.7	30.7	13.0	22.1	22.1			18.7	27.0	27.0
Effective Green, g (s)		21.6	30.7	30.7	13.0	22.1	22.1			18.7	27.0	27.0
Actuated g/C Ratio		0.21	0.30	0.30	0.13	0.22	0.22			0.18	0.27	0.27
Clearance Time (s)		4.5	4.5	4.5	4.5	4.5	4.5			4.5	4.5	4.5
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)		731	1071	479	226	699	314			633	942	421
v/s Ratio Prot		c0.17	c0.22		0.08	0.17				c0.13	0.12	
v/s Ratio Perm				0.05			0.17					0.03
v/c Ratio		0.79	0.72	0.16	0.66	0.76	0.76			0.73	0.44	0.10
Uniform Delay, d1		37.8	31.5	25.9	42.1	37.2	37.2			38.9	31.0	28.0
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00
Incremental Delay, d2		6.0	2.3	0.2	6.8	4.8	10.6			4.1	0.3	0.1
Delay (s)		43.8	33.8	26.1	48.9	41.9	47.8			43.1	31.3	28.1
Level of Service		D	C	C	D	D	D			D	C	C
Approach Delay (s)			36.2			44.6					36.1	
Approach LOS			D			D					D	

Intersection Summary			
HCM 2000 Control Delay	38.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	101.4	Sum of lost time (s)	18.0
Intersection Capacity Utilization	75.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR	SBR2
Lane Configurations				
Volume (vph)	135	323	165	238
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5
Lane Util. Factor	1.00	0.95		1.00
Frt	1.00	0.95		0.85
Flt Protected	0.95	1.00		1.00
Satd. Flow (prot)	1770	3359		1583
Flt Permitted	0.95	1.00		1.00
Satd. Flow (perm)	1770	3359		1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96
Adj. Flow (vph)	141	336	172	248
RTOR Reduction (vph)	0	0	0	197
Lane Group Flow (vph)	141	508	0	51
Turn Type	Prot	NA		Perm
Protected Phases	1	6		
Permitted Phases				6
Actuated Green, G (s)	12.7	21.0		21.0
Effective Green, g (s)	12.7	21.0		21.0
Actuated g/C Ratio	0.13	0.21		0.21
Clearance Time (s)	4.5	4.5		4.5
Vehicle Extension (s)	3.0	3.0		3.0
Lane Grp Cap (vph)	221	695		327
v/s Ratio Prot	0.08	c0.15		
v/s Ratio Perm				0.03
v/c Ratio	0.64	0.73		0.16
Uniform Delay, d1	42.2	37.6		32.9
Progression Factor	1.00	1.00		1.00
Incremental Delay, d2	5.9	4.0		0.2
Delay (s)	48.1	41.5		33.2
Level of Service	D	D		C
Approach Delay (s)		40.2		
Approach LOS		D		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	73	15	63	251	12	268	156	719	187	198	601	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5	4.5	4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frt		0.94			1.00	0.85	1.00	0.97		1.00	0.99	
Flt Protected		0.98			0.95	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1716			1778	1583	1770	4928		1770	5058	
Flt Permitted		0.72			0.66	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1258			1231	1583	1770	4928		1770	5058	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	76	16	66	261	12	279	162	749	195	206	626	23
RTOR Reduction (vph)	0	43	0	0	0	196	0	72	0	0	6	0
Lane Group Flow (vph)	0	115	0	0	273	83	162	872	0	206	643	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		17.4			17.4	17.4	9.9	16.8		10.6	17.5	
Effective Green, g (s)		17.4			17.4	17.4	9.9	16.8		10.6	17.5	
Actuated g/C Ratio		0.30			0.30	0.30	0.17	0.29		0.18	0.30	
Clearance Time (s)		4.5			4.5	4.5	4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		375			367	472	300	1420		321	1518	
v/s Ratio Prot							0.09	c0.18		c0.12	0.13	
v/s Ratio Perm		0.09			c0.22	0.05						
v/c Ratio		0.31			0.74	0.18	0.54	0.61		0.64	0.42	
Uniform Delay, d1		15.8			18.4	15.1	22.1	17.9		22.1	16.4	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.5			7.9	0.2	2.0	0.8		4.3	0.2	
Delay (s)		16.3			26.4	15.3	24.1	18.7		26.4	16.5	
Level of Service		B			C	B	C	B		C	B	
Approach Delay (s)		16.3			20.8			19.5			18.9	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	19.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	58.3	Sum of lost time (s)	13.5
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	118	403	48	61	402	83	52	191	47	71	147	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	8	12	12	12
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	0.97		1.00	1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3483		1770	3449		1770	1863	1372	1770	1718	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3483		1770	3449		1770	1863	1372	1770	1718	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	131	448	53	68	447	92	58	212	52	79	163	176
RTOR Reduction (vph)	0	15	0	0	29	0	0	0	39	0	65	0
Lane Group Flow (vph)	131	486	0	68	510	0	58	212	13	79	274	0
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	5.2	15.9		2.3	13.0		2.0	13.5	13.5	2.8	14.3	
Effective Green, g (s)	5.2	15.9		2.3	13.0		2.0	13.5	13.5	2.8	14.3	
Actuated g/C Ratio	0.10	0.30		0.04	0.25		0.04	0.26	0.26	0.05	0.27	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	175	1054		77	854		67	479	352	94	467	
v/s Ratio Prot	c0.07	0.14		0.04	c0.15		0.03	c0.11		0.04	c0.16	
v/s Ratio Perm									0.01			
v/c Ratio	0.75	0.46		0.88	0.60		0.87	0.44	0.04	0.84	0.59	
Uniform Delay, d1	23.0	14.8		25.0	17.4		25.1	16.3	14.6	24.6	16.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	16.0	0.3		64.2	1.1		64.8	0.7	0.0	45.8	1.9	
Delay (s)	39.0	15.2		89.2	18.6		89.9	17.0	14.7	70.4	18.4	
Level of Service	D	B		F	B		F	B	B	E	B	
Approach Delay (s)		20.1			26.5			29.8			28.3	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	25.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	52.5	Sum of lost time (s)	18.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	167	341	49	339	318	616	81	312	343	463	284	167
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.91	0.91	1.00	0.91	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00
Satd. Flow (prot)	1770	3539	1583	3433	3539	1583	1610	3386	1583	1610	3318	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00
Satd. Flow (perm)	1770	3539	1583	3433	3539	1583	1610	3386	1583	1610	3318	1583
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	178	363	52	361	338	655	86	332	365	493	302	178
RTOR Reduction (vph)	0	0	41	0	0	430	0	0	233	0	0	133
Lane Group Flow (vph)	178	363	11	361	338	225	77	341	132	261	534	45
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	12.1	19.7	19.7	12.6	20.2	20.2	17.9	17.9	17.9	22.9	22.9	22.9
Effective Green, g (s)	12.1	19.7	19.7	12.6	20.2	20.2	17.9	17.9	17.9	22.9	22.9	22.9
Actuated g/C Ratio	0.13	0.22	0.22	0.14	0.22	0.22	0.20	0.20	0.20	0.25	0.25	0.25
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	235	765	342	474	784	351	316	665	311	404	834	397
v/s Ratio Prot	c0.10	0.10		c0.11	0.10		0.05	c0.10		c0.16	0.16	
v/s Ratio Perm			0.01			c0.14			0.08			0.03
v/c Ratio	0.76	0.47	0.03	0.76	0.43	0.64	0.24	0.51	0.42	0.65	0.64	0.11
Uniform Delay, d1	38.1	31.2	28.2	37.8	30.5	32.2	30.9	32.7	32.1	30.5	30.4	26.3
Progression 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
Incremental Delay, d2	13.0	0.5	0.0	7.1	0.4	3.8	0.4	0.7	0.9	3.5	1.7	0.1
Delay (s)	51.1	31.6	28.2	44.9	30.9	36.0	31.3	33.4	33.0	34.0	32.1	26.4
Level of Service	D	C	C	D	C	D	C	C	C	C	C	C
Approach Delay (s)		37.2			37.1			33.0			31.6	
Approach LOS		D			D			C			C	

Intersection Summary				
HCM 2000 Control Delay	34.8	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.63			
Actuated Cycle Length (s)	91.1	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	67.3%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	797	109	249	1071	0	0	0	0	197	5	176
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0	4.5	4.5					4.5	4.5	4.5
Lane Util. Factor		0.95	1.00	0.97	0.95					0.95	0.91	0.95
Frt		1.00	0.85	1.00	1.00					1.00	0.93	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (prot)		3539	1583	3433	3539					1681	1543	1504
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (perm)		3539	1583	3433	3539					1681	1543	1504
Peak-hour factor, PHF	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Adj. Flow (vph)	0	1123	154	351	1508	0	0	0	0	277	7	248
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1123	154	351	1508	0	0	0	0	183	180	169
Turn Type		NA	Free	Prot	NA					Split	NA	Perm
Protected Phases		4		3	8					6	6	
Permitted Phases			Free									6
Actuated Green, G (s)		58.3	110.0	19.5	82.3					18.7	18.7	18.7
Effective Green, g (s)		58.3	110.0	19.5	82.3					18.7	18.7	18.7
Actuated g/C Ratio		0.53	1.00	0.18	0.75					0.17	0.17	0.17
Clearance Time (s)		4.5		4.5	4.5					4.5	4.5	4.5
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1875	1583	608	2647					285	262	255
v/s Ratio Prot		c0.32		0.10	c0.43					0.11	c0.12	
v/s Ratio Perm			0.10									0.11
v/c Ratio		0.60	0.10	0.58	0.57					0.64	0.69	0.66
Uniform Delay, d1		17.8	0.0	41.5	6.1					42.5	42.9	42.7
Progression Factor		1.00	1.00	0.71	0.37					1.00	1.00	1.00
Incremental Delay, d2		1.4	0.1	1.3	0.8					4.9	7.3	6.3
Delay (s)		19.2	0.1	30.7	3.1					47.4	50.2	49.0
Level of Service		B	A	C	A					D	D	D
Approach Delay (s)		16.9			8.3			0.0			48.9	
Approach LOS		B			A			A			D	

Intersection Summary				
HCM 2000 Control Delay	17.2	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.62			
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.5	
Intersection Capacity Utilization	47.8%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

HCM Signalized Intersection Capacity Analysis — 2015 Saturday NP MD
13: I-280 NB RAMPS/IMPERIAL WAY & HICKEY BLVD — 10/19/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	134	706	169	137	580	62	576	31	256	42	84	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00		0.98	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3488		1681	1694	1583		1832	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00		0.98	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3488		1681	1694	1583		1832	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	137	720	172	140	592	63	588	32	261	43	86	67
RTOR Reduction (vph)	0	0	92	0	6	0	0	0	199	0	0	59
Lane Group Flow (vph)	137	720	80	140	649	0	312	308	62	0	129	8
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	12.8	40.3	40.3	12.9	40.4		26.2	26.2	26.2		12.6	12.6
Effective Green, g (s)	12.8	40.3	40.3	12.9	40.4		26.2	26.2	26.2		12.6	12.6
Actuated g/C Ratio	0.12	0.37	0.37	0.12	0.37		0.24	0.24	0.24		0.11	0.11
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	205	1296	579	207	1281		400	403	377		209	181
v/s Ratio Prot	0.08	c0.20		c0.08	0.19		c0.19	0.18			c0.07	
v/s Ratio Perm			0.05						0.04			0.00
v/c Ratio	0.67	0.56	0.14	0.68	0.51		0.78	0.76	0.16		0.62	0.04
Uniform Delay, d1	46.6	27.7	23.3	46.5	27.0		39.2	39.0	33.2		46.4	43.3
Progression Factor	1.25	0.66	0.64	1.47	0.37		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	6.6	1.4	0.4	8.3	1.4		9.5	8.4	0.2		5.3	0.1
Delay (s)	65.0	19.8	15.3	76.7	11.4		48.7	47.4	33.4		51.7	43.4
Level of Service	E	B	B	E	B		D	D	C		D	D
Approach Delay (s)		25.1			22.9			43.7			48.9	
Approach LOS		C			C			D			D	

Intersection Summary				
HCM 2000 Control Delay	31.8	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.64			
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	61.8%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

HCM Signalized Intersection Capacity Analysis — 2015 Saturday NP MD
14: KAISER MEDICAL DWY & HICKEY BLVD/HICKEY DR — 10/19/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	983	8	4	767	10	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	1770	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1035	8	4	807	11	9
RTOR Reduction (vph)	0	2	0	0	0	8
Lane Group Flow (vph)	1035	6	4	807	11	1
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	86.8	86.8	1.1	92.4	8.6	8.6
Effective Green, g (s)	86.8	86.8	1.1	92.4	8.6	8.6
Actuated g/C Ratio	0.79	0.79	0.01	0.84	0.08	0.08
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2792	1249	17	2972	138	123
v/s Ratio Prot	c0.29		0.00	c0.23	c0.01	
v/s Ratio Perm		0.00				0.00
v/c Ratio	0.37	0.01	0.24	0.27	0.08	0.01
Uniform Delay, d1	3.5	2.5	54.0	1.8	47.0	46.8
Progression Factor	0.29	0.13	1.46	0.29	1.00	1.00
Incremental Delay, d2	0.3	0.0	6.9	0.2	0.2	0.0
Delay (s)	1.3	0.3	85.9	0.8	47.3	46.8
Level of Service	A	A	F	A	D	D
Approach Delay (s)	1.3			1.2	47.1	
Approach LOS	A			A	D	

Intersection Summary				
HCM 2000 Control Delay	1.8	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.35			
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.5	
Intersection Capacity Utilization	38.0%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	897	58	0	724	33	0	0	54	0	0	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5				4.5			4.5
Lane Util. Factor		0.91			0.95				1.00			1.00
Frt		0.99			0.99				0.86			0.86
Flt Protected		1.00			1.00				1.00			1.00
Satd. Flow (prot)		5039			3516				1611			1611
Flt Permitted		1.00			1.00				1.00			1.00
Satd. Flow (perm)		5039			3516				1611			1611
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	954	62	0	770	35	0	0	57	0	0	45
RTOR Reduction (vph)	0	3	0	0	1	0	0	0	54	0	0	42
Lane Group Flow (vph)	0	1013	0	0	804	0	0	0	3	0	0	3
Turn Type		NA			NA				Perm			Perm
Protected Phases		4			8							
Permitted Phases									2			6
Actuated Green, G (s)		94.5			94.5				6.5			6.5
Effective Green, g (s)		94.5			94.5				6.5			6.5
Actuated g/C Ratio		0.86			0.86				0.06			0.06
Clearance Time (s)		4.5			4.5				4.5			4.5
Vehicle Extension (s)		3.0			3.0				3.0			3.0
Lane Grp Cap (vph)		4328			3020				95			95
v/s Ratio Prot		0.20			c0.23							
v/s Ratio Perm									c0.00			0.00
v/c Ratio		0.23			0.27				0.04			0.03
Uniform Delay, d1		1.4			1.4				48.8			48.8
Progression Factor		0.47			0.43				1.00			1.00
Incremental Delay, d2		0.1			0.2				0.2			0.1
Delay (s)		0.8			0.8				48.9			48.9
Level of Service		A			A				D			D
Approach Delay (s)		0.8			0.8			48.9			48.9	
Approach LOS		A			A			D			D	

Intersection Summary				
HCM 2000 Control Delay	3.3	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.25			
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0	
Intersection Capacity Utilization	31.9%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	259	655	49	115	464	421	85	298	85	219	283	234
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.0	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.91	0.91			0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.99			1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1610	3350			3504	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	1.00			0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1610	3350			3504	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	264	668	50	117	473	430	87	304	87	223	289	239
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	72	0	0	177
Lane Group Flow (vph)	238	740	0	0	590	430	87	304	15	223	289	62
Turn Type	Split	NA		Split	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						Free			2			6
Actuated Green, G (s)	32.6	32.6			21.5	110.0	9.4	18.4	18.4	19.5	28.5	28.5
Effective Green, g (s)	32.6	32.6			21.5	110.0	9.4	18.4	18.4	19.5	28.5	28.5
Actuated g/C Ratio	0.30	0.30			0.20	1.00	0.09	0.17	0.17	0.18	0.26	0.26
Clearance Time (s)	4.5	4.5			4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	477	992			684	1583	151	591	264	313	916	410
v/s Ratio Prot	0.15	c0.22			c0.17		0.05	c0.09		c0.13	0.08	
v/s Ratio Perm						0.27			0.01			0.04
v/c Ratio	0.50	0.75			0.86	0.27	0.58	0.51	0.06	0.71	0.32	0.15
Uniform Delay, d1	32.0	35.0			42.8	0.0	48.4	41.7	38.5	42.6	32.9	31.4
Progression Factor	0.38	0.41			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.6	5.0			10.9	0.4	5.2	3.2	0.4	7.5	0.2	0.2
Delay (s)	15.8	19.5			53.7	0.4	53.6	44.9	38.9	50.1	33.1	31.6
Level of Service	B	B			D	A	D	D	D	D	C	C
Approach Delay (s)		18.6			31.3			45.4			37.7	
Approach LOS		B			C			D			D	

Intersection Summary				
HCM 2000 Control Delay	31.0	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.72			
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	69.8%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Appendix C – Similar In-N-Out Site Survey Data Sheets

Site 2

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com			
	In N Out **11 Rollins Road, Milbrae** **Queue Study**		
Time	**Wed 27/May 15**	**Sat 30/May 15**	**Notes**
12:00		5	
12:15		6	
12:30		5	
12:45		5	
13:00		5	
13:15		4	
13:30		5	
13:45		6	
16:00	4		
16:15	5		
16:30	6		
16:45	5		
17:00	4		
17:15	6		
17:30	7		
17:45	6		

Saturday, May 30, 2015 CITY: Millbrae PROJECT: SC0629

11 Rollings Rd

Prepaired by AimTD LLC tel. 951 249 3226

AM Period	IN1		OUT1			PM Period	IN1		OUT1		
00:00	27		34			12:00	25		36		
00:15	28		35			12:15	32		48		
00:30	25		26			12:30	27		41		
00:45	22	102	28	123	225	12:45	24	108	51	176	284
01:00	17		23			13:00	35		47		
01:15	8		29			13:15	37		51		
01:30	1		3			13:30	41		43		
01:45	1	27	2	57	84	13:45	45	158	48	189	347
02:00	1		0			14:00	27		39		
02:15	2		5			14:15	36		54		
02:30	3		3			14:30	38		41		
02:45	0	6	3	11	17	14:45	33	134	51	185	319
03:00	0		2			15:00	29		28		
03:15	1		1			15:15	25		22		
03:30	0		1			15:30	43		33		
03:45	1	2	3	7	9	15:45	26	123	30	113	236
04:00	1		1			16:00	30		27		
04:15	2		0			16:15	41		26		
04:30	3		1			16:30	35		20		
04:45	2	8	0	2	10	16:45	33	139	33	106	245
05:00	2		0			17:00	35		39		
05:15	1		0			17:15	49		37		
05:30	5		0			17:30	34		33		
05:45	1	9	0	0	9	17:45	32	150	51	160	310
06:00	3		3			18:00	39		37		
06:15	6		6			18:15	44		45		
06:30	4		4			18:30	48		51		
06:45	6	19	4	17	36	18:45	27	158	31	164	322
07:00	6		4			19:00	38		53		
07:15	10		6			19:15	48		48		
07:30	9		4			19:30	49		45		
07:45	20	45	5	19	64	19:45	49	184	39	185	369
08:00	19		5			20:00	41		61		
08:15	10		8			20:15	45		38		
08:30	16		9			20:30	42		47		
08:45	7	52	12	34	86	20:45	31	159	46	192	351
09:00	14		18			21:00	35		45		
09:15	12		20			21:15	36		36		
09:30	20		20			21:30	24		46		
09:45	17	63	13	71	134	21:45	25	120	26	153	273
10:00	32		11			22:00	25		35		
10:15	29		21			22:15	36		44		
10:30	61		49			22:30	35		26		
10:45	39	161	24	105	266	22:45	25	121	34	139	260
11:00	54		47			23:00	26		32		
11:15	29		37			23:15	28		37		
11:30	31		49			23:30	16		25		
11:45	16	130	20	153	283	23:45	12	82	22	116	198
Total Vol.		624		599	**1223**			1636		1878	**3514**

Daily Totals

	IN1	OUT1	Combined
	2260	2477	**4737**

	AM			PM		
Split %	51.0%	49.0%	**25.8%**	46.6%	53.4%	**74.2%**
Peak Hour	10:15	10:30	**10:30**	19:15	19:15	**19:15**
Volume	183	157	**340**	187	193	**380**
P.H.F.	0.75	0.80	**0.77**	0.99	0.79	**0.77**

pacific@aimtd.com Tell. 951 249 3226

Wednesday, May 27, 2015 CITY: Millbrae PROJECT: SC0629

11 Rollings Rd

Prepaired by AimTD LLC tel. 951 249 3226

AM Period	IN1		OUT1			PM Period	IN1		OUT1		
00:00	20		10			12:00	49		53		
00:15	27		34			12:15	60		74		
00:30	8		15			12:30	47		63		
00:45	2	57	14	73	130	12:45	55	211	57	247	458
01:00	1		5			13:00	40		51		
01:15	0		3			13:15	52		56		
01:30	1		1			13:30	35		51		
01:45	1	3	1	10	13	13:45	48	175	40	198	373
02:00	2		5			14:00	31		42		
02:15	0		0			14:15	30		29		
02:30	0		0			14:30	39		31		
02:45	0	2	1	6	8	14:45	33	133	30	132	265
03:00	0		1			15:00	38		26		
03:15	1		0			15:15	28		34		
03:30	2		0			15:30	40		29		
03:45	2	5	0	1	6	15:45	31	137	30	119	256
04:00	0		0			16:00	34		37		
04:15	3		3			16:15	26		28		
04:30	2		2			16:30	25		18		
04:45	1	6	0	5	11	16:45	8	93	19	102	195
05:00	1		0			17:00	35		11		
05:15	1		0			17:15	32		25		
05:30	3		1			17:30	29		24		
05:45	8	13	2	3	16	17:45	24	120	30	90	210
06:00	7		7			18:00	32		43		
06:15	15		5			18:15	39		38		
06:30	14		3			18:30	42		39		
06:45	7	43	7	22	65	18:45	44	157	43	163	320
07:00	9		5			19:00	30		46		
07:15	9		5			19:15	35		47		
07:30	11		6			19:30	47		41		
07:45	10	39	6	22	61	19:45	51	163	49	183	346
08:00	17		8			20:00	49		50		
08:15	12		3			20:15	44		53		
08:30	11		10			20:30	45		33		
08:45	11	51	12	33	84	20:45	45	183	42	178	361
09:00	11		15			21:00	31		40		
09:15	16		12			21:15	23		40		
09:30	17		18			21:30	24		39		
09:45	20	64	10	55	119	21:45	26	104	38	157	261
10:00	34		10			22:00	21		32		
10:15	31		22			22:15	27		29		
10:30	39		19			22:30	33		38		
10:45	37	141	36	87	228	22:45	34	115	36	135	250
11:00	48		36			23:00	21		26		
11:15	41		38			23:15	27		27		
11:30	58		59			23:30	31		30		
11:45	54	201	52	185	386	23:45	19	98	25	108	206
Total Vol.		625		502	**1127**			1689		1812	**3501**

Daily Totals

	IN1	OUT1	Combined
	2314	2314	**4628**

	AM			PM		
Split %	55.5%	44.5%	**24.4%**	48.2%	51.8%	**75.6%**
Peak Hour	11:30	11:45	**11:30**	12:00	12:00	**12:00**
Volume	221	242	**459**	211	247	**458**
P.H.F.	0.92	0.82	**0.86**	0.85	0.83	**0.86**

pacific@aimtd.com Tell. 951 249 3226

Saturday, May 30, 2015 CITY: Millbrae PROJECT: SC0629

11 Rollings Rd

Prepaired by AimTD LLC tel. 951 249 3226

AM Period	IN1		OUT1			PM Period	IN1		OUT1		
00:00	4		1			12:00	11		2		
00:15	7		1			12:15	18		4		
00:30	10		0			12:30	22		3		
00:45	8	29	1	3	32	12:45	32	83	4	13	96
01:00	2		2			13:00	21		2		
01:15	2		2			13:15	19		3		
01:30	1		1			13:30	6		5		
01:45	1	6	0	5	11	13:45	10	56	2	12	68
02:00	0		0			14:00	11		2		
02:15	0		1			14:15	6		1		
02:30	0		0			14:30	7		0		
02:45	0	0	0	1	1	14:45	10	34	0	3	37
03:00	0		0			15:00	4		2		
03:15	0		0			15:15	3		3		
03:30	0		0			15:30	3		2		
03:45	0	0	0	0		15:45	4	14	1	8	22
04:00	1		0			16:00	2		4		
04:15	0		0			16:15	1		7		
04:30	0		0			16:30	1		7		
04:45	0	1	0	0	1	16:45	1	5	4	22	27
05:00	0		0			17:00	3		7		
05:15	0		2			17:15	2		1		
05:30	1		0			17:30	2		4		
05:45	0	1	1	3	4	17:45	2	9	4	16	25
06:00	2		1			18:00	4		0		
06:15	0		0			18:15	1		4		
06:30	1		2			18:30	3		2		
06:45	2	5	5	8	13	18:45	1	9	3	9	18
07:00	2		1			19:00	3		4		
07:15	1		3			19:15	3		2		
07:30	2		2			19:30	1		2		
07:45	2	7	1	7	14	19:45	4	11	1	9	20
08:00	4		3			20:00	1		0		
08:15	3		1			20:15	5		0		
08:30	4		3			20:30	0		1		
08:45	0	11	5	12	23	20:45	1	7	0	1	8
09:00	1		7			21:00	3		4		
09:15	6		3			21:15	1		1		
09:30	5		4			21:30	1		0		
09:45	3	15	4	18	33	21:45	0	5	0	5	10
10:00	8		6			22:00	0		0		
10:15	0		3			22:15	4		0		
10:30	2		1			22:30	1		0		
10:45	3	13	3	13	26	22:45	1	6	0	0	6
11:00	5		2			23:00	2		0		
11:15	5		3			23:15	0		0		
11:30	8		1			23:30	0		0		
11:45	15	33	7	13	46	23:45	1	3	0	0	3
Total Vol.		121		83	**204**			242		98	**340**

Daily Totals

	IN1	OUT1	Combined
	363	181	**544**

	AM			PM		
Split %	59.3%	40.7%	**37.5%**	71.2%	28.8%	**62.5%**
Peak Hour	11:45	08:45	**11:45**	12:30	16:15	**12:15**
Volume	66	19	**82**	94	25	**106**
P.H.F.	0.75	0.68	**0.82**	0.75	0.89	**0.82**

pacific@aimtd.com Tell. 951 249 3226

Wednesday, May 27, 2015 CITY: Millbrae PROJECT: SC0629

11 Rollings Rd

Prepaired by AimTD LLC tel. 951 249 3226

AM Period	IN1		OUT1			PM Period	IN1		OUT1		
00:00	0		0			12:00	3		12		
00:15	0		0			12:15	20		3		
00:30	1		0			12:30	15		4		
00:45	1	2	2	2	4	12:45	16	54	4	23	77
01:00	0		0			13:00	15		6		
01:15	0		0			13:15	18		4		
01:30	0		0			13:30	15		3		
01:45	0	0	0	0		13:45	3	51	2	15	66
02:00	0		0			14:00	4		3		
02:15	0		0			14:15	1		3		
02:30	0		0			14:30	0		4		
02:45	0	0	2	2	2	14:45	1	6	7	17	23
03:00	0		0			15:00	2		5		
03:15	1		0			15:15	3		1		
03:30	0		0			15:30	2		3		
03:45	0	1	0	0	1	15:45	2	9	3	12	21
04:00	0		0			16:00	4		5		
04:15	0		0			16:15	2		5		
04:30	0		1			16:30	0		4		
04:45	0	0	0	1	1	16:45	3	9	2	16	25
05:00	0		0			17:00	1		5		
05:15	0		0			17:15	1		5		
05:30	0		0			17:30	3		3		
05:45	2	2	1	1	3	17:45	3	8	4	17	25
06:00	0		1			18:00	6		1		
06:15	6		0			18:15	0		5		
06:30	5		2			18:30	1		4		
06:45	4	15	2	5	20	18:45	2	9	4	14	23
07:00	1		5			19:00	3		2		
07:15	1		4			19:15	3		4		
07:30	3		0			19:30	4		3		
07:45	4	9	1	10	19	19:45	5	15	2	11	26
08:00	3		2			20:00	1		4		
08:15	2		3			20:15	2		5		
08:30	5		8			20:30	4		7		
08:45	2	12	4	17	29	20:45	0	7	2	18	25
09:00	3		4			21:00	0		1		
09:15	2		8			21:15	1		1		
09:30	1		2			21:30	0		2		
09:45	5	11	6	20	31	21:45	1	2	1	5	7
10:00	3		3			22:00	0		1		
10:15	2		2			22:15	0		1		
10:30	9		5			22:30	0		0		
10:45	4	18	5	15	33	22:45	1	1	0	2	3
11:00	1		8			23:00	1		1		
11:15	5		6			23:15	3		0		
11:30	4		6			23:30	0		1		
11:45	7	17	2	22	39	23:45	0	4	0	2	6
Total Vol.		87		95	**182**			175		152	**327**

Daily Totals

	IN1	OUT1	Combined
	262	247	**509**

	AM			PM		
Split %	47.8%	52.2%	**35.8%**	53.5%	46.5%	**64.2%**
Peak Hour	11:45	11:15	**11:45**	12:15	12:00	**12:15**
Volume	45	26	**66**	66	23	**83**
P.H.F.	0.56	0.54	**0.72**	0.84	0.48	**0.72**

pacific@aimtd.com Tell. 951 249 3226

Site 4

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com			
In N Out **445 Industrial Road, San Carlos** **Queue Study**			
Time	**Wed 27/May 15**	**Sat 30/May 15**	**Notes**
12:00		7	inlcuding 1 backed-up to Industrial Rd
12:15		11	inlcuding 5 backed-up to Industrial Rd
12:30		6	
12:45		5	
13:00		10	inlcuding 3 backed-up to Industrial Rd
13:15		7	
13:30		8	inlcuding 1 backed-up to Industrial Rd
13:45		5	
16:00	1		
16:15	0		
16:30	0		
16:45	0		
17:00	0		
17:15	0		
17:30	1		
17:45	1		

Saturday, May 30, 2015 CITY: Redwood City PROJECT: SC0629

949 Veterans Blvd

Prepaired by AimTD LLC tel. 951 249 3226

AM Period	IN1		OUT1			PM Period	IN1		OUT1		
00:00	8		10			12:00	10		18		
00:15	6		11			12:15	20		15		
00:30	7		5			12:30	9		19		
00:45	8	29	4	30	59	12:45	11	50	18	70	120
01:00	2		1			13:00	16		21		
01:15	6		8			13:15	19		14		
01:30	1		4			13:30	18		18		
01:45	1	10	3	16	26	13:45	11	64	18	71	135
02:00	0		0			14:00	8		10		
02:15	1		1			14:15	16		15		
02:30	0		0			14:30	12		20		
02:45	0	1	0	1	2	14:45	10	46	16	61	107
03:00	0		0			15:00	17		20		
03:15	0		6			15:15	10		7		
03:30	0		0			15:30	10		14		
03:45	0	0	0	6	6	15:45	7	44	7	48	92
04:00	0		0			16:00	6		15		
04:15	0		0			16:15	8		7		
04:30	0		0			16:30	8		5		
04:45	0	0	0	0		16:45	6	28	11	38	66
05:00	0		1			17:00	7		10		
05:15	0		0			17:15	9		7		
05:30	0		0			17:30	1		5		
05:45	0	0	0	1	1	17:45	10	27	12	34	61
06:00	0		0			18:00	10		12		
06:15	0		0			18:15	8		15		
06:30	0		0			18:30	9		13		
06:45	1	1	0	0	1	18:45	10	37	6	46	83
07:00	0		0			19:00	8		11		
07:15	1		0			19:15	13		10		
07:30	0		0			19:30	7		13		
07:45	1	2	0	0	2	19:45	14	42	10	44	86
08:00	1		2			20:00	12		12		
08:15	5		0			20:15	13		11		
08:30	3		1			20:30	11		12		
08:45	0	9	0	3	12	20:45	8	44	7	42	86
09:00	0		0			21:00	12		9		
09:15	2		1			21:15	10		7		
09:30	0		4			21:30	8		9		
09:45	1	3	8	13	16	21:45	11	41	12	37	78
10:00	3		4			22:00	9		11		
10:15	1		4			22:15	7		11		
10:30	6		2			22:30	12		6		
10:45	4	14	6	16	30	22:45	5	33	8	36	69
11:00	6		5			23:00	8		6		
11:15	2		5			23:15	4		16		
11:30	7		2			23:30	8		10		
11:45	11	26	9	21	47	23:45	3	23	3	35	58
Total Vol.		95		107	**202**			479		562	**1041**

Daily Totals

	IN1	OUT1	Combined
	574	669	**1243**

	AM			**PM**		
Split %	47.0%	53.0%	**16.3%**	46.0%	54.0%	**83.7%**
Peak Hour	11:45	11:45	**11:45**	12:45	12:15	**12:45**
Volume	50	61	**111**	64	73	**135**
P.H.F.	0.63	0.80	**0.79**	0.86	0.87	**0.79**

pacific@aimtd.com Tell. 951 249 3226

Wednesday, May 27, 2015 CITY: Redwood City PROJECT: SC0629

949 Veterans Blvd

Prepaired by AimTD LLC tel. 951 249 3226

AM Period	IN1		OUT1			PM Period	IN1		OUT1		
00:00	7		2			12:00	11		18		
00:15	0		1			12:15	14		22		
00:30	3		2			12:30	6		20		
00:45	1	11	0	5	16	12:45	4	35	14	74	109
01:00	0		1			13:00	2		16		
01:15	0		0			13:15	7		32		
01:30	0		0			13:30	12		16		
01:45	0	0	0	1	1	13:45	14	35	13	77	112
02:00	0		0			14:00	13		11		
02:15	0		0			14:15	17		12		
02:30	0		0			14:30	12		7		
02:45	0	0	0	0		14:45	9	51	13	43	94
03:00	0		0			15:00	14		13		
03:15	0		0			15:15	6		15		
03:30	0		0			15:30	8		13		
03:45	0	0	0	0		15:45	7	35	11	52	87
04:00	0		0			16:00	8		6		
04:15	1		0			16:15	11		8		
04:30	0		0			16:30	7		5		
04:45	0	1	0	0	1	16:45	7	33	9	28	61
05:00	2		2			17:00	5		12		
05:15	0		0			17:15	7		8		
05:30	1		1			17:30	5		8		
05:45	1	4	1	4	8	17:45	11	28	3	31	59
06:00	1		0			18:00	4		5		
06:15	0		0			18:15	11		8		
06:30	1		0			18:30	16		9		
06:45	0	2	0	0	2	18:45	8	39	12	34	73
07:00	0		0			19:00	8		9		
07:15	1		0			19:15	8		9		
07:30	0		0			19:30	3		4		
07:45	0	1	0	0	1	19:45	9	28	7	29	57
08:00	0		0			20:00	5		8		
08:15	0		0			20:15	6		12		
08:30	0		0			20:30	7		4		
08:45	1	1	0	0	1	20:45	9	27	2	26	53
09:00	0		0			21:00	11		8		
09:15	0		0			21:15	13		7		
09:30	0		1			21:30	11		5		
09:45	0	0	0	1	1	21:45	5	40	9	29	69
10:00	2		1			22:00	10		9		
10:15	4		0			22:15	9		9		
10:30	1		6			22:30	5		7		
10:45	2	9	3	10	19	22:45	5	29	9	34	63
11:00	8		1			23:00	3		5		
11:15	5		5			23:15	2		6		
11:30	10		7			23:30	2		2		
11:45	14	37	11	24	61	23:45	1	8	0	13	21
Total Vol.		66		45	**111**			388		470	**858**

Daily Totals

	IN1	OUT1	Combined
	454	515	**969**

	AM			**PM**		
Split %	59.5%	40.5%	**11.5%**	45.2%	54.8%	**88.5%**
Peak Hour	11:30	11:45	**11:45**	13:30	12:30	**13:15**
Volume	49	71	**116**	56	82	**118**
P.H.F.	0.88	0.81	**0.81**	0.93	0.64	**0.81**

pacific@aimtd.com Tell. 951 249 3226

Saturday, May 30, 2015 CITY: Redwood City PROJECT: SC0629

949 Veterans Blvd

Prepaired by AimTD LLC tel. 951 249 3226

AM Period	IN1		OUT1			PM Period	IN1		OUT1		
00:00	18		25			12:00	20		25		
00:15	15		12			12:15	22		19		
00:30	10		11			12:30	35		22		
00:45	5	48	9	57	105	12:45	18	95	15	81	176
01:00	9		6			13:00	21		20		
01:15	6		8			13:15	19		24		
01:30	3		12			13:30	17		11		
01:45	0	18	3	29	47	13:45	17	74	16	71	145
02:00	0		0			14:00	13		13		
02:15	0		0			14:15	21		13		
02:30	2		1			14:30	19		12		
02:45	0	2	0	1	3	14:45	18	71	13	51	122
03:00	0		0			15:00	13		10		
03:15	0		0			15:15	13		11		
03:30	0		0			15:30	10		20		
03:45	0	0	0	0		15:45	12	48	14	55	103
04:00	0		1			16:00	15		8		
04:15	0		0			16:15	12		8		
04:30	0		0			16:30	15		12		
04:45	0	0	0	1	1	16:45	12	54	9	37	91
05:00	0		0			17:00	13		6		
05:15	1		0			17:15	15		4		
05:30	0		0			17:30	13		10		
05:45	1	2	0	0	2	17:45	22	63	18	38	101
06:00	0		0			18:00	15		10		
06:15	0		0			18:15	16		8		
06:30	0		1			18:30	14		11		
06:45	0	0	0	1	1	18:45	17	62	11	40	102
07:00	0		0			19:00	18		10		
07:15	0		0			19:15	12		17		
07:30	1		0			19:30	13		12		
07:45	0	1	0	0	1	19:45	15	58	11	50	108
08:00	0		2			20:00	16		13		
08:15	6		0			20:15	12		16		
08:30	4		0			20:30	19		18		
08:45	0	10	0	2	12	20:45	14	61	13	60	121
09:00	1		1			21:00	23		15		
09:15	0		0			21:15	18		16		
09:30	1		2			21:30	12		21		
09:45	6	8	1	4	12	21:45	14	67	9	61	128
10:00	2		3			22:00	12		12		
10:15	7		0			22:15	15		10		
10:30	6		2			22:30	11		17		
10:45	2	17	4	9	26	22:45	12	50	12	51	101
11:00	10		5			23:00	12		9		
11:15	6		9			23:15	11		13		
11:30	10		9			23:30	11		18		
11:45	16	42	19	42	84	23:45	9	43	11	51	94
Total Vol.	148		146		**294**		746		646		**1392**

Daily Totals

	IN1	OUT1	Combined
	894	792	**1686**

	AM			PM		
Split %	50.3%	49.7%	**17.4%**	53.6%	46.4%	**82.6%**
Peak Hour	11:45	11:45	**11:45**	12:15	12:00	**12:00**
Volume	93	85	**178**	96	81	**176**
P.H.F.	0.66	0.85	**0.78**	0.66	0.81	**0.78**

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Wednesday, May 27, 2015 CITY: Redwood City PROJECT: SC0629

949 Veterans Blvd

Prepaired by AimTD LLC tel. 951 249 3226

AM Period	IN1		OUT1			PM Period	IN1		OUT1		
00:00	2		2			12:00	22		11		
00:15	9		8			12:15	21		21		
00:30	2		8			12:30	20		20		
00:45	4	17	4	22	39	12:45	17	80	12	64	144
01:00	0		4			13:00	19		19		
01:15	0		0			13:15	20		14		
01:30	0		0			13:30	14		19		
01:45	0	0	0	4	4	13:45	14	67	12	64	131
02:00	0		2			14:00	7		11		
02:15	0		0			14:15	11		6		
02:30	0		0			14:30	16		10		
02:45	0	0	0	2	2	14:45	15	49	13	40	89
03:00	0		0			15:00	15		12		
03:15	0		0			15:15	4		7		
03:30	0		0			15:30	5		9		
03:45	0	0	0	0		15:45	7	31	8	36	67
04:00	0		0			16:00	12		8		
04:15	0		0			16:15	6		9		
04:30	0		0			16:30	6		4		
04:45	0	0	0	0		16:45	10	34	9	30	64
05:00	0		0			17:00	11		8		
05:15	0		0			17:15	11		12		
05:30	1		0			17:30	10		9		
05:45	0	1	0	0	1	17:45	8	40	8	37	77
06:00	0		0			18:00	12		9		
06:15	0		1			18:15	16		9		
06:30	0		0			18:30	9		16		
06:45	0	0	0	1	1	18:45	7	44	10	44	88
07:00	0		0			19:00	14		22		
07:15	1		0			19:15	12		11		
07:30	0		0			19:30	13		8		
07:45	0	1	0	0	1	19:45	13	52	11	52	104
08:00	0		0			20:00	11		9		
08:15	0		0			20:15	10		7		
08:30	0		0			20:30	9		10		
08:45	0	0	1	1	1	20:45	4	34	9	35	69
09:00	2		1			21:00	19		11		
09:15	0		0			21:15	19		12		
09:30	2		1			21:30	14		12		
09:45	3	7	1	3	10	21:45	15	67	13	48	115
10:00	1		1			22:00	6		12		
10:15	3		1			22:15	10		12		
10:30	5		6			22:30	15		9		
10:45	4	13	2	10	23	22:45	8	39	12	45	84
11:00	20		5			23:00	10		10		
11:15	9		12			23:15	5		10		
11:30	11		10			23:30	2		5		
11:45	18	58	8	35	93	23:45	3	20	4	29	49
Total Vol.	97		78		**175**		557		524		**1081**

Daily Totals

	IN1	OUT1	Combined
	654	602	**1256**

	AM			PM		
Split %	55.4%	44.6%	**13.9%**	51.5%	48.5%	**86.1%**
Peak Hour	11:45	11:45	**11:45**	12:00	12:15	**12:15**
Volume	81	60	**141**	80	72	**149**
P.H.F.	0.92	0.71	**0.84**	0.94	0.86	**0.84**

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Site 3

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com			
In N Out **949 Vetrans Boulevard, Redwood City** **Queue Study**			
Time	**Wed 27/May 15**	**Sat 30/May 15**	**Notes**
12:00		5	
12:15		8	
12:30		7	
12:45		5	
13:00		8	
13:15		7	
13:30		6	
13:45		8	
16:00	1		
16:15	3		
16:30	3		
16:45	2		
17:00	1		
17:15	1		
17:30	2		
17:45	2		

Saturday, May 30, 2015 CITY: San Carlos PROJECT: SC0629

445 Industrial Rd

Prepaired by AimTD LLC tel. 951 249 3226

AM Period	IN1		OUT1			PM Period	IN1		OUT1		
00:00	2		18			12:00	7		20		
00:15	1		10			12:15	5		37		
00:30	3		18			12:30	6		33		
00:45	0	6	10	56	62	12:45	1	19	22	112	131
01:00	0		12			13:00	1		26		
01:15	0		6			13:15	3		24		
01:30	0		3			13:30	2		36		
01:45	0	0	2	23	23	13:45	1	7	19	105	112
02:00	0		0			14:00	4		30		
02:15	3		1			14:15	6		24		
02:30	4		0			14:30	5		31		
02:45	0	7	0	1	8	14:45	5	20	24	109	129
03:00	0		0			15:00	2		17		
03:15	0		0			15:15	2		16		
03:30	0		0			15:30	1		24		
03:45	0	0	0	0		15:45	1	6	12	69	75
04:00	0		0			16:00	0		17		
04:15	0		1			16:15	6		12		
04:30	0		0			16:30	2		15		
04:45	0	0	0	1	1	16:45	3	11	26	70	81
05:00	0		0			17:00	1		9		
05:15	0		0			17:15	2		24		
05:30	0		0			17:30	2		12		
05:45	0	0	0	0		17:45	1	6	26	71	77
06:00	0		0			18:00	3		13		
06:15	2		0			18:15	5		30		
06:30	1		2			18:30	1		10		
06:45	1	4	1	3	7	18:45	1	10	14	67	77
07:00	0		0			19:00	2		20		
07:15	2		2			19:15	4		19		
07:30	0		2			19:30	3		10		
07:45	0	2	1	5	7	19:45	1	10	18	67	77
08:00	0		1			20:00	5		17		
08:15	1		2			20:15	2		10		
08:30	2		1			20:30	6		20		
08:45	0	3	1	5	8	20:45	5	18	23	70	88
09:00	0		1			21:00	5		15		
09:15	0		0			21:15	1		20		
09:30	0		7			21:30	0		15		
09:45	0	0	5	13	13	21:45	4	10	18	68	78
10:00	0		1			22:00	2		13		
10:15	1		13			22:15	5		13		
10:30	2		7			22:30	1		18		
10:45	0	3	7	28	31	22:45	3	11	21	65	76
11:00	1		14			23:00	0		20		
11:15	1		16			23:15	3		10		
11:30	2		13			23:30	1		13		
11:45	3	7	12	55	62	23:45	2	6	8	51	57
Total Vol.	32		190		**222**		134		924		**1058**

Daily Totals

	IN1	OUT1	Combined
	166	1114	**1280**

	AM			PM		
Split %	14.4%	85.6%	**17.3%**	12.7%	87.3%	**82.7%**
Peak Hour	11:45	11:45	**11:45**	14:00	12:15	**12:00**
Volume	21	102	**123**	20	118	**131**
P.H.F.	0.75	0.69	**0.73**	0.83	0.80	**0.73**

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Wednesday, May 27, 2015 CITY: San Carlos PROJECT: SC0629

445 Industrial Rd

Prepaired by AimTD LLC tel. 951 249 3226

AM Period	IN1		OUT1			PM Period	IN1		OUT1		
00:00	2		5			12:00	9		20		
00:15	0		4			12:15	8		37		
00:30	1		4			12:30	12		42		
00:45	0	3	3	16	19	12:45	8	37	39	138	175
01:00	0		0			13:00	3		32		
01:15	0		0			13:15	5		37		
01:30	0		3			13:30	6		34		
01:45	0	0	0	3	3	13:45	4	18	38	141	159
02:00	0		0			14:00	4		32		
02:15	0		0			14:15	4		34		
02:30	0		0			14:30	1		20		
02:45	0	0	0	0		14:45	2	11	18	104	115
03:00	0		0			15:00	5		16		
03:15	0		0			15:15	4		15		
03:30	0		0			15:30	4		20		
03:45	0	0	0	0		15:45	2	15	22	73	88
04:00	0		0			16:00	2		20		
04:15	0		1			16:15	1		9		
04:30	0		0			16:30	5		12		
04:45	0	0	0	1	1	16:45	1	9	17	58	67
05:00	0		0			17:00	4		8		
05:15	0		0			17:15	5		17		
05:30	0		0			17:30	1		23		
05:45	1	1	0	0	1	17:45	4	14	20	68	82
06:00	0		1			18:00	4		22		
06:15	0		0			18:15	10		27		
06:30	0		0			18:30	3		28		
06:45	0	0	0	1	1	18:45	3	20	20	97	117
07:00	0		0			19:00	1		21		
07:15	0		1			19:15	3		27		
07:30	0		1			19:30	1		20		
07:45	0	0	0	2	2	19:45	1	6	13	81	87
08:00	0		1			20:00	5		20		
08:15	0		1			20:15	1		16		
08:30	0		0			20:30	0		16		
08:45	1	1	2	4	5	20:45	1	7	12	64	71
09:00	1		2			21:00	3		22		
09:15	0		1			21:15	1		22		
09:30	0		1			21:30	2		16		
09:45	2	3	1	5	8	21:45	2	8	13	73	81
10:00	0		3			22:00	3		20		
10:15	2		1			22:15	0		17		
10:30	2		3			22:30	1		12		
10:45	3	7	10	17	24	22:45	2	6	15	64	70
11:00	6		17			23:00	1		11		
11:15	4		18			23:15	3		9		
11:30	2		29			23:30	1		15		
11:45	4	16	36	100	116	23:45	2	7	5	40	47
Total Vol.	31		149		**180**		158		1001		**1159**

Daily Totals

	IN1	OUT1	Combined
	189	1150	**1339**

	AM			PM		
Split %	17.2%	82.8%	**13.4%**	13.6%	86.4%	**86.6%**
Peak Hour	11:45	11:45	**11:45**	12:00	12:15	**12:15**
Volume	33	135	**168**	37	150	**181**
P.H.F.	0.69	0.80	**0.78**	0.85	0.89	**0.78**

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Saturday, May 30, 2015 CITY: San Carlos PROJECT: SC0629

445 Industrial Rd

Prepaired by AimTD LLC tel. 951 249 3226

AM Period	IN1		OUT1			PM Period	IN1		OUT1		
00:00	4		3			12:00	34		10		
00:15	38		20			12:15	32		10		
00:30	16		7			12:30	30		5		
00:45	12	70	8	38	108	12:45	36	132	6	31	163
01:00	13		1			13:00	34		8		
01:15	3		5			13:15	38		8		
01:30	0		3			13:30	31		9		
01:45	1	17	3	12	29	13:45	31	134	9	34	168
02:00	0		0			14:00	35		6		
02:15	1		2			14:15	18		4		
02:30	0		3			14:30	28		12		
02:45	0	1	0	5	6	14:45	25	106	8	30	136
03:00	0		0			15:00	17		6		
03:15	0		0			15:15	16		4		
03:30	0		0			15:30	17		5		
03:45	1	1	1	1	2	15:45	20	70	7	22	92
04:00	0		0			16:00	18		3		
04:15	1		0			16:15	21		6		
04:30	0		0			16:30	13		3		
04:45	0	1	0	0	1	16:45	30	82	2	14	96
05:00	0		0			17:00	14		4		
05:15	1		0			17:15	20		3		
05:30	0		0			17:30	15		5		
05:45	0	1	0	0	1	17:45	25	74	2	14	88
06:00	1		0			18:00	26		3		
06:15	0		1			18:15	17		4		
06:30	1		1			18:30	21		3		
06:45	1	3	0	2	5	18:45	28	92	6	16	108
07:00	1		0			19:00	13		6		
07:15	1		0			19:15	27		3		
07:30	2		0			19:30	16		8		
07:45	0	4	1	1	5	19:45	16	72	7	24	96
08:00	3		0			20:00	13		3		
08:15	14		0			20:15	18		4		
08:30	6		0			20:30	20		5		
08:45	1	24	0	0	24	20:45	18	69	9	21	90
09:00	1		0			21:00	22		3		
09:15	1		1			21:15	17		7		
09:30	1		1			21:30	25		10		
09:45	1	4	5	7	11	21:45	22	86	9	29	115
10:00	6		1			22:00	18		4		
10:15	9		2			22:15	22		6		
10:30	9		2			22:30	11		5		
10:45	20	44	0	5	49	22:45	25	76	5	20	96
11:00	12		6			23:00	13		6		
11:15	22		3			23:15	13		2		
11:30	20		5			23:30	18		4		
11:45	36	90	10	24	114	23:45	15	59	6	18	77
Total Vol.		260		95	**355**			1052		273	**1325**

Daily Totals

IN1	OUT1	Combined
1312	368	**1680**

	AM			PM		
Split %	73.2%	26.8%	**21.1%**	79.4%	20.6%	**78.9%**
Peak Hour	11:45		**11:45**	12:45	13:00	**12:45**
Volume	132	38	**167**	139	34	**170**
P.H.F.	0.92	0.48	**0.91**	0.96	0.94	**0.91**

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Wednesday, May 27, 2015 CITY: San Carlos PROJECT: SC0629

445 Industrial Rd

Prepaired by AimTD LLC tel. 951 249 3226

AM Period	IN1		OUT1			PM Period	IN1		OUT1		
00:00	7		2			12:00	39		6		
00:15	0		1			12:15	31		4		
00:30	3		2			12:30	41		4		
00:45	1	11	0	5	16	12:45	32	143	12	26	169
01:00	0		1			13:00	46		8		
01:15	0		0			13:15	41		8		
01:30	0		0			13:30	33		11		
01:45	0	0	0	1	1	13:45	20	140	7	34	174
02:00	0		0			14:00	23		8		
02:15	0		0			14:15	26		2		
02:30	0		0			14:30	24		7		
02:45	0	0	0	0		14:45	20	93	2	19	112
03:00	0		0			15:00	20		3		
03:15	0		0			15:15	18		7		
03:30	0		0			15:30	18		4		
03:45	0	0	0	0		15:45	20	76	3	17	93
04:00	0		0			16:00	17		6		
04:15	1		0			16:15	9		2		
04:30	0		0			16:30	14		2		
04:45	0	1	0	0	1	16:45	12	52	3	13	65
05:00	2		2			17:00	16		4		
05:15	0		0			17:15	20		4		
05:30	1		1			17:30	16		1		
05:45	1	4	1	4	8	17:45	27	79	3	12	91
06:00	1		0			18:00	25		3		
06:15	1		0			18:15	25		3		
06:30	0		0			18:30	26		5		
06:45	0	2	0	0	2	18:45	16	92	5	16	108
07:00	1		0			19:00	21		3		
07:15	2		0			19:15	24		4		
07:30	2		0			19:30	20		3		
07:45	1	6	0	0	6	19:45	18	83	4	14	97
08:00	1		0			20:00	18		2		
08:15	1		0			20:15	17		2		
08:30	0		0			20:30	27		1		
08:45	2	4	0	0	4	20:45	14	76	5	10	86
09:00	3		0			21:00	20		0		
09:15	2		1			21:15	21		3		
09:30	1		1			21:30	17		2		
09:45	3	9	0	2	11	21:45	32	90	6	11	101
10:00	2		1			22:00	15		5		
10:15	0		1			22:15	11		4		
10:30	3		0			22:30	16		4		
10:45	11	16	0	2	18	22:45	15	57	4	17	74
11:00	20		2			23:00	17		3		
11:15	17		3			23:15	14		3		
11:30	36		5			23:30	9		6		
11:45	36	109	4	14	123	23:45	8	48	4	16	64
Total Vol.		162		28	**190**			1029		205	**1234**

Daily Totals

IN1	OUT1	Combined
1191	233	**1424**

	AM			PM		
Split %	85.3%	14.7%	**13.3%**	83.4%	16.6%	**86.7%**
Peak Hour	11:45	11:30	**11:45**	12:30	12:45	**12:30**
Volume	147	19	**165**	160	39	**192**
P.H.F.	0.90	0.79	**0.92**	0.90	0.81	**0.92**

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Appendix D – Existing Sizzler Site Survey Data Sheets

Saturday, May 30, 2015 CITY: Daly City PROJECT: SC0629

372 Gellert Blvd

Prepaired by AimTD LLC tel. 951 249 3226

AM Period	IN1		OUT1			PM Period	IN1		OUT1		
00:00	0		0			12:00	5		4		
00:15	0		0			12:15	10		6		
00:30	0		0			12:30	8		2		
00:45	0	0	0	0		12:45	6	29	3	15	44
01:00	0		0			13:00	5		6		
01:15	0		1			13:15	5		0		
01:30	0		0			13:30	8		8		
01:45	0	0	0	1	1	13:45	7	25	9	23	48
02:00	0		0			14:00	4		2		
02:15	0		0			14:15	4		0		
02:30	0		0			14:30	1		1		
02:45	0	0	0	0		14:45	6	15	2	5	20
03:00	0		0			15:00	1		7		
03:15	0		1			15:15	2		3		
03:30	0		0			15:30	6		9		
03:45	0	0	0	1	1	15:45	1	10	4	23	33
04:00	0		0			16:00	6		5		
04:15	0		0			16:15	4		8		
04:30	0		0			16:30	13		5		
04:45	0	0	0	0		16:45	0	23	3	21	44
05:00	0		0			17:00	2		7		
05:15	0		0			17:15	0		5		
05:30	0		0			17:30	2		5		
05:45	0	0	0	0		17:45	1	5	6	23	28
06:00	0		0			18:00	2		4		
06:15	0		0			18:15	2		5		
06:30	0		1			18:30	3		1		
06:45	0	0	0	1	1	18:45	3	10	1	11	21
07:00	0		0			19:00	4		1		
07:15	0		0			19:15	6		1		
07:30	0		1			19:30	6		2		
07:45	0	0	0	1	1	19:45	3	19	3	7	26
08:00	0		1			20:00	5		0		
08:15	0		0			20:15	2		2		
08:30	1		2			20:30	6		3		
08:45	0	1	1	4	5	20:45	5	18	5	10	28
09:00	0		0			21:00	3		1		
09:15	1		0			21:15	1		3		
09:30	2		2			21:30	0		1		
09:45	4	7	2	4	11	21:45	0	4	0	5	9
10:00	4		0			22:00	0		2		
10:15	2		0			22:15	0		1		
10:30	3		0			22:30	0		0		
10:45	1	10	1	1	11	22:45	0	0	0	3	3
11:00	2		4			23:00	0		0		
11:15	3		2			23:15	0		0		
11:30	2		4			23:30	0		0		
11:45	5	12	4	14	26	23:45	0	0	0	0	
Total Vol.		30		27	**57**			158		146	**304**

Daily Totals

	IN1	OUT1	Combined
	188	173	**361**

	AM			PM		
Split %	52.6%	47.4%	**15.8%**	52.0%	48.0%	**84.2%**
Peak Hour	11:45	11:30	**11:45**	12:00	15:30	**13:00**
Volume	28	18	**44**	29	26	**48**
P.H.F.	0.70	0.75	**0.69**	0.78	0.72	**0.69**

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Wednesday, May 27, 2015 CITY: Daly City PROJECT: SC0629

372 Gellert Blvd

Prepaired by AimTD LLC tel. 951 249 3226

AM Period	IN1		OUT1			PM Period	IN1		OUT1		
00:00	0		0			12:00	6		5		
00:15	0		0			12:15	5		5		
00:30	0		0			12:30	6		4		
00:45	0	0	0	0		12:45	5	22	2	16	38
01:00	0		0			13:00	5		3		
01:15	0		0			13:15	4		0		
01:30	0		1			13:30	3		3		
01:45	0	0	0	1	1	13:45	6	18	5	11	29
02:00	0		0			14:00	2		4		
02:15	0		0			14:15	3		1		
02:30	0		0			14:30	3		2		
02:45	0	0	0	0		14:45	8	16	3	10	26
03:00	0		0			15:00	2		7		
03:15	0		0			15:15	4		4		
03:30	0		0			15:30	5		5		
03:45	0	0	0	0		15:45	0	11	6	22	33
04:00	0		0			16:00	4		5		
04:15	0		0			16:15	1		4		
04:30	0		0			16:30	8		5		
04:45	0	0	1	1	1	16:45	1	14	4	18	32
05:00	0		0			17:00	3		5		
05:15	0		0			17:15	0		8		
05:30	0		0			17:30	0		3		
05:45	0	0	0	0		17:45	0	3	4	20	23
06:00	0		0			18:00	2		2		
06:15	0		0			18:15	3		5		
06:30	0		0			18:30	3		1		
06:45	0	0	0	0		18:45	3	11	0	8	19
07:00	0		0			19:00	2		0		
07:15	3		1			19:15	0		1		
07:30	0		0			19:30	2		1		
07:45	0	3	0	1	4	19:45	0	4	2	4	8
08:00	1		0			20:00	0		1		
08:15	1		1			20:15	2		2		
08:30	1		0			20:30	0		3		
08:45	2	5	1	2	7	20:45	0	2	6	12	14
09:00	1		1			21:00	3		1		
09:15	3		2			21:15	1		3		
09:30	1		1			21:30	0		1		
09:45	0	5	1	5	10	21:45	0	4	0	5	9
10:00	3		2			22:00	0		2		
10:15	2		0			22:15	0		0		
10:30	2		6			22:30	0		0		
10:45	4	11	2	10	21	22:45	0	0	0	2	2
11:00	5		2			23:00	0		1		
11:15	5		1			23:15	0		0		
11:30	5		5			23:30	0		0		
11:45	5	20	3	11	31	23:45	0	0	0	1	1
Total Vol.		44		31	**75**			105		129	**234**

Daily Totals

	IN1	OUT1	Combined
	149	160	**309**

	AM			PM		
Split %	58.7%	41.3%	**24.3%**	44.9%	55.1%	**75.7%**
Peak Hour	11:45	11:30	**11:30**	12:00	15:00	**12:00**
Volume	22	18	**39**	22	22	**38**
P.H.F.	0.92	0.90	**0.89**	0.96	0.79	**0.89**

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Saturday, May 30, 2015 CITY: Daly City PROJECT: SC0629

372 Gellert Blvd

Prepaired by AimTD LLC tel. 951 249 3226

AM Period	IN1		OUT1			PM Period	IN1		OUT1		
00:00	0		0			12:00	3		2		
00:15	0		0			12:15	1		2		
00:30	0		0			12:30	0		2		
00:45	0	0	0	0		12:45	3	7	0	6	13
01:00	0		0			13:00	0		6		
01:15	0		0			13:15	2		2		
01:30	0		0			13:30	3		1		
01:45	0	0	0	0		13:45	1	6	2	11	17
02:00	0		0			14:00	3		1		
02:15	0		0			14:15	6		4		
02:30	0		0			14:30	3		2		
02:45	0	0	0	0		14:45	0	12	4	11	23
03:00	0		0			15:00	2		3		
03:15	0		0			15:15	1		3		
03:30	0		0			15:30	2		1		
03:45	0	0	0	0		15:45	2	7	2	9	16
04:00	0		0			16:00	2		1		
04:15	0		0			16:15	1		2		
04:30	0		0			16:30	4		5		
04:45	0	0	0	0		16:45	0	7	3	11	18
05:00	0		0			17:00	2		5		
05:15	0		0			17:15	1		7		
05:30	0		0			17:30	5		4		
05:45	0	0	0	0		17:45	4	12	6	22	34
06:00	0		0			18:00	2		8		
06:15	0		0			18:15	5		5		
06:30	0		0			18:30	2		4		
06:45	0	0	0	0		18:45	4	13	6	23	36
07:00	0		0			19:00	5		5		
07:15	0		0			19:15	4		1		
07:30	0		0			19:30	3		3		
07:45	0	0	0	0		19:45	2	14	2	11	25
08:00	0		0			20:00	4		3		
08:15	0		0			20:15	3		1		
08:30	0		0			20:30	2		1		
08:45	0	0	0	0		20:45	4	13	1	6	19
09:00	0		0			21:00	2		2		
09:15	0		0			21:15	0	1	3		
09:30	0		0			21:30	1		1		
09:45	0	0	0	0		21:45	0	3	2	8	11
10:00	2		1			22:00	1		0		
10:15	3		0			22:15	0		0		
10:30	3		4			22:30	0		0		
10:45	2	10	3	8	18	22:45	0	1	0	0	1
11:00	5		3			23:00	0		0		
11:15	1		1			23:15	0		0		
11:30	5		0			23:30	0		0		
11:45	3	14	2	6	20	23:45	0	0	0	0	
Total Vol.		24		14	**38**			95		118	**213**

Daily Totals

	IN1	OUT1	Combined
	119	132	**251**

	AM			**PM**		
Split %	63.2%	36.8%	**15.1%**	44.6%	55.4%	**84.9%**
Peak Hour	11:00	10:30	**10:15**	17:30	17:15	**17:30**
Volume	14	11	**23**	16	25	**39**
P.H.F.	0.70	0.69	**0.72**	0.65	0.78	**0.72**

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Wednesday, May 27, 2015 CITY: Daly City PROJECT: SC0629

372 Gellert Blvd

Prepaired by AimTD LLC tel. 951 249 3226

AM Period	IN1		OUT1			PM Period	IN1		OUT1		
00:00	0		0			12:00	3		0		
00:15	0		0			12:15	3		1		
00:30	0		0			12:30	2		1		
00:45	0	0	0	0		12:45	4	12	1	3	15
01:00	0		0			13:00	6		1		
01:15	0		0			13:15	1		2		
01:30	0		0			13:30	1		4		
01:45	0	0	0	0		13:45	2	10	2	9	19
02:00	0		0			14:00	5		3		
02:15	0		0			14:15	3		3		
02:30	0		0			14:30	4		3		
02:45	0	0	0	0		14:45	4	16	2	11	27
03:00	0		0			15:00	2		2		
03:15	0		0			15:15	0		2		
03:30	0		0			15:30	1		1		
03:45	0	0	0	0		15:45	4	7	4	9	16
04:00	0		0			16:00	3		1		
04:15	0		0			16:15	3		3		
04:30	0		0			16:30	3		4		
04:45	0	0	0	0		16:45	2	11	3	11	22
05:00	0		0			17:00	4		3		
05:15	0		0			17:15	1		1		
05:30	0		0			17:30	7		5		
05:45	0	0	0	0		17:45	4	16	2	11	27
06:00	0		0			18:00	3		2		
06:15	0		0			18:15	1		4		
06:30	0		0			18:30	0		2		
06:45	0	0	0	0		18:45	4	8	4	12	20
07:00	0		0			19:00	5		5		
07:15	0		0			19:15	2		2		
07:30	0		0			19:30	3		4		
07:45	0	0	0	0		19:45	1	11	5	16	27
08:00	0		0			20:00	3		4		
08:15	0		0			20:15	6		5		
08:30	0		0			20:30	3		6		
08:45	0	0	0	0		20:45	0	12	5	20	32
09:00	0		0			21:00	1		2		
09:15	0		0			21:15	1		0		
09:30	0		0			21:30	0		1		
09:45	0	0	0	0		21:45	1	3	1	4	7
10:00	0		0			22:00	0		0		
10:15	1		0			22:15	0		0		
10:30	1		0			22:30	0		0		
10:45	1	3	0	0	3	22:45	0	0	0	0	
11:00	1		1			23:00	0		0		
11:15	0		0			23:15	0		0		
11:30	4		0			23:30	0		0		
11:45	7	12	0	1	13	23:45	0	0	0	0	
Total Vol.		15		1	**16**			106		106	**212**

Daily Totals

	IN1	OUT1	Combined
	121	107	**228**

	AM			**PM**		
Split %	93.8%	6.3%	**7.0%**	50.0%	50.0%	**93.0%**
Peak Hour	11:30	11:45	**11:30**	14:00	19:45	**19:45**
Volume	17	2	**18**	16	20	**33**
P.H.F.	0.61	0.50	**0.64**	0.80	0.83	**0.64**

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Appendix E – Traffic Model Forecast Data

VTA SCCS

INTERSECTION TRAFFIC COUNTS

2015 PM Counts

PM Peak

Intersection			Northbound			Southbound			Eastbound			Westbound			
No.	Street (N-S)	Street (E-W)	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right	TOTAL
101	SR-1 SB Ramps	Clarinada Ave	458	0	256	0	0	0	6	47	82	226	98	0	1173
102	SR-1 NB Ramps	Serramonte Blvd	13	37	57	175	19	79	221	153	41	78	165	143	1181
103	Callan Blvd	Serramonte Blvd	91	231	121	124	243	104	56	247	79	151	205	222	1874
104	Serramonte Center Dwy	Serramonte Blvd	0	0	0	248	0	221	195	284	0	53	345	317	1663
105	Gellert Blvd	Serramonte Blvd	340	249	620	392	291	55	45	299	221	534	311	467	3824
106	I-280 SB Off-Ramp	Serramonte Blvd	0	0	0	675	0	710	0	1270	0	0	609	0	3264
107	I-280 NB On-Ramp	Serramonte Blvd	0	0	0	0	0	0	602	1331	0	0	635	4	2572
108	Junipero Serra Blvd	Serramonte Blvd	117	501	116	104	328	126	374	699	263	185	417	60	3290
109	Gellert Blvd	Gellert Marketplace Dwy	162	646	118	172	574	13	57	21	49	267	11	187	2277
110	Callan Blvd	Hickey Blvd	70	227	39	52	229	181	128	340	86	67	517	88	2024
111	Gellert Blvd	Hickey Blvd	84	237	288	419	299	181	126	309	50	461	430	585	3469
112	I-280 SB Ramps	Hickey Blvd	0	0	0	185	6	233	0	778	152	321	1231	0	2906
113	I-280 NB Ramps-Imperial Hwy	Hickey Blvd	576	63	261	49	77	63	152	720	150	179	724	49	3063
114	Kaiser Medical Offices Dwy	Hickey Blvd	153	0	123	0	0	0	0	937	91	52	805	0	2161
115	Longford Dr	Hickey Blvd	0	0	75	0	0	24	0	888	110	0	857	50	2004
116	Junipero Serra Blvd	Hickey Blvd	184	443	128	240	369	182	209	610	90	165	555	484	3659

VTA SCCS

2015 with Project Final Adjusted

PM Peak

Intersection			Northbound			Southbound			Eastbound			Westbound			
No.	Street (N-S)	Street (E-W)	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right	TOTAL
101	SR-1 SB Ramps	Clarinada Ave	471	0	256	0	0	0	6	50	83	229	98	0	1193
102	SR-1 NB Ramps	Serramonte Blvd	13	37	58	198	19	79	221	153	42	75	161	145	1201
103	Callan Blvd	Serramonte Blvd	88	232	120	138	237	103	56	272	79	153	203	224	1905
104	Serramonte Center Dwy	Serramonte Blvd	0	0	0	248	0	220	195	323	0	53	348	317	1704
105	Gellert Blvd	Serramonte Blvd	350	249	645	383	292	55	45	315	242	566	304	466	3912
106	I-280 SB Off-Ramp	Serramonte Blvd	0	0	0	666	0	718	0	1301	0	0	624	0	3309
107	I-280 NB On-Ramp	Serramonte Blvd	0	0	0	0	0	0	624	1331	0	0	650	4	2609
108	Junipero Serra Blvd	Serramonte Blvd	108	511	115	108	327	132	375	695	266	187	433	59	3316
109	Gellert Blvd	Gellert Marketplace Dwy	162	680	118	172	625	13	57	21	49	267	11	187	2362
110	Callan Blvd	Hickey Blvd	69	230	39	48	226	183	127	355	90	67	486	84	2004
111	Gellert Blvd	Hickey Blvd	85	244	288	436	322	186	130	332	34	449	388	614	3508
112	I-280 SB Ramps	Hickey Blvd	0	0	0	188	6	231	0	780	190	317	1207	0	2919
113	I-280 NB Ramps-Imperial Hwy	Hickey Blvd	553	57	263	49	77	58	153	724	150	179	726	49	3038
114	Kaiser Medical Offices Dwy	Hickey Blvd	153	0	123	5	0	0	0	944	91	52	807	6	2181
115	Longford Dr	Hickey Blvd	0	0	75	0	0	24	0	900	110	0	865	50	2024
116	Junipero Serra Blvd	Hickey Blvd	195	441	120	248	366	182	210	613	100	168	551	482	3676

VTA SCCS

2035 No Project

PM Peak

Intersection			Northbound			Southbound			Eastbound			Westbound			
No.	Street (N-S)	Street (E-W)	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right	TOTAL
101	SR-1 SB Ramps	Clarinada Ave	497	0	358	0	0	0	6	85	101	395	105	0	1547
102	SR-1 NB Ramps	Serramonte Blvd	46	88	143	298	41	83	319	128	47	194	228	331	1946
103	Callan Blvd	Serramonte Blvd	117	247	114	212	232	171	100	390	78	218	514	313	2706
104	Serramonte Center Dwy	Serramonte Blvd	0	0	0	288	0	284	217	488	0	53	750	436	2516
105	Gellert Blvd	Serramonte Blvd	472	283	746	413	346	64	47	328	310	688	550	600	4847
106	I-280 SB Off-Ramp	Serramonte Blvd	0	0	0	743	0	758	0	1447	0	0	1086	0	4034
107	I-280 NB On-Ramp	Serramonte Blvd	0	0	0	0	0	0	550	1627	0	0	1112	4	3293
108	Junipero Serra Blvd	Serramonte Blvd	203	592	335	151	352	171	379	1029	358	529	762	135	4996
109	Gellert Blvd	Gellert Marketplace Dwy	161	936	118	172	878	20	59	20	47	249	10	187	2857
110	Callan Blvd	Hickey Blvd	48	232	39	26	215	233	117	477	73	69	602	113	2244
111	Gellert Blvd	Hickey Blvd	74	347	223	531	471	202	117	500	15	599	525	774	4378
112	I-280 SB Ramps	Hickey Blvd	0	0	0	383	6	305	0	778	424	261	1473	0	3630
113	I-280 NB Ramps-Imperial Hwy	Hickey Blvd	795	52	266	49	77	50	174	954	170	179	754	49	3569
114	Kaiser Medical Offices Dwy	Hickey Blvd	153	0	123	83	0	0	0	1177	91	52	835	122	2636
115	Longford Dr	Hickey Blvd	0	0	75	0	0	24	0	1194	110	0	956	50	2409
116	Junipero Serra Blvd	Hickey Blvd	255	654	117	367	730	186	217	803	196	150	578	789	5042

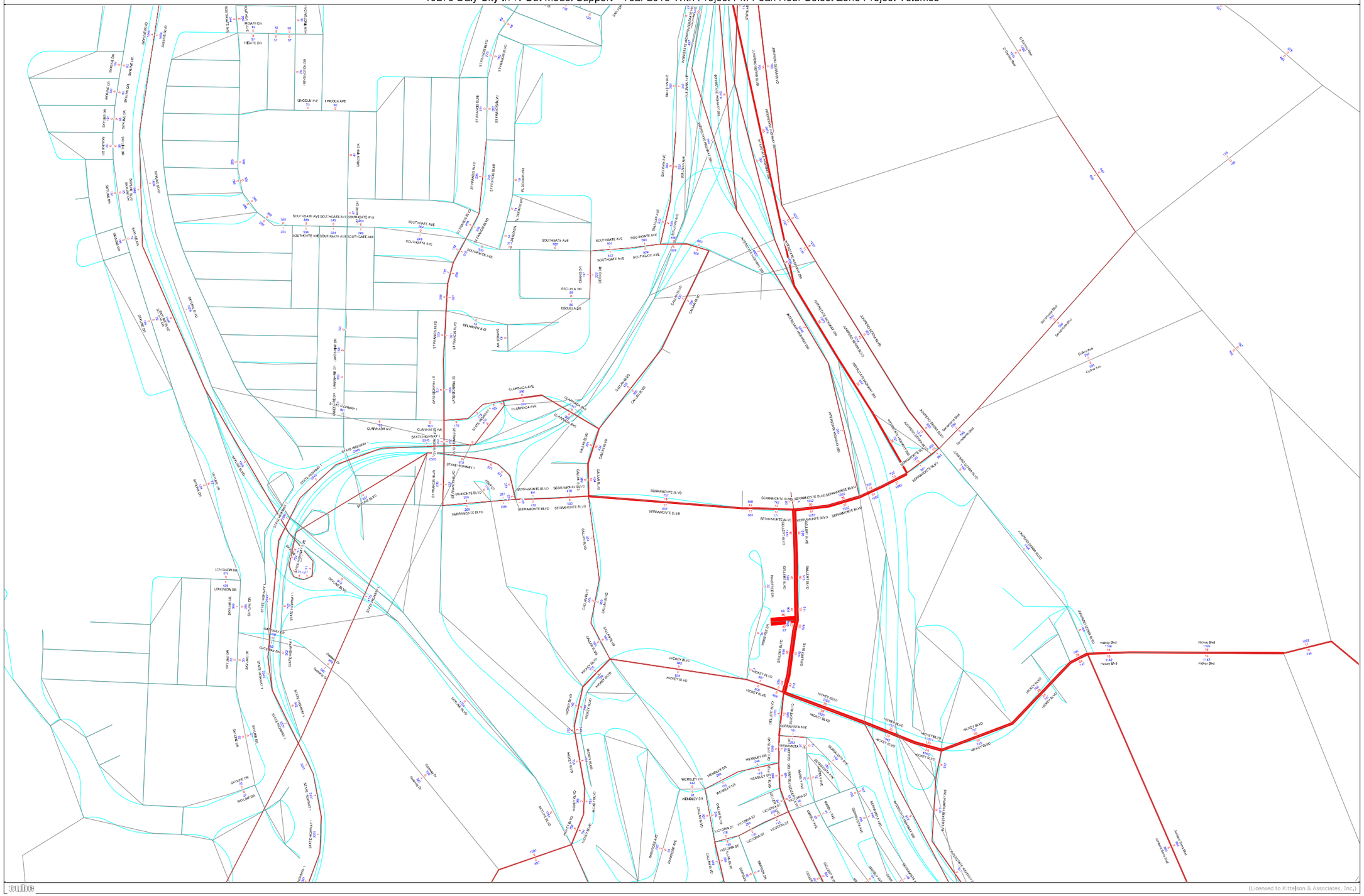
VTA SCCS

2035 with Project Final Adjusted

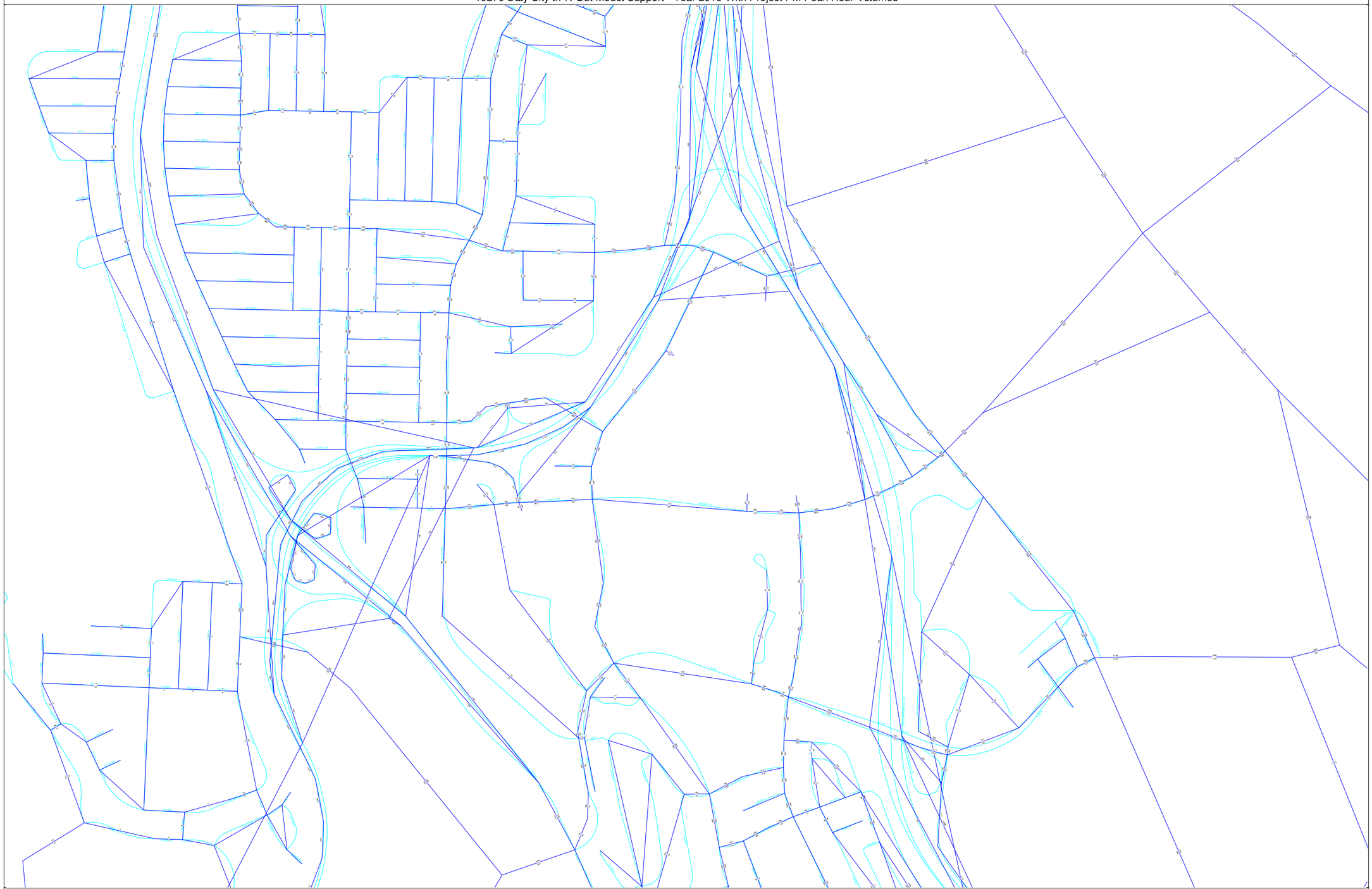
PM Peak

Intersection			Northbound			Southbound			Eastbound			Westbound			
No.	Street (N-S)	Street (E-W)	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right	TOTAL
101	SR-1 SB Ramps	Clarinada Ave	511	0	358	0	0	0	6	88	100	409	105	0	1577
102	SR-1 NB Ramps	Serramonte Blvd	46	86	144	282	41	83	319	128	46	195	215	325	1910
103	Callan Blvd	Serramonte Blvd	117	246	115	221	230	171	99	385	70	228	495	321	2698
104	Serramonte Center Dwy	Serramonte Blvd	0	0	0	288	0	282	218	491	0	53	751	436	2519
105	Gellert Blvd	Serramonte Blvd	464	285	769	407	352	64	47	321	323	688	562	604	4886
106	I-280 SB Off-Ramp	Serramonte Blvd	0	0	0	745	0	762	0	1457	0	0	1098	0	4062
107	I-280 NB On-Ramp	Serramonte Blvd	0	0	0	0	0	0	576	1614	0	0	1124	4	3318
108	Junipero Serra Blvd	Serramonte Blvd	209	593	333	154	352	177	377	1015	360	531	762	134	4997
109	Gellert Blvd	Gellert Marketplace Dwy	161	951	118	172	898	20	59	20	47	247	10	187	2890
110	Callan Blvd	Hickey Blvd	40	233	39	25	208	241	118	481	79	69	578	112	2223
111	Gellert Blvd	Hickey Blvd	73	351	225	550	463	198	119	508	12	601	504	787	4391
112	I-280 SB Ramps	Hickey Blvd	0	0	0	375	6	312	0	795	434	253	1460	0	3635
113	I-280 NB Ramps-Imperial Hwy	Hickey Blvd	780	52	261	49	77	49	174	961	172	179	752	49	3554
114	Kaiser Medical Offices Dwy	Hickey Blvd	153	0	123	87	0	0	0	1179	91	52	833	125	2643
115	Longford Dr	Hickey Blvd	0	0	75	0	0	24	0	1200	110	0	957	50	2416
116	Junipero Serra Blvd	Hickey Blvd	266	662	113	363	741	184	214	808	200	149	571	781	5052

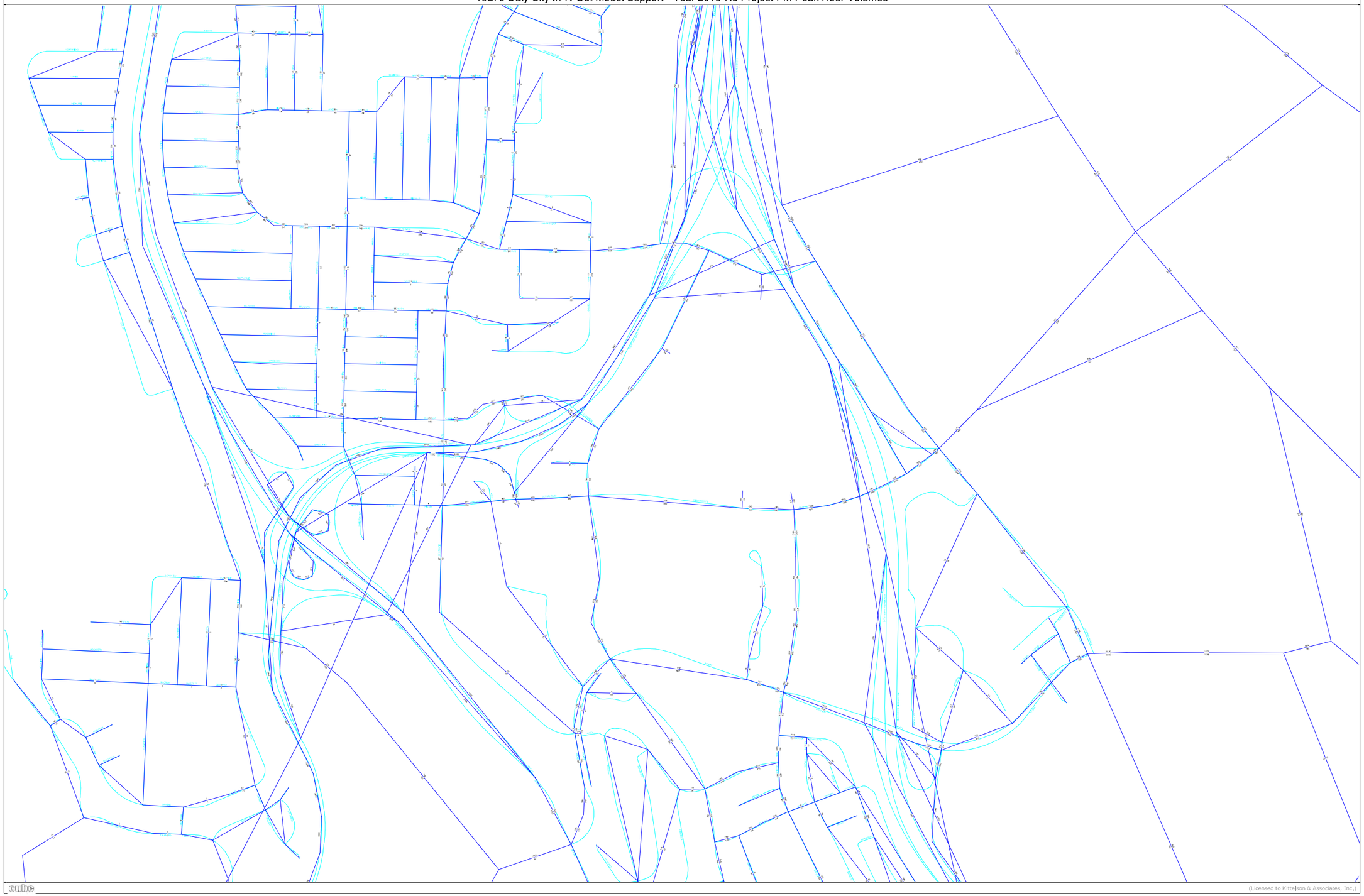
19279 Daly City In-N-Out Model Support - Year 2015 With Project PM Peak Hour Select Zone Project Volumes



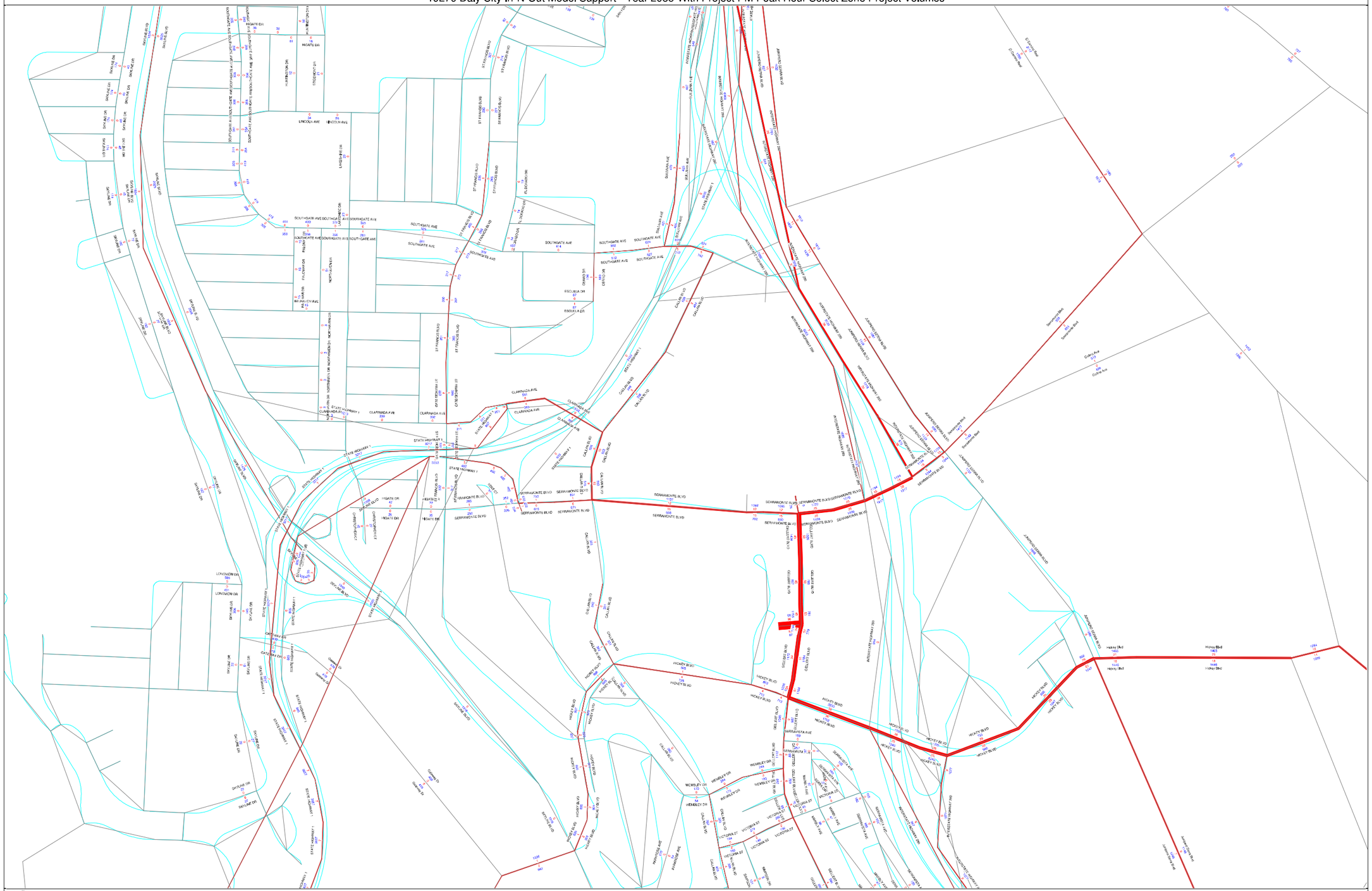
19279 Daly City In-N-Out Model Support - Year 2015 With Project PM Peak Hour Volumes



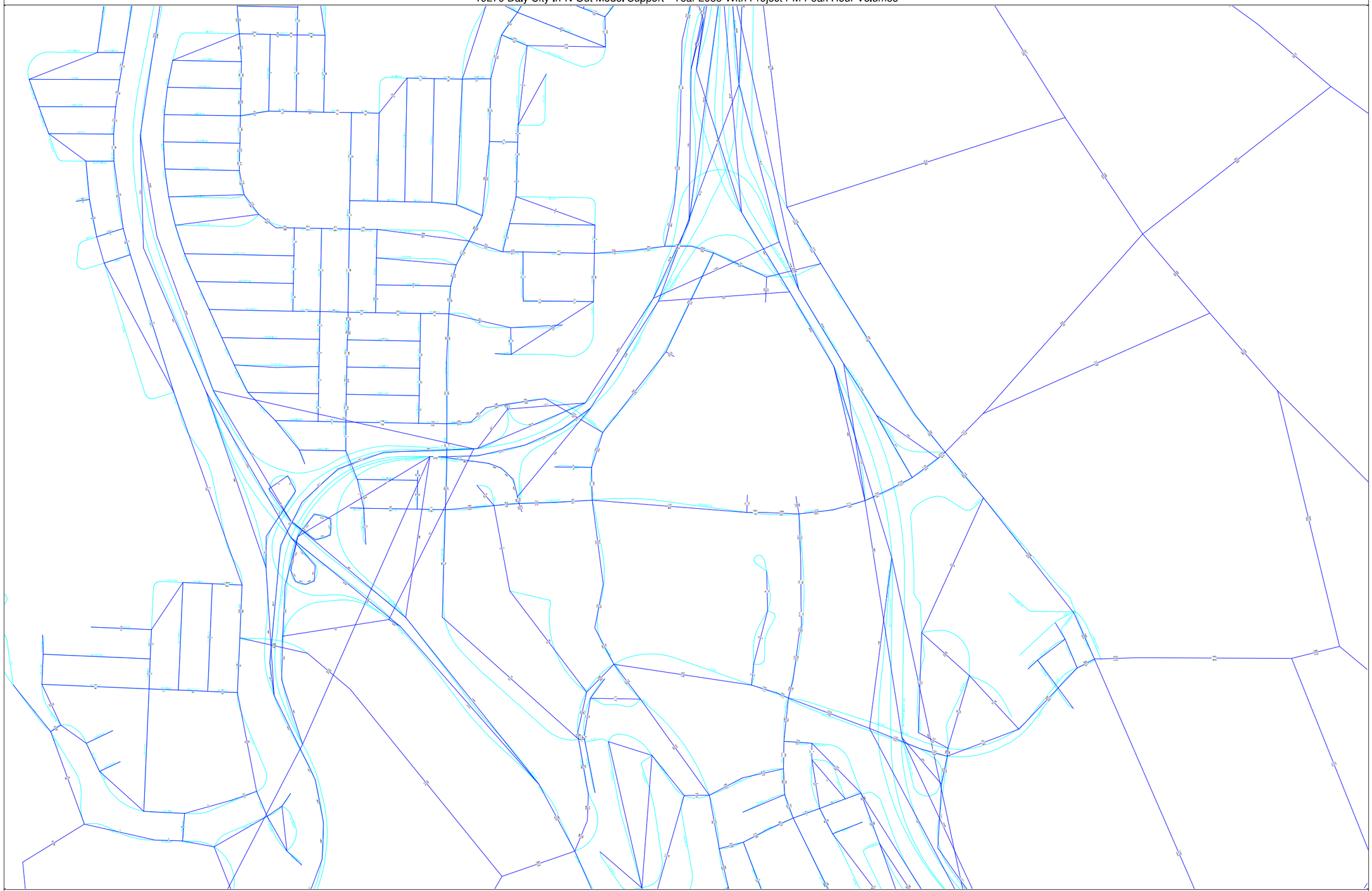
19279 Daly City In-N-Out Model Support - Year 2015 No Project PM Peak Hour Volumes



19279 Daly City In-N-Out Model Support - Year 2035 With Project PM Peak Hour Select Zone Project Volumes



19279 Daly City In-N-Out Model Support - Year 2035 With Project PM Peak Hour Volumes



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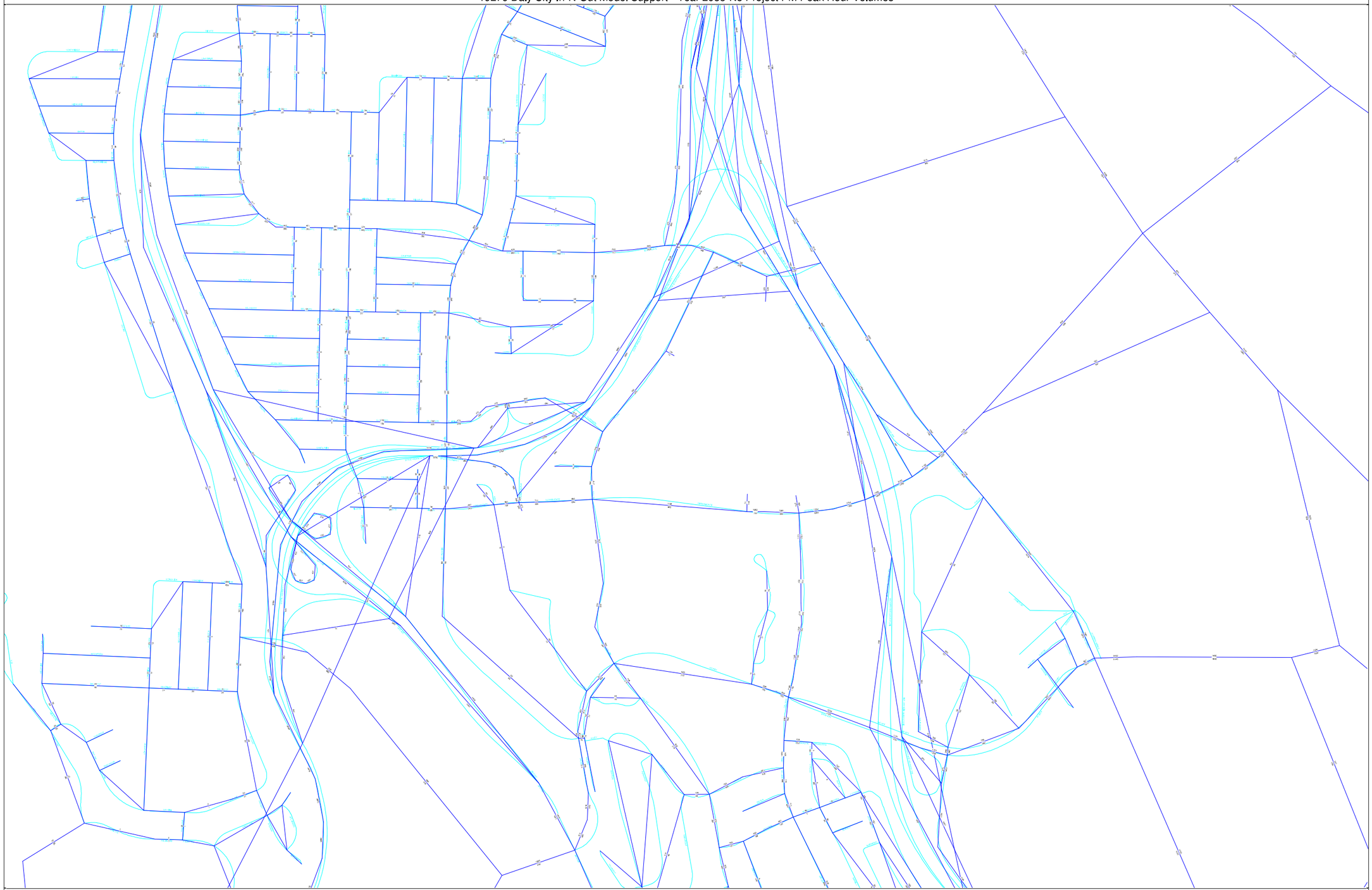
19279 Daly City In-N-Out Model Support - Year 2035 No Project PM Peak Hour Volumes



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Appendix F – Future Forecast Post-Process Data Sheets

Forecasted Intersection Traffic Volumes
2015nP

Gellert Blvd / Gellert Marketplace Dwy

Adj.		⇩	759	#DIV/0!	PM				PM	#DIV/0!	890	⇧	DATE	
	Flow	⇩	821	#DIV/0!	MD				MD	#DIV/0!	1,060	⇧	Flow	
⇦	⇦	Origin	ADT	0	PM	13	574	172	PM	0	ADT	Origin	⇦	⇦
186	190	ADT			MD	22	601	198	MD			ADT	531	465
#DIV/0!	#DIV/0!	0			PM	13	574	172	PM			0	#DIV/0!	#DIV/0!
PM	MD	PM	MD	PM	MD	22	601	198	MD	PM	MD	PM	MD	PM
						⇦	⇩	⇨						
		57	73	57	73	⇧	SB		⇧	268	187	268	187	
		21	15	21	15	⇨	EB 109	WB	⇦	12	11	12	11	
		49	63	49	63	⇩	NB		⇩	251	267	251	267	
						⇦	⇧	⇨						
PM	MD	PM	MD	PM	MD	156	719	187	MD	PM	MD	PM	MD	PM
#DIV/0!	#DIV/0!	0			PM	162	646	118	PM			0	#DIV/0!	#DIV/0!
127	151	ADT			MD	156	719	187	MD			ADT	400	311
⇨	⇨	Origin	ADT	0	PM	162	646	118	PM	0	ADT	Origin	⇨	⇨
	Flow	⇩	915	#DIV/0!	MD				MD	#DIV/0!	1,062	⇧	Flow	
Adj.		⇩	890	#DIV/0!	PM				PM	#DIV/0!	926	⇧		Adj.

Gellert Blvd / Northerly (In-N-Out) Dwy

Adj.		⇩	890	#DIV/0!	PM		870		PM	#DIV/0!	926	⇧	DATE	
	Flow	⇩	915	#DIV/0!	MD		904		MD	#DIV/0!	1,062	⇧	Flow	
⇦	⇦	Origin	ADT	0	PM	20	0	0	PM	0	ADT	Origin	⇦	⇦
20	11	ADT			MD	11	0	0	MD			ADT	0	0
#DIV/0!	#DIV/0!	0			PM	20	870	0	PM			0	#DIV/0!	#DIV/0!
PM	MD	PM	MD	PM	MD	11	904	0	MD	PM	MD	PM	MD	PM
						⇦	⇩	⇨						
		0	0	0	0	⇧	SB		⇧	0	0	0	0	
		0	0	0	0	⇨	EB 118	WB	⇦	0	0	0	0	
		17	14	17	14	⇩	NB		⇩	0	0	0	0	
						⇦	⇧	⇨						
PM	MD	PM	MD	PM	MD	0	1,062	0	MD	PM	MD	PM	MD	PM
#DIV/0!	#DIV/0!	0			PM	0	926	0	PM			0	#DIV/0!	#DIV/0!
17	14	ADT			MD	0	0	0	MD			ADT	0	0
⇨	⇨	Origin	ADT	0	PM	0	0	0	PM	0	ADT	Origin	⇨	⇨
	Flow	⇩	918	#DIV/0!	MD		1,062		MD	#DIV/0!	1,062	⇧	Flow	
Adj.		⇩	887	#DIV/0!	PM		926		PM	#DIV/0!	926	⇧		Adj.

Gellert Blvd / Southerly (Clinic) Dwy

Adj.		⇩	887	#DIV/0!	PM		887		PM	#DIV/0!	926	⇧	DATE	
	Flow	⇩	918	#DIV/0!	MD		918		MD	#DIV/0!	1,062	⇧	Flow	
⇦	⇦	Origin	ADT	0	PM	0	0	0	PM	0	ADT	Origin	⇦	⇦
0	0	ADT			MD	0	0	0	MD			ADT	0	0
#DIV/0!	#DIV/0!	0			PM	0	887	0	PM			0	#DIV/0!	#DIV/0!
PM	MD	PM	MD	PM	MD	0	918	0	MD	PM	MD	PM	MD	PM
						⇦	⇩	⇨						
		0	0	0	0	⇧	SB		⇧	0	0	0	0	
		0	0	0	0	⇨	EB 117	WB	⇦	0	0	0	0	
		0	0	0	0	⇩	NB		⇩	0	0	0	0	
						⇦	⇧	⇨						
PM	MD	PM	MD	PM	MD	0	1,062	0	MD	PM	MD	PM	MD	PM
#DIV/0!	#DIV/0!	0			PM	0	926	0	PM			0	#DIV/0!	#DIV/0!
0	0	ADT			MD	0	0	0	MD			ADT	0	0
⇨	⇨	Origin	ADT	0	PM	0	0	0	PM	0	ADT	Origin	⇨	⇨
	Flow	⇩	918	#DIV/0!	MD		1,062		MD	#DIV/0!	1,062	⇧	Flow	
Adj.		⇩	887	#DIV/0!	PM		926		PM	#DIV/0!	926	⇧		Adj.

Forecasted Intersection Traffic Volumes
2015wP

Gellert Blvd / Gellert Marketplace Dwy

Adj.		⇩	810	#DIV/0!	PM				PM	#DIV/0!	976	⇧	DATE	
	Flow	⇩	0	#DIV/0!	AM				AM	#DIV/0!	0	⇧	Flow	
⇦	⇦	Origin	ADT	0	PM	13	625	172	PM	0	ADT	Origin	⇦	⇦
186	0	ADT			AM	0	0	0	AM			ADT	0	465
#DIV/0!	#DIV/0!	0			PM	13	625	172	PM			0	#DIV/0!	#DIV/0!
PM	AM	PM	AM	PM	AM	0	0	0	AM	PM	AM	PM	AM	PM
						⇦	⇩	⇨						
52		57	0	109	0	⇧	SB		⇧	0	187	0	187	
		21	0	21	0	⇨ EB	109	WB	⇦	0	11	0	11	
		49	0	49	0	⇩	NB		⇩	0	267	0	267	
						⇦	⇧	⇨						
PM	AM	PM	AM	PM	AM	0	0	0	AM	PM	AM	PM	AM	PM
#DIV/0!	#DIV/0!	0			PM	162	680	118	PM			0	#DIV/0!	#DIV/0!
179	0	ADT			AM	0	0	0	AM			ADT	0	311
⇨	⇨	Origin	ADT	0	PM	162	680	118	PM	0	ADT	Origin	⇨	⇨
	Flow	⇩	0	#DIV/0!	AM				AM	#DIV/0!	0	⇧	Flow	
Adj.		⇩	941	#DIV/0!	PM				PM	#DIV/0!	960	⇧		Adj.

Gellert Blvd / Northerly (In-N-Out) Dwy

Adj.		⇩	941	#DIV/0!	PM	34	887		PM	#DIV/0!	960	⇧	DATE	
	Flow	⇩	0	#DIV/0!	AM				AM	#DIV/0!	0	⇧	Flow	
⇦	⇦	Origin	ADT	0	PM	20	0	0	PM	0	ADT	Origin	⇦	⇦
54	0	ADT			AM	0	0	0	AM			ADT	0	0
#DIV/0!	#DIV/0!	0			PM	54	887	0	PM			0	#DIV/0!	#DIV/0!
PM	AM	PM	AM	PM	AM	0	0	0	AM	PM	AM	PM	AM	PM
						⇦	⇩	⇨						
		0	0	0	0	⇧	SB		⇧	0	0	0	0	
		0	0	0	0	⇨ EB	118	WB	⇦	0	0	0	0	
36		17	0	53	0	⇩	NB		⇩	0	0	0	0	
						⇦	⇧	⇨						
PM	AM	PM	AM	PM	AM	0	0	0	AM	PM	AM	PM	AM	PM
#DIV/0!	#DIV/0!	0			PM	0	960	0	PM			0	#DIV/0!	#DIV/0!
53	0	ADT			AM	0	0	0	AM			ADT	0	0
⇨	⇨	Origin	ADT	0	PM	0	0	0	PM	0	ADT	Origin	⇨	⇨
	Flow	⇩	0	#DIV/0!	AM				AM	#DIV/0!	0	⇧	Flow	
Adj.		⇩	940	#DIV/0!	PM		960		PM	#DIV/0!	960	⇧		Adj.

Gellert Blvd / Southerly (Clinic) Dwy

Adj.		⇩	940	#DIV/0!	PM	11	929		PM	#DIV/0!	960	⇧	DATE	
	Flow	⇩	0	#DIV/0!	AM				AM	#DIV/0!	0	⇧	Flow	
⇦	⇦	Origin	ADT	0	PM	0	0	0	PM	0	ADT	Origin	⇦	⇦
64	0	ADT			AM	0	0	0	AM			ADT	0	0
#DIV/0!	#DIV/0!	0			PM	11	929	0	PM			0	#DIV/0!	#DIV/0!
PM	AM	PM	AM	PM	AM	0	0	0	AM	PM	AM	PM	AM	PM
						⇦	⇩	⇨						
		0	0	0	0	⇧	SB		⇧	0	0	0	0	
		0	0	0	0	⇨ EB	117	WB	⇦	0	0	0	0	
19		0	0	19	0	⇩	NB		⇩	0	0	0	0	
						⇦	⇧	⇨						
PM	AM	PM	AM	PM	AM	0	0	0	AM	PM	AM	PM	AM	PM
#DIV/0!	#DIV/0!	0			PM	53	960	0	PM			0	#DIV/0!	#DIV/0!
19	0	ADT			AM	0	0	0	AM			ADT	0	0
⇨	⇨	Origin	ADT	0	PM	0	0	0	PM	0	ADT	Origin	⇨	⇨
	Flow	⇩	0	#DIV/0!	AM				AM	#DIV/0!	0	⇧	Flow	
Adj.		⇩	948	#DIV/0!	PM	53	960		PM	#DIV/0!	1,013	⇧		Adj.

Forecasted Intersection Traffic Volumes
2035nP

Gellert Blvd / Gellert Marketplace Dwy

Adj.		⇩	1,070	#DIV/0!	PM				PM	#DIV/0!	1,182	⇧	DATE	
	Flow	⇩	1,151	#DIV/0!	MD				MD	#DIV/0!	1,386	⇧	Flow	
⇦	⇦	Origin	ADT	0	PM	20	878	172	PM	0	ADT	Origin	⇦	⇦
191	200	ADT			MD	34	919	198	MD			ADT	513	446
#DIV/0!	#DIV/0!	0			PM	20	878	172	PM			0	#DIV/0!	#DIV/0!
PM	MD	PM	MD	PM	MD	34	919	198	MD	PM	MD	PM	MD	PM
						⇦	⇩	⇨						
		59	76	59	76	⇧	SB		⇧	268	187	268	187	
		20	14	20	14	⇨	EB 109	WB	⇦	11	10	11	10	
		47	60	47	60	⇩	NB		⇩	234	249	234	249	
						⇦	⇧	⇨						
PM	MD	PM	MD	PM	MD	155	1,042	187	MD	PM	MD	PM	MD	PM
#DIV/0!	#DIV/0!	0			PM	161	936	118	PM			0	#DIV/0!	#DIV/0!
126	150	ADT			MD	155	1,042	187	MD			ADT	399	310
⇨	⇨	Origin	ADT	0	PM	161	936	118	PM	0	ADT	Origin	⇨	⇨
	Flow	⇩	1,213	#DIV/0!	MD				MD	#DIV/0!	1,384	⇧	Flow	
Adj.		⇩	1,174	#DIV/0!	PM				PM	#DIV/0!	1,215	⇧		Adj.

Gellert Blvd / Northerly (In-N-Out) Dwy

Adj.		⇩	1,174	#DIV/0!	PM		1,154		PM	#DIV/0!	1,215	⇧	DATE	
	Flow	⇩	1,213	#DIV/0!	MD		1,202		MD	#DIV/0!	1,384	⇧	Flow	
⇦	⇦	Origin	ADT	0	PM	20	0	0	PM	0	ADT	Origin	⇦	⇦
20	11	ADT			MD	11	0	0	MD			ADT	0	0
#DIV/0!	#DIV/0!	0			PM	20	1,154	0	PM			0	#DIV/0!	#DIV/0!
PM	MD	PM	MD	PM	MD	11	1,202	0	MD	PM	MD	PM	MD	PM
						⇦	⇩	⇨						
		0	0	0	0	⇧	SB		⇧	0	0	0	0	
		0	0	0	0	⇨	EB 118	WB	⇦	0	0	0	0	
		17	14	17	14	⇩	NB		⇩	0	0	0	0	
						⇦	⇧	⇨						
PM	MD	PM	MD	PM	MD	0	1,384	0	MD	PM	MD	PM	MD	PM
#DIV/0!	#DIV/0!	0			PM	0	1,215	0	PM			0	#DIV/0!	#DIV/0!
17	14	ADT			MD	0	0	0	MD			ADT	0	0
⇨	⇨	Origin	ADT	0	PM	0	0	0	PM	0	ADT	Origin	⇨	⇨
	Flow	⇩	1,216	#DIV/0!	MD		1,384		MD	#DIV/0!	1,384	⇧	Flow	
Adj.		⇩	1,171	#DIV/0!	PM		1,215		PM	#DIV/0!	1,215	⇧		Adj.

Gellert Blvd / Southerly (Clinic) Dwy

Adj.		⇩	1,171	#DIV/0!	PM		1,164		PM	#DIV/0!	1,215	⇧	DATE	
	Flow	⇩	1,216	#DIV/0!	MD		1,209		MD	#DIV/0!	1,384	⇧	Flow	
⇦	⇦	Origin	ADT	0	PM	7	0	0	PM	0	ADT	Origin	⇦	⇦
13	13	ADT			MD	7	0	0	MD			ADT	0	0
#DIV/0!	#DIV/0!	0			PM	7	1,164	0	PM			0	#DIV/0!	#DIV/0!
PM	MD	PM	MD	PM	MD	7	1,209	0	MD	PM	MD	PM	MD	PM
						⇦	⇩	⇨						
		0	0	0	0	⇧	SB		⇧	0	0	0	0	
		0	0	0	0	⇨	EB 117	WB	⇦	0	0	0	0	
		35	35	35	35	⇩	NB		⇩	0	0	0	0	
						⇦	⇧	⇨						
PM	MD	PM	MD	PM	MD	6	1,384	0	MD	PM	MD	PM	MD	PM
#DIV/0!	#DIV/0!	0			PM	6	1,215	0	PM			0	#DIV/0!	#DIV/0!
35	35	ADT			MD	6	0	0	MD			ADT	0	0
⇨	⇨	Origin	ADT	0	PM	6	0	0	PM	0	ADT	Origin	⇨	⇨
	Flow	⇩	1,244	#DIV/0!	MD		1,384		MD	#DIV/0!	1,390	⇧	Flow	
Adj.		⇩	1,199	#DIV/0!	PM		1,215		PM	#DIV/0!	1,221	⇧		Adj.

Forecasted Intersection Traffic Volumes
2035wP

Gellert Blvd / Gellert Marketplace Dwy

Adj.		⇩	1,090	#DIV/0!	PM				PM	#DIV/0!	1,251	⇧	DATE	
	Flow	⇩	0	#DIV/0!	AM				AM	#DIV/0!	0	⇧	Flow	
⇦	⇦	Origin	ADT	0	PM	20	898	172	PM	0	ADT	Origin	⇦	⇦
191	0	ADT			AM	0	0	0	AM			ADT	0	444
#DIV/0!	#DIV/0!	0			PM	20	898	172	PM			0	#DIV/0!	#DIV/0!
PM	AM	PM	AM	PM	AM	0	0	0	AM	PM	AM	PM	AM	PM
						⇦	⇩	⇨						
54		59	0	113	0	⇧	SB		⇧	0	187	0	187	
		20	0	20	0	⇨ EB	109	WB ⇦		0	10	0	10	
		47	0	47	0	⇩	NB		⇩	0	247	0	247	
						⇦	⇧	⇨						
PM	AM	PM	AM	PM	AM	0	0	0	AM	PM	AM	PM	AM	PM
#DIV/0!	#DIV/0!	0			PM	161	951	118	PM			0	#DIV/0!	#DIV/0!
180	0	ADT			AM	0	0	0	AM			ADT	0	310
⇨	⇨	Origin	ADT	0	PM	161	951	118	PM	0	ADT	Origin	⇨	⇨
	Flow	⇩	0	#DIV/0!	AM				AM	#DIV/0!	0	⇧	Flow	
Adj.		⇩	1,192	#DIV/0!	PM				PM	#DIV/0!	1,230	⇧		Adj.

Gellert Blvd / Northerly (In-N-Out) Dwy

Adj.		⇩	1,192	#DIV/0!	PM	37	1,135		PM	#DIV/0!	1,230	⇧	DATE	
	Flow	⇩	0	#DIV/0!	AM				AM	#DIV/0!	0	⇧	Flow	
⇦	⇦	Origin	ADT	0	PM	20	0	0	PM	0	ADT	Origin	⇦	⇦
57	0	ADT			AM	0	0	0	AM			ADT	0	0
#DIV/0!	#DIV/0!	0			PM	57	1,135	0	PM			0	#DIV/0!	#DIV/0!
PM	AM	PM	AM	PM	AM	0	0	0	AM	PM	AM	PM	AM	PM
						⇦	⇩	⇨						
		0	0	0	0	⇧	SB		⇧	0	0	0	0	
		0	0	0	0	⇨ EB	118	WB ⇦		0	0	0	0	
17		17	0	34	0	⇩	NB		⇩	0	0	0	0	
						⇦	⇧	⇨						
PM	AM	PM	AM	PM	AM	0	0	0	AM	PM	AM	PM	AM	PM
#DIV/0!	#DIV/0!	0			PM	0	1,230	0	PM			0	#DIV/0!	#DIV/0!
34	0	ADT			AM	0	0	0	AM			ADT	0	0
⇨	⇨	Origin	ADT	0	PM	0	0	0	PM	0	ADT	Origin	⇨	⇨
	Flow	⇩	0	#DIV/0!	AM				AM	#DIV/0!	0	⇧	Flow	
Adj.		⇩	1,169	#DIV/0!	PM		1,230		PM	#DIV/0!	1,230	⇧		Adj.

Gellert Blvd / Southerly (Clinic) Dwy

Adj.		⇩	1,169	#DIV/0!	PM	11	1,151		PM	#DIV/0!	1,230	⇧	DATE	
	Flow	⇩	0	#DIV/0!	AM				AM	#DIV/0!	0	⇧	Flow	
⇦	⇦	Origin	ADT	0	PM	7	0	0	PM	0	ADT	Origin	⇦	⇦
77	0	ADT			AM	0	0	0	AM			ADT	0	0
#DIV/0!	#DIV/0!	0			PM	18	1,151	0	PM			0	#DIV/0!	#DIV/0!
PM	AM	PM	AM	PM	AM	0	0	0	AM	PM	AM	PM	AM	PM
						⇦	⇩	⇨						
		0	0	0	0	⇧	SB		⇧	0	0	0	0	
		0	0	0	0	⇨ EB	117	WB ⇦		0	0	0	0	
18		35	0	53	0	⇩	NB		⇩	0	0	0	0	
						⇦	⇧	⇨						
PM	AM	PM	AM	PM	AM	0	0	0	AM	PM	AM	PM	AM	PM
#DIV/0!	#DIV/0!	0			PM	59	1,230	0	PM			0	#DIV/0!	#DIV/0!
53	0	ADT			AM	0	0	0	AM			ADT	0	0
⇨	⇨	Origin	ADT	0	PM	6	0	0	PM	0	ADT	Origin	⇨	⇨
	Flow	⇩	0	#DIV/0!	AM				AM	#DIV/0!	0	⇧	Flow	
Adj.		⇩	1,204	#DIV/0!	PM	53	1,230		PM	#DIV/0!	1,289	⇧		Adj.

VTA SCCS

2035-2015 PM Difference

PM Peak

Intersection			2035-2015 PM Volume Difference													2035-2015 PM Growth																	
			Northbound			Southbound			Eastbound			Westbound				Leg					Northbound			Southbound			Eastbound			Westbound			INT
No.	Street (N-S)	Street (E-W)	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right	TOTAL	North	South	East	West	Average	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
101	SR-1 SB Ramps	Clarinada Ave	39	0	102	0	0	0	0	38	19	169	7	0	374	0%	32%	50%	15%	32%	9%	0%	40%	0%	0%	0%	0%	81%	23%	75%	7%	0%	32%
102	SR-1 NB Ramps	Serramonte Blvd	33	51	86	123	22	4	98	-25	6	116	63	188	765	72%	128%	71%	27%	75%	254%	138%	151%	70%	116%	5%	44%	-16%	15%	149%	38%	131%	65%
103	Callan Blvd	Serramonte Blvd	26	16	-7	88	-11	67	44	143	-1	67	309	91	832	30%	10%	65%	75%	45%	29%	7%	-6%	71%	-5%	64%	79%	58%	-1%	44%	151%	41%	44%
104	Serramonte Center Dwy	Serramonte Blvd	0	0	0	40	0	63	22	204	0	0	405	119	853	25%	0%	62%	66%	51%	0%	0%	0%	16%	0%	29%	11%	72%	0%	0%	117%	38%	51%
105	Gellert Blvd	Serramonte Blvd	132	34	126	21	55	9	2	29	89	154	239	133	1023	17%	26%	27%	39%	27%	39%	14%	20%	5%	19%	16%	4%	10%	40%	29%	77%	28%	27%
106	I-280 SB Off-Ramp	Serramonte Blvd	0	0	0	68	0	48	0	177	0	0	477	0	770	8%	0%	28%	27%	21%	0%	0%	0%	10%	0%	7%	0%	14%	0%	0%	78%	0%	24%
107	I-280 NB On-Ramp	Serramonte Blvd	0	0	0	0	0	0	-52	296	0	0	477	0	721	-9%	0%	39%	28%	20%	0%	0%	0%	0%	0%	0%	-9%	22%	0%	0%	75%	0%	28%
108	Junipero Serra Blvd	Serramonte Blvd	86	91	219	47	24	45	5	330	95	344	345	75	1706	19%	57%	86%	45%	52%	74%	18%	189%	45%	7%	36%	1%	47%	36%	186%	83%	125%	52%
109	Gellert Blvd	Gellert Marketplace Dwy	-1	290	0	0	304	7	2	-1	-2	-18	-1	0	580	37%	32%	-3%	1%	17%	-1%	45%	0%	0%	53%	54%	4%	-5%	-4%	-7%	-9%	0%	25%
110	Callan Blvd	Hickey Blvd	-22	5	0	-26	-14	52	-11	137	-13	2	85	25	220	3%	-6%	20%	17%	9%	-31%	2%	0%	-50%	-6%	29%	-9%	40%	-15%	3%	16%	28%	11%
111	Gellert Blvd	Hickey Blvd	-10	110	-65	112	172	21	-9	191	-35	138	95	189	909	32%	22%	26%	21%	26%	-12%	46%	-23%	27%	58%	12%	-7%	62%	-70%	30%	22%	32%	26%
112	I-280 SB Ramps	Hickey Blvd	0	0	0	198	0	72	0	0	272	-60	242	0	724	64%	44%	15%	24%	37%	0%	0%	0%	107%	0%	31%	0%	0%	179%	-19%	20%	0%	25%
113	I-280 NB Ramps-Imperial Hwy	Hickey Blvd	219	-11	5	0	0	-13	22	234	20	0	30	0	506	0%	18%	14%	21%	13%	38%	-17%	2%	0%	0%	-21%	14%	33%	13%	0%	4%	0%	17%
114	Kaiser Medical Offices Dwy	Hickey Blvd	0	0	0	83	0	0	0	240	0	0	30	122	475	0%	0%	25%	14%	19%	0%	0%	0%	0%	0%	0%	0%	26%	0%	0%	4%	0%	22%
115	Longford Dr	Hickey Blvd	0	0	0	0	0	0	0	306	0	0	99	0	405	0%	0%	22%	22%	22%	0%	0%	0%	0%	0%	0%	0%	34%	0%	0%	12%	0%	20%
116	Junipero Serra Blvd	Hickey Blvd	71	211	-11	127	361	4	8	193	106	-15	23	305	1383	53%	52%	29%	22%	39%	39%	48%	-9%	53%	98%	2%	4%	32%	118%	-9%	4%	63%	38%

VTA SCCS

INTERSECTION TRAFFIC COUNTS

2015 MD Counts

MD Peak

Intersection			Northbound			Southbound			Eastbound			Westbound			
No.	Street (N-S)	Street (E-W)	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right	TOTAL
101	SR-1 SB Ramps	Clarinada Ave	266	0	201	0	0	0	2	52	70	197	78	0	866
102	SR-1 NB Ramps	Serramonte Blvd	0	6	10	271	1	77	235	155	3	7	145	178	1088
103	Callan Blvd	Serramonte Blvd	98	186	136	121	194	68	81	292	54	128	142	180	1680
104	Serramonte Center Dwy	Serramonte Blvd	0	0	0	295	0	205	196	336	0	69	253	375	1729
105	Gellert Blvd	Serramonte Blvd	333	319	719	451	343	74	51	335	293	545	244	634	4341
106	I-280 SB Off-Ramp	Serramonte Blvd	0	0	0	777	0	825	0	1520	0	0	576	0	3698
107	I-280 NB On-Ramp	Serramonte Blvd	0	0	0	0	0	0	754	1535	0	0	566	1	2856
108	Junipero Serra Blvd	Serramonte Blvd	75	401	146	135	323	165	557	737	249	143	327	75	3333
109	Gellert Blvd	Gellert Marketplace Dwy	156	719	187	198	601	22	73	15	63	251	12	268	2565
110	Callan Blvd	Hickey Blvd	52	191	47	71	147	158	118	403	48	61	402	83	1781
111	Gellert Blvd	Hickey Blvd	81	312	343	463	284	167	167	341	49	339	318	616	3480
112	I-280 SB Ramps	Hickey Blvd	0	0	0	197	5	176	0	797	109	249	1071	0	2604
113	I-280 NB Ramps-Imperial Hwy	Hickey Blvd	576	31	256	42	84	66	134	706	169	137	580	62	2843
114	Kaiser Medical Offices Dwy	Hickey Blvd	10	0	9	0	0	0	0	983	8	4	767	0	1781
115	Longford Dr	Hickey Blvd	0	0	54	0	0	42	0	897	58	0	724	33	1808
116	Junipero Serra Blvd	Hickey Blvd	85	298	85	219	283	234	259	655	49	115	464	421	3167

VTA SCCS

2035 No Project

MD Peak

Intersection			Northbound			Southbound			Eastbound			Westbound				2035 nP Leg Volume			
No.	Street (N-S)	Street (E-W)	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right	TOTAL	North	South	East	West
101	SR-1 SB Ramps	Clarinada Ave	289	0	281	0	0	0	2	94	86	344	84	0	1180	2	1,000	803	555
102	SR-1 NB Ramps	Serramonte Blvd	0	14	25	461	2	81	339	130	3	17	200	412	1684	1,309	61	1,245	753
103	Callan Blvd	Serramonte Blvd	126	199	128	207	185	112	145	461	53	185	356	254	2411	1,102	876	1,591	1,253
104	Serramonte Center Dwy	Serramonte Blvd	0	0	0	343	0	263	218	577	0	69	550	516	2536	1,340	69	2,055	1,608
105	Gellert Blvd	Serramonte Blvd	462	363	865	475	408	86	53	367	411	702	432	815	5439	2,200	3,211	3,656	1,811
106	I-280 SB Off-Ramp	Serramonte Blvd	0	0	0	855	0	881	0	1732	0	0	1027	0	4495	1,736	-	3,614	3,640
107	I-280 NB On-Ramp	Serramonte Blvd	0	0	0	0	0	0	689	1876	0	0	991	1	3557	690	-	2,868	3,556
108	Junipero Serra Blvd	Serramonte Blvd	130	474	422	196	347	224	564	1085	338	409	598	169	4956	1,974	2,120	2,879	2,939
109	Gellert Blvd	Gellert Marketplace Dwy	155	1042	187	198	919	34	76	14	60	234	11	268	3198	2,537	2,597	912	350
110	Callan Blvd	Hickey Blvd	36	195	47	36	138	203	108	565	41	63	468	107	2007	787	520	1,286	1,421
111	Gellert Blvd	Hickey Blvd	71	457	266	587	447	186	155	552	15	441	388	815	4380	2,647	1,697	3,049	1,367
112	I-280 SB Ramps	Hickey Blvd	0	0	0	408	5	230	0	797	304	202	1282	0	3228	643	511	2,689	2,613
113	I-280 NB Ramps-Imperial Hwy	Hickey Blvd	795	26	261	42	84	52	153	935	191	137	604	62	3342	419	1,494	2,041	2,730
114	Kaiser Medical Offices Dwy	Hickey Blvd	10	0	9	0	0	0	0	1235	8	4	796	0	2062	-	31	2,044	2,049
115	Longford Dr	Hickey Blvd	0	0	54	0	0	42	0	1206	58	0	808	33	2201	75	112	2,101	2,114
116	Junipero Serra Blvd	Hickey Blvd	118	440	78	335	559	239	269	862	107	105	483	686	4281	2,528	1,407	2,549	2,078

Appendix G – Existing Plus Project Conditions Intersection Operations Analysis Worksheets

Intersection	
Intersection Delay, s/veh	27.5
Intersection LOS	D

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Vol, veh/h	6	50	83	0	229	98	0	471	256
Peak Hour Factor	0.96	0.96	0.96	0.92	0.96	0.96	0.92	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	52	86	0	239	102	0	491	267
Number of Lanes	0	2	0	0	1	2	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	3	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	3
HCM Control Delay	12	15.9	35.7
HCM LOS	B	C	E

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3
Vol Left, %	100%	0%	0%	0%	100%	0%	0%
Vol Thru, %	0%	0%	100%	23%	0%	100%	100%
Vol Right, %	0%	100%	0%	77%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	471	256	31	108	229	49	49
LT Vol	471	0	0	0	229	0	0
Through Vol	0	0	31	25	0	49	49
RT Vol	0	256	0	83	0	0	0
Lane Flow Rate	491	267	32	112	239	51	51
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	0.924	0.413	0.07	0.227	0.514	0.103	0.078
Departure Headway (Hd)	6.78	5.575	7.817	7.261	7.756	7.245	5.474
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	535	643	455	491	463	492	649
Service Time	4.543	3.338	5.615	5.059	5.538	5.027	3.255
HCM Lane V/C Ratio	0.918	0.415	0.07	0.228	0.516	0.104	0.079
HCM Control Delay	48.5	12.2	11.2	12.2	18.5	10.9	8.7
HCM Lane LOS	E	B	B	B	C	B	A
HCM 95th-tile Q	11.2	2	0.2	0.9	2.9	0.3	0.3

Intersection	
Intersection Delay, s/veh	16.9
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	221	153	42	0	75	161	145	0	13	37	58
Peak Hour Factor	0.92	0.85	0.85	0.85	0.92	0.85	0.85	0.85	0.92	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	260	180	49	0	88	189	171	0	15	44	68
Number of Lanes	0	1	1	0	0	0	2	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	1	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	2	2
HCM Control Delay	17.7	15.7	14
HCM LOS	C	C	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	12%	100%	0%	48%	0%	91%	0%
Vol Thru, %	34%	0%	78%	52%	36%	9%	0%
Vol Right, %	54%	0%	22%	0%	64%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	108	221	195	156	226	217	79
LT Vol	13	221	0	75	0	198	0
Through Vol	37	0	153	81	81	19	0
RT Vol	58	0	42	0	145	0	79
Lane Flow Rate	127	260	229	183	265	255	93
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.279	0.556	0.448	0.383	0.503	0.571	0.177
Departure Headway (Hd)	7.918	7.692	7.024	7.529	6.819	8.053	6.869
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	452	468	512	477	528	447	521
Service Time	5.984	5.444	4.776	5.281	4.571	5.805	4.62
HCM Lane V/C Ratio	0.281	0.556	0.447	0.384	0.502	0.57	0.179
HCM Control Delay	14	19.7	15.4	14.9	16.3	21	11.1
HCM Lane LOS	B	C	C	B	C	C	B
HCM 95th-tile Q	1.1	3.3	2.3	1.8	2.8	3.5	0.6

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	198	19	79
Peak Hour Factor	0.92	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	233	22	93
Number of Lanes	0	0	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	18.4
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	31.7
Intersection LOS	D

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	56	272	79	0	153	203	224	0	88	232	120
Peak Hour Factor	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	58	283	82	0	159	211	233	0	92	242	125
Number of Lanes	0	1	2	0	0	1	2	0	0	0	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	3
HCM Control Delay	25.8	36.5	32.6
HCM LOS	D	E	D

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	43%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	57%	49%	0%	100%	53%	0%	100%	23%	0%	100%	0%
Vol Right, %	0%	51%	0%	0%	47%	0%	0%	77%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	204	236	56	181	170	153	135	292	138	237	103
LT Vol	88	0	56	0	0	153	0	0	138	0	0
Through Vol	116	116	0	181	91	0	135	68	0	237	0
RT Vol	0	120	0	0	79	0	0	224	0	0	103
Lane Flow Rate	212	246	58	189	177	159	141	304	144	247	107
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.639	0.7	0.19	0.587	0.532	0.494	0.417	0.851	0.454	0.745	0.302
Departure Headway (Hd)	10.82	10.249	11.698	11.178	10.839	11.156	10.638	10.08	11.382	10.868	10.148
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	334	352	307	323	332	324	338	359	316	333	354
Service Time	8.588	8.016	9.471	8.951	8.611	8.925	8.406	7.847	9.155	8.64	7.92
HCM Lane V/C Ratio	0.635	0.699	0.189	0.585	0.533	0.491	0.417	0.847	0.456	0.742	0.302
HCM Control Delay	31	33.9	17.2	28.8	25.4	24.4	20.9	50.1	23.3	39.7	17.3
HCM Lane LOS	D	D	C	D	D	C	C	F	C	E	C
HCM 95th-tile Q	4.2	5.1	0.7	3.5	3	2.6	2	7.8	2.3	5.7	1.2

Intersection				
Intersection Delay, s/veh				
Intersection LOS				

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	138	237	103
Peak Hour Factor	0.92	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	144	247	107
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	30.1
HCM LOS	D

Lane

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	195	323	53	348	317	248	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95		0.95	1.00	0.97	
Frt	1.00	1.00		1.00	0.85	0.93	
Flt Protected	0.95	1.00		0.99	1.00	0.97	
Satd. Flow (prot)	1770	3539		3516	1583	3272	
Flt Permitted	0.95	1.00		0.86	1.00	0.97	
Satd. Flow (perm)	1770	3539		3046	1583	3272	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	205	340	56	366	334	261	232
RTOR Reduction (vph)	0	0	0	0	162	178	0
Lane Group Flow (vph)	205	340	0	422	172	315	0
Turn Type	Prot	NA	Perm	NA	pm+ov	Prot	
Protected Phases	7	4		8	6	6	
Permitted Phases			8		8		
Actuated Green, G (s)	12.0	30.0		13.5	25.4	11.9	
Effective Green, g (s)	12.0	30.0		13.5	25.4	11.9	
Actuated g/C Ratio	0.24	0.59		0.27	0.50	0.23	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	417	2085		807	929	764	
v/s Ratio Prot	c0.12	0.10			0.04	c0.10	
v/s Ratio Perm				c0.14	0.07		
v/c Ratio	0.49	0.16		0.52	0.19	0.41	
Uniform Delay, d1	16.8	4.7		16.0	7.0	16.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.9	0.0		0.6	0.1	0.4	
Delay (s)	17.7	4.8		16.6	7.1	16.9	
Level of Service	B	A		B	A	B	
Approach Delay (s)		9.7		12.4		16.9	
Approach LOS		A		B		B	

Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	50.9	Sum of lost time (s)	13.5
Intersection Capacity Utilization	47.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	315	242	566	304	466	350	249	645	383	292	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95	1.00	0.97	1.00	0.88	0.91	0.86	0.91	0.91	0.91	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.92	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	
Satd. Flow (prot)	1770	3539	1583	3433	1863	2787	1610	2940	1441	1610	3285	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	
Satd. Flow (perm)	1770	3539	1583	3433	1863	2787	1610	2940	1441	1610	3285	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	46	325	249	584	313	480	361	257	665	395	301	57
RTOR Reduction (vph)	0	0	67	0	0	225	0	175	70	0	8	0
Lane Group Flow (vph)	46	325	182	584	313	255	325	451	262	249	496	0
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Split	NA	pm+ov	Split	NA	
Protected Phases	7	4	2	3	8	6	2	2	3	6	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	5.5	16.8	41.6	20.7	32.0	54.9	24.8	24.8	45.5	22.9	22.9	
Effective Green, g (s)	5.5	16.8	41.6	20.7	32.0	54.9	24.8	24.8	45.5	22.9	22.9	
Actuated g/C Ratio	0.05	0.16	0.40	0.20	0.31	0.53	0.24	0.24	0.44	0.22	0.22	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	94	576	707	688	577	1482	386	706	635	357	728	
v/s Ratio Prot	0.03	0.09	0.06	c0.17	c0.17	0.04	c0.20	0.15	0.08	c0.15	0.15	
v/s Ratio Perm			0.05			0.05			0.10			
v/c Ratio	0.49	0.56	0.26	0.85	0.54	0.17	0.84	0.64	0.41	0.70	0.68	
Uniform Delay, d1	47.5	39.8	20.5	39.7	29.5	12.4	37.3	35.2	19.7	37.0	36.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.0	1.3	0.2	9.6	1.0	0.1	15.2	1.9	0.4	5.8	2.6	
Delay (s)	51.5	41.1	20.7	49.3	30.6	12.5	52.6	37.1	20.2	42.8	39.4	
Level of Service	D	D	C	D	C	B	D	D	C	D	D	
Approach Delay (s)		33.7			32.2			36.6			40.6	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	35.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	103.2	Sum of lost time (s)	18.0
Intersection Capacity Utilization	69.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	1301	624	0	666	718
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5
Lane Util. Factor		0.95	0.91		0.97	0.88
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	5085		3433	2787
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	5085		3433	2787
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	0	1314	630	0	673	725
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1314	630	0	673	725
Turn Type		NA	NA		Prot	Prot
Protected Phases		4	8		6	6
Permitted Phases						
Actuated Green, G (s)		51.7	51.7		29.3	29.3
Effective Green, g (s)		51.7	51.7		29.3	29.3
Actuated g/C Ratio		0.57	0.57		0.33	0.33
Clearance Time (s)		4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		2032	2921		1117	907
v/s Ratio Prot		c0.37	0.12		0.20	c0.26
v/s Ratio Perm						
v/c Ratio		0.65	0.22		0.60	0.80
Uniform Delay, d1		13.0	9.3		25.5	27.7
Progression Factor		1.00	0.00		1.00	1.00
Incremental Delay, d2		1.6	0.2		0.9	5.0
Delay (s)		14.6	0.2		26.4	32.7
Level of Service		B	A		C	C
Approach Delay (s)		14.6	0.2		29.6	
Approach LOS		B	A		C	

Intersection Summary			
HCM 2000 Control Delay	18.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	90.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Volume (vph)	624	1331	650	4	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5			
Lane Util. Factor	0.97	0.95	0.95			
Frt	1.00	1.00	1.00			
Flt Protected	0.95	1.00	1.00			
Satd. Flow (prot)	3433	3539	3536			
Flt Permitted	0.95	1.00	1.00			
Satd. Flow (perm)	3433	3539	3536			
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	637	1358	663	4	0	0
RTOR Reduction (vph)	0	0	1	0	0	0
Lane Group Flow (vph)	637	1358	666	0	0	0
Turn Type	Prot	NA	NA			
Protected Phases	7	4	8			
Permitted Phases						
Actuated Green, G (s)	39.5	90.0	41.5			
Effective Green, g (s)	39.5	90.0	41.5			
Actuated g/C Ratio	0.44	1.00	0.46			
Clearance Time (s)	4.5	4.5	4.5			
Vehicle Extension (s)	3.0	3.0	3.0			
Lane Grp Cap (vph)	1506	3539	1630			
v/s Ratio Prot	0.19	c0.38	0.19			
v/s Ratio Perm						
v/c Ratio	0.42	0.38	0.41			
Uniform Delay, d1	17.4	0.0	16.1			
Progression Factor	0.89	1.00	1.00			
Incremental Delay, d2	0.2	0.3	0.8			
Delay (s)	15.6	0.3	16.9			
Level of Service	B	A	B			
Approach Delay (s)		5.1	16.9		0.0	
Approach LOS		A	B		A	

Intersection Summary			
HCM 2000 Control Delay	8.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	90.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	4	375	695	266	187	433	409	59	108	376	511	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5	4.5	4.5			4.5	4.5	4.5
Lane Util. Factor		0.97	0.95	1.00	1.00	0.91	0.91			0.97	0.95	1.00
Frt		1.00	1.00	0.85	1.00	0.95	0.85			1.00	1.00	0.85
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	1.00
Satd. Flow (prot)		3433	3539	1583	1770	3236	1441			3433	3539	1583
Flt Permitted		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	1.00
Satd. Flow (perm)		3433	3539	1583	1770	3236	1441			3433	3539	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.92	0.98	0.98	0.98
Adj. Flow (vph)	4	383	709	271	191	442	417	60	117	384	521	117
RTOR Reduction (vph)	0	0	0	190	0	0	0	0	0	0	0	85
Lane Group Flow (vph)	0	387	709	81	191	634	285	0	0	501	521	32
Turn Type	Prot	Prot	NA	Perm	Prot	NA	Perm		Prot	Prot	NA	Perm
Protected Phases	7	7	4		3	8			5	5	2	
Permitted Phases				4			8					2
Actuated Green, G (s)		16.5	30.0	30.0	12.8	26.3	26.3			19.1	27.5	27.5
Effective Green, g (s)		16.5	30.0	30.0	12.8	26.3	26.3			19.1	27.5	27.5
Actuated g/C Ratio		0.16	0.30	0.30	0.13	0.26	0.26			0.19	0.28	0.28
Clearance Time (s)		4.5	4.5	4.5	4.5	4.5	4.5			4.5	4.5	4.5
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)		566	1061	474	226	851	378			655	973	435
v/s Ratio Prot		0.11	c0.20		c0.11	0.20				c0.15	0.15	
v/s Ratio Perm				0.05			c0.20					0.02
v/c Ratio		0.68	0.67	0.17	0.85	0.75	0.75			0.76	0.54	0.07
Uniform Delay, d1		39.3	30.6	25.8	42.6	33.8	33.9			38.3	30.8	26.8
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00
Incremental Delay, d2		3.4	1.6	0.2	24.0	3.6	8.3			5.3	0.6	0.1
Delay (s)		42.7	32.3	26.0	66.7	37.3	42.2			43.6	31.4	26.9
Level of Service		D	C	C	E	D	D			D	C	C
Approach Delay (s)			34.0			43.6					36.3	
Approach LOS			C			D					D	

Intersection Summary			
HCM 2000 Control Delay	37.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR	SBR2
Lane Configurations				
Volume (vph)	108	327	132	205
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5
Lane Util. Factor	1.00	0.95		1.00
Frt	1.00	0.96		0.85
Flt Protected	0.95	1.00		1.00
Satd. Flow (prot)	1770	3386		1583
Flt Permitted	0.95	1.00		1.00
Satd. Flow (perm)	1770	3386		1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.92
Adj. Flow (vph)	110	334	135	223
RTOR Reduction (vph)	0	0	0	178
Lane Group Flow (vph)	110	469	0	45
Turn Type	Prot	NA		Perm
Protected Phases	1	6		
Permitted Phases				6
Actuated Green, G (s)	11.7	20.1		20.1
Effective Green, g (s)	11.7	20.1		20.1
Actuated g/C Ratio	0.12	0.20		0.20
Clearance Time (s)	4.5	4.5		4.5
Vehicle Extension (s)	3.0	3.0		3.0
Lane Grp Cap (vph)	207	680		318
v/s Ratio Prot	0.06	c0.14		
v/s Ratio Perm				0.03
v/c Ratio	0.53	0.69		0.14
Uniform Delay, d1	41.6	37.1		32.9
Progression Factor	1.00	1.00		1.00
Incremental Delay, d2	2.6	2.9		0.2
Delay (s)	44.2	40.0		33.1
Level of Service	D	D		C
Approach Delay (s)		38.6		
Approach LOS		D		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	109	21	49	267	11	187	162	680	118	172	625	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5	4.5	4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frt		0.96			1.00	0.85	1.00	0.98		1.00	1.00	
Flt Protected		0.97			0.95	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1741			1777	1583	1770	4972		1770	5070	
Flt Permitted		0.56			0.63	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		998			1173	1583	1770	4972		1770	5070	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	120	23	54	293	12	205	178	747	130	189	687	14
RTOR Reduction (vph)	0	22	0	0	0	139	0	39	0	0	3	0
Lane Group Flow (vph)	0	175	0	0	305	66	178	838	0	189	698	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		19.2			19.2	19.2	9.3	16.2		10.4	17.3	
Effective Green, g (s)		19.2			19.2	19.2	9.3	16.2		10.4	17.3	
Actuated g/C Ratio		0.32			0.32	0.32	0.16	0.27		0.18	0.29	
Clearance Time (s)		4.5			4.5	4.5	4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		323			379	512	277	1358		310	1479	
v/s Ratio Prot							0.10	c0.17		c0.11	0.14	
v/s Ratio Perm		0.18			c0.26	0.04						
v/c Ratio		0.54			0.80	0.13	0.64	0.62		0.61	0.47	
Uniform Delay, d1		16.4			18.3	14.2	23.4	18.8		22.6	17.2	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.9			11.7	0.1	5.0	0.8		3.4	0.2	
Delay (s)		18.3			30.1	14.3	28.5	19.7		26.0	17.5	
Level of Service		B			C	B	C	B		C	B	
Approach Delay (s)		18.3			23.7			21.2			19.3	
Approach LOS		B			C			C			B	

Intersection Summary

HCM 2000 Control Delay	20.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	59.3	Sum of lost time (s)	13.5
Intersection Capacity Utilization	58.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	127	355	90	67	486	84	69	230	39	48	226	183
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	8	12	12	12
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	0.98		1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3432		1770	3461		1770	1863	1372	1770	1737	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3432		1770	3461		1770	1863	1372	1770	1737	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	135	378	96	71	517	89	73	245	41	51	240	195
RTOR Reduction (vph)	0	30	0	0	21	0	0	0	29	0	44	0
Lane Group Flow (vph)	135	444	0	71	585	0	73	245	12	51	391	0
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	9.2	20.9		2.5	14.2		3.9	18.5	18.5	2.3	16.9	
Effective Green, g (s)	9.2	20.9		2.5	14.2		3.9	18.5	18.5	2.3	16.9	
Actuated g/C Ratio	0.15	0.34		0.04	0.23		0.06	0.30	0.30	0.04	0.27	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	261	1153		71	790		110	554	408	65	471	
v/s Ratio Prot	c0.08	0.13		0.04	c0.17		0.04	c0.13		0.03	c0.22	
v/s Ratio Perm									0.01			
v/c Ratio	0.52	0.39		1.00	0.74		0.66	0.44	0.03	0.78	0.83	
Uniform Delay, d1	24.5	15.7		29.9	22.3		28.5	17.7	15.5	29.7	21.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.7	0.2		106.8	3.8		14.1	0.6	0.0	44.9	11.5	
Delay (s)	26.2	16.0		136.7	26.0		42.6	18.2	15.5	74.6	32.8	
Level of Service	C	B		F	C		D	B	B	E	C	
Approach Delay (s)		18.2			37.6			22.9			37.2	
Approach LOS		B			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	29.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	62.2	Sum of lost time (s)	18.0
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	130	332	34	449	388	614	85	244	288	436	322	186
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.91	0.91	1.00	0.91	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00
Satd. Flow (prot)	1770	3539	1583	3433	3539	1583	1610	3384	1583	1610	3329	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00
Satd. Flow (perm)	1770	3539	1583	3433	3539	1583	1610	3384	1583	1610	3329	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	135	346	35	468	404	640	89	254	300	454	335	194
RTOR Reduction (vph)	0	0	28	0	0	458	0	0	249	0	0	145
Lane Group Flow (vph)	135	346	7	468	404	182	80	263	51	259	530	49
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	13.7	17.1	17.1	17.8	21.2	21.2	15.4	15.4	15.4	22.9	22.9	22.9
Effective Green, g (s)	13.7	17.1	17.1	17.8	21.2	21.2	15.4	15.4	15.4	22.9	22.9	22.9
Actuated g/C Ratio	0.15	0.19	0.19	0.20	0.23	0.23	0.17	0.17	0.17	0.25	0.25	0.25
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	265	663	296	670	822	367	271	571	267	404	835	397
v/s Ratio Prot	0.08	c0.10		c0.14	0.11		0.05	c0.08		c0.16	0.16	
v/s Ratio Perm			0.00			0.11			0.03			0.03
v/c Ratio	0.51	0.52	0.02	0.70	0.49	0.50	0.30	0.46	0.19	0.64	0.63	0.12
Uniform Delay, d1	35.7	33.4	30.2	34.2	30.3	30.4	33.2	34.2	32.5	30.5	30.4	26.4
Progression 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
Incremental Delay, d2	1.5	0.7	0.0	3.2	0.5	1.1	0.6	0.6	0.3	3.5	1.6	0.1
Delay (s)	37.2	34.1	30.3	37.4	30.8	31.4	33.8	34.7	32.9	33.9	32.0	26.5
Level of Service	D	C	C	D	C	C	C	C	C	C	C	C
Approach Delay (s)		34.7			33.1			33.8			31.4	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	33.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	91.2	Sum of lost time (s)	18.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	780	190	317	1207	0	0	0	0	188	6	231
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0	4.5	4.5					4.5	4.5	4.5
Lane Util. Factor		0.95	1.00	0.97	0.95					0.95	0.91	0.95
Frt		1.00	0.85	1.00	1.00					1.00	0.90	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.99	1.00
Satd. Flow (prot)		3539	1583	3433	3539					1681	1503	1504
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.99	1.00
Satd. Flow (perm)		3539	1583	3433	3539					1681	1503	1504
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	0	963	235	391	1490	0	0	0	0	232	7	285
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	963	235	391	1490	0	0	0	0	181	175	168
Turn Type		NA	Free	Prot	NA					Split	NA	Perm
Protected Phases		4		3	8					6	6	
Permitted Phases			Free									6
Actuated Green, G (s)		52.4	110.0	25.5	82.4					18.6	18.6	18.6
Effective Green, g (s)		52.4	110.0	25.5	82.4					18.6	18.6	18.6
Actuated g/C Ratio		0.48	1.00	0.23	0.75					0.17	0.17	0.17
Clearance Time (s)		4.5		4.5	4.5					4.5	4.5	4.5
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1685	1583	795	2651					284	254	254
v/s Ratio Prot		0.27		0.11	c0.42					0.11	c0.12	
v/s Ratio Perm			0.15									0.11
v/c Ratio		0.57	0.15	0.49	0.56					0.64	0.69	0.66
Uniform Delay, d1		20.7	0.0	36.6	6.0					42.6	43.0	42.8
Progression Factor		1.00	1.00	0.69	0.22					1.00	1.00	1.00
Incremental Delay, d2		1.4	0.2	0.4	0.8					4.6	7.6	6.3
Delay (s)		22.1	0.2	25.5	2.1					47.2	50.5	49.1
Level of Service		C	A	C	A					D	D	D
Approach Delay (s)		17.8			7.0			0.0			48.9	
Approach LOS		B			A			A			D	

Intersection Summary				
HCM 2000 Control Delay	16.7	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.61			
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.5	
Intersection Capacity Utilization	50.4%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	153	724	150	179	726	49	553	57	263	49	77	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00		0.98	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3506		1681	1700	1583		1827	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00		0.98	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3506		1681	1700	1583		1827	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	156	739	153	183	741	50	564	58	268	50	79	59
RTOR Reduction (vph)	0	0	83	0	4	0	0	0	206	0	0	52
Lane Group Flow (vph)	156	739	70	183	787	0	310	312	62	0	129	7
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	13.3	39.4	39.4	14.7	40.8		25.3	25.3	25.3		12.6	12.6
Effective Green, g (s)	13.3	39.4	39.4	14.7	40.8		25.3	25.3	25.3		12.6	12.6
Actuated g/C Ratio	0.12	0.36	0.36	0.13	0.37		0.23	0.23	0.23		0.11	0.11
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	214	1267	567	236	1300		386	391	364		209	181
v/s Ratio Prot	0.09	0.21		c0.10	c0.22		c0.18	0.18			c0.07	
v/s Ratio Perm			0.04						0.04			0.00
v/c Ratio	0.73	0.58	0.12	0.78	0.61		0.80	0.80	0.17		0.62	0.04
Uniform Delay, d1	46.6	28.6	23.7	46.1	28.1		40.0	39.9	33.9		46.4	43.3
Progression Factor	1.31	0.63	0.72	1.34	0.49		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	10.0	1.7	0.4	14.2	2.0		11.5	10.8	0.2		5.3	0.1
Delay (s)	71.0	19.8	17.3	76.0	15.9		51.5	50.8	34.2		51.7	43.4
Level of Service	E	B	B	E	B		D	D	C		D	D
Approach Delay (s)		27.1			27.1			46.0			49.1	
Approach LOS		C			C			D			D	

Intersection Summary				
HCM 2000 Control Delay	33.9	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.70			
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	64.8%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	944	91	52	807	153	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	1770	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	983	95	54	841	159	128
RTOR Reduction (vph)	0	34	0	0	0	108
Lane Group Flow (vph)	983	61	54	841	159	20
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	70.2	70.2	9.2	83.9	17.1	17.1
Effective Green, g (s)	70.2	70.2	9.2	83.9	17.1	17.1
Actuated g/C Ratio	0.64	0.64	0.08	0.76	0.16	0.16
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2258	1010	148	2699	275	246
v/s Ratio Prot	c0.28		0.03	c0.24	c0.09	
v/s Ratio Perm		0.04				0.01
v/c Ratio	0.44	0.06	0.36	0.31	0.58	0.08
Uniform Delay, d1	10.0	7.5	47.6	4.1	43.1	39.7
Progression Factor	0.27	0.00	1.11	0.47	1.00	1.00
Incremental Delay, d2	0.5	0.1	1.5	0.3	2.9	0.1
Delay (s)	3.2	0.1	54.6	2.2	46.0	39.9
Level of Service	A	A	D	A	D	D
Approach Delay (s)	2.9			5.4	43.3	
Approach LOS	A			A	D	

Intersection Summary			
HCM 2000 Control Delay	9.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	900	110	0	865	50	0	0	75	0	0	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5				4.5			4.5
Lane Util. Factor		0.91			0.95				1.00			1.00
Frt		0.98			0.99				0.86			0.86
Flt Protected		1.00			1.00				1.00			1.00
Satd. Flow (prot)		5002			3510				1611			1611
Flt Permitted		1.00			1.00				1.00			1.00
Satd. Flow (perm)		5002			3510				1611			1611
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	928	113	0	892	52	0	0	77	0	0	25
RTOR Reduction (vph)	0	6	0	0	2	0	0	0	72	0	0	24
Lane Group Flow (vph)	0	1035	0	0	942	0	0	0	5	0	0	1
Turn Type		NA			NA				Perm			Perm
Protected Phases		4			8							
Permitted Phases									2			6
Actuated Green, G (s)		94.5			94.5				6.5			6.5
Effective Green, g (s)		94.5			94.5				6.5			6.5
Actuated g/C Ratio		0.86			0.86				0.06			0.06
Clearance Time (s)		4.5			4.5				4.5			4.5
Vehicle Extension (s)		3.0			3.0				3.0			3.0
Lane Grp Cap (vph)		4297			3015				95			95
v/s Ratio Prot		0.21			c0.27							
v/s Ratio Perm									c0.00			0.00
v/c Ratio		0.24			0.31				0.05			0.02
Uniform Delay, d1		1.4			1.5				48.8			48.7
Progression Factor		1.17			0.36				1.00			1.00
Incremental Delay, d2		0.1			0.1				0.2			0.1
Delay (s)		1.7			0.7				49.0			48.8
Level of Service		A			A				D			D
Approach Delay (s)		1.7			0.7			49.0			48.8	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	3.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	36.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	210	613	100	168	551	482	195	441	120	248	366	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.0	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.91	0.91			0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.98			1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1610	3316			3498	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	1.00			0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1610	3316			3498	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	219	639	104	175	574	502	203	459	125	258	381	190
RTOR Reduction (vph)	0	10	0	0	0	0	0	0	88	0	0	152
Lane Group Flow (vph)	197	755	0	0	749	502	203	459	37	258	381	38
Turn Type	Split	NA		Split	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						Free			2			6
Actuated Green, G (s)	31.4	31.4			23.5	110.0	15.2	17.0	17.0	20.1	21.9	21.9
Effective Green, g (s)	31.4	31.4			23.5	110.0	15.2	17.0	17.0	20.1	21.9	21.9
Actuated g/C Ratio	0.29	0.29			0.21	1.00	0.14	0.15	0.15	0.18	0.20	0.20
Clearance Time (s)	4.5	4.5			4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	459	946			747	1583	244	546	244	323	704	315
v/s Ratio Prot	0.12	c0.23			c0.21		0.11	c0.13		c0.15	0.11	
v/s Ratio Perm						c0.32			0.02			0.02
v/c Ratio	0.43	0.80			1.00	0.32	0.83	0.84	0.15	0.80	0.54	0.12
Uniform Delay, d1	32.0	36.4			43.2	0.0	46.2	45.2	40.3	43.0	39.5	36.1
Progression Factor	0.39	0.44			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.9	6.9			33.6	0.5	20.8	11.2	0.3	12.9	0.9	0.2
Delay (s)	15.5	22.8			76.8	0.5	67.0	56.4	40.5	55.9	40.4	36.3
Level of Service	B	C			E	A	E	E	D	E	D	D
Approach Delay (s)		21.3			46.2			56.6			44.3	
Approach LOS		C			D			E			D	

Intersection Summary			
HCM 2000 Control Delay	41.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	78.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	19	53	960	929	11
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	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	21	58	1043	1010	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1549	511	1022	0	-	0
Stage 1	1016	-	-	-	-	-
Stage 2	533	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	162	435	382	-	-	-
Stage 1	236	-	-	-	-	-
Stage 2	505	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	137	435	382	-	-	-
Mov Cap-2 Maneuver	137	-	-	-	-	-
Stage 1	236	-	-	-	-	-
Stage 2	428	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.7	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	382	-	435	-	-
HCM Lane V/C Ratio	0.151	-	0.047	-	-
HCM Control Delay (s)	16.1	-	13.7	-	-
HCM Lane LOS	C	-	B	-	-
HCM 95th %tile Q(veh)	0.5	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	53	0	960	887	54
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	58	0	1043	964	59

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1410	511	1023	0	-	0
Stage 1	993	-	-	-	-	-
Stage 2	417	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	192	435	382	-	-	-
Stage 1	244	-	-	-	-	-
Stage 2	579	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	192	435	382	-	-	-
Mov Cap-2 Maneuver	192	-	-	-	-	-
Stage 1	244	-	-	-	-	-
Stage 2	579	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	382	-	435	-	-
HCM Lane V/C Ratio	-	-	0.132	-	-
HCM Control Delay (s)	0	-	14.5	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.5	-	-

Intersection	
Intersection Delay, s/veh	13.1
Intersection LOS	B

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Vol, veh/h	2	57	70	0	208	78	0	266	201
Peak Hour Factor	0.93	0.93	0.93	0.92	0.93	0.93	0.92	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	61	75	0	224	84	0	286	216
Number of Lanes	0	2	0	0	1	2	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	3	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	3
HCM Control Delay	10.5	13.2	13.7
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3
Vol Left, %	100%	0%	0%	0%	100%	0%	0%
Vol Thru, %	0%	0%	100%	29%	0%	100%	100%
Vol Right, %	0%	100%	0%	71%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	266	201	31	99	208	39	39
LT Vol	266	0	0	0	208	0	0
Through Vol	0	0	31	29	0	39	39
RT Vol	0	201	0	70	0	0	0
Lane Flow Rate	286	216	33	106	224	42	42
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	0.518	0.319	0.063	0.188	0.432	0.075	0.055
Departure Headway (Hd)	6.514	5.311	6.897	6.389	6.951	6.444	4.683
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	555	676	518	560	519	555	762
Service Time	4.253	3.05	4.653	4.145	4.698	4.19	2.43
HCM Lane V/C Ratio	0.515	0.32	0.064	0.189	0.432	0.076	0.055
HCM Control Delay	16.1	10.5	10.1	10.6	14.9	9.7	7.7
HCM Lane LOS	C	B	B	B	B	A	A
HCM 95th-tile Q	3	1.4	0.2	0.7	2.2	0.2	0.2

Intersection	
Intersection Delay, s/veh	14.3
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	235	156	3	0	7	147	178	0	0	6	10
Peak Hour Factor	0.92	0.98	0.98	0.98	0.92	0.98	0.98	0.98	0.92	0.98	0.98	0.98
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	240	159	3	0	7	150	182	0	0	6	10
Number of Lanes	0	1	1	0	0	0	2	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	1	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	2	2
HCM Control Delay	13.8	12.4	10.4
HCM LOS	B	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	100%	0%	9%	0%	100%	0%
Vol Thru, %	38%	0%	98%	91%	29%	0%	0%
Vol Right, %	62%	0%	2%	0%	71%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	16	235	159	81	252	281	77
LT Vol	0	235	0	7	0	280	0
Through Vol	6	0	156	74	74	1	0
RT Vol	10	0	3	0	178	0	77
Lane Flow Rate	16	240	162	82	257	287	79
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.032	0.456	0.285	0.149	0.426	0.564	0.128
Departure Headway (Hd)	7.045	6.845	6.323	6.519	5.97	7.087	5.872
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	504	525	566	548	601	508	608
Service Time	5.139	4.607	4.085	4.283	3.734	4.844	3.628
HCM Lane V/C Ratio	0.032	0.457	0.286	0.15	0.428	0.565	0.13
HCM Control Delay	10.4	15.3	11.6	10.4	13.1	18.7	9.5
HCM Lane LOS	B	C	B	B	B	C	A
HCM 95th-tile Q	0.1	2.4	1.2	0.5	2.1	3.4	0.4

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	280	1	77
Peak Hour Factor	0.92	0.98	0.98	0.98
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	286	1	79
Number of Lanes	0	0	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	16.7
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	22.3
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	81	303	54	0	129	144	193	0	98	186	137
Peak Hour Factor	0.92	0.97	0.97	0.97	0.92	0.97	0.97	0.97	0.92	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	84	312	56	0	133	148	199	0	101	192	141
Number of Lanes	0	1	2	0	0	1	2	0	0	0	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	3
HCM Control Delay	21.3	22.5	24.2
HCM LOS	C	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	51%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	49%	40%	0%	100%	65%	0%	100%	20%	0%	100%	0%
Vol Right, %	0%	60%	0%	0%	35%	0%	0%	80%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	191	230	81	202	155	129	96	241	133	194	68
LT Vol	98	0	81	0	0	129	0	0	133	0	0
Through Vol	93	93	0	202	101	0	96	48	0	194	0
RT Vol	0	137	0	0	54	0	0	193	0	0	68
Lane Flow Rate	197	237	84	208	160	133	99	248	137	200	70
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.535	0.6	0.24	0.569	0.425	0.38	0.268	0.634	0.396	0.55	0.179
Departure Headway (Hd)	9.785	9.111	10.344	9.828	9.576	10.28	9.764	9.185	10.41	9.899	9.182
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	368	396	346	367	374	348	366	393	344	364	389
Service Time	7.574	6.901	8.139	7.623	7.371	8.074	7.558	6.979	8.208	7.696	6.98
HCM Lane V/C Ratio	0.535	0.598	0.243	0.567	0.428	0.382	0.27	0.631	0.398	0.549	0.18
HCM Control Delay	23.4	24.8	16.4	24.9	19.3	19.3	16.1	26.7	19.9	24.3	14
HCM Lane LOS	C	C	C	C	C	C	C	D	C	C	B
HCM 95th-tile Q	3	3.8	0.9	3.4	2.1	1.7	1.1	4.2	1.8	3.2	0.6

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	133	194	68
Peak Hour Factor	0.92	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	137	200	70
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	21
HCM LOS	C

Lane

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	196	360	69	270	375	295	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95		0.95	1.00	0.97	
Frt	1.00	1.00		1.00	0.85	0.94	
Flt Protected	0.95	1.00		0.99	1.00	0.97	
Satd. Flow (prot)	1770	3539		3504	1583	3294	
Flt Permitted	0.95	1.00		0.80	1.00	0.97	
Satd. Flow (perm)	1770	3539		2848	1583	3294	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	202	371	71	278	387	304	211
RTOR Reduction (vph)	0	0	0	0	153	158	0
Lane Group Flow (vph)	202	371	0	349	234	357	0
Turn Type	Prot	NA	Perm	NA	pm+ov	Prot	
Protected Phases	7	4		8	6	6	
Permitted Phases			8		8		
Actuated Green, G (s)	11.7	28.9		12.7	25.4	12.7	
Effective Green, g (s)	11.7	28.9		12.7	25.4	12.7	
Actuated g/C Ratio	0.23	0.57		0.25	0.50	0.25	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	409	2021		714	935	826	
v/s Ratio Prot	c0.11	0.10			0.06	c0.11	
v/s Ratio Perm				c0.12	0.08		
v/c Ratio	0.49	0.18		0.49	0.25	0.43	
Uniform Delay, d1	16.9	5.2		16.2	7.2	15.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.9	0.0		0.5	0.1	0.4	
Delay (s)	17.8	5.2		16.7	7.3	16.3	
Level of Service	B	A		B	A	B	
Approach Delay (s)		9.7		11.8		16.3	
Approach LOS		A		B		B	

Intersection Summary			
HCM 2000 Control Delay	12.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	50.6	Sum of lost time (s)	13.5
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	335	317	573	244	634	350	320	771	451	351	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95	1.00	0.97	1.00	0.88	0.91	0.86	0.91	0.91	0.91	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.92	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	
Satd. Flow (prot)	1770	3539	1583	3433	1863	2787	1610	2947	1441	1610	3281	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	
Satd. Flow (perm)	1770	3539	1583	3433	1863	2787	1610	2947	1441	1610	3281	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	53	349	330	597	254	660	365	333	803	470	366	77
RTOR Reduction (vph)	0	0	63	0	0	181	0	174	63	0	10	0
Lane Group Flow (vph)	53	349	267	597	254	479	328	598	338	301	602	0
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Split	NA	pm+ov	Split	NA	
Protected Phases	7	4	2	3	8	6	2	2	3	6	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	6.5	17.0	39.6	19.6	30.1	54.4	22.6	22.6	42.2	24.3	24.3	
Effective Green, g (s)	6.5	17.0	39.6	19.6	30.1	54.4	22.6	22.6	42.2	24.3	24.3	
Actuated g/C Ratio	0.06	0.17	0.39	0.19	0.30	0.54	0.22	0.22	0.42	0.24	0.24	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	113	592	687	662	552	1493	358	656	599	385	785	
v/s Ratio Prot	0.03	c0.10	0.09	c0.17	0.14	0.08	c0.20	0.20	0.11	c0.19	0.18	
v/s Ratio Perm			0.08			0.10			0.13			
v/c Ratio	0.47	0.59	0.39	0.90	0.46	0.32	0.92	0.91	0.57	0.78	0.77	
Uniform Delay, d1	45.8	39.0	22.2	40.0	29.1	13.2	38.5	38.5	22.6	36.1	36.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.1	1.5	0.4	15.5	0.6	0.1	27.3	17.0	1.2	9.9	4.5	
Delay (s)	48.9	40.5	22.6	55.5	29.7	13.3	65.8	55.4	23.9	46.0	40.5	
Level of Service	D	D	C	E	C	B	E	E	C	D	D	
Approach Delay (s)		33.1			32.8			49.3			42.3	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	40.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	101.5	Sum of lost time (s)	18.0
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	1572	594	0	777	834
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5
Lane Util. Factor		0.95	0.91		0.97	0.88
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	5085		3433	2787
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	5085		3433	2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1655	625	0	818	878
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1655	625	0	818	878
Turn Type		NA	NA		Prot	Prot
Protected Phases		4	8		6	6
Permitted Phases						
Actuated Green, G (s)		48.5	48.5		32.5	32.5
Effective Green, g (s)		48.5	48.5		32.5	32.5
Actuated g/C Ratio		0.54	0.54		0.36	0.36
Clearance Time (s)		4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1907	2740		1239	1006
v/s Ratio Prot		c0.47	0.12		0.24	c0.32
v/s Ratio Perm						
v/c Ratio		0.87	0.23		0.66	0.87
Uniform Delay, d1		18.0	10.9		24.1	26.8
Progression Factor		1.00	0.01		1.00	1.00
Incremental Delay, d2		5.7	0.2		1.3	8.5
Delay (s)		23.6	0.3		25.5	35.3
Level of Service		C	A		C	D
Approach Delay (s)		23.6	0.3		30.5	
Approach LOS		C	A		C	

Intersection Summary			
HCM 2000 Control Delay	22.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	100.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Volume (vph)	804	1537	584	1	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5			
Lane Util. Factor	0.97	0.95	0.95			
Frt	1.00	1.00	1.00			
Flt Protected	0.95	1.00	1.00			
Satd. Flow (prot)	3433	3539	3538			
Flt Permitted	0.95	1.00	1.00			
Satd. Flow (perm)	3433	3539	3538			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	846	1618	615	1	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	846	1618	616	0	0	0
Turn Type	Prot	NA	NA			
Protected Phases	7	4	8			
Permitted Phases						
Actuated Green, G (s)	45.5	90.0	35.5			
Effective Green, g (s)	45.5	90.0	35.5			
Actuated g/C Ratio	0.51	1.00	0.39			
Clearance Time (s)	4.5	4.5	4.5			
Vehicle Extension (s)	3.0	3.0	3.0			
Lane Grp Cap (vph)	1735	3539	1395			
v/s Ratio Prot	0.25	c0.46	0.17			
v/s Ratio Perm						
v/c Ratio	0.49	0.46	0.44			
Uniform Delay, d1	14.6	0.0	20.0			
Progression Factor	0.79	1.00	1.00			
Incremental Delay, d2	0.1	0.2	1.0			
Delay (s)	11.6	0.2	21.0			
Level of Service	B	A	C			
Approach Delay (s)		4.2	21.0		0.0	
Approach LOS		A	C		A	

Intersection Summary			
HCM 2000 Control Delay	7.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	100.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	1	558	738	249	143	330	339	75	75	362	401	146
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5	4.5	4.5			4.5	4.5	4.5
Lane Util. Factor		0.97	0.95	1.00	1.00	0.91	0.91			0.97	0.95	1.00
Frt		1.00	1.00	0.85	1.00	0.95	0.85			1.00	1.00	0.85
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	1.00
Satd. Flow (prot)		3433	3539	1583	1770	3209	1441			3433	3539	1583
Flt Permitted		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	1.00
Satd. Flow (perm)		3433	3539	1583	1770	3209	1441			3433	3539	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1	581	769	259	149	344	353	78	78	377	418	152
RTOR Reduction (vph)	0	0	0	181	0	0	0	0	0	0	0	110
Lane Group Flow (vph)	0	582	769	78	149	535	240	0	0	455	418	42
Turn Type	Prot	Prot	NA	Perm	Prot	NA	Perm		Prot	Prot	NA	Perm
Protected Phases	7	7	4		3	8			5	5	2	
Permitted Phases				4			8					2
Actuated Green, G (s)		21.7	30.8	30.8	13.0	22.1	22.1			18.6	27.3	27.3
Effective Green, g (s)		21.7	30.8	30.8	13.0	22.1	22.1			18.6	27.3	27.3
Actuated g/C Ratio		0.21	0.30	0.30	0.13	0.22	0.22			0.18	0.27	0.27
Clearance Time (s)		4.5	4.5	4.5	4.5	4.5	4.5			4.5	4.5	4.5
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)		731	1070	478	226	696	312			627	949	424
v/s Ratio Prot		c0.17	c0.22		0.08	0.17				c0.13	0.12	
v/s Ratio Perm				0.05			0.17					0.03
v/c Ratio		0.80	0.72	0.16	0.66	0.77	0.77			0.73	0.44	0.10
Uniform Delay, d1		38.0	31.6	26.1	42.3	37.4	37.5			39.2	30.9	28.0
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00
Incremental Delay, d2		6.0	2.3	0.2	6.8	5.1	10.9			4.2	0.3	0.1
Delay (s)		44.0	34.0	26.2	49.1	42.6	48.3			43.4	31.2	28.1
Level of Service		D	C	C	D	D	D			D	C	C
Approach Delay (s)			36.3			45.1					36.2	
Approach LOS			D			D					D	

Intersection Summary			
HCM 2000 Control Delay	39.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	101.8	Sum of lost time (s)	18.0
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR	SBR2
Lane Configurations				
Volume (vph)	135	323	181	238
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5
Lane Util. Factor	1.00	0.95		1.00
Frt	1.00	0.95		0.85
Flt Protected	0.95	1.00		1.00
Satd. Flow (prot)	1770	3348		1583
Flt Permitted	0.95	1.00		1.00
Satd. Flow (perm)	1770	3348		1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96
Adj. Flow (vph)	141	336	189	248
RTOR Reduction (vph)	0	0	0	196
Lane Group Flow (vph)	141	525	0	52
Turn Type	Prot	NA		Perm
Protected Phases	1	6		
Permitted Phases				6
Actuated Green, G (s)	12.7	21.4		21.4
Effective Green, g (s)	12.7	21.4		21.4
Actuated g/C Ratio	0.12	0.21		0.21
Clearance Time (s)	4.5	4.5		4.5
Vehicle Extension (s)	3.0	3.0		3.0
Lane Grp Cap (vph)	220	703		332
v/s Ratio Prot	0.08	c0.16		
v/s Ratio Perm				0.03
v/c Ratio	0.64	0.75		0.16
Uniform Delay, d1	42.4	37.7		32.8
Progression Factor	1.00	1.00		1.00
Incremental Delay, d2	6.2	4.3		0.2
Delay (s)	48.6	42.0		33.1
Level of Service	D	D		C
Approach Delay (s)		40.6		
Approach LOS		D		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	172	15	63	251	12	268	156	719	187	198	660	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5	4.5	4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frt		0.97			1.00	0.85	1.00	0.97		1.00	1.00	
Flt Protected		0.97			0.95	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1740			1778	1583	1770	4928		1770	5061	
Flt Permitted		0.54			0.61	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		976			1135	1583	1770	4928		1770	5061	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	179	16	66	261	12	279	162	749	195	206	688	23
RTOR Reduction (vph)	0	20	0	0	0	189	0	63	0	0	4	0
Lane Group Flow (vph)	0	241	0	0	273	90	162	881	0	206	707	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		19.8			19.8	19.8	9.7	17.2		10.9	18.4	
Effective Green, g (s)		19.8			19.8	19.8	9.7	17.2		10.9	18.4	
Actuated g/C Ratio		0.32			0.32	0.32	0.16	0.28		0.18	0.30	
Clearance Time (s)		4.5			4.5	4.5	4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		314			366	510	279	1380		314	1516	
v/s Ratio Prot							0.09	c0.18		c0.12	0.14	
v/s Ratio Perm		c0.25			0.24	0.06						
v/c Ratio		0.77			0.75	0.18	0.58	0.64		0.66	0.47	
Uniform Delay, d1		18.7			18.6	14.9	24.0	19.4		23.5	17.5	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		10.8			8.0	0.2	3.1	1.0		4.9	0.2	
Delay (s)		29.5			26.6	15.1	27.0	20.4		28.4	17.7	
Level of Service		C			C	B	C	C		C	B	
Approach Delay (s)		29.5			20.8			21.3			20.1	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	21.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	61.4	Sum of lost time (s)	13.5
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	118	408	48	61	406	84	52	191	47	74	147	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	8	12	12	12
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	0.97		1.00	1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3484		1770	3448		1770	1863	1372	1770	1718	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3484		1770	3448		1770	1863	1372	1770	1718	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	131	453	53	68	451	93	58	212	52	82	163	176
RTOR Reduction (vph)	0	14	0	0	30	0	0	0	40	0	66	0
Lane Group Flow (vph)	131	492	0	68	514	0	58	212	12	82	273	0
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	8.1	18.6		2.4	12.9		2.1	13.1	13.1	3.0	14.0	
Effective Green, g (s)	8.1	18.6		2.4	12.9		2.1	13.1	13.1	3.0	14.0	
Actuated g/C Ratio	0.15	0.34		0.04	0.23		0.04	0.24	0.24	0.05	0.25	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	260	1176		77	807		67	442	326	96	436	
v/s Ratio Prot	0.07	c0.14		0.04	c0.15		0.03	c0.11		0.05	c0.16	
v/s Ratio Perm									0.01			
v/c Ratio	0.50	0.42		0.88	0.64		0.87	0.48	0.04	0.85	0.63	
Uniform Delay, d1	21.6	14.1		26.2	19.0		26.4	18.1	16.2	25.8	18.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.5	0.2		64.2	1.7		64.8	0.8	0.0	48.1	2.8	
Delay (s)	23.2	14.3		90.5	20.7		91.2	18.9	16.2	74.0	21.0	
Level of Service	C	B		F	C		F	B	B	E	C	
Approach Delay (s)		16.1			28.4			31.5			31.3	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	25.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	55.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	175	341	49	339	318	665	81	328	343	503	290	172
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.91	0.91	1.00	0.91	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00
Satd. Flow (prot)	1770	3539	1583	3433	3539	1583	1610	3386	1583	1610	3315	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00
Satd. Flow (perm)	1770	3539	1583	3433	3539	1583	1610	3386	1583	1610	3315	1583
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	186	363	52	361	338	707	86	349	365	535	309	183
RTOR Reduction (vph)	0	0	41	0	0	414	0	0	265	0	0	136
Lane Group Flow (vph)	186	363	11	361	338	293	77	358	100	278	566	47
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	11.0	19.7	19.7	14.7	23.4	23.4	18.9	18.9	18.9	24.4	24.4	24.4
Effective Green, g (s)	11.0	19.7	19.7	14.7	23.4	23.4	18.9	18.9	18.9	24.4	24.4	24.4
Actuated g/C Ratio	0.11	0.21	0.21	0.15	0.24	0.24	0.20	0.20	0.20	0.25	0.25	0.25
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	203	728	325	527	865	387	317	668	312	410	845	403
v/s Ratio Prot	c0.11	0.10		0.11	0.10		0.05	c0.11		c0.17	0.17	
v/s Ratio Perm			0.01			c0.19			0.06			0.03
v/c Ratio	0.92	0.50	0.03	0.69	0.39	0.76	0.24	0.54	0.32	0.68	0.67	0.12
Uniform Delay, d1	41.9	33.6	30.4	38.3	30.2	33.5	32.4	34.5	32.9	32.1	32.0	27.4
Progression 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
Incremental Delay, d2	40.2	0.5	0.0	3.7	0.3	8.2	0.4	0.8	0.6	4.4	2.0	0.1
Delay (s)	82.1	34.2	30.4	42.0	30.5	41.7	32.8	35.3	33.5	36.5	34.1	27.5
Level of Service	F	C	C	D	C	D	C	D	C	D	C	C
Approach Delay (s)		48.7			39.1			34.2			33.6	
Approach LOS		D			D			C			C	

Intersection Summary				
HCM 2000 Control Delay	38.1	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.70			
Actuated Cycle Length (s)	95.7	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	71.2%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	830	116	249	1120	0	0	0	0	197	5	176
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0	4.5	4.5					4.5	4.5	4.5
Lane Util. Factor		0.95	1.00	0.97	0.95					0.95	0.91	0.95
Frt		1.00	0.85	1.00	1.00					1.00	0.93	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (prot)		3539	1583	3433	3539					1681	1543	1504
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (perm)		3539	1583	3433	3539					1681	1543	1504
Peak-hour factor, PHF	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Adj. Flow (vph)	0	1169	163	351	1577	0	0	0	0	277	7	248
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1169	163	351	1577	0	0	0	0	183	180	169
Turn Type		NA	Free	Prot	NA					Split	NA	Perm
Protected Phases		4		3	8					6	6	
Permitted Phases			Free									6
Actuated Green, G (s)		57.3	110.0	20.5	82.3					18.7	18.7	18.7
Effective Green, g (s)		57.3	110.0	20.5	82.3					18.7	18.7	18.7
Actuated g/C Ratio		0.52	1.00	0.19	0.75					0.17	0.17	0.17
Clearance Time (s)		4.5		4.5	4.5					4.5	4.5	4.5
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1843	1583	639	2647					285	262	255
v/s Ratio Prot		c0.33		0.10	c0.45					0.11	c0.12	
v/s Ratio Perm			0.10									0.11
v/c Ratio		0.63	0.10	0.55	0.60					0.64	0.69	0.66
Uniform Delay, d1		18.9	0.0	40.6	6.3					42.5	42.9	42.7
Progression Factor		1.00	1.00	0.71	0.34					1.00	1.00	1.00
Incremental Delay, d2		1.7	0.1	0.9	0.9					4.9	7.3	6.3
Delay (s)		20.5	0.1	29.7	3.1					47.4	50.2	49.0
Level of Service		C	A	C	A					D	D	D
Approach Delay (s)		18.0			7.9			0.0			48.9	
Approach LOS		B			A			A			D	

Intersection Summary				
HCM 2000 Control Delay	17.2	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.65			
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.5	
Intersection Capacity Utilization	48.7%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	134	739	169	137	618	62	587	31	256	42	84	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00		0.98	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3491		1681	1694	1583		1832	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00		0.98	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3491		1681	1694	1583		1832	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	137	754	172	140	631	63	599	32	261	43	86	67
RTOR Reduction (vph)	0	0	88	0	6	0	0	0	198	0	0	59
Lane Group Flow (vph)	137	754	84	140	688	0	317	314	63	0	129	8
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	12.8	40.1	40.1	12.9	40.2		26.4	26.4	26.4		12.6	12.6
Effective Green, g (s)	12.8	40.1	40.1	12.9	40.2		26.4	26.4	26.4		12.6	12.6
Actuated g/C Ratio	0.12	0.36	0.36	0.12	0.37		0.24	0.24	0.24		0.11	0.11
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	205	1290	577	207	1275		403	406	379		209	181
v/s Ratio Prot	0.08	c0.21		c0.08	0.20		c0.19	0.19			c0.07	
v/s Ratio Perm			0.05						0.04			0.00
v/c Ratio	0.67	0.58	0.15	0.68	0.54		0.79	0.77	0.17		0.62	0.04
Uniform Delay, d1	46.6	28.2	23.5	46.5	27.6		39.2	39.0	33.1		46.4	43.3
Progression Factor	1.25	0.70	0.75	1.46	0.42		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	6.4	1.6	0.4	8.3	1.6		9.7	8.9	0.2		5.3	0.1
Delay (s)	64.6	21.4	18.0	76.4	13.2		48.9	47.9	33.3		51.7	43.4
Level of Service	E	C	B	E	B		D	D	C		D	D
Approach Delay (s)		26.4			23.8			44.0			48.9	
Approach LOS		C			C			D			D	

Intersection Summary				
HCM 2000 Control Delay	32.4	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.66			
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	63.0%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1016	8	4	805	10	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	1770	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1069	8	4	847	11	9
RTOR Reduction (vph)	0	2	0	0	0	8
Lane Group Flow (vph)	1069	6	4	847	11	1
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	86.6	86.6	1.3	92.4	8.6	8.6
Effective Green, g (s)	86.6	86.6	1.3	92.4	8.6	8.6
Actuated g/C Ratio	0.79	0.79	0.01	0.84	0.08	0.08
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2786	1246	20	2972	138	123
v/s Ratio Prot	c0.30		0.00	c0.24	c0.01	
v/s Ratio Perm		0.00				0.00
v/c Ratio	0.38	0.01	0.20	0.28	0.08	0.01
Uniform Delay, d1	3.6	2.5	53.8	1.9	47.0	46.8
Progression Factor	0.34	0.24	1.44	0.33	1.00	1.00
Incremental Delay, d2	0.3	0.0	4.8	0.2	0.2	0.0
Delay (s)	1.6	0.6	82.2	0.8	47.3	46.8
Level of Service	A	A	F	A	D	D
Approach Delay (s)	1.5			1.2	47.1	
Approach LOS	A			A	D	

Intersection Summary				
HCM 2000 Control Delay	1.9	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.36			
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.5	
Intersection Capacity Utilization	38.9%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	930	58	0	762	33	0	0	54	0	0	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5				4.5			4.5
Lane Util. Factor		0.91			0.95				1.00			1.00
Frt		0.99			0.99				0.86			0.86
Flt Protected		1.00			1.00				1.00			1.00
Satd. Flow (prot)		5040			3517				1611			1611
Flt Permitted		1.00			1.00				1.00			1.00
Satd. Flow (perm)		5040			3517				1611			1611
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	989	62	0	811	35	0	0	57	0	0	45
RTOR Reduction (vph)	0	3	0	0	1	0	0	0	54	0	0	42
Lane Group Flow (vph)	0	1048	0	0	845	0	0	0	3	0	0	3
Turn Type		NA			NA				Perm			Perm
Protected Phases		4			8							
Permitted Phases									2			6
Actuated Green, G (s)		94.5			94.5				6.5			6.5
Effective Green, g (s)		94.5			94.5				6.5			6.5
Actuated g/C Ratio		0.86			0.86				0.06			0.06
Clearance Time (s)		4.5			4.5				4.5			4.5
Vehicle Extension (s)		3.0			3.0				3.0			3.0
Lane Grp Cap (vph)		4329			3021				95			95
v/s Ratio Prot		0.21			c0.24							
v/s Ratio Perm									c0.00			0.00
v/c Ratio		0.24			0.28				0.04			0.03
Uniform Delay, d1		1.4			1.4				48.8			48.8
Progression Factor		0.47			0.57				1.00			1.00
Incremental Delay, d2		0.1			0.2				0.2			0.1
Delay (s)		0.8			1.0				48.9			48.9
Level of Service		A			A				D			D
Approach Delay (s)		0.8			1.0			48.9			48.9	
Approach LOS		A			A			D			D	

Intersection Summary				
HCM 2000 Control Delay	3.3	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.26			
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0	
Intersection Capacity Utilization	32.9%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	259	677	60	115	490	421	97	298	85	219	283	234
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.0	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.91	0.91			0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.99			1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1610	3345			3506	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	1.00			0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1610	3345			3506	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	264	691	61	117	500	430	99	304	87	223	289	239
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	73	0	0	184
Lane Group Flow (vph)	238	773	0	0	617	430	99	304	14	223	289	55
Turn Type	Split	NA		Split	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						Free			2			6
Actuated Green, G (s)	33.5	33.5			21.7	110.0	11.5	18.2	18.2	18.6	25.3	25.3
Effective Green, g (s)	33.5	33.5			21.7	110.0	11.5	18.2	18.2	18.6	25.3	25.3
Actuated g/C Ratio	0.30	0.30			0.20	1.00	0.10	0.17	0.17	0.17	0.23	0.23
Clearance Time (s)	4.5	4.5			4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	490	1018			691	1583	185	585	261	299	813	364
v/s Ratio Prot	0.15	c0.23			c0.18		0.06	c0.09		c0.13	0.08	
v/s Ratio Perm						0.27			0.01			0.03
v/c Ratio	0.49	0.76			0.89	0.27	0.54	0.52	0.06	0.75	0.36	0.15
Uniform Delay, d1	31.2	34.6			43.0	0.0	46.7	41.9	38.7	43.5	35.5	33.8
Progression Factor	0.36	0.39			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.4	5.2			13.9	0.4	3.0	3.3	0.4	9.7	0.3	0.2
Delay (s)	14.6	18.9			56.9	0.4	49.7	45.2	39.1	53.2	35.8	34.0
Level of Service	B	B			E	A	D	D	D	D	D	C
Approach Delay (s)		17.9			33.7			45.0			40.4	
Approach LOS		B			C			D			D	

Intersection Summary				
HCM 2000 Control Delay	32.0	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.74			
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	71.2%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	36	98	1062	944	20
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	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	39	107	1154	1026	22

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1712	524	1048	0	-	0
Stage 1	1037	-	-	-	-	-
Stage 2	675	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	133	426	371	-	-	-
Stage 1	230	-	-	-	-	-
Stage 2	425	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	95	426	371	-	-	-
Mov Cap-2 Maneuver	95	-	-	-	-	-
Stage 1	230	-	-	-	-	-
Stage 2	302	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.3	1.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	371	-	426	-	-
HCM Lane V/C Ratio	0.287	-	0.092	-	-
HCM Control Delay (s)	18.6	-	14.3	-	-
HCM Lane LOS	C	-	B	-	-
HCM 95th %tile Q(veh)	1.2	-	0.3	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	50	0	1062	919	72
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	54	0	1154	999	78

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1500	539	1077	0	-	0
Stage 1	1038	-	-	-	-	-
Stage 2	462	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	172	417	359	-	-	-
Stage 1	229	-	-	-	-	-
Stage 2	549	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	172	417	359	-	-	-
Mov Cap-2 Maneuver	172	-	-	-	-	-
Stage 1	229	-	-	-	-	-
Stage 2	549	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	359	-	417	-	-
HCM Lane V/C Ratio	-	-	0.13	-	-
HCM Control Delay (s)	0	-	14.9	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

Appendix H – Cumulative 2035 Without Conditions Intersection Operations Analysis Worksheets

Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Volume (vph)	6	85	101	395	105	497	358
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5		4.5	4.5	4.5	4.5
Lane Util. Factor		0.95		1.00	0.95	1.00	1.00
Frt		0.92		1.00	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)		3256		1770	3539	1770	1583
Flt Permitted		0.94		0.95	1.00	0.95	1.00
Satd. Flow (perm)		3070		1770	3539	1770	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	6	89	105	411	109	518	373
RTOR Reduction (vph)	0	96	0	0	0	0	0
Lane Group Flow (vph)	0	104	0	411	109	518	373
Turn Type	Perm	NA		Prot	NA	Prot	Perm
Protected Phases		4		3	8	2	
Permitted Phases	4						2
Actuated Green, G (s)		4.9		16.2	25.6	20.0	20.0
Effective Green, g (s)		4.9		16.2	25.6	20.0	20.0
Actuated g/C Ratio		0.09		0.30	0.47	0.37	0.37
Clearance Time (s)		4.5		4.5	4.5	4.5	4.5
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		275		525	1659	648	579
v/s Ratio Prot				c0.23	0.03	c0.29	
v/s Ratio Perm		c0.03					0.24
v/c Ratio		0.38		0.78	0.07	0.80	0.64
Uniform Delay, d1		23.4		17.6	7.9	15.5	14.3
Progression Factor		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2		0.9		7.5	0.0	6.9	2.5
Delay (s)		24.3		25.1	8.0	22.4	16.8
Level of Service		C		C	A	C	B
Approach Delay (s)		24.3			21.5	20.0	
Approach LOS		C			C	C	

Intersection Summary			
HCM 2000 Control Delay	21.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	54.6	Sum of lost time (s)	13.5
Intersection Capacity Utilization	66.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	319	128	47	194	228	331	46	88	143	298	41	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5			4.5			4.5	4.5
Lane Util. Factor	1.00	1.00		1.00	0.95			1.00			1.00	1.00
Frt	1.00	0.96		1.00	0.91			0.93			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.96	1.00
Satd. Flow (prot)	1770	1788		1770	3225			1719			1784	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.99			0.96	1.00
Satd. Flow (perm)	1770	1788		1770	3225			1719			1784	1583
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	375	151	55	228	268	389	54	104	168	351	48	98
RTOR Reduction (vph)	0	17	0	0	341	0	0	51	0	0	0	75
Lane Group Flow (vph)	375	189	0	228	316	0	0	275	0	0	399	23
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases												6
Actuated Green, G (s)	16.8	15.6		10.5	9.3			13.0			17.5	17.5
Effective Green, g (s)	16.8	15.6		10.5	9.3			13.0			17.5	17.5
Actuated g/C Ratio	0.23	0.21		0.14	0.12			0.17			0.23	0.23
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5			4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	398	373		249	402			299			418	371
v/s Ratio Prot	c0.21	0.11		0.13	c0.10			c0.16			c0.22	
v/s Ratio Perm												0.01
v/c Ratio	0.94	0.51		0.92	0.79			0.92			0.95	0.06
Uniform Delay, d1	28.4	26.1		31.6	31.7			30.3			28.2	22.2
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	30.6	1.1		35.0	9.8			31.4			32.3	0.1
Delay (s)	59.0	27.2		66.6	41.5			61.7			60.4	22.2
Level of Service	E	C		E	D			E			E	C
Approach Delay (s)		47.7			48.0			61.7			52.9	
Approach LOS		D			D			E			D	

Intersection Summary			
HCM 2000 Control Delay	50.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	74.6	Sum of lost time (s)	18.0
Intersection Capacity Utilization	84.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	390	78	218	514	313	117	247	114	212	232	171
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5			4.5		4.5	4.5	4.5
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.94			0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99		0.95	1.00	1.00
Satd. Flow (prot)	1770	3451		1770	3338			3371		1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.99		0.95	1.00	1.00
Satd. Flow (perm)	1770	3451		1770	3338			3371		1770	1863	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	104	406	81	227	535	326	122	257	119	221	242	178
RTOR Reduction (vph)	0	16	0	0	91	0	0	31	0	0	0	142
Lane Group Flow (vph)	104	471	0	227	770	0	0	467	0	221	242	36
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases												6
Actuated Green, G (s)	7.5	18.7		13.9	25.1			17.5		17.4	17.4	17.4
Effective Green, g (s)	7.5	18.7		13.9	25.1			17.5		17.4	17.4	17.4
Actuated g/C Ratio	0.09	0.22		0.16	0.29			0.20		0.20	0.20	0.20
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	155	754		287	979			689		360	379	322
v/s Ratio Prot	0.06	0.14		c0.13	c0.23			c0.14		0.12	c0.13	
v/s Ratio Perm												0.02
v/c Ratio	0.67	0.62		0.79	0.79			0.68		0.61	0.64	0.11
Uniform Delay, d1	37.8	30.2		34.4	27.7			31.4		31.0	31.2	27.8
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2	10.9	1.6		13.8	4.2			2.7		3.1	3.5	0.2
Delay (s)	48.7	31.8		48.2	32.0			34.1		34.1	34.7	27.9
Level of Service	D	C		D	C			C		C	C	C
Approach Delay (s)		34.8			35.3			34.1			32.6	
Approach LOS		C			D			C			C	

Intersection Summary				
HCM 2000 Control Delay	34.4	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.75			
Actuated Cycle Length (s)	85.5	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	70.9%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	217	488	53	750	436	288	284
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95		0.95	1.00	0.97	
Frt	1.00	1.00		1.00	0.85	0.93	
Flt Protected	0.95	1.00		1.00	1.00	0.98	
Satd. Flow (prot)	1770	3539		3528	1583	3262	
Flt Permitted	0.95	1.00		0.88	1.00	0.98	
Satd. Flow (perm)	1770	3539		3132	1583	3262	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	228	514	56	789	459	303	299
RTOR Reduction (vph)	0	0	0	0	109	232	0
Lane Group Flow (vph)	228	514	0	845	350	370	0
Turn Type	Prot	NA	Perm	NA	pm+ov	Prot	
Protected Phases	7	4		8	6	6	
Permitted Phases			8		8		
Actuated Green, G (s)	12.9	39.1		21.7	35.6	13.9	
Effective Green, g (s)	12.9	39.1		21.7	35.6	13.9	
Actuated g/C Ratio	0.21	0.63		0.35	0.57	0.22	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	368	2231		1096	1023	731	
v/s Ratio Prot	c0.13	0.15			0.08	c0.11	
v/s Ratio Perm				c0.27	0.14		
v/c Ratio	0.62	0.23		0.77	0.34	0.51	
Uniform Delay, d1	22.3	4.9		17.9	7.0	21.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	
Incremental Delay, d2	3.1	0.1		3.4	0.2	0.6	
Delay (s)	25.4	5.0		21.4	7.2	21.6	
Level of Service	C	A		C	A	C	
Approach Delay (s)		11.3		16.4		21.6	
Approach LOS		B		B		C	

Intersection Summary				
HCM 2000 Control Delay	16.1	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.65			
Actuated Cycle Length (s)	62.0	Sum of lost time (s)	13.5	
Intersection Capacity Utilization	64.2%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

HCM Signalized Intersection Capacity Analysis
5: GELLERT BLVD & SERRAMONTE BLVD

2035 Weekday NP PM
1/11/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	47	328	310	688	550	600	472	283	746	413	346	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95	1.00	0.97	1.00	0.88	0.97	0.91	0.91	0.97	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.91	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	3433	1863	2787	3433	3101	1441	3433	1819	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	3433	1863	2787	3433	3101	1441	3433	1819	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	48	338	320	709	567	619	487	292	769	426	357	66
RTOR Reduction (vph)	0	0	63	0	0	146	0	187	51	0	5	0
Lane Group Flow (vph)	48	338	257	709	567	473	487	490	333	426	418	0
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	4.5	18.5	36.6	26.7	40.7	60.6	18.1	26.5	53.2	19.9	28.3	
Effective Green, g (s)	4.5	18.5	36.6	26.7	40.7	60.6	18.1	26.5	53.2	19.9	28.3	
Actuated g/C Ratio	0.04	0.17	0.33	0.24	0.37	0.55	0.17	0.24	0.49	0.18	0.26	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	72	597	528	836	691	1655	566	749	758	623	469	
v/s Ratio Prot	0.03	0.10	0.08	c0.21	0.30	c0.05	c0.14	0.16	c0.11	0.12	c0.23	
v/s Ratio Perm			0.08			0.12			0.12			
v/c Ratio	0.67	0.57	0.49	0.85	0.82	0.29	0.86	0.65	0.44	0.68	0.89	
Uniform Delay, d1	51.8	41.9	29.0	39.5	31.1	13.0	44.5	37.4	18.4	41.9	39.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	20.9	1.2	0.7	8.0	7.7	0.1	12.7	2.1	0.4	3.1	18.7	
Delay (s)	72.7	43.1	29.7	47.5	38.9	13.1	57.2	39.5	18.8	45.0	57.9	
Level of Service	E	D	C	D	D	B	E	D	B	D	E	
Approach Delay (s)		39.1			33.7			39.9			51.4	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	39.4	HCM 2010 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	109.6	Sum of lost time (s)	18.0
Intersection Capacity Utilization	82.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
6: SERRAMONTE BLVD & I-280 SB OFF-RAMP

2035 Weekday NP PM
10/20/2015

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	1447	1086	0	743	758
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5
Lane Util. Factor		0.95	0.91		0.97	0.88
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	5085		3433	2787
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	5085		3433	2787
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	0	1462	1097	0	751	766
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1462	1097	0	751	766
Turn Type		NA	NA		Prot	Prot
Protected Phases		4	8		6	6
Permitted Phases						
Actuated Green, G (s)		52.4	52.4		28.6	28.6
Effective Green, g (s)		52.4	52.4		28.6	28.6
Actuated g/C Ratio		0.58	0.58		0.32	0.32
Clearance Time (s)		4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		2060	2960		1090	885
v/s Ratio Prot		c0.41	0.22		0.22	c0.27
v/s Ratio Perm						
v/c Ratio		0.71	0.37		0.69	0.87
Uniform Delay, d1		13.4	10.0		26.8	28.9
Progression Factor		1.00	0.00		1.00	1.00
Incremental Delay, d2		2.1	0.3		1.8	8.9
Delay (s)		15.5	0.3		28.6	37.8
Level of Service		B	A		C	D
Approach Delay (s)		15.5	0.3		33.2	
Approach LOS		B	A		C	

Intersection Summary			
HCM 2000 Control Delay	18.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	108.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Volume (vph)	550	1627	1112	4	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5			
Lane Util. Factor	0.97	0.95	0.95			
Frt	1.00	1.00	1.00			
Flt Protected	0.95	1.00	1.00			
Satd. Flow (prot)	3433	3539	3537			
Flt Permitted	0.95	1.00	1.00			
Satd. Flow (perm)	3433	3539	3537			
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	561	1660	1135	4	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	561	1660	1139	0	0	0
Turn Type	Prot	NA	NA			
Protected Phases	7	4	8			
Permitted Phases						
Actuated Green, G (s)	39.5	90.0	41.5			
Effective Green, g (s)	39.5	90.0	41.5			
Actuated g/C Ratio	0.44	1.00	0.46			
Clearance Time (s)	4.5	4.5	4.5			
Vehicle Extension (s)	3.0	3.0	3.0			
Lane Grp Cap (vph)	1506	3539	1630			
v/s Ratio Prot	0.16	c0.47	c0.32			
v/s Ratio Perm						
v/c Ratio	0.37	0.47	0.70			
Uniform Delay, d1	16.9	0.0	19.3			
Progression Factor	0.94	1.00	1.00			
Incremental Delay, d2	0.1	0.3	2.5			
Delay (s)	16.1	0.3	21.8			
Level of Service	B	A	C			
Approach Delay (s)		4.3	21.8		0.0	
Approach LOS		A	C		A	

Intersection Summary			
HCM 2000 Control Delay	10.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	108.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	4	379	1029	358	529	762	573	135	203	532	592	335
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5	4.5	4.5			4.5	4.5	4.5
Lane Util. Factor		0.97	0.95	1.00	1.00	0.91	0.91			0.97	0.95	1.00
Frt		1.00	1.00	0.85	1.00	0.96	0.85			1.00	1.00	0.85
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	1.00
Satd. Flow (prot)		3433	3539	1583	1770	3262	1441			3433	3539	1583
Flt Permitted		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	1.00
Satd. Flow (perm)		3433	3539	1583	1770	3262	1441			3433	3539	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.92	0.98	0.98	0.98
Adj. Flow (vph)	4	387	1050	365	540	778	585	138	221	543	604	342
RTOR Reduction (vph)	0	0	0	227	0	0	0	0	0	0	0	169
Lane Group Flow (vph)	0	391	1050	138	540	1041	460	0	0	764	604	173
Turn Type	Prot	Prot	NA	Perm	Prot	NA	Perm		Prot	Prot	NA	Perm
Protected Phases	7	7	4		3	8			5	5	2	
Permitted Phases				4			8					2
Actuated Green, G (s)		16.2	33.0	33.0	24.5	41.3	41.3			18.5	31.4	31.4
Effective Green, g (s)		16.2	33.0	33.0	24.5	41.3	41.3			18.5	31.4	31.4
Actuated g/C Ratio		0.14	0.29	0.29	0.21	0.36	0.36			0.16	0.27	0.27
Clearance Time (s)		4.5	4.5	4.5	4.5	4.5	4.5			4.5	4.5	4.5
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)		486	1020	456	379	1177	520			555	971	434
v/s Ratio Prot		0.11	c0.30		c0.31	0.32				c0.22	0.17	
v/s Ratio Perm				0.09			0.32					0.11
v/c Ratio		0.80	1.03	0.30	1.42	0.88	0.88			1.38	0.62	0.40
Uniform Delay, d1		47.6	40.7	31.7	45.0	34.3	34.3			48.0	36.3	33.8
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00
Incremental Delay, d2		9.4	36.0	0.4	205.9	8.2	16.3			180.6	1.2	0.6
Delay (s)		56.9	76.7	32.1	250.9	42.5	50.6			228.5	37.6	34.4
Level of Service		E	E	C	F	D	D			F	D	C
Approach Delay (s)			63.4			99.5					122.3	
Approach LOS			E			F					F	

Intersection Summary			
HCM 2000 Control Delay	93.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	114.4	Sum of lost time (s)	18.0
Intersection Capacity Utilization	108.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR	SBR2
Lane Configurations				
Volume (vph)	151	352	171	205
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5
Lane Util. Factor	1.00	0.95		1.00
Frt	1.00	0.95		0.85
Flt Protected	0.95	1.00		1.00
Satd. Flow (prot)	1770	3366		1583
Flt Permitted	0.95	1.00		1.00
Satd. Flow (perm)	1770	3366		1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.92
Adj. Flow (vph)	154	359	174	223
RTOR Reduction (vph)	0	0	0	183
Lane Group Flow (vph)	154	533	0	40
Turn Type	Prot	NA		Perm
Protected Phases	1	6		
Permitted Phases				6
Actuated Green, G (s)	7.5	20.4		20.4
Effective Green, g (s)	7.5	20.4		20.4
Actuated g/C Ratio	0.07	0.18		0.18
Clearance Time (s)	4.5	4.5		4.5
Vehicle Extension (s)	3.0	3.0		3.0
Lane Grp Cap (vph)	116	600		282
v/s Ratio Prot	0.09	c0.16		
v/s Ratio Perm				0.03
v/c Ratio	1.33	0.89		0.14
Uniform Delay, d1	53.5	45.9		39.6
Progression Factor	1.00	1.00		1.00
Incremental Delay, d2	195.0	14.9		0.2
Delay (s)	248.4	60.8		39.8
Level of Service	F	E		D
Approach Delay (s)		87.4		
Approach LOS		F		

Intersection Summary			
HCM 2000 Control Delay	20.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	59.9	Sum of lost time (s)	13.5
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	20	47	249	10	187	161	936	118	172	878	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5	4.5	4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frt		0.95			1.00	0.85	1.00	0.98		1.00	1.00	
Flt Protected		0.98			0.95	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1728			1777	1583	1770	5000		1770	5068	
Flt Permitted		0.73			0.68	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1291			1264	1583	1770	5000		1770	5068	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	65	22	52	274	11	205	177	1029	130	189	965	22
RTOR Reduction (vph)	0	36	0	0	0	144	0	24	0	0	3	0
Lane Group Flow (vph)	0	103	0	0	285	61	177	1135	0	189	984	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		17.8			17.8	17.8	9.8	18.3		10.3	18.8	
Effective Green, g (s)		17.8			17.8	17.8	9.8	18.3		10.3	18.8	
Actuated g/C Ratio		0.30			0.30	0.30	0.16	0.31		0.17	0.31	
Clearance Time (s)		4.5			4.5	4.5	4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		383			375	470	289	1527		304	1590	
v/s Ratio Prot							0.10	c0.23		c0.11	0.19	
v/s Ratio Perm		0.08			c0.23	0.04						
v/c Ratio		0.27			0.76	0.13	0.61	0.74		0.62	0.62	
Uniform Delay, d1		16.1			19.1	15.4	23.3	18.7		23.0	17.5	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.4			8.8	0.1	3.8	2.0		3.9	0.7	
Delay (s)		16.5			27.9	15.5	27.1	20.7		26.9	18.2	
Level of Service		B			C	B	C	C		C	B	
Approach Delay (s)		16.5			22.7			21.5			19.6	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	20.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	59.9	Sum of lost time (s)	13.5
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
10: CALLAN BLVD & HICKEY BLVD

2035 Weekday NP PM
10/20/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	117	477	73	69	602	113	48	232	39	26	215	233
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	8	12	12	12
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.0	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3468		1770	3455		1770	1863	1372	1770	1717	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3468		1770	3455		1770	1863	1372	1770	1717	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	124	507	78	73	640	120	51	247	41	28	229	248
RTOR Reduction (vph)	0	17	0	0	24	0	0	0	28	0	63	0
Lane Group Flow (vph)	124	568	0	73	736	0	51	247	13	28	414	0
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	7.5	20.8		2.6	15.9		2.8	19.1	19.1	1.4	17.2	
Effective Green, g (s)	7.5	20.8		2.6	15.9		2.8	19.1	19.1	1.4	17.2	
Actuated g/C Ratio	0.12	0.34		0.04	0.26		0.05	0.31	0.31	0.02	0.28	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.0	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	216	1174		74	894		80	579	426	40	480	
v/s Ratio Prot	0.07	c0.16		0.04	c0.21		0.03	c0.13		0.02	c0.24	
v/s Ratio Perm									0.01			
v/c Ratio	0.57	0.48		0.99	0.82		0.64	0.43	0.03	0.70	0.86	
Uniform Delay, d1	25.4	16.1		29.4	21.4		28.8	16.8	14.7	29.8	21.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.7	0.3		99.2	6.2		15.5	0.5	0.0	42.0	14.8	
Delay (s)	29.1	16.4		128.6	27.6		44.3	17.3	14.7	71.8	35.8	
Level of Service	C	B		F	C		D	B	B	E	D	
Approach Delay (s)		18.6			36.5			21.1			37.8	
Approach LOS		B			D			C			D	

Intersection Summary				
HCM 2000 Control Delay	29.3	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.81			
Actuated Cycle Length (s)	61.4	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	70.6%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
11: GELLERT BLVD & HICKEY BLVD

2035 Weekday NP PM
1/11/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	117	500	15	599	525	774	74	347	223	531	471	202
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.91	0.91	1.00	0.91	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00
Satd. Flow (prot)	1770	3539	1583	3433	3539	1583	1610	3387	1583	1610	3340	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00
Satd. Flow (perm)	1770	3539	1583	3433	3539	1583	1610	3387	1583	1610	3340	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	122	521	16	624	547	806	77	361	232	553	491	210
RTOR Reduction (vph)	0	0	13	0	0	73	0	0	191	0	0	150
Lane Group Flow (vph)	122	521	3	624	547	733	69	369	41	343	701	60
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8	6	2	2		6	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	16.1	21.4	21.4	17.2	22.5	52.8	18.9	18.9	18.9	30.3	30.3	30.3
Effective Green, g (s)	16.1	21.4	21.4	17.2	22.5	52.8	18.9	18.9	18.9	30.3	30.3	30.3
Actuated g/C Ratio	0.15	0.20	0.20	0.16	0.21	0.50	0.18	0.18	0.18	0.29	0.29	0.29
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	269	715	320	558	752	857	287	605	282	461	956	453
v/s Ratio Prot	0.07	c0.15		c0.18	0.15	c0.24	0.04	c0.11		0.21	0.21	
v/s Ratio Perm			0.00			0.22			0.03			0.04
v/c Ratio	0.45	0.73	0.01	1.12	0.73	0.86	0.24	0.61	0.15	0.74	0.73	0.13
Uniform Delay, d1	40.8	39.5	33.7	44.3	38.8	23.2	37.3	40.1	36.7	34.2	34.1	28.0
Progression 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
Incremental Delay, d2	1.2	3.7	0.0	74.9	3.5	8.4	0.4	1.8	0.2	6.4	2.9	0.1
Delay (s)	42.1	43.2	33.7	119.2	42.3	31.5	37.7	41.8	36.9	40.6	37.0	28.1
Level of Service	D	D	C	F	D	C	D	D	D	D	D	C
Approach Delay (s)		42.8			62.2			39.7			36.5	
Approach LOS		D			E			D			D	

Intersection Summary				
HCM 2000 Control Delay	49.0	HCM 2010 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.85			
Actuated Cycle Length (s)	105.8	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	75.2%	ICU Level of Service	D	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	778	424	261	1473	0	0	0	0	383	6	305
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0	4.5	4.5					4.5	4.5	4.5
Lane Util. Factor		0.95	1.00	0.97	0.95					0.95	0.91	0.95
Frt		1.00	0.85	1.00	1.00					1.00	0.94	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (prot)		3539	1583	3433	3539					1681	1554	1504
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (perm)		3539	1583	3433	3539					1681	1554	1504
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	0	960	523	322	1819	0	0	0	0	473	7	377
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	960	523	322	1819	0	0	0	0	298	288	271
Turn Type		NA	Free	Prot	NA					Split	NA	Perm
Protected Phases		4		3	8					6	6	
Permitted Phases			Free									6
Actuated Green, G (s)		50.1	110.0	22.5	77.1					23.9	23.9	23.9
Effective Green, g (s)		50.1	110.0	22.5	77.1					23.9	23.9	23.9
Actuated g/C Ratio		0.46	1.00	0.20	0.70					0.22	0.22	0.22
Clearance Time (s)		4.5		4.5	4.5					4.5	4.5	4.5
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1611	1583	702	2480					365	337	326
v/s Ratio Prot		0.27		0.09	c0.51					0.18	c0.19	
v/s Ratio Perm			0.33									0.18
v/c Ratio		0.60	0.33	0.46	0.73					0.82	0.85	0.83
Uniform Delay, d1		22.4	0.0	38.4	10.1					41.0	41.4	41.1
Progression Factor		1.00	1.00	0.66	0.38					1.00	1.00	1.00
Incremental Delay, d2		1.6	0.6	0.4	1.5					13.2	18.6	16.3
Delay (s)		24.0	0.6	25.6	5.4					54.1	60.0	57.4
Level of Service		C	A	C	A					D	E	E
Approach Delay (s)		15.7			8.5			0.0			57.1	
Approach LOS		B			A			A			E	

Intersection Summary				
HCM 2000 Control Delay	20.2	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.80			
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.5	
Intersection Capacity Utilization	62.1%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	174	954	170	179	754	49	795	52	266	49	77	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00		0.98	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3507		1681	1695	1583		1827	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00		0.98	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3507		1681	1695	1583		1827	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	178	973	173	183	769	50	811	53	271	50	79	51
RTOR Reduction (vph)	0	0	71	0	4	0	0	0	201	0	0	45
Lane Group Flow (vph)	178	973	102	183	815	0	430	434	70	0	129	6
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	14.7	35.2	35.2	15.7	36.2		28.5	28.5	28.5		12.6	12.6
Effective Green, g (s)	14.7	35.2	35.2	15.7	36.2		28.5	28.5	28.5		12.6	12.6
Actuated g/C Ratio	0.13	0.32	0.32	0.14	0.33		0.26	0.26	0.26		0.11	0.11
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	236	1132	506	252	1154		435	439	410		209	181
v/s Ratio Prot	0.10	c0.27		c0.10	0.23		0.26	c0.26			c0.07	
v/s Ratio Perm			0.06						0.04			0.00
v/c Ratio	0.75	0.86	0.20	0.73	0.71		0.99	0.99	0.17		0.62	0.03
Uniform Delay, d1	45.9	35.1	27.2	45.1	32.3		40.6	40.6	31.6		46.4	43.3
Progression Factor	1.20	0.54	0.38	1.37	0.91		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	9.8	6.6	0.7	9.6	3.5		39.7	39.5	0.2		5.3	0.1
Delay (s)	65.0	25.6	11.0	71.5	32.9		80.3	80.1	31.8		51.7	43.4
Level of Service	E	C	B	E	C		F	F	C		D	D
Approach Delay (s)		29.0			39.9			68.6			49.4	
Approach LOS		C			D			E			D	

Intersection Summary				
HCM 2000 Control Delay	45.4	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.84			
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	77.6%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1177	91	52	835	153	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	1770	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1226	95	54	870	159	128
RTOR Reduction (vph)	0	30	0	0	0	108
Lane Group Flow (vph)	1226	65	54	870	159	20
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	64.6	64.6	14.8	83.9	17.1	17.1
Effective Green, g (s)	64.6	64.6	14.8	83.9	17.1	17.1
Actuated g/C Ratio	0.59	0.59	0.13	0.76	0.16	0.16
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2078	929	238	2699	275	246
v/s Ratio Prot	c0.35		0.03	c0.25	c0.09	
v/s Ratio Perm		0.04				0.01
v/c Ratio	0.59	0.07	0.23	0.32	0.58	0.08
Uniform Delay, d1	14.3	9.8	42.5	4.1	43.1	39.7
Progression Factor	0.45	0.04	1.23	0.50	1.00	1.00
Incremental Delay, d2	0.8	0.1	0.5	0.3	2.9	0.1
Delay (s)	7.2	0.5	52.7	2.4	46.0	39.9
Level of Service	A	A	D	A	D	D
Approach Delay (s)	6.7			5.3	43.3	
Approach LOS	A			A	D	

Intersection Summary			
HCM 2000 Control Delay	10.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	55.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1194	110	0	956	50	0	0	75	0	0	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5				4.5			4.5
Lane Util. Factor		0.91			0.95				1.00			1.00
Frt		0.99			0.99				0.86			0.86
Flt Protected		1.00			1.00				1.00			1.00
Satd. Flow (prot)		5021			3513				1611			1611
Flt Permitted		1.00			1.00				1.00			1.00
Satd. Flow (perm)		5021			3513				1611			1611
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	1231	113	0	986	52	0	0	77	0	0	25
RTOR Reduction (vph)	0	4	0	0	2	0	0	0	72	0	0	24
Lane Group Flow (vph)	0	1340	0	0	1036	0	0	0	5	0	0	1
Turn Type		NA			NA				Perm			Perm
Protected Phases		4			8							
Permitted Phases									2			6
Actuated Green, G (s)		94.5			94.5				6.5			6.5
Effective Green, g (s)		94.5			94.5				6.5			6.5
Actuated g/C Ratio		0.86			0.86				0.06			0.06
Clearance Time (s)		4.5			4.5				4.5			4.5
Vehicle Extension (s)		3.0			3.0				3.0			3.0
Lane Grp Cap (vph)		4313			3017				95			95
v/s Ratio Prot		0.27			c0.30							
v/s Ratio Perm									c0.00			0.00
v/c Ratio		0.31			0.34				0.05			0.02
Uniform Delay, d1		1.5			1.5				48.8			48.7
Progression Factor		0.76			4.20				1.00			1.00
Incremental Delay, d2		0.2			0.1				0.2			0.1
Delay (s)		1.3			6.6				49.0			48.8
Level of Service		A			A				D			D
Approach Delay (s)		1.3			6.6			49.0			48.8	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	5.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	38.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	217	803	196	150	578	789	255	654	117	367	730	186
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.0	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.91	0.91			0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.97			1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1610	3289			3503	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	1.00			0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1610	3289			3503	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	226	836	204	156	602	822	266	681	122	382	760	194
RTOR Reduction (vph)	0	17	0	0	0	0	0	0	86	0	0	117
Lane Group Flow (vph)	203	1046	0	0	758	822	266	681	36	382	760	77
Turn Type	Split	NA		Split	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						Free			2			6
Actuated Green, G (s)	27.5	27.5			23.5	110.0	16.0	19.5	19.5	21.5	25.0	25.0
Effective Green, g (s)	27.5	27.5			23.5	110.0	16.0	19.5	19.5	21.5	25.0	25.0
Actuated g/C Ratio	0.25	0.25			0.21	1.00	0.15	0.18	0.18	0.20	0.23	0.23
Clearance Time (s)	4.5	4.5			4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	402	822			748	1583	257	627	280	345	804	359
v/s Ratio Prot	0.13	c0.32			c0.22		0.15	c0.19		c0.22	0.21	
v/s Ratio Perm						c0.52			0.02			0.05
v/c Ratio	0.50	1.27			1.01	0.52	1.04	1.09	0.13	1.11	0.95	0.21
Uniform Delay, d1	35.4	41.2			43.2	0.0	47.0	45.2	38.1	44.2	41.8	34.5
Progression Factor	0.51	0.53			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.3	131.7			36.3	1.2	65.5	61.6	1.0	80.5	19.5	0.3
Delay (s)	22.6	153.5			79.5	1.2	112.5	106.8	39.1	124.8	61.3	34.8
Level of Service	C	F			E	A	F	F	D	F	E	C
Approach Delay (s)		132.5			38.8			100.5			75.6	
Approach LOS		F			D			F			E	

Intersection Summary			
HCM 2000 Control Delay	83.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	96.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	35	6	1215	1164	7
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	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	38	7	1321	1265	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1810	636	1273	0	-	0
Stage 1	1269	-	-	-	-	-
Stage 2	541	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	118	361	288	-	-	-
Stage 1	165	-	-	-	-	-
Stage 2	500	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	115	361	288	-	-	-
Mov Cap-2 Maneuver	115	-	-	-	-	-
Stage 1	165	-	-	-	-	-
Stage 2	488	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.1	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	288	-	361	-	-
HCM Lane V/C Ratio	0.023	-	0.105	-	-
HCM Control Delay (s)	17.8	-	16.1	-	-
HCM Lane LOS	C	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	17	0	1215	1154	20
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	18	0	1321	1254	22

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1793	638	1276	0	-	0
Stage 1	1265	-	-	-	-	-
Stage 2	528	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	121	359	287	-	-	-
Stage 1	166	-	-	-	-	-
Stage 2	508	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	121	359	287	-	-	-
Mov Cap-2 Maneuver	121	-	-	-	-	-
Stage 1	166	-	-	-	-	-
Stage 2	508	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.6	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	287	-	359	-	-
HCM Lane V/C Ratio	-	-	0.051	-	-
HCM Control Delay (s)	0	-	15.6	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Volume (vph)	2	94	86	344	84	289	281
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5		4.5	4.5	4.5	4.5
Lane Util. Factor		0.95		1.00	0.95	1.00	1.00
Frt		0.93		1.00	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)		3287		1770	3539	1770	1583
Flt Permitted		0.95		0.95	1.00	0.95	1.00
Satd. Flow (perm)		3128		1770	3539	1770	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	2	101	92	370	90	311	302
RTOR Reduction (vph)	0	85	0	0	0	0	0
Lane Group Flow (vph)	0	110	0	370	90	311	302
Turn Type	Perm	NA		Prot	NA	Prot	Perm
Protected Phases		4		3	8	2	
Permitted Phases	4						2
Actuated Green, G (s)		3.3		13.1	20.9	12.9	12.9
Effective Green, g (s)		3.3		13.1	20.9	12.9	12.9
Actuated g/C Ratio		0.08		0.31	0.49	0.30	0.30
Clearance Time (s)		4.5		4.5	4.5	4.5	4.5
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		241		541	1728	533	477
v/s Ratio Prot				c0.21	0.03	0.18	
v/s Ratio Perm		c0.04					c0.19
v/c Ratio		0.46		0.68	0.05	0.58	0.63
Uniform Delay, d1		18.9		13.0	5.7	12.7	12.9
Progression Factor		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2		1.4		3.6	0.0	1.6	2.7
Delay (s)		20.3		16.6	5.8	14.3	15.6
Level of Service		C		B	A	B	B
Approach Delay (s)		20.3			14.5	15.0	
Approach LOS		C			B	B	

Intersection Summary			
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	42.8	Sum of lost time (s)	13.5
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	339	130	3	17	200	412	0	14	25	461	2	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5			4.5			4.5	4.5
Lane Util. Factor	1.00	1.00		1.00	0.95			1.00			1.00	1.00
Frt	1.00	1.00		1.00	0.90			0.91			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.95	1.00
Satd. Flow (prot)	1770	1857		1770	3182			1699			1774	1583
Flt Permitted	0.95	1.00		0.95	1.00			1.00			0.95	1.00
Satd. Flow (perm)	1770	1857		1770	3182			1699			1774	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	346	133	3	17	204	420	0	14	26	470	2	83
RTOR Reduction (vph)	0	1	0	0	344	0	0	25	0	0	0	59
Lane Group Flow (vph)	346	135	0	17	280	0	0	15	0	0	472	24
Turn Type	Prot	NA		Prot	NA			NA		Split	NA	Perm
Protected Phases	7	4		3	8			2		6	6	
Permitted Phases							2					6
Actuated Green, G (s)	16.4	28.5		0.7	12.8			2.9			20.8	20.8
Effective Green, g (s)	16.4	28.5		0.7	12.8			2.9			20.8	20.8
Actuated g/C Ratio	0.23	0.40		0.01	0.18			0.04			0.29	0.29
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5			4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	409	746		17	574			69			520	464
v/s Ratio Prot	c0.20	0.07		0.01	c0.09			c0.01			c0.27	
v/s Ratio Perm												0.02
v/c Ratio	0.85	0.18		1.00	0.49			0.22			0.91	0.05
Uniform Delay, d1	26.0	13.7		35.1	26.1			32.9			24.1	18.0
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	14.8	0.1		218.3	0.7			1.6			19.5	0.0
Delay (s)	40.9	13.8		253.4	26.8			34.5			43.6	18.0
Level of Service	D	B		F	C			C			D	B
Approach Delay (s)		33.2			32.8			34.5			39.8	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	35.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	70.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	81.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	145	461	53	185	356	254	126	199	128	207	185	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5			4.5		4.5	4.5	4.5
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.94			0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99		0.95	1.00	1.00
Satd. Flow (prot)	1770	3484		1770	3318			3343		1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.99		0.95	1.00	1.00
Satd. Flow (perm)	1770	3484		1770	3318			3343		1770	1863	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	149	475	55	191	367	262	130	205	132	213	191	115
RTOR Reduction (vph)	0	9	0	0	136	0	0	46	0	0	0	91
Lane Group Flow (vph)	149	521	0	191	493	0	0	421	0	213	191	24
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases												6
Actuated Green, G (s)	8.6	16.8		8.8	17.0			15.3		15.2	15.2	15.2
Effective Green, g (s)	8.6	16.8		8.8	17.0			15.3		15.2	15.2	15.2
Actuated g/C Ratio	0.12	0.23		0.12	0.23			0.21		0.21	0.21	0.21
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	205	789		210	761			690		363	382	324
v/s Ratio Prot	0.08	c0.15		c0.11	0.15			c0.13		c0.12	0.10	
v/s Ratio Perm												0.01
v/c Ratio	0.73	0.66		0.91	0.65			0.61		0.59	0.50	0.07
Uniform Delay, d1	31.6	26.1		32.3	25.8			26.7		26.6	26.1	23.8
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2	12.1	2.0		37.6	1.9			1.6		2.4	1.0	0.1
Delay (s)	43.7	28.1		69.9	27.7			28.3		29.0	27.1	23.9
Level of Service	D	C		E	C			C		C	C	C
Approach Delay (s)		31.5			37.6			28.3			27.2	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	32.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	74.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
4: SERRAMONTE BLVD & SERRAMONTE SHOPPING CNTR

2035 Saturday NP MD
10/20/2015

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	218	577	69	550	516	343	263
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95		0.95	1.00	0.97	
Frt	1.00	1.00		1.00	0.85	0.93	
Flt Protected	0.95	1.00		0.99	1.00	0.97	
Satd. Flow (prot)	1770	3539		3520	1583	3286	
Flt Permitted	0.95	1.00		0.82	1.00	0.97	
Satd. Flow (perm)	1770	3539		2910	1583	3286	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	225	595	71	567	532	354	271
RTOR Reduction (vph)	0	0	0	0	116	194	0
Lane Group Flow (vph)	225	595	0	638	416	431	0
Turn Type	Prot	NA	Perm	NA	pm+ov	Prot	
Protected Phases	7	4		8	6	6	
Permitted Phases			8		8		
Actuated Green, G (s)	13.1	36.7		19.1	34.5	15.4	
Effective Green, g (s)	13.1	36.7		19.1	34.5	15.4	
Actuated g/C Ratio	0.21	0.60		0.31	0.56	0.25	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	379	2125		909	1010	828	
v/s Ratio Prot	c0.13	0.17			0.10	c0.13	
v/s Ratio Perm				c0.22	0.16		
v/c Ratio	0.59	0.28		0.70	0.41	0.52	
Uniform Delay, d1	21.6	5.9		18.5	7.5	19.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00	
Incremental Delay, d2	2.5	0.1		2.5	0.3	0.6	
Delay (s)	24.1	5.9		21.0	7.8	20.2	
Level of Service	C	A		C	A	C	
Approach Delay (s)		10.9		15.0		20.2	
Approach LOS		B		B		C	

Intersection Summary			
HCM 2000 Control Delay	15.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	61.1	Sum of lost time (s)	13.5
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
5: GELLERT BLVD & SERRAMONTE BLVD

2035 Saturday NP PM
1/11/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	53	367	411	702	432	815	462	363	865	475	408	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95	1.00	0.97	1.00	0.88	0.97	0.91	0.91	0.97	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.92	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	3433	1863	2787	3433	3114	1441	3433	1814	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	3433	1863	2787	3433	3114	1441	3433	1814	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	55	382	428	731	450	849	481	378	901	495	425	90
RTOR Reduction (vph)	0	0	80	0	0	149	0	151	22	0	6	0
Lane Group Flow (vph)	55	382	348	731	450	700	481	678	428	495	509	0
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	5.6	20.5	41.4	32.3	47.2	70.9	20.9	36.6	68.9	23.7	39.4	
Effective Green, g (s)	5.6	20.5	41.4	32.3	47.2	70.9	20.9	36.6	68.9	23.7	39.4	
Actuated g/C Ratio	0.04	0.16	0.32	0.25	0.36	0.54	0.16	0.28	0.53	0.18	0.30	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	75	553	499	845	670	1602	547	869	806	620	545	
v/s Ratio Prot	0.03	0.11	0.11	c0.21	0.24	c0.08	c0.14	0.22	c0.13	0.14	c0.28	
v/s Ratio Perm			0.11			0.17			0.17			
v/c Ratio	0.73	0.69	0.70	0.87	0.67	0.44	0.88	0.78	0.53	0.80	0.93	
Uniform Delay, d1	62.0	52.3	39.4	47.3	35.4	18.1	53.9	43.5	20.5	51.4	44.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	30.6	3.7	4.2	9.2	2.7	0.2	14.9	4.5	0.7	7.1	23.4	
Delay (s)	92.6	56.0	43.6	56.5	38.1	18.3	68.8	48.0	21.1	58.5	68.0	
Level of Service	F	E	D	E	D	B	E	D	C	E	E	
Approach Delay (s)		52.2			36.4			46.8			63.3	
Approach LOS		D			D			D			E	

Intersection Summary			
HCM 2000 Control Delay	46.9	HCM 2010 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	131.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	85.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	1732	1027	0	855	881
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5
Lane Util. Factor		0.95	0.91		0.97	0.88
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	5085		3433	2787
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	5085		3433	2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1823	1081	0	900	927
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1823	1081	0	900	927
Turn Type		NA	NA		Prot	Prot
Protected Phases		4	8		6	6
Permitted Phases						
Actuated Green, G (s)		48.1	48.1		32.9	32.9
Effective Green, g (s)		48.1	48.1		32.9	32.9
Actuated g/C Ratio		0.53	0.53		0.37	0.37
Clearance Time (s)		4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1891	2717		1254	1018
v/s Ratio Prot		c0.52	0.21		0.26	c0.33
v/s Ratio Perm						
v/c Ratio		0.96	0.40		0.72	0.91
Uniform Delay, d1		20.1	12.4		24.6	27.2
Progression Factor		1.00	0.03		1.00	1.00
Incremental Delay, d2		13.8	0.3		2.0	11.9
Delay (s)		33.9	0.6		26.5	39.1
Level of Service		C	A		C	D
Approach Delay (s)		33.9	0.6		32.9	
Approach LOS		C	A		C	

Intersection Summary			
HCM 2000 Control Delay	25.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	117.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Volume (vph)	689	1876	991	1	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5			
Lane Util. Factor	0.97	0.95	0.95			
Frt	1.00	1.00	1.00			
Flt Protected	0.95	1.00	1.00			
Satd. Flow (prot)	3433	3539	3539			
Flt Permitted	0.95	1.00	1.00			
Satd. Flow (perm)	3433	3539	3539			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	725	1975	1043	1	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	725	1975	1044	0	0	0
Turn Type	Prot	NA	NA			
Protected Phases	7	4	8			
Permitted Phases						
Actuated Green, G (s)	45.5	90.0	35.5			
Effective Green, g (s)	45.5	90.0	35.5			
Actuated g/C Ratio	0.51	1.00	0.39			
Clearance Time (s)	4.5	4.5	4.5			
Vehicle Extension (s)	3.0	3.0	3.0			
Lane Grp Cap (vph)	1735	3539	1395			
v/s Ratio Prot	0.21	c0.56	c0.30			
v/s Ratio Perm						
v/c Ratio	0.42	0.56	0.75			
Uniform Delay, d1	13.9	0.0	23.4			
Progression Factor	0.78	1.00	1.00			
Incremental Delay, d2	0.1	0.3	3.7			
Delay (s)	11.0	0.3	27.1			
Level of Service	B	A	C			
Approach Delay (s)		3.2	27.1		0.0	
Approach LOS		A	C		A	

Intersection Summary			
HCM 2000 Control Delay	9.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	117.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	1	564	1085	338	409	598	475	169	130	512	474	422
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5	4.5	4.5			4.5	4.5	4.5
Lane Util. Factor		0.97	0.95	1.00	1.00	0.91	0.91			0.97	0.95	1.00
Frt		1.00	1.00	0.85	1.00	0.95	0.85			1.00	1.00	0.85
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	1.00
Satd. Flow (prot)		3433	3539	1583	1770	3236	1441			3433	3539	1583
Flt Permitted		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	1.00
Satd. Flow (perm)		3433	3539	1583	1770	3236	1441			3433	3539	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1	588	1130	352	426	623	495	176	135	533	494	440
RTOR Reduction (vph)	0	0	0	174	0	0	0	0	0	0	0	226
Lane Group Flow (vph)	0	589	1130	178	426	895	399	0	0	668	494	214
Turn Type	Prot	Prot	NA	Perm	Prot	NA	Perm		Prot	Prot	NA	Perm
Protected Phases	7	7	4		3	8			5	5	2	
Permitted Phases				4			8					2
Actuated Green, G (s)		23.6	40.0	40.0	29.5	45.9	45.9			24.5	32.0	32.0
Effective Green, g (s)		23.6	40.0	40.0	29.5	45.9	45.9			24.5	32.0	32.0
Actuated g/C Ratio		0.17	0.30	0.30	0.22	0.34	0.34			0.18	0.24	0.24
Clearance Time (s)		4.5	4.5	4.5	4.5	4.5	4.5			4.5	4.5	4.5
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)		600	1048	469	386	1100	489			623	838	375
v/s Ratio Prot		0.17	c0.32		c0.24	0.28				c0.19	0.14	
v/s Ratio Perm				0.11			0.28					0.14
v/c Ratio		0.98	1.08	0.38	1.10	0.81	0.82			1.07	0.59	0.57
Uniform Delay, d1		55.5	47.5	37.7	52.8	40.6	40.7			55.2	45.7	45.4
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00
Incremental Delay, d2		31.9	51.4	0.5	76.8	4.7	10.1			57.0	1.1	2.1
Delay (s)		87.4	98.9	38.2	129.5	45.4	50.8			112.2	46.7	47.5
Level of Service		F	F	D	F	D	D			F	D	D
Approach Delay (s)			85.3			67.5					74.3	
Approach LOS			F			E					E	

Intersection Summary			
HCM 2000 Control Delay	79.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	135.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	102.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR	SBR2
Lane Configurations				
Volume (vph)	196	347	224	238
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5
Lane Util. Factor	1.00	0.95		1.00
Frt	1.00	0.94		0.85
Flt Protected	0.95	1.00		1.00
Satd. Flow (prot)	1770	3331		1583
Flt Permitted	0.95	1.00		1.00
Satd. Flow (perm)	1770	3331		1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96
Adj. Flow (vph)	204	361	233	248
RTOR Reduction (vph)	0	0	0	206
Lane Group Flow (vph)	204	594	0	42
Turn Type	Prot	NA		Perm
Protected Phases	1	6		
Permitted Phases				6
Actuated Green, G (s)	15.5	23.0		23.0
Effective Green, g (s)	15.5	23.0		23.0
Actuated g/C Ratio	0.11	0.17		0.17
Clearance Time (s)	4.5	4.5		4.5
Vehicle Extension (s)	3.0	3.0		3.0
Lane Grp Cap (vph)	203	567		269
v/s Ratio Prot	0.12	c0.18		
v/s Ratio Perm				0.03
v/c Ratio	1.00	1.05		0.16
Uniform Delay, d1	59.8	56.0		47.7
Progression Factor	1.00	1.00		1.00
Incremental Delay, d2	64.4	50.9		0.3
Delay (s)	124.2	106.9		48.0
Level of Service	F	F		D
Approach Delay (s)		96.3		
Approach LOS		F		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	76	14	60	234	11	268	155	1042	187	198	919	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5	4.5	4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frt		0.95			1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected		0.98			0.95	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1719			1778	1583	1770	4969		1770	5058	
Flt Permitted		0.70			0.66	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1238			1229	1583	1770	4969		1770	5058	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	79	15	62	244	11	279	161	1085	195	206	957	35
RTOR Reduction (vph)	0	41	0	0	0	199	0	38	0	0	5	0
Lane Group Flow (vph)	0	115	0	0	255	80	161	1242	0	206	987	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		17.1			17.1	17.1	9.6	18.9		10.4	19.7	
Effective Green, g (s)		17.1			17.1	17.1	9.6	18.9		10.4	19.7	
Actuated g/C Ratio		0.29			0.29	0.29	0.16	0.32		0.17	0.33	
Clearance Time (s)		4.5			4.5	4.5	4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		353			350	451	283	1567		307	1663	
v/s Ratio Prot							0.09	c0.25		c0.12	0.20	
v/s Ratio Perm		0.09			c0.21	0.05						
v/c Ratio		0.33			0.73	0.18	0.57	0.79		0.67	0.59	
Uniform Delay, d1		16.9			19.3	16.1	23.2	18.7		23.1	16.8	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.5			7.4	0.2	2.6	2.8		5.7	0.6	
Delay (s)		17.4			26.7	16.3	25.9	21.5		28.8	17.3	
Level of Service		B			C	B	C	C		C	B	
Approach Delay (s)		17.4			21.3			22.0			19.3	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	20.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	59.9	Sum of lost time (s)	13.5
Intersection Capacity Utilization	66.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	108	565	41	63	468	107	36	195	47	36	138	203
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	8	12	12	12
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.97		1.00	1.00	0.85	1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3503		1770	3440		1770	1863	1372	1770	1696	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3503		1770	3440		1770	1863	1372	1770	1696	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	120	628	46	70	520	119	40	217	52	40	153	226
RTOR Reduction (vph)	0	8	0	0	32	0	0	0	40	0	94	0
Lane Group Flow (vph)	120	666	0	70	607	0	40	217	12	40	285	0
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	4.2	18.2		2.1	16.1		1.3	12.4	12.4	1.3	12.4	
Effective Green, g (s)	4.2	18.2		2.1	16.1		1.3	12.4	12.4	1.3	12.4	
Actuated g/C Ratio	0.08	0.35		0.04	0.31		0.03	0.24	0.24	0.03	0.24	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	142	1226		71	1065		44	444	327	44	404	
v/s Ratio Prot	c0.07	c0.19		0.04	0.18		c0.02	0.12		0.02	c0.17	
v/s Ratio Perm									0.01			
v/c Ratio	0.85	0.54		0.99	0.57		0.91	0.49	0.04	0.91	0.70	
Uniform Delay, d1	23.6	13.6		24.9	15.0		25.3	17.1	15.2	25.3	18.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	34.4	0.5		101.2	0.7		99.9	0.8	0.0	99.9	5.5	
Delay (s)	58.0	14.1		126.2	15.8		125.2	17.9	15.3	125.2	23.6	
Level of Service	E	B		F	B		F	B	B	F	C	
Approach Delay (s)		20.7			26.7			31.4			33.3	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	26.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	52.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	60.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
11: GELLERT BLVD & HICKEY BLVD

2035 Saturday NP PM
1/11/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	155	552	15	441	388	815	71	457	266	587	447	186
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.91	0.91	1.00	0.91	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00
Satd. Flow (prot)	1770	3539	1583	3433	3539	1583	1610	3387	1583	1610	3331	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00
Satd. Flow (perm)	1770	3539	1583	3433	3539	1583	1610	3387	1583	1610	3331	1583
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	165	587	16	469	413	867	76	486	283	624	476	198
RTOR Reduction (vph)	0	0	13	0	0	59	0	0	220	0	0	138
Lane Group Flow (vph)	165	587	3	469	413	808	68	494	63	362	738	60
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8	6	2	2		6	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	20.5	23.1	23.1	16.6	19.2	54.8	24.0	24.0	24.0	35.6	35.6	35.6
Effective Green, g (s)	20.5	23.1	23.1	16.6	19.2	54.8	24.0	24.0	24.0	35.6	35.6	35.6
Actuated g/C Ratio	0.17	0.20	0.20	0.14	0.16	0.47	0.20	0.20	0.20	0.30	0.30	0.30
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	309	696	311	485	579	800	329	692	323	488	1010	480
v/s Ratio Prot	0.09	c0.17		0.14	0.12	c0.31	0.04	c0.15		0.22	0.22	
v/s Ratio Perm			0.00			0.20			0.04			0.04
v/c Ratio	0.53	0.84	0.01	0.97	0.71	1.01	0.21	0.71	0.19	0.74	0.73	0.13
Uniform Delay, d1	44.1	45.4	37.9	50.1	46.4	31.2	38.7	43.5	38.6	36.7	36.6	29.6
Progression 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
Incremental Delay, d2	1.8	9.2	0.0	32.2	4.2	34.4	0.3	3.5	0.3	6.0	2.8	0.1
Delay (s)	45.8	54.5	37.9	82.2	50.6	65.7	39.1	47.0	38.9	42.7	39.3	29.7
Level of Service	D	D	D	F	D	E	D	D	D	D	D	C
Approach Delay (s)		52.3			66.6			43.6			38.8	
Approach LOS		D			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	52.3	HCM 2010 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	117.3	Sum of lost time (s)	18.0
Intersection Capacity Utilization	82.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
12: I-280 SB RAMPS & HICKEY BLVD

2035 Saturday NP MD
10/20/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	797	304	202	1282	0	0	0	0	408	5	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0	4.5	4.5					4.5	4.5	4.5
Lane Util. Factor		0.95	1.00	0.97	0.95					0.95	0.91	0.95
Frt		1.00	0.85	1.00	1.00					1.00	0.98	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.96	1.00
Satd. Flow (prot)		3539	1583	3433	3539					1681	1593	1504
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.96	1.00
Satd. Flow (perm)		3539	1583	3433	3539					1681	1593	1504
Peak-hour factor, PHF	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Adj. Flow (vph)	0	1123	428	285	1806	0	0	0	0	575	7	324
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1123	428	285	1806	0	0	0	0	316	308	282
Turn Type		NA	Free	Prot	NA					Split	NA	Perm
Protected Phases		4		3	8					6	6	
Permitted Phases			Free									6
Actuated Green, G (s)		54.2	110.0	15.2	73.9					27.1	27.1	27.1
Effective Green, g (s)		54.2	110.0	15.2	73.9					27.1	27.1	27.1
Actuated g/C Ratio		0.49	1.00	0.14	0.67					0.25	0.25	0.25
Clearance Time (s)		4.5		4.5	4.5					4.5	4.5	4.5
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1743	1583	474	2377					414	392	370
v/s Ratio Prot		0.32		0.08	c0.51					0.19	c0.19	
v/s Ratio Perm			0.27									0.19
v/c Ratio		0.64	0.27	0.60	0.76					0.76	0.79	0.76
Uniform Delay, d1		20.7	0.0	44.6	12.1					38.5	38.7	38.5
Progression Factor		1.00	1.00	0.70	0.37					1.00	1.00	1.00
Incremental Delay, d2		1.8	0.4	1.9	2.0					8.1	10.0	9.0
Delay (s)		22.6	0.4	33.2	6.5					46.6	48.7	47.4
Level of Service		C	A	C	A					D	D	D
Approach Delay (s)		16.5			10.1			0.0			47.6	
Approach LOS		B			B			A			D	

Intersection Summary			
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	153	935	191	137	604	62	795	26	261	42	84	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00		0.98	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3490		1681	1691	1583		1832	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00		0.98	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3490		1681	1691	1583		1832	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	156	954	195	140	616	63	811	27	266	43	86	53
RTOR Reduction (vph)	0	0	85	0	7	0	0	0	192	0	0	47
Lane Group Flow (vph)	156	954	110	140	672	0	422	416	74	0	129	6
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	13.2	37.2	37.2	11.7	35.7		30.5	30.5	30.5		12.6	12.6
Effective Green, g (s)	13.2	37.2	37.2	11.7	35.7		30.5	30.5	30.5		12.6	12.6
Actuated g/C Ratio	0.12	0.34	0.34	0.11	0.32		0.28	0.28	0.28		0.11	0.11
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	212	1196	535	188	1132		466	468	438		209	181
v/s Ratio Prot	c0.09	c0.27		0.08	0.19		c0.25	0.25			c0.07	
v/s Ratio Perm			0.07						0.05			0.00
v/c Ratio	0.74	0.80	0.20	0.74	0.59		0.91	0.89	0.17		0.62	0.03
Uniform Delay, d1	46.7	33.0	25.9	47.7	31.1		38.4	38.1	30.1		46.4	43.3
Progression Factor	1.18	0.84	0.99	1.47	0.34		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	9.6	4.3	0.7	14.4	2.2		20.9	18.2	0.2		5.3	0.1
Delay (s)	64.6	31.9	26.2	84.7	12.7		59.2	56.3	30.3		51.7	43.4
Level of Service	E	C	C	F	B		E	E	C		D	D
Approach Delay (s)		35.0			25.0			51.2			49.3	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	38.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	74.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1235	8	4	796	10	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	1770	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1300	8	4	838	11	9
RTOR Reduction (vph)	0	2	0	0	0	8
Lane Group Flow (vph)	1300	6	4	838	11	1
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	87.0	87.0	0.9	92.4	8.6	8.6
Effective Green, g (s)	87.0	87.0	0.9	92.4	8.6	8.6
Actuated g/C Ratio	0.79	0.79	0.01	0.84	0.08	0.08
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2799	1252	14	2972	138	123
v/s Ratio Prot	c0.37		0.00	c0.24	c0.01	
v/s Ratio Perm		0.00				0.00
v/c Ratio	0.46	0.01	0.29	0.28	0.08	0.01
Uniform Delay, d1	3.8	2.4	54.2	1.8	47.0	46.8
Progression Factor	0.32	0.03	1.15	0.79	1.00	1.00
Incremental Delay, d2	0.4	0.0	10.7	0.2	0.2	0.0
Delay (s)	1.6	0.1	73.3	1.7	47.3	46.8
Level of Service	A	A	E	A	D	D
Approach Delay (s)	1.6			2.0	47.1	
Approach LOS	A			A	D	

Intersection Summary			
HCM 2000 Control Delay	2.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	45.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1206	58	0	808	33	0	0	54	0	0	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5				4.5			4.5
Lane Util. Factor		0.91			0.95				1.00			1.00
Frt		0.99			0.99				0.86			0.86
Flt Protected		1.00			1.00				1.00			1.00
Satd. Flow (prot)		5050			3518				1611			1611
Flt Permitted		1.00			1.00				1.00			1.00
Satd. Flow (perm)		5050			3518				1611			1611
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	1283	62	0	860	35	0	0	57	0	0	45
RTOR Reduction (vph)	0	2	0	0	1	0	0	0	54	0	0	42
Lane Group Flow (vph)	0	1343	0	0	894	0	0	0	3	0	0	3
Turn Type		NA			NA				Perm			Perm
Protected Phases		4			8							
Permitted Phases									2			6
Actuated Green, G (s)		94.5			94.5				6.5			6.5
Effective Green, g (s)		94.5			94.5				6.5			6.5
Actuated g/C Ratio		0.86			0.86				0.06			0.06
Clearance Time (s)		4.5			4.5				4.5			4.5
Vehicle Extension (s)		3.0			3.0				3.0			3.0
Lane Grp Cap (vph)		4338			3022				95			95
v/s Ratio Prot		c0.27			0.25							
v/s Ratio Perm									c0.00			0.00
v/c Ratio		0.31			0.30				0.04			0.03
Uniform Delay, d1		1.5			1.5				48.8			48.8
Progression Factor		1.90			0.41				1.00			1.00
Incremental Delay, d2		0.2			0.2				0.2			0.1
Delay (s)		3.0			0.8				48.9			48.9
Level of Service		A			A				D			D
Approach Delay (s)		3.0			0.8			48.9			48.9	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	4.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	35.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	269	862	107	105	483	686	118	440	78	335	559	239
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.0	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.91	0.91			0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.98			1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1610	3331			3508	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	1.00			0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1610	3331			3508	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	274	880	109	107	493	700	120	449	80	342	570	244
RTOR Reduction (vph)	0	8	0	0	0	0	0	0	66	0	0	180
Lane Group Flow (vph)	247	1008	0	0	600	700	120	449	14	342	570	64
Turn Type	Split	NA		Split	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						Free			2			6
Actuated Green, G (s)	32.4	32.4			18.5	110.0	12.4	18.7	18.7	22.4	28.7	28.7
Effective Green, g (s)	32.4	32.4			18.5	110.0	12.4	18.7	18.7	22.4	28.7	28.7
Actuated g/C Ratio	0.29	0.29			0.17	1.00	0.11	0.17	0.17	0.20	0.26	0.26
Clearance Time (s)	4.5	4.5			4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	474	981			589	1583	199	601	269	360	923	413
v/s Ratio Prot	0.15	c0.30			c0.17		0.07	c0.13		c0.19	0.16	
v/s Ratio Perm						0.44			0.01			0.04
v/c Ratio	0.52	1.03			1.02	0.44	0.60	0.75	0.05	0.95	0.62	0.15
Uniform Delay, d1	32.3	38.8			45.8	0.0	46.5	43.4	38.2	43.2	35.8	31.3
Progression Factor	0.44	0.47			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.9	35.6			41.9	0.9	5.1	8.2	0.4	34.1	1.2	0.2
Delay (s)	18.0	53.7			87.6	0.9	51.5	51.7	38.6	77.4	37.1	31.5
Level of Service	B	D			F	A	D	D	D	E	D	C
Approach Delay (s)		46.7			40.9			50.0			47.8	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	45.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	86.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	35	6	1384	1209	7
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	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	38	7	1504	1314	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1933	661	1322	0	-	0
Stage 1	1318	-	-	-	-	-
Stage 2	615	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	102	347	273	-	-	-
Stage 1	154	-	-	-	-	-
Stage 2	457	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	99	347	273	-	-	-
Mov Cap-2 Maneuver	99	-	-	-	-	-
Stage 1	154	-	-	-	-	-
Stage 2	445	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.6	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	273	-	347	-	-
HCM Lane V/C Ratio	0.024	-	0.11	-	-
HCM Control Delay (s)	18.5	-	16.6	-	-
HCM Lane LOS	C	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	14	0	1384	1202	11
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	15	0	1504	1307	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1915	659	1318	0	-	0
Stage 1	1313	-	-	-	-	-
Stage 2	602	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	104	348	274	-	-	-
Stage 1	155	-	-	-	-	-
Stage 2	464	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	104	348	274	-	-	-
Mov Cap-2 Maneuver	104	-	-	-	-	-
Stage 1	155	-	-	-	-	-
Stage 2	464	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.8	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	274	-	348	-	-
HCM Lane V/C Ratio	-	-	0.044	-	-
HCM Control Delay (s)	0	-	15.8	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Appendix I – Cumulative 2035 With Project Conditions Intersection Operations Analysis Worksheets

Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Volume (vph)	6	88	100	409	105	511	358
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5		4.5	4.5	4.5	4.5
Lane Util. Factor		0.95		1.00	0.95	1.00	1.00
Frt		0.92		1.00	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)		3261		1770	3539	1770	1583
Flt Permitted		0.94		0.95	1.00	0.95	1.00
Satd. Flow (perm)		3075		1770	3539	1770	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	6	92	104	426	109	532	373
RTOR Reduction (vph)	0	95	0	0	0	0	0
Lane Group Flow (vph)	0	107	0	426	109	532	373
Turn Type	Perm	NA		Prot	NA	Prot	Perm
Protected Phases		4		3	8	2	
Permitted Phases	4						2
Actuated Green, G (s)		4.9		16.5	25.9	20.3	20.3
Effective Green, g (s)		4.9		16.5	25.9	20.3	20.3
Actuated g/C Ratio		0.09		0.30	0.47	0.37	0.37
Clearance Time (s)		4.5		4.5	4.5	4.5	4.5
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		272		529	1660	650	582
v/s Ratio Prot				c0.24	0.03	c0.30	
v/s Ratio Perm		c0.03					0.24
v/c Ratio		0.39		0.81	0.07	0.82	0.64
Uniform Delay, d1		23.7		17.9	8.0	15.8	14.4
Progression Factor		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2		0.9		8.7	0.0	7.9	2.4
Delay (s)		24.7		26.6	8.0	23.7	16.8
Level of Service		C		C	A	C	B
Approach Delay (s)		24.7			22.8	20.9	
Approach LOS		C			C	C	

Intersection Summary			
HCM 2000 Control Delay	22.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	55.2	Sum of lost time (s)	13.5
Intersection Capacity Utilization	68.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	319	128	46	195	215	325	46	86	144	282	41	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5			4.5			4.5	4.5
Lane Util. Factor	1.00	1.00		1.00	0.95			1.00			1.00	1.00
Frt	1.00	0.96		1.00	0.91			0.93			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.96	1.00
Satd. Flow (prot)	1770	1789		1770	3220			1717			1785	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.99			0.96	1.00
Satd. Flow (perm)	1770	1789		1770	3220			1717			1785	1583
Peak-hour factor, PHF	0.83	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	384	152	55	232	256	387	55	102	171	336	49	99
RTOR Reduction (vph)	0	14	0	0	294	0	0	43	0	0	0	76
Lane Group Flow (vph)	384	193	0	232	349	0	0	285	0	0	385	23
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases												6
Actuated Green, G (s)	21.1	17.7		14.9	11.5			18.0			21.0	21.0
Effective Green, g (s)	21.1	17.7		14.9	11.5			18.0			21.0	21.0
Actuated g/C Ratio	0.24	0.20		0.17	0.13			0.20			0.23	0.23
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5			4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	416	353		294	413			344			418	371
v/s Ratio Prot	c0.22	0.11		0.13	c0.11			c0.17			c0.22	
v/s Ratio Perm												0.01
v/c Ratio	0.92	0.55		0.79	0.85			0.83			0.92	0.06
Uniform Delay, d1	33.5	32.3		35.8	38.2			34.3			33.5	26.7
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	25.9	1.7		13.1	14.7			15.0			25.5	0.1
Delay (s)	59.4	34.1		49.0	52.9			49.3			59.0	26.7
Level of Service	E	C		D	D			D			E	C
Approach Delay (s)		50.5			51.8			49.3			52.4	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	51.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	89.6	Sum of lost time (s)	18.0
Intersection Capacity Utilization	82.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis — 2035 Weekday WP PM
3: SERRAMONTE BLVD & CALLAN BLVD — 11/4/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	385	70	228	495	321	117	246	115	221	230	171
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5			4.5		4.5	4.5	4.5
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.94			0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99		0.95	1.00	1.00
Satd. Flow (prot)	1770	3457		1770	3331			3370		1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.99		0.95	1.00	1.00
Satd. Flow (perm)	1770	3457		1770	3331			3370		1770	1863	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	103	401	73	238	516	334	122	256	120	230	240	178
RTOR Reduction (vph)	0	15	0	0	100	0	0	32	0	0	0	142
Lane Group Flow (vph)	103	459	0	238	750	0	0	466	0	230	240	36
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases												6
Actuated Green, G (s)	6.9	20.0		14.2	27.3			17.5		17.4	17.4	17.4
Effective Green, g (s)	6.9	20.0		14.2	27.3			17.5		17.4	17.4	17.4
Actuated g/C Ratio	0.08	0.23		0.16	0.31			0.20		0.20	0.20	0.20
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	140	793		288	1044			677		353	372	316
v/s Ratio Prot	0.06	0.13		c0.13	c0.23			c0.14		c0.13	0.13	
v/s Ratio Perm												0.02
v/c Ratio	0.74	0.58		0.83	0.72			0.69		0.65	0.65	0.11
Uniform Delay, d1	39.2	29.8		35.3	26.5			32.3		32.1	32.0	28.5
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2	18.1	1.0		17.3	2.4			2.9		4.3	3.8	0.2
Delay (s)	57.3	30.8		52.6	28.9			35.2		36.3	35.8	28.7
Level of Service	E	C		D	C			D		D	D	C
Approach Delay (s)		35.6			34.1			35.2			34.0	
Approach LOS		D			C			D			C	

Intersection Summary				
HCM 2000 Control Delay	34.6	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.74			
Actuated Cycle Length (s)	87.1	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	70.6%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

HCM Signalized Intersection Capacity Analysis — 2035 Weekday WP PM
4: SERRAMONTE BLVD & SERRAMONTE SHOPPING CNTR — 11/4/2015

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	218	491	53	751	436	288	282
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95		0.95	1.00	0.97	
Frt	1.00	1.00		1.00	0.85	0.93	
Flt Protected	0.95	1.00		1.00	1.00	0.98	
Satd. Flow (prot)	1770	3539		3528	1583	3263	
Flt Permitted	0.95	1.00		0.88	1.00	0.98	
Satd. Flow (perm)	1770	3539		3131	1583	3263	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	229	517	56	791	459	303	297
RTOR Reduction (vph)	0	0	0	0	108	230	0
Lane Group Flow (vph)	229	517	0	847	351	370	0
Turn Type	Prot	NA	Perm	NA	pm+ov	Prot	
Protected Phases	7	4		8	6	6	
Permitted Phases			8		8		
Actuated Green, G (s)	12.9	39.2		21.8	35.8	14.0	
Effective Green, g (s)	12.9	39.2		21.8	35.8	14.0	
Actuated g/C Ratio	0.21	0.63		0.35	0.58	0.23	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	367	2230		1097	1025	734	
v/s Ratio Prot	c0.13	0.15			0.08	c0.11	
v/s Ratio Perm				c0.27	0.14		
v/c Ratio	0.62	0.23		0.77	0.34	0.50	
Uniform Delay, d1	22.4	5.0		18.0	7.0	21.1	
Progression Factor	1.00	1.00		1.00	1.00	1.00	
Incremental Delay, d2	3.3	0.1		3.4	0.2	0.5	
Delay (s)	25.7	5.0		21.4	7.2	21.6	
Level of Service	C	A		C	A	C	
Approach Delay (s)		11.4		16.4		21.6	
Approach LOS		B		B		C	

Intersection Summary				
HCM 2000 Control Delay	16.2	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.66			
Actuated Cycle Length (s)	62.2	Sum of lost time (s)	13.5	
Intersection Capacity Utilization	64.2%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

HCM Signalized Intersection Capacity Analysis
5: GELLERT BLVD & SERRAMONTE BLVD

2035 Weekday WP PM
1/11/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	47	321	323	688	562	604	464	285	769	407	352	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95	1.00	0.97	1.00	0.88	0.97	0.91	0.91	0.97	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.91	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	3433	1863	2787	3433	3098	1441	3433	1820	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	3433	1863	2787	3433	3098	1441	3433	1820	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	48	331	333	709	579	623	478	294	793	420	363	66
RTOR Reduction (vph)	0	0	63	0	0	144	0	192	54	0	5	0
Lane Group Flow (vph)	48	331	270	709	579	479	478	499	342	420	424	0
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	4.5	19.0	37.0	26.7	41.2	61.0	18.0	26.7	53.4	19.8	28.5	
Effective Green, g (s)	4.5	19.0	37.0	26.7	41.2	61.0	18.0	26.7	53.4	19.8	28.5	
Actuated g/C Ratio	0.04	0.17	0.34	0.24	0.37	0.55	0.16	0.24	0.48	0.18	0.26	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	72	610	531	831	696	1656	560	750	757	616	470	
v/s Ratio Prot	0.03	0.09	0.08	c0.21	0.31	c0.05	c0.14	0.16	c0.11	0.12	c0.23	
v/s Ratio Perm			0.09			0.12			0.13			
v/c Ratio	0.67	0.54	0.51	0.85	0.83	0.29	0.85	0.66	0.45	0.68	0.90	
Uniform Delay, d1	52.1	41.6	29.3	39.9	31.4	13.1	44.8	37.7	18.7	42.3	39.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	20.9	1.0	0.8	8.5	8.4	0.1	12.0	2.2	0.4	3.1	20.2	
Delay (s)	73.0	42.6	30.1	48.4	39.7	13.2	56.9	39.9	19.2	45.4	59.7	
Level of Service	E	D	C	D	D	B	E	D	B	D	E	
Approach Delay (s)		38.8			34.3			39.9			52.6	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	39.7	HCM 2010 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	110.2	Sum of lost time (s)	18.0
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
6: SERRAMONTE BLVD & I-280 SB OFF-RAMP

2035 Weekday WP PM
11/4/2015

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	1457	1098	0	745	762
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5
Lane Util. Factor		0.95	0.91		0.97	0.88
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	5085		3433	2787
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	5085		3433	2787
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	0	1472	1109	0	753	770
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1472	1109	0	753	770
Turn Type		NA	NA		Prot	Prot
Protected Phases		4	8		6	6
Permitted Phases						
Actuated Green, G (s)		52.4	52.4		28.6	28.6
Effective Green, g (s)		52.4	52.4		28.6	28.6
Actuated g/C Ratio		0.58	0.58		0.32	0.32
Clearance Time (s)		4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		2060	2960		1090	885
v/s Ratio Prot		c0.42	0.22		0.22	c0.28
v/s Ratio Perm						
v/c Ratio		0.71	0.37		0.69	0.87
Uniform Delay, d1		13.4	10.0		26.8	28.9
Progression Factor		1.00	0.00		1.00	1.00
Incremental Delay, d2		2.2	0.3		1.9	9.3
Delay (s)		15.6	0.3		28.7	38.3
Level of Service		B	A		C	D
Approach Delay (s)		15.6	0.3		33.6	
Approach LOS		B	A		C	

Intersection Summary			
HCM 2000 Control Delay	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	109.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Volume (vph)	576	1614	1124	4	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5			
Lane Util. Factor	0.97	0.95	0.95			
Frt	1.00	1.00	1.00			
Flt Protected	0.95	1.00	1.00			
Satd. Flow (prot)	3433	3539	3537			
Flt Permitted	0.95	1.00	1.00			
Satd. Flow (perm)	3433	3539	3537			
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	588	1647	1147	4	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	588	1647	1151	0	0	0
Turn Type	Prot	NA	NA			
Protected Phases	7	4	8			
Permitted Phases						
Actuated Green, G (s)	39.5	90.0	41.5			
Effective Green, g (s)	39.5	90.0	41.5			
Actuated g/C Ratio	0.44	1.00	0.46			
Clearance Time (s)	4.5	4.5	4.5			
Vehicle Extension (s)	3.0	3.0	3.0			
Lane Grp Cap (vph)	1506	3539	1630			
v/s Ratio Prot	0.17	c0.47	c0.33			
v/s Ratio Perm						
v/c Ratio	0.39	0.47	0.71			
Uniform Delay, d1	17.1	0.0	19.4			
Progression Factor	0.94	1.00	1.00			
Incremental Delay, d2	0.1	0.3	2.6			
Delay (s)	16.2	0.3	22.0			
Level of Service	B	A	C			
Approach Delay (s)		4.5	22.0		0.0	
Approach LOS		A	C		A	

Intersection Summary			
HCM 2000 Control Delay	10.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	109.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	4	377	1015	360	531	762	570	134	209	524	593	333
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5	4.5	4.5			4.5	4.5	4.5
Lane Util. Factor		0.97	0.95	1.00	1.00	0.91	0.91			0.97	0.95	1.00
Frt		1.00	1.00	0.85	1.00	0.96	0.85			1.00	1.00	0.85
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	1.00
Satd. Flow (prot)		3433	3539	1583	1770	3264	1441			3433	3539	1583
Flt Permitted		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	1.00
Satd. Flow (perm)		3433	3539	1583	1770	3264	1441			3433	3539	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.92	0.98	0.98	0.98
Adj. Flow (vph)	4	385	1036	367	542	778	582	137	227	535	605	340
RTOR Reduction (vph)	0	0	0	231	0	0	0	0	0	0	0	169
Lane Group Flow (vph)	0	389	1036	136	542	1034	463	0	0	762	605	171
Turn Type	Prot	Prot	NA	Perm	Prot	NA	Perm		Prot	Prot	NA	Perm
Protected Phases	7	7	4		3	8			5	5	2	
Permitted Phases				4			8					2
Actuated Green, G (s)		14.8	32.9	32.9	23.6	41.7	41.7			18.5	31.2	31.2
Effective Green, g (s)		14.8	32.9	32.9	23.6	41.7	41.7			18.5	31.2	31.2
Actuated g/C Ratio		0.13	0.29	0.29	0.21	0.37	0.37			0.16	0.27	0.27
Clearance Time (s)		4.5	4.5	4.5	4.5	4.5	4.5			4.5	4.5	4.5
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)		444	1019	456	365	1191	526			556	966	432
v/s Ratio Prot		0.11	c0.29		c0.31	0.32				c0.22	0.17	
v/s Ratio Perm				0.09			0.32					0.11
v/c Ratio		0.88	1.02	0.30	1.48	0.87	0.88			1.37	0.63	0.40
Uniform Delay, d1		48.8	40.6	31.7	45.3	33.7	33.9			47.9	36.4	33.8
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00
Incremental Delay, d2		17.3	32.4	0.4	232.4	6.9	15.7			177.9	1.3	0.6
Delay (s)		66.1	73.1	32.0	277.7	40.6	49.6			225.8	37.7	34.4
Level of Service		E	E	C	F	D	D			F	D	C
Approach Delay (s)			63.2			105.7					121.0	
Approach LOS			E			F					F	

Intersection Summary			
HCM 2000 Control Delay	93.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	114.2	Sum of lost time (s)	18.0
Intersection Capacity Utilization	108.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR	SBR2
Lane Configurations				
Volume (vph)	154	352	177	205
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5
Lane Util. Factor	1.00	0.95		1.00
Frt	1.00	0.95		0.85
Flt Protected	0.95	1.00		1.00
Satd. Flow (prot)	1770	3361		1583
Flt Permitted	0.95	1.00		1.00
Satd. Flow (perm)	1770	3361		1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.92
Adj. Flow (vph)	157	359	181	223
RTOR Reduction (vph)	0	0	0	182
Lane Group Flow (vph)	157	540	0	41
Turn Type	Prot	NA		Perm
Protected Phases	1	6		
Permitted Phases				6
Actuated Green, G (s)	8.5	21.2		21.2
Effective Green, g (s)	8.5	21.2		21.2
Actuated g/C Ratio	0.07	0.19		0.19
Clearance Time (s)	4.5	4.5		4.5
Vehicle Extension (s)	3.0	3.0		3.0
Lane Grp Cap (vph)	131	623		293
v/s Ratio Prot	0.09	c0.16		
v/s Ratio Perm				0.03
v/c Ratio	1.20	0.87		0.14
Uniform Delay, d1	52.9	45.1		38.9
Progression Factor	1.00	1.00		1.00
Incremental Delay, d2	141.6	12.1		0.2
Delay (s)	194.5	57.3		39.1
Level of Service	F	E		D
Approach Delay (s)		76.3		
Approach LOS		E		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	113	20	47	247	10	187	161	951	118	172	898	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5	4.5	4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frt		0.96			1.00	0.85	1.00	0.98		1.00	1.00	
Flt Protected		0.97			0.95	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1742			1777	1583	1770	5001		1770	5069	
Flt Permitted		0.55			0.63	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		984			1173	1583	1770	5001		1770	5069	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	124	22	52	271	11	205	177	1045	130	189	987	22
RTOR Reduction (vph)	0	22	0	0	0	142	0	24	0	0	3	0
Lane Group Flow (vph)	0	176	0	0	282	63	177	1151	0	189	1006	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		18.5			18.5	18.5	9.8	18.4		10.2	18.8	
Effective Green, g (s)		18.5			18.5	18.5	9.8	18.4		10.2	18.8	
Actuated g/C Ratio		0.31			0.31	0.31	0.16	0.30		0.17	0.31	
Clearance Time (s)		4.5			4.5	4.5	4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		300			358	483	286	1518		297	1572	
v/s Ratio Prot							0.10	c0.23		c0.11	0.20	
v/s Ratio Perm		0.18			c0.24	0.04						
v/c Ratio		0.59			0.79	0.13	0.62	0.76		0.64	0.64	
Uniform Delay, d1		17.8			19.3	15.2	23.7	19.1		23.5	18.0	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.9			10.9	0.1	4.0	2.2		4.4	0.9	
Delay (s)		20.8			30.2	15.3	27.6	21.3		27.9	18.9	
Level of Service		C			C	B	C	C		C	B	
Approach Delay (s)		20.8			23.9			22.1			20.3	
Approach LOS		C			C			C			C	

Intersection Summary

HCM 2000 Control Delay	21.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	60.6	Sum of lost time (s)	13.5
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
10: CALLAN BLVD & HICKEY BLVD

2035 Weekday WP PM
11/4/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	118	481	79	69	578	112	40	233	39	25	208	241
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	8	12	12	12
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.0	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3464		1770	3453		1770	1863	1372	1770	1713	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3464		1770	3453		1770	1863	1372	1770	1713	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	126	512	84	73	615	119	43	248	41	27	221	256
RTOR Reduction (vph)	0	18	0	0	25	0	0	0	28	0	67	0
Lane Group Flow (vph)	126	578	0	73	709	0	43	248	13	27	410	0
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	6.5	19.4		2.3	15.2		3.8	19.9	19.9	1.4	17.0	
Effective Green, g (s)	6.5	19.4		2.3	15.2		3.8	19.9	19.9	1.4	17.0	
Actuated g/C Ratio	0.11	0.32		0.04	0.25		0.06	0.33	0.33	0.02	0.28	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.0	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	190	1110		67	867		111	612	451	40	481	
v/s Ratio Prot	0.07	c0.17		0.04	c0.21		0.02	c0.13		0.02	c0.24	
v/s Ratio Perm									0.01			
v/c Ratio	0.66	0.52		1.09	0.82		0.39	0.41	0.03	0.68	0.85	
Uniform Delay, d1	25.9	16.8		29.1	21.3		27.2	15.7	13.8	29.3	20.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	8.4	0.4		136.7	6.1		2.2	0.4	0.0	36.7	13.6	
Delay (s)	34.4	17.2		165.8	27.4		29.5	16.2	13.8	66.1	34.2	
Level of Service	C	B		F	C		C	B	B	E	C	
Approach Delay (s)		20.2			39.9			17.6			35.9	
Approach LOS		C			D			B			D	

Intersection Summary				
HCM 2000 Control Delay	29.9	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.80			
Actuated Cycle Length (s)	60.5	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	70.1%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
11: GELLERT BLVD & HICKEY BLVD

2035 Weekday WP PM
1/11/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	119	508	12	601	504	787	73	351	225	550	463	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.91	0.91	1.00	0.91	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00
Satd. Flow (prot)	1770	3539	1583	3433	3539	1583	1610	3387	1583	1610	3336	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00
Satd. Flow (perm)	1770	3539	1583	3433	3539	1583	1610	3387	1583	1610	3336	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	124	529	12	626	525	820	76	366	234	573	482	206
RTOR Reduction (vph)	0	0	10	0	0	85	0	0	192	0	0	147
Lane Group Flow (vph)	124	529	2	626	525	735	68	374	42	344	711	59
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8	6	2	2		6	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	17.1	21.6	21.6	17.2	21.7	52.0	19.1	19.1	19.1	30.3	30.3	30.3
Effective Green, g (s)	17.1	21.6	21.6	17.2	21.7	52.0	19.1	19.1	19.1	30.3	30.3	30.3
Actuated g/C Ratio	0.16	0.20	0.20	0.16	0.20	0.49	0.18	0.18	0.18	0.29	0.29	0.29
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	285	719	321	556	723	842	289	609	284	459	951	451
v/s Ratio Prot	0.07	c0.15		c0.18	0.15	c0.25	0.04	c0.11		0.21	0.21	
v/s Ratio Perm			0.00			0.22			0.03			0.04
v/c Ratio	0.44	0.74	0.01	1.13	0.73	0.87	0.24	0.61	0.15	0.75	0.75	0.13
Uniform Delay, d1	40.2	39.6	33.7	44.5	39.5	24.1	37.3	40.2	36.7	34.5	34.5	28.2
Progression 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
Incremental Delay, d2	1.1	3.9	0.0	77.8	3.6	9.9	0.4	1.8	0.2	6.6	3.2	0.1
Delay (s)	41.3	43.6	33.8	122.3	43.1	34.0	37.7	42.0	36.9	41.1	37.7	28.3
Level of Service	D	D	C	F	D	C	D	D	D	D	D	C
Approach Delay (s)		42.9			64.5			39.8			37.1	
Approach LOS		D			E			D			D	

Intersection Summary				
HCM 2000 Control Delay	50.2	HCM 2010 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.85			
Actuated Cycle Length (s)	106.2	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	76.3%	ICU Level of Service	D	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	795	434	253	1460	0	0	0	0	375	6	312
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0	4.5	4.5					4.5	4.5	4.5
Lane Util. Factor		0.95	1.00	0.97	0.95					0.95	0.91	0.95
Frt		1.00	0.85	1.00	1.00					1.00	0.94	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (prot)		3539	1583	3433	3539					1681	1549	1504
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (perm)		3539	1583	3433	3539					1681	1549	1504
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	0	981	536	312	1802	0	0	0	0	463	7	385
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	981	536	312	1802	0	0	0	0	296	290	269
Turn Type		NA	Free	Prot	NA					Split	NA	Perm
Protected Phases		4		3	8					6	6	
Permitted Phases			Free									6
Actuated Green, G (s)		50.0	110.0	22.5	77.0					24.0	24.0	24.0
Effective Green, g (s)		50.0	110.0	22.5	77.0					24.0	24.0	24.0
Actuated g/C Ratio		0.45	1.00	0.20	0.70					0.22	0.22	0.22
Clearance Time (s)		4.5		4.5	4.5					4.5	4.5	4.5
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1608	1583	702	2477					366	337	328
v/s Ratio Prot		0.28		0.09	c0.51					0.18	c0.19	
v/s Ratio Perm			0.34									0.18
v/c Ratio		0.61	0.34	0.44	0.73					0.81	0.86	0.82
Uniform Delay, d1		22.6	0.0	38.3	10.1					40.8	41.4	40.9
Progression Factor		1.00	1.00	0.83	0.80					1.00	1.00	1.00
Incremental Delay, d2		1.7	0.6	0.4	1.5					12.4	19.5	15.0
Delay (s)		24.4	0.6	32.1	9.5					53.2	60.9	56.0
Level of Service		C	A	C	A					D	E	E
Approach Delay (s)		16.0			12.9			0.0			56.7	
Approach LOS		B			B			A			E	

Intersection Summary				
HCM 2000 Control Delay	22.3	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.79			
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.5	
Intersection Capacity Utilization	61.6%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	174	961	172	179	752	49	780	52	261	49	77	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00		0.98	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3507		1681	1695	1583		1827	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00		0.98	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3507		1681	1695	1583		1827	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	178	981	176	183	767	50	796	53	266	50	79	50
RTOR Reduction (vph)	0	0	72	0	4	0	0	0	197	0	0	44
Lane Group Flow (vph)	178	981	104	183	813	0	422	427	69	0	129	6
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	14.7	35.2	35.2	15.7	36.2		28.5	28.5	28.5		12.6	12.6
Effective Green, g (s)	14.7	35.2	35.2	15.7	36.2		28.5	28.5	28.5		12.6	12.6
Actuated g/C Ratio	0.13	0.32	0.32	0.14	0.33		0.26	0.26	0.26		0.11	0.11
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	236	1132	506	252	1154		435	439	410		209	181
v/s Ratio Prot	0.10	c0.28		c0.10	0.23		0.25	c0.25			c0.07	
v/s Ratio Perm			0.07						0.04			0.00
v/c Ratio	0.75	0.87	0.21	0.73	0.70		0.97	0.97	0.17		0.62	0.03
Uniform Delay, d1	45.9	35.2	27.2	45.1	32.2		40.3	40.4	31.6		46.4	43.3
Progression Factor	1.20	0.53	0.37	1.33	1.15		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	9.7	6.9	0.7	9.6	3.5		35.3	35.6	0.2		5.3	0.1
Delay (s)	64.7	25.6	10.8	69.8	40.7		75.6	76.0	31.8		51.7	43.3
Level of Service	E	C	B	E	D		E	E	C		D	D
Approach Delay (s)		28.9			46.0			65.3			49.4	
Approach LOS		C			D			E			D	

Intersection Summary				
HCM 2000 Control Delay	45.8	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.84			
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	77.4%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1179	91	52	833	153	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	1770	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1228	95	54	868	159	128
RTOR Reduction (vph)	0	30	0	0	0	108
Lane Group Flow (vph)	1228	65	54	868	159	20
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	64.6	64.6	14.8	83.9	17.1	17.1
Effective Green, g (s)	64.6	64.6	14.8	83.9	17.1	17.1
Actuated g/C Ratio	0.59	0.59	0.13	0.76	0.16	0.16
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2078	929	238	2699	275	246
v/s Ratio Prot	c0.35		0.03	c0.25	c0.09	
v/s Ratio Perm		0.04				0.01
v/c Ratio	0.59	0.07	0.23	0.32	0.58	0.08
Uniform Delay, d1	14.3	9.8	42.5	4.1	43.1	39.7
Progression Factor	0.64	0.11	1.19	0.33	1.00	1.00
Incremental Delay, d2	0.8	0.1	0.5	0.3	2.9	0.1
Delay (s)	9.9	1.2	51.1	1.6	46.0	39.9
Level of Service	A	A	D	A	D	D
Approach Delay (s)	9.3			4.5	43.3	
Approach LOS	A			A	D	

Intersection Summary			
HCM 2000 Control Delay	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1200	110	0	957	50	0	0	75	0	0	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5				4.5			4.5
Lane Util. Factor		0.91			0.95				1.00			1.00
Frt		0.99			0.99				0.86			0.86
Flt Protected		1.00			1.00				1.00			1.00
Satd. Flow (prot)		5021			3513				1611			1611
Flt Permitted		1.00			1.00				1.00			1.00
Satd. Flow (perm)		5021			3513				1611			1611
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	1237	113	0	987	52	0	0	77	0	0	25
RTOR Reduction (vph)	0	4	0	0	2	0	0	0	72	0	0	24
Lane Group Flow (vph)	0	1346	0	0	1037	0	0	0	5	0	0	1
Turn Type		NA			NA				Perm			Perm
Protected Phases		4			8							
Permitted Phases									2			6
Actuated Green, G (s)		94.5			94.5				6.5			6.5
Effective Green, g (s)		94.5			94.5				6.5			6.5
Actuated g/C Ratio		0.86			0.86				0.06			0.06
Clearance Time (s)		4.5			4.5				4.5			4.5
Vehicle Extension (s)		3.0			3.0				3.0			3.0
Lane Grp Cap (vph)		4313			3017				95			95
v/s Ratio Prot		0.27			c0.30							
v/s Ratio Perm									c0.00			0.00
v/c Ratio		0.31			0.34				0.05			0.02
Uniform Delay, d1		1.5			1.5				48.8			48.7
Progression Factor		0.63			4.81				1.00			1.00
Incremental Delay, d2		0.2			0.1				0.2			0.1
Delay (s)		1.1			7.6				49.0			48.8
Level of Service		A			A				D			D
Approach Delay (s)		1.1			7.6			49.0			48.8	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	5.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	38.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	214	808	200	149	571	781	266	662	113	363	741	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.0	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.91	0.91			0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.97			1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1610	3288			3503	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	1.00			0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1610	3288			3503	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	223	842	208	155	595	814	277	690	118	378	772	192
RTOR Reduction (vph)	0	18	0	0	0	0	0	0	85	0	0	114
Lane Group Flow (vph)	201	1054	0	0	750	814	277	690	33	378	772	78
Turn Type	Split	NA		Split	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						Free			2			6
Actuated Green, G (s)	27.5	27.5			23.5	110.0	16.0	20.5	20.5	20.5	25.0	25.0
Effective Green, g (s)	27.5	27.5			23.5	110.0	16.0	20.5	20.5	20.5	25.0	25.0
Actuated g/C Ratio	0.25	0.25			0.21	1.00	0.15	0.19	0.19	0.19	0.23	0.23
Clearance Time (s)	4.5	4.5			4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	402	822			748	1583	257	659	295	329	804	359
v/s Ratio Prot	0.12	c0.32			c0.21		0.16	c0.19		c0.21	0.22	
v/s Ratio Perm						c0.51			0.02			0.05
v/c Ratio	0.50	1.28			1.00	0.51	1.08	1.05	0.11	1.15	0.96	0.22
Uniform Delay, d1	35.4	41.2			43.2	0.0	47.0	44.8	37.2	44.8	42.0	34.5
Progression Factor	0.53	0.54			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.3	136.0			33.6	1.2	78.4	48.0	0.2	96.4	22.4	0.3
Delay (s)	22.8	158.2			76.8	1.2	125.4	92.7	37.4	141.1	64.4	34.8
Level of Service	C	F			E	A	F	F	D	F	E	C
Approach Delay (s)		136.8			37.5			95.0			81.8	
Approach LOS		F			D			F			F	

Intersection Summary			
HCM 2000 Control Delay	84.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	96.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	53	59	1230	1151	18
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	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	58	64	1337	1251	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1924	635	1271	0	-	0
Stage 1	1261	-	-	-	-	-
Stage 2	663	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	103	361	289	-	-	-
Stage 1	167	-	-	-	-	-
Stage 2	432	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	80	361	289	-	-	-
Mov Cap-2 Maneuver	80	-	-	-	-	-
Stage 1	167	-	-	-	-	-
Stage 2	336	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.9	1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	289	-	361	-	-
HCM Lane V/C Ratio	0.222	-	0.16	-	-
HCM Control Delay (s)	21	-	16.9	-	-
HCM Lane LOS	C	-	C	-	-
HCM 95th %tile Q(veh)	0.8	-	0.6	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	34	0	1230	1135	57
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	37	0	1337	1234	62

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1800	648	1296	0	-	0
Stage 1	1265	-	-	-	-	-
Stage 2	535	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	120	354	281	-	-	-
Stage 1	166	-	-	-	-	-
Stage 2	503	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	120	354	281	-	-	-
Mov Cap-2 Maneuver	120	-	-	-	-	-
Stage 1	166	-	-	-	-	-
Stage 2	503	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.4	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	281	-	354	-	-
HCM Lane V/C Ratio	-	-	0.104	-	-
HCM Control Delay (s)	0	-	16.4	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Volume (vph)	2	99	86	355	84	289	281
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5		4.5	4.5	4.5	4.5
Lane Util. Factor		0.95		1.00	0.95	1.00	1.00
Frt		0.93		1.00	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)		3293		1770	3539	1770	1583
Flt Permitted		0.95		0.95	1.00	0.95	1.00
Satd. Flow (perm)		3134		1770	3539	1770	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	2	106	92	382	90	311	302
RTOR Reduction (vph)	0	85	0	0	0	0	0
Lane Group Flow (vph)	0	115	0	382	90	311	302
Turn Type	Perm	NA		Prot	NA	Prot	Perm
Protected Phases		4		3	8	2	
Permitted Phases	4						2
Actuated Green, G (s)		3.3		13.3	21.1	12.9	12.9
Effective Green, g (s)		3.3		13.3	21.1	12.9	12.9
Actuated g/C Ratio		0.08		0.31	0.49	0.30	0.30
Clearance Time (s)		4.5		4.5	4.5	4.5	4.5
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		240		547	1736	531	474
v/s Ratio Prot				c0.22	0.03	0.18	
v/s Ratio Perm		c0.04					c0.19
v/c Ratio		0.48		0.70	0.05	0.59	0.64
Uniform Delay, d1		19.0		13.1	5.7	12.8	13.0
Progression Factor		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2		1.5		3.9	0.0	1.7	2.8
Delay (s)		20.5		17.0	5.7	14.4	15.8
Level of Service		C		B	A	B	B
Approach Delay (s)		20.5			14.8	15.1	
Approach LOS		C			B	B	

Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	43.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
2: SR-1 NB RAMPS & SERRAMONTE BLVD

2035 Saturday WP MD
11/4/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	339	131	3	17	202	412	0	14	25	468	2	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5			4.5			4.5	4.5
Lane Util. Factor	1.00	1.00		1.00	0.95			1.00			1.00	1.00
Frt	1.00	1.00		1.00	0.90			0.91			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.95	1.00
Satd. Flow (prot)	1770	1857		1770	3183			1699			1774	1583
Flt Permitted	0.95	1.00		0.95	1.00			1.00			0.95	1.00
Satd. Flow (perm)	1770	1857		1770	3183			1699			1774	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	346	134	3	17	206	420	0	14	26	478	2	83
RTOR Reduction (vph)	0	1	0	0	346	0	0	25	0	0	0	59
Lane Group Flow (vph)	346	136	0	17	280	0	0	15	0	0	480	24
Turn Type	Prot	NA		Prot	NA			NA		Split	NA	Perm
Protected Phases	7	4		3	8			2		6	6	
Permitted Phases							2					6
Actuated Green, G (s)	15.3	26.5		0.7	11.9			2.9			19.8	19.8
Effective Green, g (s)	15.3	26.5		0.7	11.9			2.9			19.8	19.8
Actuated g/C Ratio	0.23	0.39		0.01	0.18			0.04			0.29	0.29
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5			4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	398	724		18	557			72			517	461
v/s Ratio Prot	c0.20	0.07		0.01	c0.09			c0.01			c0.27	
v/s Ratio Perm												0.02
v/c Ratio	0.87	0.19		0.94	0.50			0.21			0.93	0.05
Uniform Delay, d1	25.3	13.6		33.6	25.3			31.4			23.4	17.3
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	17.9	0.1		183.9	0.7			1.5			23.0	0.0
Delay (s)	43.2	13.7		217.5	26.0			32.8			46.3	17.3
Level of Service	D	B		F	C			C			D	B
Approach Delay (s)		34.9			31.1			32.8			42.1	
Approach LOS		C			C			C			D	

Intersection Summary				
HCM 2000 Control Delay	35.8	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.77			
Actuated Cycle Length (s)	67.9	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	81.6%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

HCM Signalized Intersection Capacity Analysis
3: SERRAMONTE BLVD & CALLAN BLVD

2035 Saturday WP MD
11/4/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	145	469	53	186	358	267	126	199	129	219	185	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5			4.5		4.5	4.5	4.5
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.94			0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99		0.95	1.00	1.00
Satd. Flow (prot)	1770	3485		1770	3313			3342		1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.99		0.95	1.00	1.00
Satd. Flow (perm)	1770	3485		1770	3313			3342		1770	1863	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	149	484	55	192	369	275	130	205	133	226	191	115
RTOR Reduction (vph)	0	9	0	0	143	0	0	47	0	0	0	91
Lane Group Flow (vph)	149	530	0	192	501	0	0	421	0	226	191	24
Turn Type	Prot	NA		Prot	NA		Split	NA		Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases												6
Actuated Green, G (s)	8.6	17.1		8.8	17.3			15.4		15.6	15.6	15.6
Effective Green, g (s)	8.6	17.1		8.8	17.3			15.4		15.6	15.6	15.6
Actuated g/C Ratio	0.11	0.23		0.12	0.23			0.21		0.21	0.21	0.21
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	203	795		207	765			687		368	388	329
v/s Ratio Prot	0.08	c0.15		c0.11	0.15			c0.13		c0.13	0.10	
v/s Ratio Perm												0.02
v/c Ratio	0.73	0.67		0.93	0.65			0.61		0.61	0.49	0.07
Uniform Delay, d1	32.0	26.3		32.7	26.1			27.0		26.9	26.2	23.8
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2	12.9	2.1		42.3	2.0			1.6		3.0	1.0	0.1
Delay (s)	44.9	28.4		75.0	28.1			28.7		29.9	27.1	23.9
Level of Service	D	C		E	C			C		C	C	C
Approach Delay (s)		32.0			38.9			28.7			27.6	
Approach LOS		C			D			C			C	

Intersection Summary				
HCM 2000 Control Delay	32.7	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.68			
Actuated Cycle Length (s)	74.9	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	66.9%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

HCM Signalized Intersection Capacity Analysis — 2035 Saturday WP MD
4: SERRAMONTE BLVD & SERRAMONTE SHOPPING CNTR — 11/4/2015

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	218	598	69	567	516	343	263
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95		0.95	1.00	0.97	
Frt	1.00	1.00		1.00	0.85	0.93	
Flt Protected	0.95	1.00		0.99	1.00	0.97	
Satd. Flow (prot)	1770	3539		3520	1583	3286	
Flt Permitted	0.95	1.00		0.82	1.00	0.97	
Satd. Flow (perm)	1770	3539		2906	1583	3286	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	225	616	71	585	532	354	271
RTOR Reduction (vph)	0	0	0	0	124	192	0
Lane Group Flow (vph)	225	616	0	656	408	433	0
Turn Type	Prot	NA	Perm	NA	pm+ov	Prot	
Protected Phases	7	4		8	6	6	
Permitted Phases			8		8		
Actuated Green, G (s)	13.3	37.3		19.5	35.0	15.5	
Effective Green, g (s)	13.3	37.3		19.5	35.0	15.5	
Actuated g/C Ratio	0.22	0.60		0.32	0.57	0.25	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	380	2135		916	1011	824	
v/s Ratio Prot	c0.13	0.17			0.10	c0.13	
v/s Ratio Perm				c0.23	0.16		
v/c Ratio	0.59	0.29		0.72	0.40	0.53	
Uniform Delay, d1	21.8	5.9		18.7	7.5	20.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	
Incremental Delay, d2	2.5	0.1		2.7	0.3	0.6	
Delay (s)	24.3	6.0		21.4	7.8	20.6	
Level of Service	C	A		C	A	C	
Approach Delay (s)		10.9		15.3		20.6	
Approach LOS		B		B		C	

Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	61.8	Sum of lost time (s)	13.5
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis — 2035 Saturday WP PM
5: GELLERT BLVD & SERRAMONTE BLVD — 1/11/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	53	367	422	718	432	815	471	365	893	475	413	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95	1.00	0.97	1.00	0.88	0.97	0.91	0.91	0.97	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.92	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	3433	1863	2787	3433	3110	1441	3433	1814	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	3433	1863	2787	3433	3110	1441	3433	1814	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	55	382	440	748	450	849	491	380	930	495	430	90
RTOR Reduction (vph)	0	0	80	0	0	149	0	153	22	0	6	0
Lane Group Flow (vph)	55	382	360	748	450	700	491	692	443	495	514	0
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	5.7	20.5	41.6	32.8	47.6	71.4	21.1	37.3	70.1	23.8	40.0	
Effective Green, g (s)	5.7	20.5	41.6	32.8	47.6	71.4	21.1	37.3	70.1	23.8	40.0	
Actuated g/C Ratio	0.04	0.15	0.31	0.25	0.36	0.54	0.16	0.28	0.53	0.18	0.30	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	76	547	497	850	669	1597	547	876	811	617	548	
v/s Ratio Prot	0.03	0.11	0.12	c0.22	0.24	c0.08	c0.14	0.22	c0.14	0.14	c0.28	
v/s Ratio Perm			0.11			0.17			0.17			
v/c Ratio	0.72	0.70	0.72	0.88	0.67	0.44	0.90	0.79	0.55	0.80	0.94	
Uniform Delay, d1	62.6	53.0	40.3	47.9	35.8	18.4	54.6	43.9	20.6	52.0	45.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	28.6	3.9	5.2	10.5	2.7	0.2	17.3	4.8	0.8	7.4	23.9	
Delay (s)	91.2	56.9	45.5	58.4	38.5	18.6	71.9	48.7	21.4	59.5	68.9	
Level of Service	F	E	D	E	D	B	E	D	C	E	E	
Approach Delay (s)		53.3			37.5			48.0			64.3	
Approach LOS		D			D			D			E	

Intersection Summary			
HCM 2000 Control Delay	48.0	HCM 2010 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.28		
Actuated Cycle Length (s)	132.4	Sum of lost time (s)	18.0
Intersection Capacity Utilization	86.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	1786	1048	0	855	892
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.5
Lane Util. Factor		0.95	0.91		0.97	0.88
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	5085		3433	2787
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	5085		3433	2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1880	1103	0	900	939
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	1880	1103	0	900	939
Turn Type		NA	NA		Prot	Prot
Protected Phases		4	8		6	6
Permitted Phases						
Actuated Green, G (s)		48.0	48.0		33.0	33.0
Effective Green, g (s)		48.0	48.0		33.0	33.0
Actuated g/C Ratio		0.53	0.53		0.37	0.37
Clearance Time (s)		4.5	4.5		4.5	4.5
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1887	2712		1258	1021
v/s Ratio Prot		c0.53	0.22		0.26	c0.34
v/s Ratio Perm						
v/c Ratio		1.00	0.41		0.72	0.92
Uniform Delay, d1		20.9	12.5		24.5	27.2
Progression Factor		1.00	0.03		1.00	1.00
Incremental Delay, d2		19.9	0.3		2.0	12.8
Delay (s)		40.8	0.6		26.4	40.0
Level of Service		D	A		C	D
Approach Delay (s)		40.8	0.6		33.4	
Approach LOS		D	A		C	

Intersection Summary			
HCM 2000 Control Delay	28.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	119.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Volume (vph)	739	1880	1012	1	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5			
Lane Util. Factor	0.97	0.95	0.95			
Frt	1.00	1.00	1.00			
Flt Protected	0.95	1.00	1.00			
Satd. Flow (prot)	3433	3539	3539			
Flt Permitted	0.95	1.00	1.00			
Satd. Flow (perm)	3433	3539	3539			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	778	1979	1065	1	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	778	1979	1066	0	0	0
Turn Type	Prot	NA	NA			
Protected Phases	7	4	8			
Permitted Phases						
Actuated Green, G (s)	45.5	90.0	35.5			
Effective Green, g (s)	45.5	90.0	35.5			
Actuated g/C Ratio	0.51	1.00	0.39			
Clearance Time (s)	4.5	4.5	4.5			
Vehicle Extension (s)	3.0	3.0	3.0			
Lane Grp Cap (vph)	1735	3539	1395			
v/s Ratio Prot	0.23	c0.56	c0.30			
v/s Ratio Perm						
v/c Ratio	0.45	0.56	0.76			
Uniform Delay, d1	14.2	0.0	23.6			
Progression Factor	0.81	1.00	1.00			
Incremental Delay, d2	0.1	0.3	4.0			
Delay (s)	11.6	0.3	27.6			
Level of Service	B	A	C			
Approach Delay (s)		3.5	27.6		0.0	
Approach LOS		A	C		A	

Intersection Summary			
HCM 2000 Control Delay	10.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	119.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	1	565	1087	338	409	603	472	169	130	505	474	422
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5	4.5	4.5			4.5	4.5	4.5
Lane Util. Factor		0.97	0.95	1.00	1.00	0.91	0.91			0.97	0.95	1.00
Frt		1.00	1.00	0.85	1.00	0.96	0.85			1.00	1.00	0.85
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	1.00
Satd. Flow (prot)		3433	3539	1583	1770	3239	1441			3433	3539	1583
Flt Permitted		0.95	1.00	1.00	0.95	1.00	1.00			0.95	1.00	1.00
Satd. Flow (perm)		3433	3539	1583	1770	3239	1441			3433	3539	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1	589	1132	352	426	628	492	176	135	526	494	440
RTOR Reduction (vph)	0	0	0	171	0	0	0	0	0	0	0	222
Lane Group Flow (vph)	0	590	1132	181	426	894	402	0	0	661	494	218
Turn Type	Prot	Prot	NA	Perm	Prot	NA	Perm		Prot	Prot	NA	Perm
Protected Phases	7	7	4		3	8			5	5	2	
Permitted Phases				4			8					2
Actuated Green, G (s)		25.8	41.3	41.3	29.5	45.0	45.0			23.5	32.0	32.0
Effective Green, g (s)		25.8	41.3	41.3	29.5	45.0	45.0			23.5	32.0	32.0
Actuated g/C Ratio		0.19	0.30	0.30	0.22	0.33	0.33			0.17	0.23	0.23
Clearance Time (s)		4.5	4.5	4.5	4.5	4.5	4.5			4.5	4.5	4.5
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)		649	1072	479	383	1069	475			591	830	371
v/s Ratio Prot		0.17	c0.32		c0.24	0.28				c0.19	0.14	
v/s Ratio Perm				0.11			c0.28					0.14
v/c Ratio		0.91	1.06	0.38	1.11	0.84	0.85			1.12	0.60	0.59
Uniform Delay, d1		54.1	47.5	37.4	53.4	42.2	42.4			56.4	46.4	46.3
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00
Incremental Delay, d2		16.6	43.5	0.5	79.9	5.8	13.1			74.0	1.2	2.4
Delay (s)		70.7	91.0	37.9	133.3	48.0	55.5			130.4	47.5	48.7
Level of Service		E	F	D	F	D	E			F	D	D
Approach Delay (s)			76.2			70.9					82.2	
Approach LOS			E			E					F	

Intersection Summary			
HCM 2000 Control Delay	79.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	136.3	Sum of lost time (s)	18.0
Intersection Capacity Utilization	103.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR	SBR2
Lane Configurations				
Volume (vph)	196	347	240	238
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5
Lane Util. Factor	1.00	0.95		1.00
Frt	1.00	0.94		0.85
Flt Protected	0.95	1.00		1.00
Satd. Flow (prot)	1770	3322		1583
Flt Permitted	0.95	1.00		1.00
Satd. Flow (perm)	1770	3322		1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96
Adj. Flow (vph)	204	361	250	248
RTOR Reduction (vph)	0	0	0	203
Lane Group Flow (vph)	204	611	0	45
Turn Type	Prot	NA		Perm
Protected Phases	1	6		
Permitted Phases				6
Actuated Green, G (s)	15.5	24.0		24.0
Effective Green, g (s)	15.5	24.0		24.0
Actuated g/C Ratio	0.11	0.18		0.18
Clearance Time (s)	4.5	4.5		4.5
Vehicle Extension (s)	3.0	3.0		3.0
Lane Grp Cap (vph)	201	584		278
v/s Ratio Prot	0.12	c0.18		
v/s Ratio Perm				0.03
v/c Ratio	1.01	1.05		0.16
Uniform Delay, d1	60.4	56.2		47.6
Progression Factor	1.00	1.00		1.00
Incremental Delay, d2	67.4	49.9		0.3
Delay (s)	127.8	106.0		47.9
Level of Service	F	F		D
Approach Delay (s)		96.7		
Approach LOS		F		

Intersection Summary

HCM Signalized Intersection Capacity Analysis
9: GELLERT BLVD & SERRAMONTE PLAZA

2035 Saturday WP MD
11/4/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	179	14	60	234	11	268	155	1042	187	198	981	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5	4.5	4.5	4.5		4.5	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frt		0.97			1.00	0.85	1.00	0.98		1.00	1.00	
Flt Protected		0.97			0.95	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1742			1778	1583	1770	4969		1770	5060	
Flt Permitted		0.55			0.62	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		994			1149	1583	1770	4969		1770	5060	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	186	15	62	244	11	279	161	1085	195	206	1022	35
RTOR Reduction (vph)	0	18	0	0	0	193	0	33	0	0	4	0
Lane Group Flow (vph)	0	245	0	0	255	86	161	1247	0	206	1053	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		19.3			19.3	19.3	9.7	19.2		10.7	20.2	
Effective Green, g (s)		19.3			19.3	19.3	9.7	19.2		10.7	20.2	
Actuated g/C Ratio		0.31			0.31	0.31	0.15	0.31		0.17	0.32	
Clearance Time (s)		4.5			4.5	4.5	4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		305			353	487	273	1521		302	1630	
v/s Ratio Prot							0.09	c0.25		c0.12	0.21	
v/s Ratio Perm		c0.25			0.22	0.05						
v/c Ratio		0.80			0.72	0.18	0.59	0.82		0.68	0.65	
Uniform Delay, d1		20.0			19.3	15.9	24.6	20.1		24.4	18.2	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		14.1			7.1	0.2	3.2	3.6		6.2	0.9	
Delay (s)		34.1			26.4	16.1	27.9	23.7		30.6	19.1	
Level of Service		C			C	B	C	C		C	B	
Approach Delay (s)		34.1			21.0			24.2			21.0	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	23.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	62.7	Sum of lost time (s)	13.5
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
10: CALLAN BLVD & HICKEY BLVD

2035 Saturday WP MD
11/4/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	108	569	41	63	469	108	36	195	47	37	138	203
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	8	12	12	12
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.97		1.00	1.00	0.85	1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3503		1770	3440		1770	1863	1372	1770	1696	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3503		1770	3440		1770	1863	1372	1770	1696	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	120	632	46	70	521	120	40	217	52	41	153	226
RTOR Reduction (vph)	0	8	0	0	32	0	0	0	40	0	95	0
Lane Group Flow (vph)	120	670	0	70	609	0	40	217	12	41	284	0
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	4.2	18.2		2.1	16.1		1.3	12.2	12.2	1.3	12.2	
Effective Green, g (s)	4.2	18.2		2.1	16.1		1.3	12.2	12.2	1.3	12.2	
Actuated g/C Ratio	0.08	0.35		0.04	0.31		0.03	0.24	0.24	0.03	0.24	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	143	1230		71	1069		44	438	323	44	399	
v/s Ratio Prot	c0.07	c0.19		0.04	0.18		0.02	0.12		c0.02	c0.17	
v/s Ratio Perm									0.01			
v/c Ratio	0.84	0.54		0.99	0.57		0.91	0.50	0.04	0.93	0.71	
Uniform Delay, d1	23.5	13.5		24.8	15.0		25.2	17.1	15.3	25.2	18.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	32.9	0.5		101.2	0.7		99.9	0.9	0.0	109.0	5.9	
Delay (s)	56.3	14.0		126.1	15.7		125.1	18.0	15.3	134.2	24.1	
Level of Service	E	B		F	B		F	B	B	F	C	
Approach Delay (s)		20.3			26.5			31.4			34.9	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	26.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	51.8	Sum of lost time (s)	18.0
Intersection Capacity Utilization	60.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
11: GELLERT BLVD & HICKEY BLVD

2035 Saturday WP PM
1/11/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	158	552	15	441	388	842	71	463	266	609	448	187
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.91	0.91	1.00	0.91	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00
Satd. Flow (prot)	1770	3539	1583	3433	3539	1583	1610	3387	1583	1610	3329	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00
Satd. Flow (perm)	1770	3539	1583	3433	3539	1583	1610	3387	1583	1610	3329	1583
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	168	587	16	469	413	896	76	493	283	648	477	199
RTOR Reduction (vph)	0	0	13	0	0	63	0	0	224	0	0	143
Lane Group Flow (vph)	168	587	3	469	413	833	68	501	59	369	756	56
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8	6	2	2		6	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	20.5	22.7	22.7	16.6	18.8	50.5	23.6	23.6	23.6	31.7	31.7	31.7
Effective Green, g (s)	20.5	22.7	22.7	16.6	18.8	50.5	23.6	23.6	23.6	31.7	31.7	31.7
Actuated g/C Ratio	0.18	0.20	0.20	0.15	0.17	0.45	0.21	0.21	0.21	0.28	0.28	0.28
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	322	713	319	506	590	773	337	709	331	453	937	445
v/s Ratio Prot	0.09	c0.17		0.14	0.12	c0.30	0.04	c0.15		0.23	0.23	
v/s Ratio Perm			0.00			0.22			0.04			0.04
v/c Ratio	0.52	0.82	0.01	0.93	0.70	1.08	0.20	0.71	0.18	0.81	0.81	0.13
Uniform Delay, d1	41.6	43.0	36.0	47.4	44.2	31.0	36.7	41.3	36.5	37.7	37.6	30.1
Progression 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
Incremental Delay, d2	1.5	7.6	0.0	23.1	3.6	55.4	0.3	3.2	0.3	10.8	5.2	0.1
Delay (s)	43.1	50.7	36.0	70.5	47.9	86.4	37.0	44.5	36.8	48.5	42.8	30.3
Level of Service	D	D	D	E	D	F	D	D	D	D	D	C
Approach Delay (s)		48.7			73.3			41.4			42.5	
Approach LOS		D			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	54.9	HCM 2010 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	112.6	Sum of lost time (s)	18.0
Intersection Capacity Utilization	84.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
12: I-280 SB RAMPS & HICKEY BLVD

2035 Saturday WP MD
11/4/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	831	313	202	1335	0	0	0	0	408	5	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0	4.5	4.5					4.5	4.5	4.5
Lane Util. Factor		0.95	1.00	0.97	0.95					0.95	0.91	0.95
Frt		1.00	0.85	1.00	1.00					1.00	0.98	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.96	1.00
Satd. Flow (prot)		3539	1583	3433	3539					1681	1593	1504
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.96	1.00
Satd. Flow (perm)		3539	1583	3433	3539					1681	1593	1504
Peak-hour factor, PHF	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Adj. Flow (vph)	0	1170	441	285	1880	0	0	0	0	575	7	324
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1170	441	285	1880	0	0	0	0	316	308	282
Turn Type		NA	Free	Prot	NA					Split	NA	Perm
Protected Phases		4		3	8					6	6	
Permitted Phases			Free									6
Actuated Green, G (s)		54.2	110.0	15.2	73.9					27.1	27.1	27.1
Effective Green, g (s)		54.2	110.0	15.2	73.9					27.1	27.1	27.1
Actuated g/C Ratio		0.49	1.00	0.14	0.67					0.25	0.25	0.25
Clearance Time (s)		4.5		4.5	4.5					4.5	4.5	4.5
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1743	1583	474	2377					414	392	370
v/s Ratio Prot		0.33		0.08	c0.53					0.19	c0.19	
v/s Ratio Perm			0.28									0.19
v/c Ratio		0.67	0.28	0.60	0.79					0.76	0.79	0.76
Uniform Delay, d1		21.1	0.0	44.6	12.6					38.5	38.7	38.5
Progression Factor		1.00	1.00	0.71	0.37					1.00	1.00	1.00
Incremental Delay, d2		2.1	0.4	1.8	2.4					8.1	10.0	9.0
Delay (s)		23.2	0.4	33.3	7.1					46.6	48.7	47.4
Level of Service		C	A	C	A					D	D	D
Approach Delay (s)		17.0			10.6			0.0			47.6	
Approach LOS		B			B			A			D	

Intersection Summary			
HCM 2000 Control Delay	19.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	153	969	191	137	645	62	807	26	261	42	84	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00		0.98	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3493		1681	1690	1583		1832	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00		0.98	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3493		1681	1690	1583		1832	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	156	989	195	140	658	63	823	27	266	43	86	53
RTOR Reduction (vph)	0	0	82	0	6	0	0	0	192	0	0	47
Lane Group Flow (vph)	156	989	113	140	715	0	428	422	74	0	129	6
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	13.2	37.1	37.1	11.7	35.6		30.6	30.6	30.6		12.6	12.6
Effective Green, g (s)	13.2	37.1	37.1	11.7	35.6		30.6	30.6	30.6		12.6	12.6
Actuated g/C Ratio	0.12	0.34	0.34	0.11	0.32		0.28	0.28	0.28		0.11	0.11
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	212	1193	533	188	1130		467	470	440		209	181
v/s Ratio Prot	c0.09	c0.28		0.08	0.20		c0.25	0.25			c0.07	
v/s Ratio Perm			0.07						0.05			0.00
v/c Ratio	0.74	0.83	0.21	0.74	0.63		0.92	0.90	0.17		0.62	0.03
Uniform Delay, d1	46.7	33.5	26.0	47.7	31.6		38.5	38.2	30.1		46.4	43.3
Progression Factor	1.17	0.86	1.03	1.33	0.73		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	9.4	5.0	0.7	14.4	2.6		22.6	19.5	0.2		5.3	0.1
Delay (s)	64.2	33.9	27.4	77.8	25.9		61.1	57.7	30.2		51.7	43.4
Level of Service	E	C	C	E	C		E	E	C		D	D
Approach Delay (s)		36.5			34.3			52.4			49.3	
Approach LOS		D			C			D			D	

Intersection Summary				
HCM 2000 Control Delay	41.7	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.83			
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	75.3%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1269	8	4	837	10	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	1770	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1336	8	4	881	11	9
RTOR Reduction (vph)	0	2	0	0	0	8
Lane Group Flow (vph)	1336	6	4	881	11	1
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	87.0	87.0	0.9	92.4	8.6	8.6
Effective Green, g (s)	87.0	87.0	0.9	92.4	8.6	8.6
Actuated g/C Ratio	0.79	0.79	0.01	0.84	0.08	0.08
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2799	1252	14	2972	138	123
v/s Ratio Prot	c0.38		0.00	c0.25	c0.01	
v/s Ratio Perm		0.00				0.00
v/c Ratio	0.48	0.01	0.29	0.30	0.08	0.01
Uniform Delay, d1	3.9	2.4	54.2	1.9	47.0	46.8
Progression Factor	0.96	0.21	1.44	2.11	1.00	1.00
Incremental Delay, d2	0.4	0.0	10.6	0.2	0.2	0.0
Delay (s)	4.1	0.5	88.8	4.2	47.3	46.8
Level of Service	A	A	F	A	D	D
Approach Delay (s)	4.1			4.6	47.1	
Approach LOS	A			A	D	

Intersection Summary				
HCM 2000 Control Delay	4.7	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.45			
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.5	
Intersection Capacity Utilization	45.9%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1240	58	0	849	33	0	0	54	0	0	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5				4.5			4.5
Lane Util. Factor		0.91			0.95				1.00			1.00
Frt		0.99			0.99				0.86			0.86
Flt Protected		1.00			1.00				1.00			1.00
Satd. Flow (prot)		5051			3519				1611			1611
Flt Permitted		1.00			1.00				1.00			1.00
Satd. Flow (perm)		5051			3519				1611			1611
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	1319	62	0	903	35	0	0	57	0	0	45
RTOR Reduction (vph)	0	2	0	0	1	0	0	0	54	0	0	42
Lane Group Flow (vph)	0	1379	0	0	937	0	0	0	3	0	0	3
Turn Type		NA			NA				Perm			Perm
Protected Phases		4			8							
Permitted Phases									2			6
Actuated Green, G (s)		94.5			94.5				6.5			6.5
Effective Green, g (s)		94.5			94.5				6.5			6.5
Actuated g/C Ratio		0.86			0.86				0.06			0.06
Clearance Time (s)		4.5			4.5				4.5			4.5
Vehicle Extension (s)		3.0			3.0				3.0			3.0
Lane Grp Cap (vph)		4339			3023				95			95
v/s Ratio Prot		c0.27			0.27							
v/s Ratio Perm									c0.00			0.00
v/c Ratio		0.32			0.31				0.04			0.03
Uniform Delay, d1		1.5			1.5				48.8			48.8
Progression Factor		2.21			0.38				1.00			1.00
Incremental Delay, d2		0.2			0.2				0.2			0.1
Delay (s)		3.5			0.7				48.9			48.9
Level of Service		A			A				D			D
Approach Delay (s)		3.5			0.7			48.9			48.9	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	4.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	36.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	269	886	117	105	512	686	130	440	78	335	559	239
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.0	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.91	0.91			0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.98			1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1610	3328			3509	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	1.00			0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1610	3328			3509	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	274	904	119	107	522	700	133	449	80	342	570	244
RTOR Reduction (vph)	0	8	0	0	0	0	0	0	66	0	0	182
Lane Group Flow (vph)	247	1042	0	0	629	700	133	449	14	342	570	62
Turn Type	Split	NA		Split	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						Free			2			6
Actuated Green, G (s)	32.5	32.5			18.5	110.0	13.0	18.6	18.6	22.4	28.0	28.0
Effective Green, g (s)	32.5	32.5			18.5	110.0	13.0	18.6	18.6	22.4	28.0	28.0
Actuated g/C Ratio	0.30	0.30			0.17	1.00	0.12	0.17	0.17	0.20	0.25	0.25
Clearance Time (s)	4.5	4.5			4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	475	983			590	1583	209	598	267	360	900	402
v/s Ratio Prot	0.15	c0.31			c0.18		0.08	c0.13		c0.19	0.16	
v/s Ratio Perm						0.44			0.01			0.04
v/c Ratio	0.52	1.06			1.07	0.44	0.64	0.75	0.05	0.95	0.63	0.15
Uniform Delay, d1	32.3	38.8			45.8	0.0	46.2	43.5	38.3	43.2	36.4	31.8
Progression Factor	0.57	0.50			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.9	45.4			55.9	0.9	6.2	8.4	0.4	34.1	1.5	0.2
Delay (s)	22.3	64.6			101.7	0.9	52.5	51.9	38.7	77.4	37.9	32.0
Level of Service	C	E			F	A	D	D	D	E	D	C
Approach Delay (s)		56.6			48.6			50.4			48.3	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	51.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	87.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	69	100	1384	1232	27
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	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	75	109	1504	1339	29

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2173	684	1368	0	-	0
Stage 1	1354	-	-	-	-	-
Stage 2	819	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	76	335	259	-	-	-
Stage 1	146	-	-	-	-	-
Stage 2	357	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	44	335	259	-	-	-
Mov Cap-2 Maneuver	44	-	-	-	-	-
Stage 1	146	-	-	-	-	-
Stage 2	207	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.8	1.9	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	259	-	335	-	-
HCM Lane V/C Ratio	0.42	-	0.224	-	-
HCM Control Delay (s)	28.6	-	18.8	-	-
HCM Lane LOS	D	-	C	-	-
HCM 95th %tile Q(veh)	2	-	0.8	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	40	0	1384	1217	64
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	43	0	1504	1323	70

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1960	696	1392	0	-	0
Stage 1	1358	-	-	-	-	-
Stage 2	602	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	98	329	252	-	-	-
Stage 1	145	-	-	-	-	-
Stage 2	464	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	98	329	252	-	-	-
Mov Cap-2 Maneuver	98	-	-	-	-	-
Stage 1	145	-	-	-	-	-
Stage 2	464	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.6	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	252	-	329	-	-
HCM Lane V/C Ratio	-	-	0.132	-	-
HCM Control Delay (s)	0	-	17.6	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.5	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	214	808	200	149	571	781	266	662	113	363	741	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.0	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.91	0.91			0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.97			1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1610	3288			3503	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.95	1.00			0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1610	3288			3503	1583	3433	3539	1583	3433	3539	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	223	842	208	155	595	814	277	690	118	378	772	192
RTOR Reduction (vph)	0	18	0	0	0	0	0	0	83	0	0	114
Lane Group Flow (vph)	201	1054	0	0	750	814	277	690	35	378	772	78
Turn Type	Split	NA		Split	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						Free			2			6
Actuated Green, G (s)	34.7	34.7			22.9	110.0	9.3	21.9	21.9	12.5	25.1	25.1
Effective Green, g (s)	34.7	34.7			22.9	110.0	9.3	21.9	21.9	12.5	25.1	25.1
Actuated g/C Ratio	0.32	0.32			0.21	1.00	0.08	0.20	0.20	0.11	0.23	0.23
Clearance Time (s)	4.5	4.5			4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	507	1037			729	1583	290	704	315	390	807	361
v/s Ratio Prot	0.12	c0.32			c0.21		0.08	c0.19		0.11	c0.22	
v/s Ratio Perm						0.51			0.02			0.05
v/c Ratio	0.40	1.02			1.03	0.51	0.96	0.98	0.11	0.97	0.96	0.22
Uniform Delay, d1	29.5	37.6			43.5	0.0	50.1	43.8	36.1	48.6	41.9	34.5
Progression Factor	0.35	0.38			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.2	31.7			40.9	1.2	40.5	28.9	0.2	37.0	21.5	0.3
Delay (s)	12.6	46.1			84.5	1.2	90.6	72.7	36.2	85.6	63.4	34.8
Level of Service	B	D			F	A	F	E	D	F	E	C
Approach Delay (s)		40.8			41.1			73.3			65.6	
Approach LOS		D			D			E			E	

Intersection Summary			
HCM 2000 Control Delay	53.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	87.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	269	886	117	105	512	686	130	440	78	335	559	239
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.0	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.91	0.91			0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.98			1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1610	3328			3509	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.95	1.00			0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1610	3328			3509	1583	3433	3539	1583	3433	3539	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	274	904	119	107	522	700	133	449	80	342	570	244
RTOR Reduction (vph)	0	8	0	0	0	0	0	0	61	0	0	174
Lane Group Flow (vph)	247	1042	0	0	629	700	133	449	19	342	570	70
Turn Type	Split	NA		Split	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						Free			2			6
Actuated Green, G (s)	32.3	32.3			18.7	110.0	9.6	25.6	25.6	15.4	31.4	31.4
Effective Green, g (s)	32.3	32.3			18.7	110.0	9.6	25.6	25.6	15.4	31.4	31.4
Actuated g/C Ratio	0.29	0.29			0.17	1.00	0.09	0.23	0.23	0.14	0.29	0.29
Clearance Time (s)	4.5	4.5			4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	472	977			596	1583	299	823	368	480	1010	451
v/s Ratio Prot	0.15	c0.31			c0.18		0.04	0.13		c0.10	c0.16	
v/s Ratio Perm						0.44			0.01			0.04
v/c Ratio	0.52	1.07			1.06	0.44	0.44	0.55	0.05	0.71	0.56	0.15
Uniform Delay, d1	32.4	38.9			45.6	0.0	47.7	37.1	32.8	45.2	33.5	29.4
Progression Factor	0.35	0.42			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.0	47.7			52.3	0.9	1.1	2.6	0.3	5.0	0.7	0.2
Delay (s)	15.2	64.2			98.0	0.9	48.7	39.7	33.0	50.1	34.2	29.5
Level of Service	B	E			F	A	D	D	C	D	C	C
Approach Delay (s)		54.8			46.8			40.7			37.9	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	45.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	78.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Appendix J – Driveway Queueing Analysis Worksheets

9: GELLERT BLVD & SERRAMONTE PLAZA

Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	197	305	205	178	877	189	701
v/c Ratio	0.56	0.79	0.31	0.53	0.62	0.68	0.47
Control Delay	21.1	35.6	4.1	29.1	19.8	40.8	20.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.1	35.6	4.1	29.1	19.8	40.8	20.6
Queue Length 50th (ft)	49	101	0	63	100	72	87
Queue Length 95th (ft)	110	#220	38	119	138	#163	124
Internal Link Dist (ft)	1	43			113		599
Turn Bay Length (ft)				220		200	
Base Capacity (vph)	422	474	761	400	1694	295	1560
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.64	0.27	0.45	0.52	0.64	0.45

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

17: GELLERT BLVD & PROJ DRWY (NORTH)

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	19	53	960	929	11
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	21	58	1043	1010	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				414	489	
pX, platoon unblocked	0.93	0.93	0.93			
vC, conflicting volume	1479	343	1022			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1234	6	740			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	98	93			
cM capacity (veh/h)	145	994	798			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	21	58	348	348	348	404	404	214
Volume Left	0	58	0	0	0	0	0	0
Volume Right	21	0	0	0	0	0	0	12
cSH	994	798	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.02	0.07	0.20	0.20	0.20	0.24	0.24	0.13
Queue Length 95th (ft)	2	6	0	0	0	0	0	0
Control Delay (s)	8.7	9.9	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A	A						
Approach Delay (s)	8.7	0.5				0.0		
Approach LOS	A							

Intersection Summary

Average Delay	0.3		
Intersection Capacity Utilization	28.2%	ICU Level of Service	A
Analysis Period (min)	15		

18: GELLERT BLVD & PROJ DRWY (NORTH)

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	53	0	960	887	54
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	58	0	1043	964	59
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				710	193	
pX, platoon unblocked	0.90	0.90	0.90			
vC, conflicting volume	1341	351	1023			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	974	0	619			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	94	100			
cM capacity (veh/h)	223	971	858			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	58	348	348	348	386	386	252
Volume Left	0	0	0	0	0	0	0
Volume Right	58	0	0	0	0	0	59
cSH	971	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.06	0.20	0.20	0.20	0.23	0.23	0.15
Queue Length 95th (ft)	5	0	0	0	0	0	0
Control Delay (s)	8.9	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A						
Approach Delay (s)	8.9	0.0			0.0		
Approach LOS	A						

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	28.3%	ICU Level of Service	A
Analysis Period (min)	15		

9: GELLERT BLVD & SERRAMONTE PLAZA

Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	261	273	279	162	944	206	711
v/c Ratio	0.77	0.74	0.40	0.49	0.65	0.73	0.46
Control Delay	32.4	30.8	3.9	29.6	20.4	45.2	21.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.4	30.8	3.9	29.6	20.4	45.2	21.3
Queue Length 50th (ft)	78	90	0	55	101	77	86
Queue Length 95th (ft)	157	166	41	124	170	#209	143
Internal Link Dist (ft)	1	43			113		599
Turn Bay Length (ft)				220		200	
Base Capacity (vph)	518	585	952	378	1644	284	1605
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.47	0.29	0.43	0.57	0.73	0.44

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

17: GELLERT BLVD & PROJ DRWY (NORTH)

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	36	98	1062	944	20
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	39	107	1154	1026	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				414	489	
pX, platoon unblocked	0.93	0.93	0.93			
vC, conflicting volume	1635	353	1048			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1407	23	773			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	96	86			
cM capacity (veh/h)	104	971	776			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	39	107	385	385	385	410	410	227
Volume Left	0	107	0	0	0	0	0	0
Volume Right	39	0	0	0	0	0	0	22
cSH	971	776	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.04	0.14	0.23	0.23	0.23	0.24	0.24	0.13
Queue Length 95th (ft)	3	12	0	0	0	0	0	0
Control Delay (s)	8.9	10.4	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A	B						
Approach Delay (s)	8.9	0.9				0.0		
Approach LOS	A							

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	30.8%	ICU Level of Service	A
Analysis Period (min)	15		

18: GELLERT BLVD & PROJ DRWY (NORTH)

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	50	0	1062	919	72
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	54	0	1154	999	78
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				710	193	
pX, platoon unblocked	0.89	0.89	0.89			
vC, conflicting volume	1423	372	1077			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1061	0	675			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	94	100			
cM capacity (veh/h)	196	970	816			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	54	385	385	385	400	400	278
Volume Left	0	0	0	0	0	0	0
Volume Right	54	0	0	0	0	0	78
cSH	970	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.06	0.23	0.23	0.23	0.24	0.24	0.16
Queue Length 95th (ft)	4	0	0	0	0	0	0
Control Delay (s)	8.9	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A						
Approach Delay (s)	8.9	0.0			0.0		
Approach LOS	A						

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	29.4%	ICU Level of Service	A
Analysis Period (min)	15		

9: GELLERT BLVD & SERRAMONTE PLAZA

Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	198	282	205	177	1175	189	1009
v/c Ratio	0.61	0.78	0.32	0.52	0.75	0.70	0.63
Control Delay	23.4	34.9	4.2	28.7	22.5	42.1	22.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.4	34.9	4.2	28.7	22.5	42.1	22.9
Queue Length 50th (ft)	51	93	0	61	144	70	132
Queue Length 95th (ft)	112	#196	38	119	199	#163	#192
Internal Link Dist (ft)	1	43			113		599
Turn Bay Length (ft)				220		200	
Base Capacity (vph)	403	458	743	387	1635	285	1600
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.62	0.28	0.46	0.72	0.66	0.63

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

17: GELLERT BLVD & PROJ DRWY (NORTH)

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	53	59	1230	1151	18
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	58	64	1337	1251	20
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				414	489	
pX, platoon unblocked	0.87	0.86	0.86			
vC, conflicting volume	1835	427	1271			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1236	0	727			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	94	91			
cM capacity (veh/h)	134	928	746			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	58	64	446	446	446	500	500	270
Volume Left	0	64	0	0	0	0	0	0
Volume Right	58	0	0	0	0	0	0	20
cSH	928	746	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.06	0.09	0.26	0.26	0.26	0.29	0.29	0.16
Queue Length 95th (ft)	5	7	0	0	0	0	0	0
Control Delay (s)	9.1	10.3	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A	B						
Approach Delay (s)	9.1	0.5				0.0		
Approach LOS	A							

Intersection Summary

Average Delay	0.4		
Intersection Capacity Utilization	32.6%	ICU Level of Service	A
Analysis Period (min)	15		

18: GELLERT BLVD & PROJ DRWY (NORTH)

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	34	0	1230	1135	57
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	37	0	1337	1234	62
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				710	193	
pX, platoon unblocked	0.84	0.84	0.84			
vC, conflicting volume	1710	442	1296			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1163	0	667			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	96	100			
cM capacity (veh/h)	157	907	768			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	37	446	446	446	493	493	309
Volume Left	0	0	0	0	0	0	0
Volume Right	37	0	0	0	0	0	62
cSH	907	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.04	0.26	0.26	0.26	0.29	0.29	0.18
Queue Length 95th (ft)	3	0	0	0	0	0	0
Control Delay (s)	9.1	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A						
Approach Delay (s)	9.1	0.0			0.0		
Approach LOS	A						

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	33.2%	ICU Level of Service	A
Analysis Period (min)	15		

9: GELLERT BLVD & SERRAMONTE PLAZA

Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	263	255	279	161	1280	206	1057
v/c Ratio	0.80	0.71	0.41	0.50	0.81	0.75	0.64
Control Delay	35.9	29.9	4.0	30.0	25.9	47.2	24.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.9	29.9	4.0	30.0	25.9	47.2	24.1
Queue Length 50th (ft)	79	82	0	53	154	75	134
Queue Length 95th (ft)	159	151	41	123	#294	#209	#255
Internal Link Dist (ft)	1	43			113		599
Turn Bay Length (ft)				220		200	
Base Capacity (vph)	509	573	930	362	1579	275	1658
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.45	0.30	0.44	0.81	0.75	0.64

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

17: GELLERT BLVD & PROJ DRWY (NORTH)

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	69	100	1384	1232	27
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	75	109	1504	1339	29
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				414	489	
pX, platoon unblocked	0.88	0.85	0.85			
vC, conflicting volume	2073	461	1368			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1200	0	803			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	92	84			
cM capacity (veh/h)	132	919	692			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	75	109	501	501	501	536	536	297
Volume Left	0	109	0	0	0	0	0	0
Volume Right	75	0	0	0	0	0	0	29
cSH	919	692	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.08	0.16	0.29	0.29	0.29	0.32	0.32	0.17
Queue Length 95th (ft)	7	14	0	0	0	0	0	0
Control Delay (s)	9.3	11.2	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A	B						
Approach Delay (s)	9.3	0.8				0.0		
Approach LOS	A							

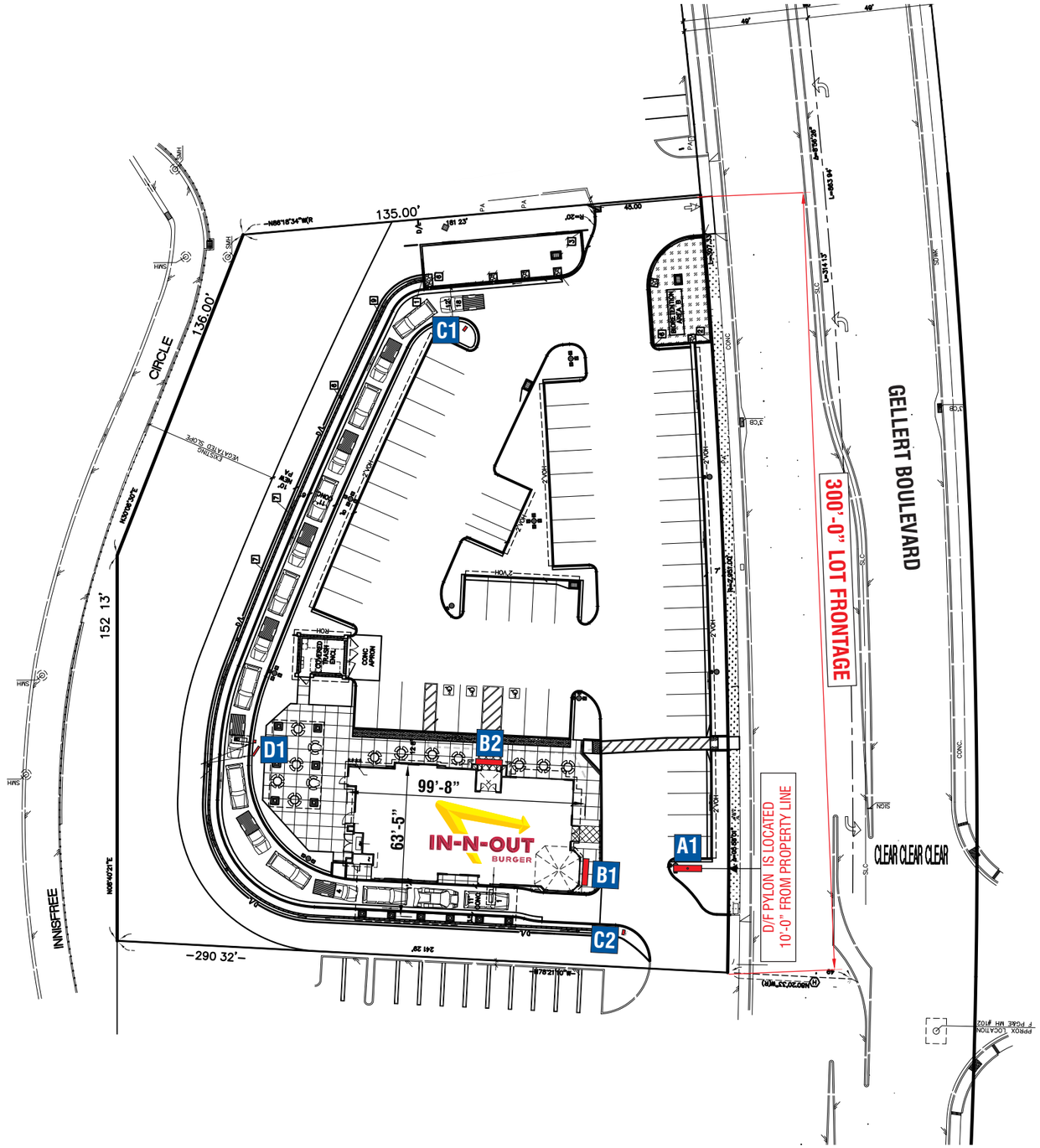
Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		

18: GELLERT BLVD & PROJ DRWY (NORTH)

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	40	0	1384	1217	64
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	43	0	1504	1323	70
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				710	193	
pX, platoon unblocked	0.84	0.83	0.83			
vC, conflicting volume	1859	476	1392			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1131	0	747			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	95	100			
cM capacity (veh/h)	166	898	710			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	43	501	501	501	529	529	334
Volume Left	0	0	0	0	0	0	0
Volume Right	43	0	0	0	0	0	70
cSH	898	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.05	0.29	0.29	0.29	0.31	0.31	0.20
Queue Length 95th (ft)	4	0	0	0	0	0	0
Control Delay (s)	9.2	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A						
Approach Delay (s)	9.2	0.0			0.0		
Approach LOS	A						

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	34.9%	ICU Level of Service	A
Analysis Period (min)	15		



KEY

A1 D/F PYLON SIGN 3'-0" x 9'-0" CABINET @ 22'-0" OAH (43.2 SQ. FT.)

B1 S/F 6'-3 1/8" X 10'-6 1/8" INTERNALLY ILLUMINATED WALL SIGN (27.9 SQ. FT.)

B2 S/F 6'-3 1/8" X 10'-6 1/8" INTERNALLY ILLUMINATED WALL SIGN (27.9 SQ. FT.)

C1 D/F INTERNALLY ILLUMINATED DIRECTIONAL DISPLAY ("DRIVE THRU")

C2 D/F INTERNALLY ILLUMINATED DIRECTIONAL DISPLAY ("THANK YOU/DO NOT ENTER")

D1 S/F INTERNALLY ILLUMINATED MENU BOARD

PER CODE:
SIGNAGE IS BASED ON LINEAL FOOT OF LOT FRONTAGE.
LOT FRONTAGE W/ A LINEAL FOOT OF 250'-0" OR MORE IS ALLOWED 125 SQ. FT. OF SIGNAGE.

TOTAL SIGNAGE SQ. FT. NOT TO EXCEED 125 SQ. FT.

SQUARE FOOTAGE CALCULATIONS

SIGN TYPE	QUANTITY (UNITS)	SQ. FT. (PER UNIT)	SQ. FT. (TOTAL)
3'-0" X 9'-0" CABINET PYLON SIGN	1	43.2	43.2
18" CHANNEL LETTER WALL SIGN	2	27.9	55.8
6'-0" MENU BOARD	1	19.9	19.9
TOTAL AGGREGATE SQUARE FOOTAGE			118.9

NORTH

SITE PLAN

SCALE: 1" = 50'-0"

CNP SIGNS & GRAPHICS
4530 Mission Gorge Place
San Diego, CA 92120
Tel: 619.283.2191
Fax: 619.283.9503
Web: www.cnpsigns.com

CLIENT
IN-N-OUT BURGER

PROJECT
IN-N-OUT BURGER #XXX

LOCATION
372 GILBERT BLVD.
DALY CITY, CA 94105

SHEET TITLE
SITE PLAN & SIGN KEY

ACCT. REP.
GARRY WILCOX

DESIGNER
GERALD MCCLUNG

DATE 10/09/14 SCALE NOTED

CUSTOMER APPROVAL

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DWG#	PROJECT #
14-592	315741
REVISION NO. 1	WO#

REVISIONS

1	8/20/15	TT	7		
2			8		
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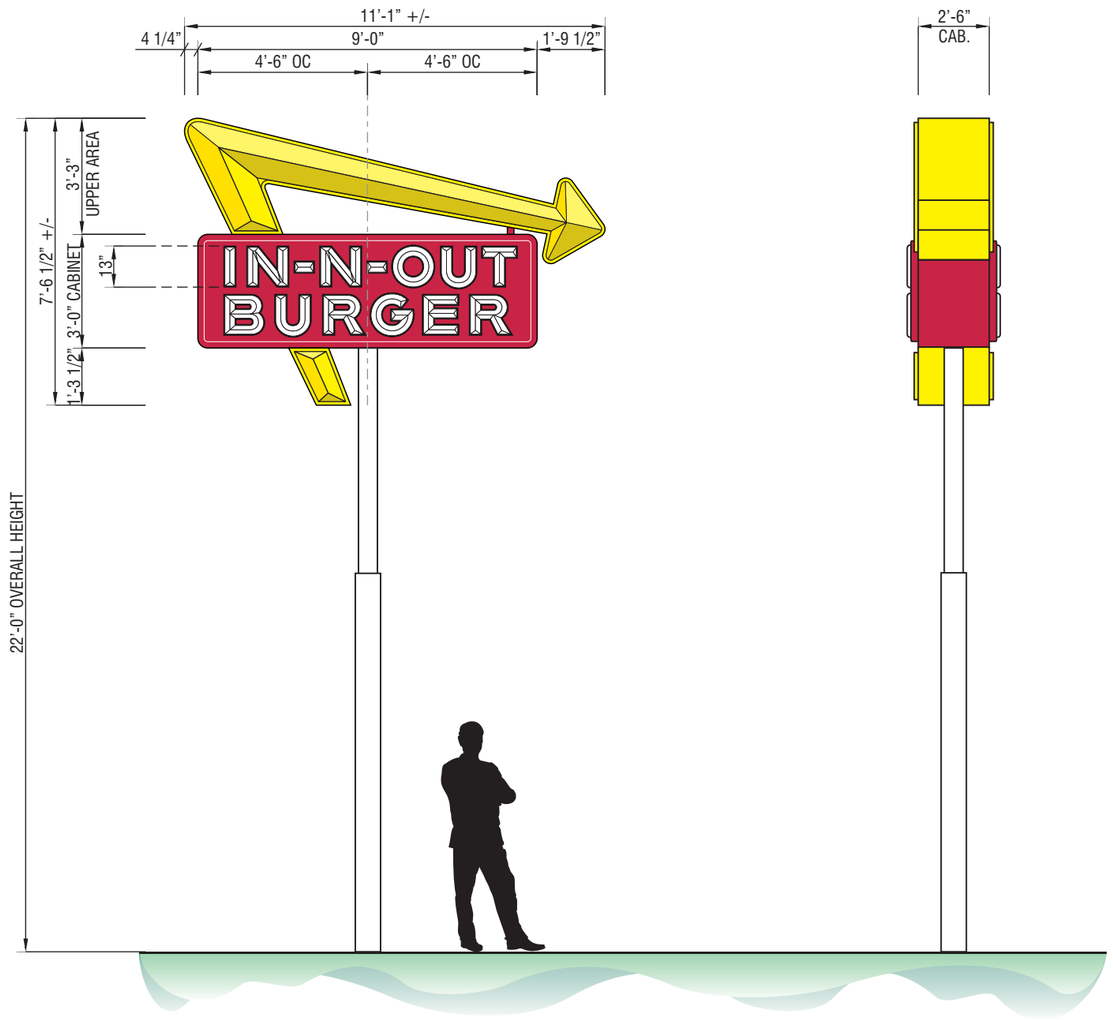
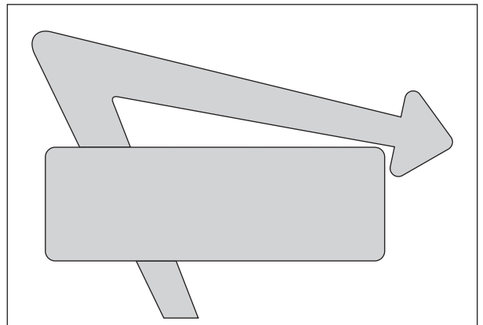
KEY NO.



ELEVATION VIEW

END VIEW



NOTE: GRAY INDICATES CALCULATED AREA

SQUARE FOOTAGE

UPPER ARROW:	14.9 SQ FT
LETTERS:	26.8 SQ FT
LOWER ARROW:	1.5 SQ FT

43.2 SQUARE FEET TOTAL AREA

SIGN SPECIFICATIONS:

D/F INTERNALLY ILLUMINATED MONUMENT SIGN W/ ALUMINUM CABINET & ARROW W/ FORMED FACES. COLORS ARE PER BELOW:

ARROW: FABRICATED CHANNEL WITH RETURNS PAINTED TO MATCH PMS YELLOW "C" W/ GLOSS FINISH. FORMED YELLOW #2037 ACRYLIC PLASTIC FACES WITH 1" YELLOW TRIMCAP EDGES. HO TRIPHOSPHORUS LAMP ILLUMINATION.

CABINET: FABRICATED CABINET & RETAINERS PAINTED TO INO RED W/ GLOSS FINISH. FORMED RED #211-1 ACRYLIC PLASTIC FACES W/ WHITE LETTERS. HO TRIPHOSPHORUS LAMP ILLUMINATION.

POLE: STANDARD PIPE AS REQ'D/ PAINT TO MATCH DUNN EDWARDS 'BONE CHINA WHITE'.

D/F INTERNALLY ILLUMINATED 3'-0" X 9'-0" PYLON SIGN @ 22'-0" OAH

SCALE: 1/4" = 1'-0"

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CLIENT
IN-N-OUT BURGER

PROJECT
IN-N-OUT BURGER #XXX

LOCATION
372 GILBERT BLVD.
DALY CITY, CA 94105

SHEET TITLE
GROUND SIGN

ACCT. REP.
GARRY WILCOX

DESIGNER
GERALD MCCLUNG

DATE 10/09/14
SCALE NOTED

CUSTOMER APPROVAL

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REVISIONS

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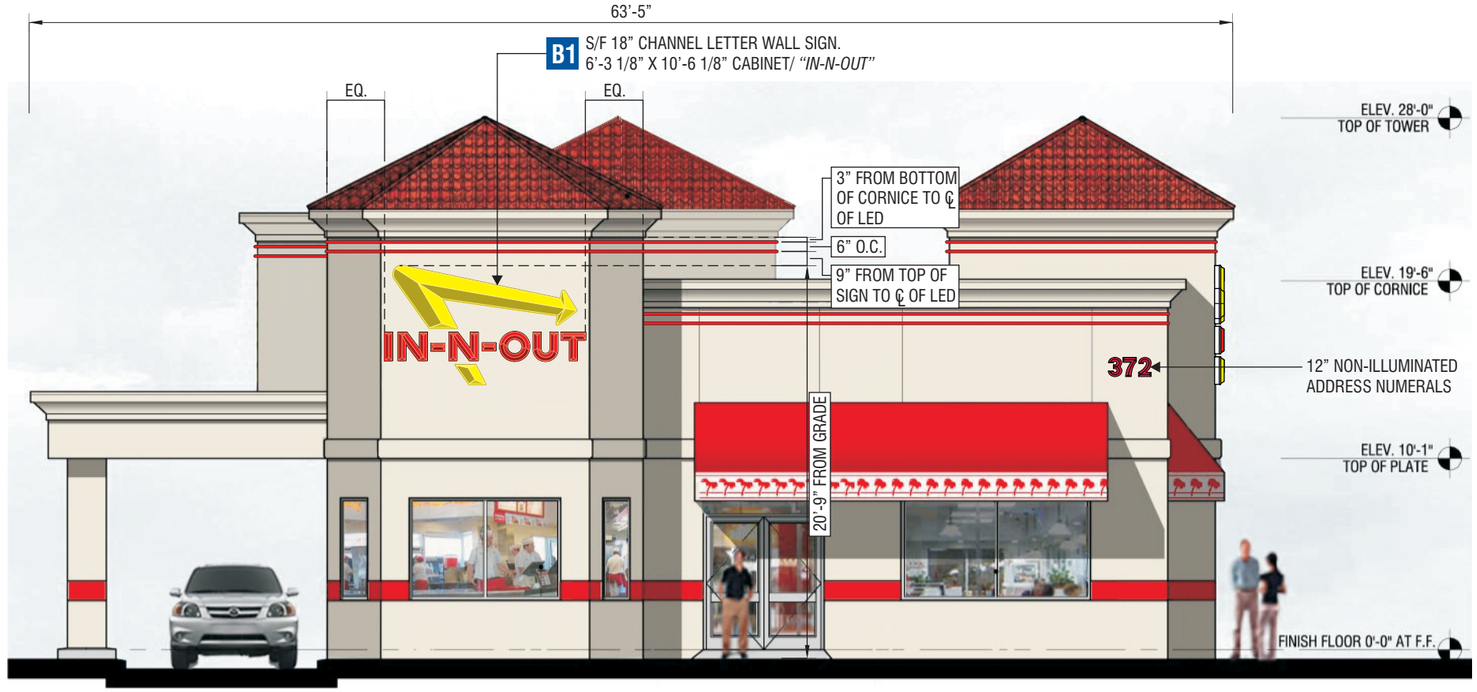
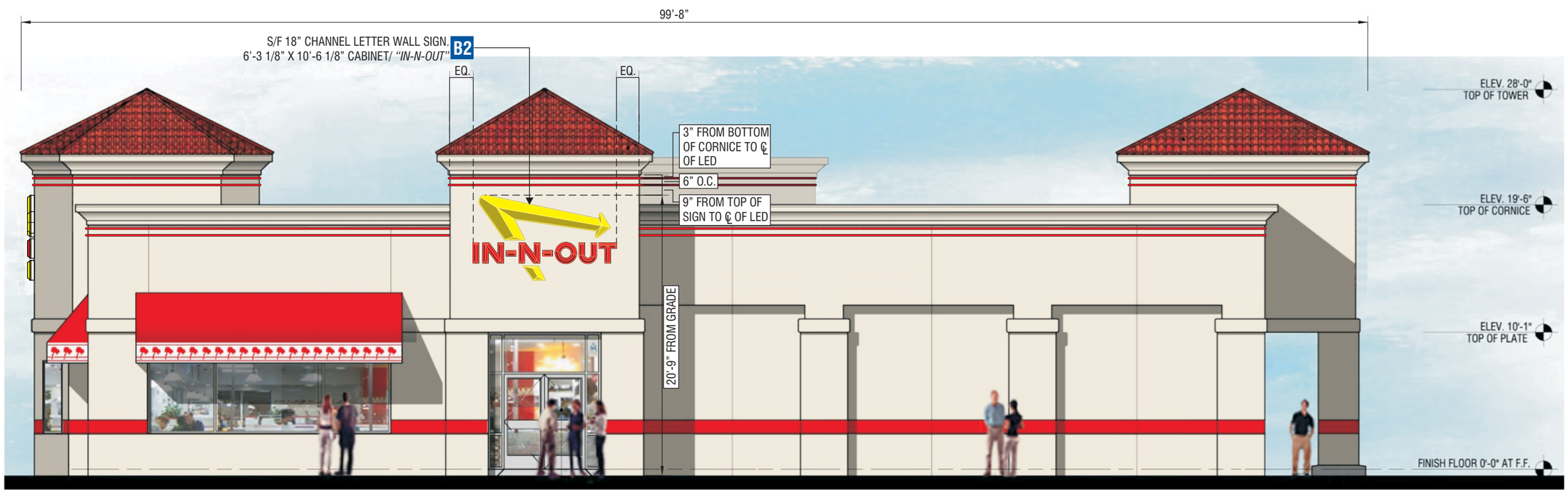
KEY NO.
A1



EAST/FRONT ELEVATION

SCALE: 1/8" = 1'-0"



NORTH/RIGHT ELEVATION

SCALE: 1/8" = 1'-0"

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CLIENT
IN-N-OUT BURGER

PROJECT
IN-N-OUT BURGER #XXX

LOCATION
372 GILBERT BLVD.
DALY CITY, CA 94105

SHEET TITLE
ELEVATIONS

ACCT. REP.
GARRY WILCOX

DESIGNER
GERALD MCCLUNG

DATE 10/09/14
SCALE NOTED

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REVISION NO. 1	WO#

REVISIONS

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KEY NO.
B1 B2

WEST/REAR ELEVATION

SCALE: 1/8" = 1'-0"

SOUTH/LEFT ELEVATION

SCALE: 1/8" = 1'-0"

CNP SIGNS & GRAPHICS
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CLIENT
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DALY CITY, CA 94105

SHEET TITLE
ELEVATIONS

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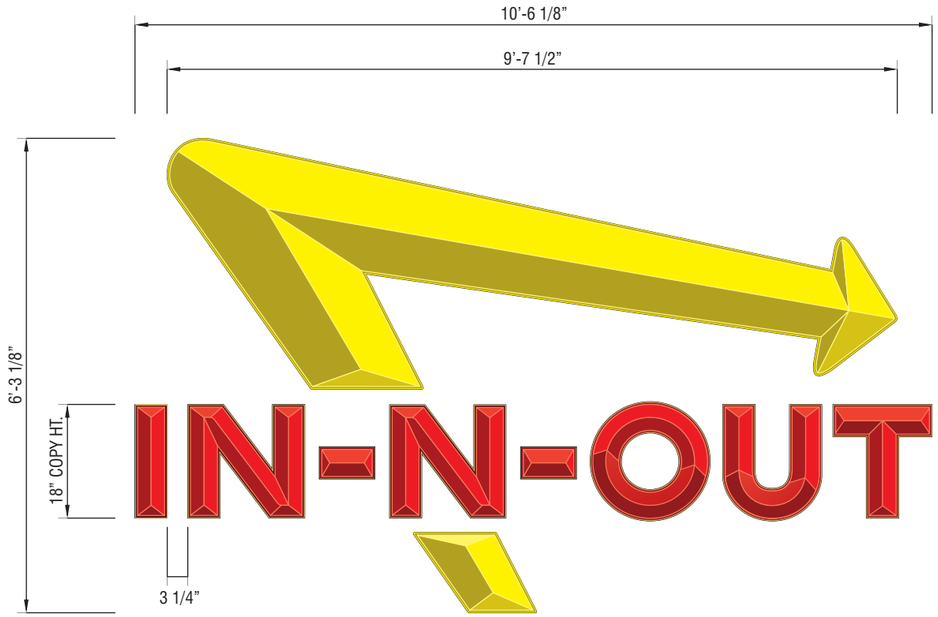
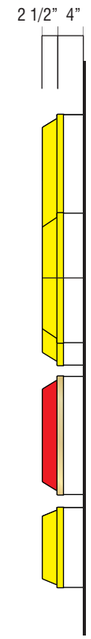
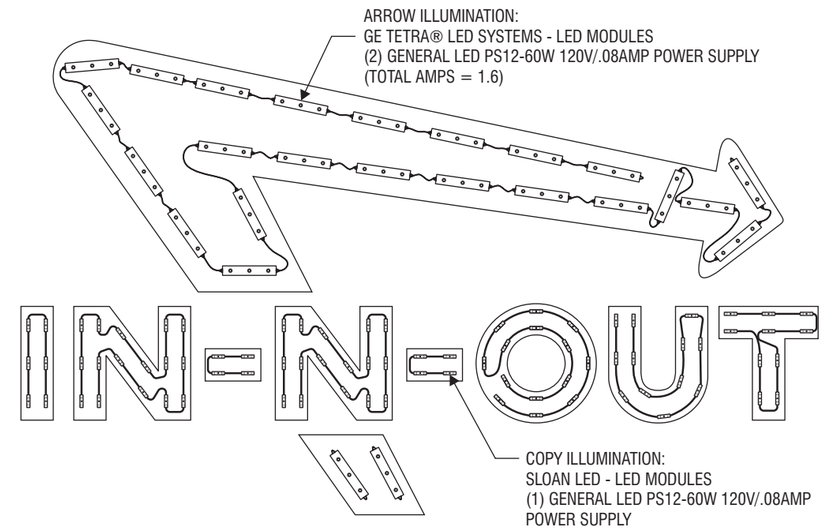


ELEVATION VIEW



SIDE VIEW

NOTES:
ALL LIGHTING COMPONENTS TO BE U.L. LISTED WITH DISCONNECT SWITCH @ POWER SUPPLY LOCATION (REMOTE). SIGNS PROVIDED WITH 3-WIRE 14 GAUGE JACK CABLE.



LIGHTING COMPONENT DETAIL

S/F 6' X 10' ILLUMINATED WALL SIGN

SCALE: 1/2" = 1'-0"

SIGN SPECIFICATIONS:

S/F INTERNALLY ILLUMINATED ALUMINUM CHANNEL LETTER SIGN DISPLAY WITH FORMED COPY & ARROW. COLORS/ MATERIAL PER BELOW:

ARROW:
FABRICATED CHANNEL WITH RETURNS PAINTED TO MATCH "BONE CHINA" SP 514 BY DUNN EDWARDS W/ SATIN FINISH. FORMED YELLOW #2037 ACRYLIC FACES. LED ILLUMINATION (SEE ABOVE).

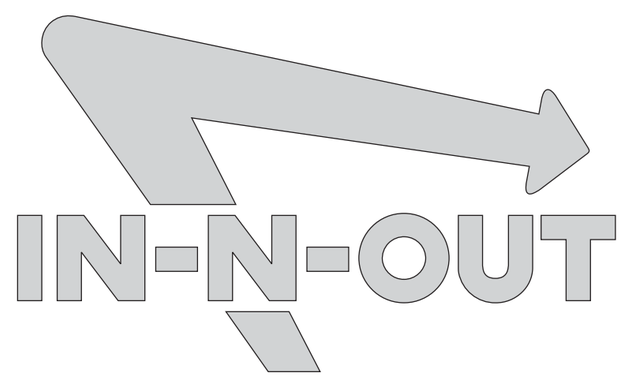
COPY:
FABRICATED CHANNEL WITH RETURNS PAINTED TO MATCH "BONE CHINA" SP 514 BY DUNN EDWARDS W/ SATIN FINISH. FORMED RED #211-1 ACRYLIC FACES WITH 1" GOLD TRIMCAP. RED LED ILLUMINATION (SEE ABOVE).

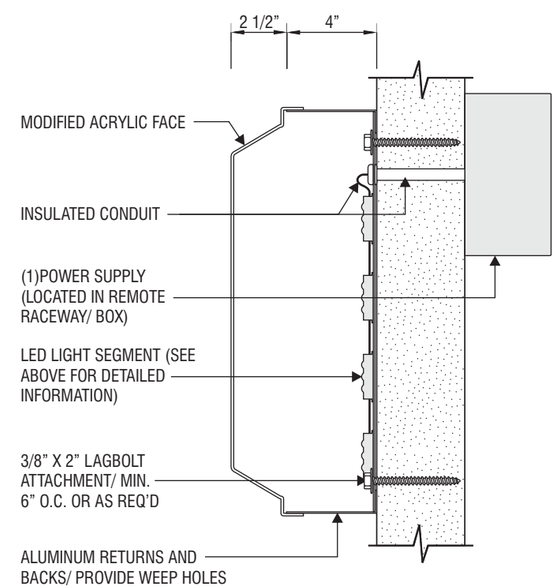
CHANNEL LETTERS TO BE 4" DEEP/ ALL SIGNS TO BE INSTALLED ONTO BUILDING AS REQUIRED.

SQUARE FOOTAGE CALCULATIONS:

UPPER ARROW:	15.6 S.F.
COPY:	11.0 S.F.
LOWER ARROW:	1.3 S.F.
TOTAL SIGN AREA:	**27.9 S.F.**

NOTE: GRAY INDICATES CALCULATED AREA





SECTION DETAIL (NOT TO SCALE)

CNP SIGNS & GRAPHICS
4530 Mission Gorge Place
San Diego, CA 92120
Tel: 619.283.2191
Fax: 619.283.9503
Web: www.cnpsigns.com

CLIENT
IN-N-OUT BURGER

PROJECT
IN-N-OUT BURGER #XXX

LOCATION
372 GILBERT BLVD.
DALY CITY, CA 94105

SHEET TITLE
WALL SIGNS

ACCT. REP.
GARRY WILCOX

DESIGNER
GERALD MCCLUNG

DATE 10/09/14
SCALE NOTED

CUSTOMER APPROVAL

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DWG# 14-592	PROJECT # 315741
REVISION NO. 1	WO#

REVISIONS

1	8/20/15	TT	7		
2			8		
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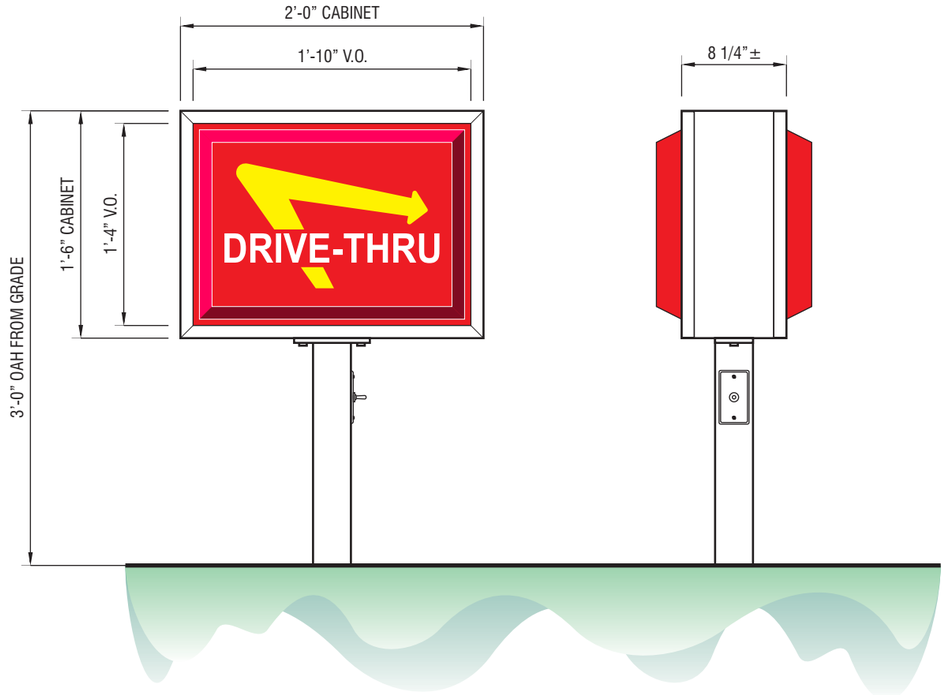
4			10		
5			11		
6			12		

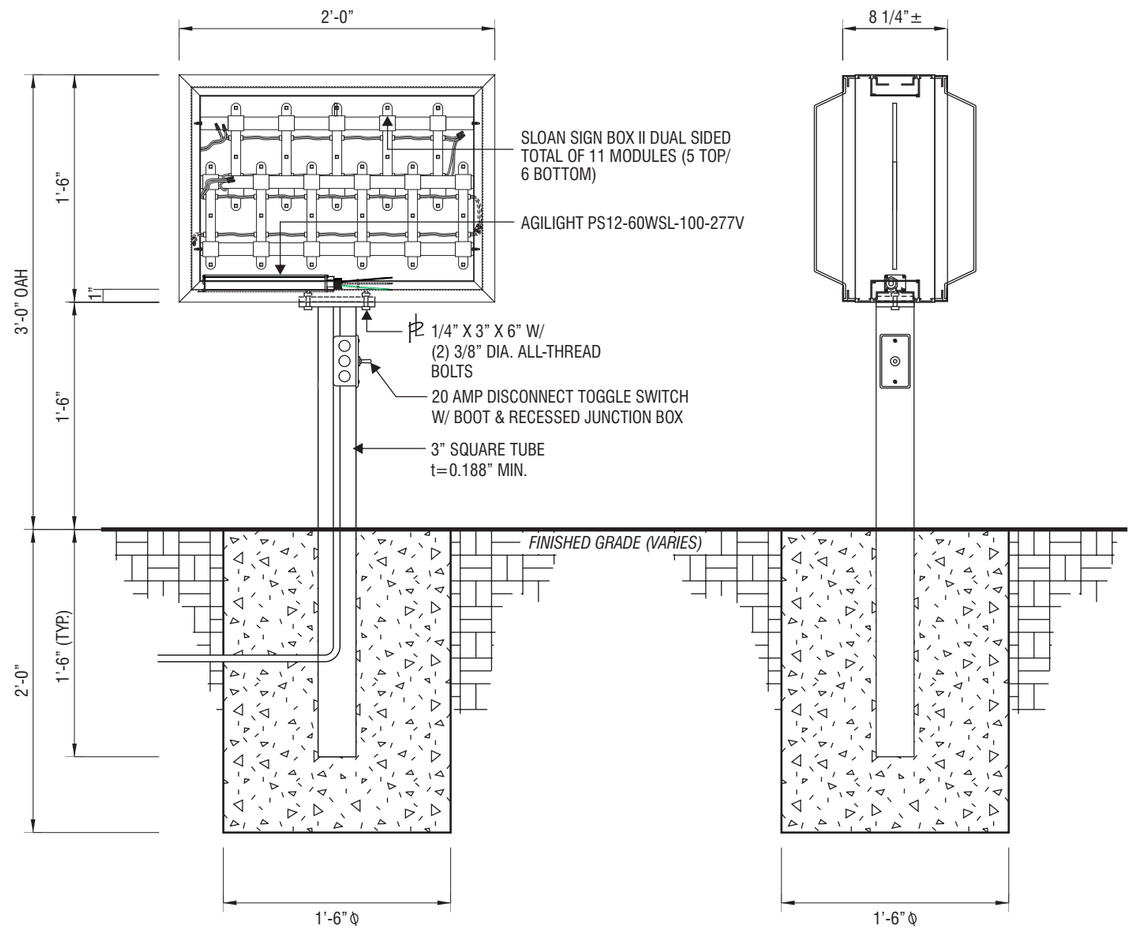
KEY NO.
B1 B2



ELEVATION VIEW *SIDE VIEW*

D/F INTERNALLY ILLUMINATED DIRECTIONAL SIGNS

SCALE: 1" = 1'-0"



ELEVATION VIEW *SIDE VIEW*

C1

SIDE A *SIDE B*

C2

SIDE A *SIDE B*

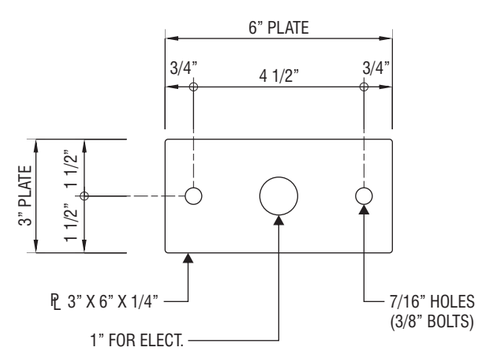


PLATE DETAIL

SCALE: 3" = 1'-0"

SIGN SPECIFICATIONS:

D/F INTERNALLY ILLUMINATED ALUMINUM DIRECTIONAL CABINET W/ FORMED FACES & ARROW. SIGN CABINET, RETAINERS PAINTED TO MATCH "BONE CHINA" SP 514 BY DUNN EDWARDS W/ SATIN FINISH. FORMED ACRYLIC PLASTIC FACES TO HAVE SECOND-SURFACE PAINTED GRAPHICS. BACKGROUND COLOR TO BE PAINTED INO 443 RED (25% CLEAR). LETTER COLOR TO BE PAINTED WHITE. ARROW TO BE PAINTED INO 413 YELLOW (25% CLEAR) - *AS APPLIES*. SIGN CABINETS TO BE ILLUMINATED W/ COMPACT FLUORESCENT LIGHT FIXTURE.

NOTES: 120V POWER. SIGN TO BE UL LISTED WITH APPROVED DISCONNECT SWITCH. GROUNDING AND BONDING IN ACCORDANCE WITH ARTICLE 600 NEC.

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CLIENT
IN-N-OUT BURGER

PROJECT
IN-N-OUT BURGER #XXX

LOCATION
372 GILBERT BLVD.
DALY CITY, CA 94105

SHEET TITLE
DIRECTIONALS

ACCT. REP.
GARRY WILCOX

DESIGNER
GERALD MCCLUNG

DATE 10/09/14 SCALE NOTED

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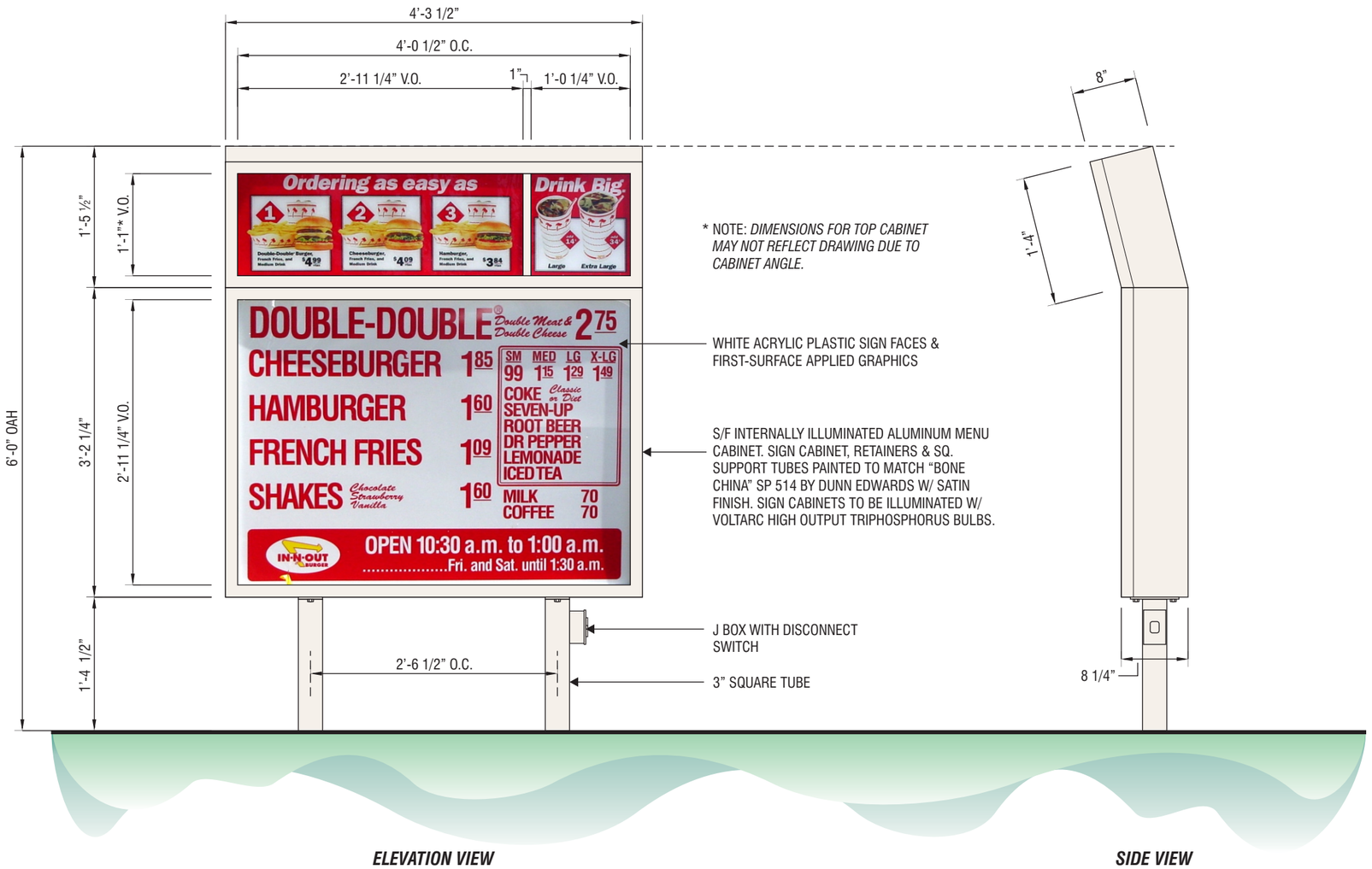
KEY NO.
C1 C2



ELEVATION VIEW

SIDE VIEW

S/F INTERNALLY ILLUMINATED MENU BOARD @ 6'-7 ½" OAH (19.9 SQ. FT.)

SCALE: 3/4" = 1'-0"

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CLIENT
IN-N-OUT BURGER

PROJECT
IN-N-OUT BURGER #XXX

LOCATION
372 GILBERT BLVD.
DALY CITY, CA 94105

SHEET TITLE
MENU BOARD

ACCT. REP.
GARRY WILCOX

DESIGNER
GERALD MCCLUNG

DATE 10/09/14
SCALE NOTED

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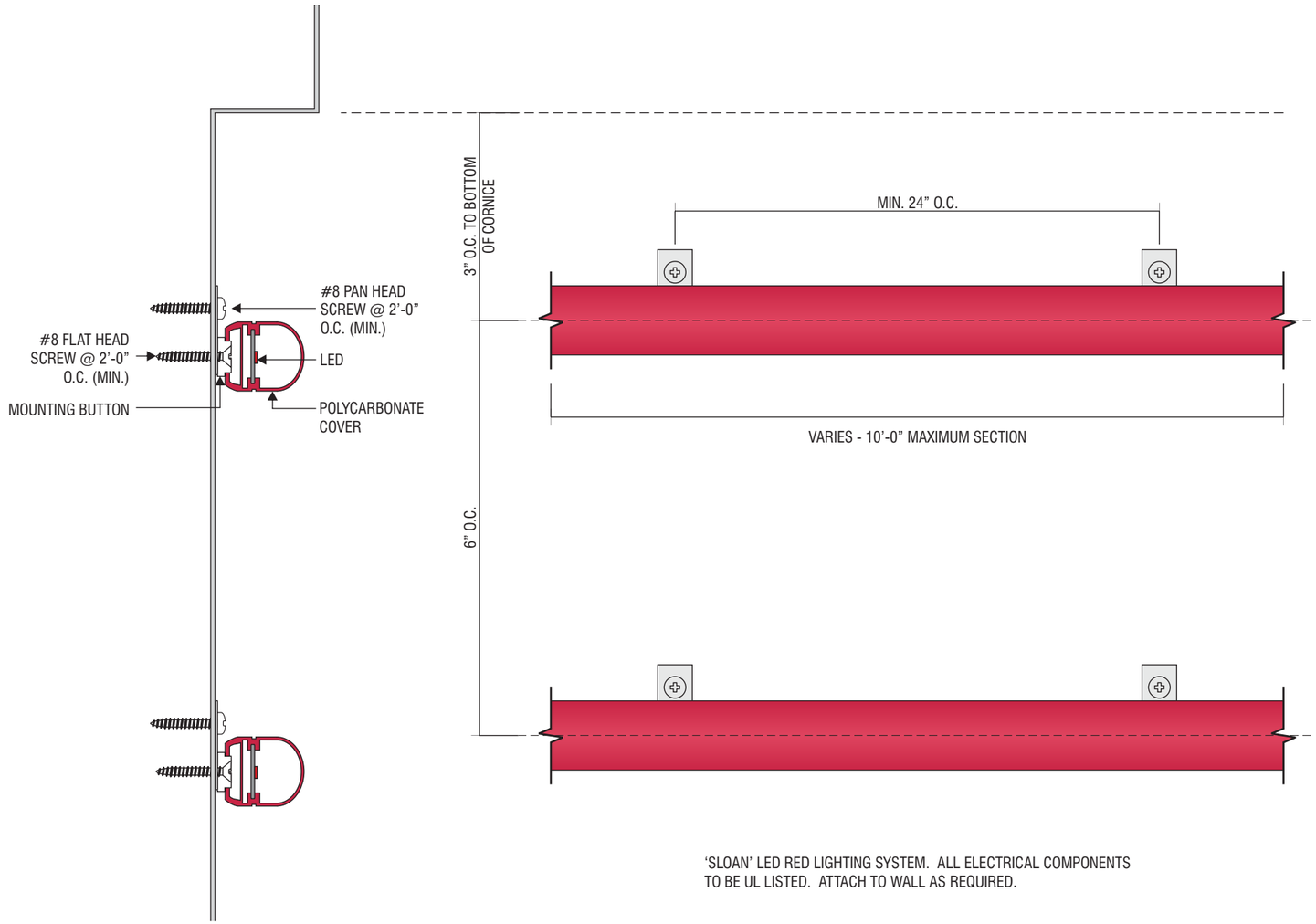
KEY NO.
D1



'SLOAN' LED RED LIGHTING SYSTEM. ALL ELECTRICAL COMPONENTS TO BE UL LISTED. ATTACH TO WALL AS REQUIRED.

LED BORDER

HALF SIZE

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IN-N-OUT BURGER

PROJECT
IN-N-OUT BURGER #XXX

LOCATION
372 GILBERT BLVD.
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SHEET TITLE
BORDER LED DETAIL

ACCT. REP.
GARRY WILCOX

DESIGNER
GERALD MCCLUNG

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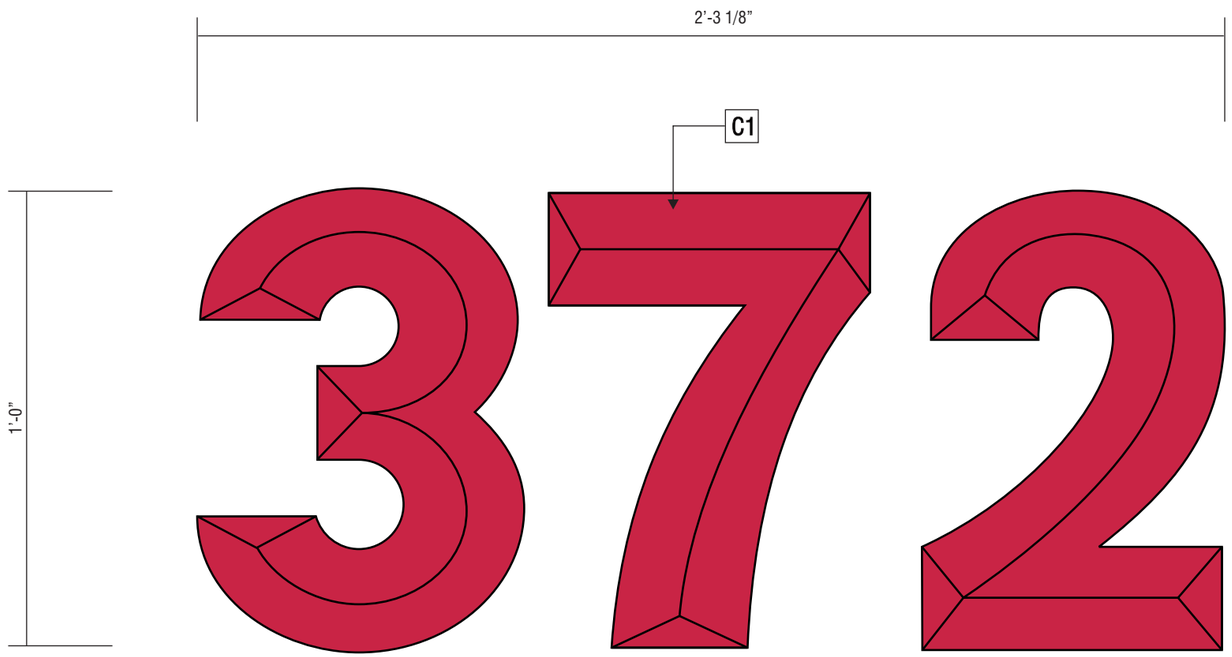
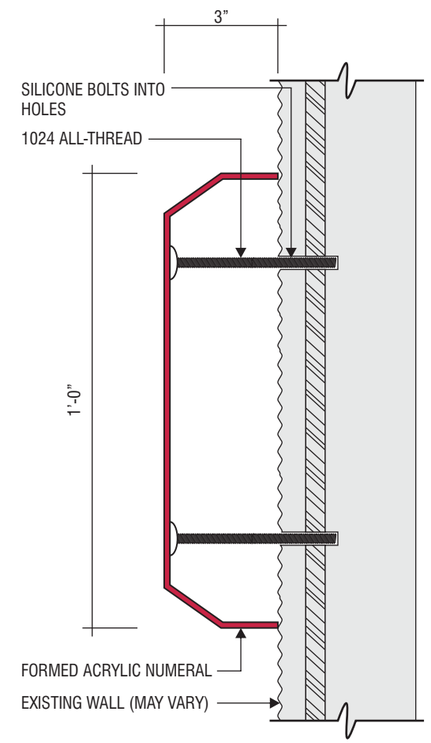
KEY NO.

COLOR SPECIFICATIONS	
C1	RED ACRYLIC #211-1





NON-ILLUMINATED 12" ADDRESS NUMERALS

SCALE: 3" = 1'-0"

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CLIENT
IN-N-OUT BURGER

PROJECT
IN-N-OUT BURGER #XXX

LOCATION
372 GILBERT BLVD.
DALY CITY, CA 94105

SHEET TITLE
NON-ILLUMINATED ADDRESS NUMERALS

ACCT. REP.
GARRY WILCOX

DESIGNER
GERALD MCCLUNG

DATE 10/09/14 SCALE NOTED

CUSTOMER APPROVAL

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KEY NO.

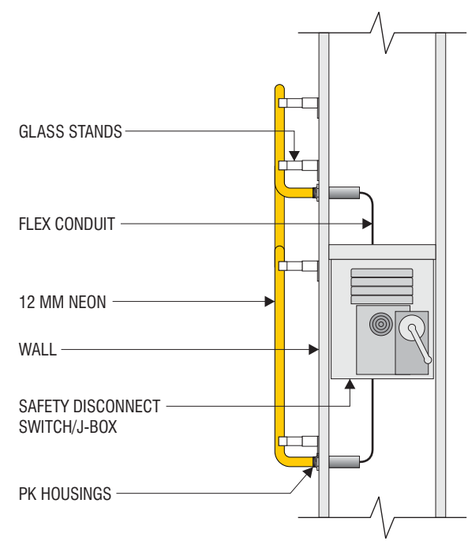
INTERIOR NEON SIGN

SCALE: 1 1/2" = 1'-0"

NOTE: DISPLAY TO BE CENTERED TOP TO BOTTOM & LEFT TO RIGHT

INSTALLED NEON DISPLAY (TYP.)

NOTE: NEON SIGN IS ORIENTED FOR INTERIOR VISIBILITY ONLY



NEON DETAIL

SCALE: NTS

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CLIENT
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PROJECT
IN-N-OUT BURGER #XXX

LOCATION
372 GILBERT BLVD.
DALY CITY, CA 94105

SHEET TITLE
INTERIOR NEON DISPLAY

ACCT. REP.
GARRY WILCOX

DESIGNER
GERALD MCCLUNG

DATE 10/09/14
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KEY NO.

City Council Meeting Agenda Report

Item # _____

Meeting Date: February 22, 2016

Subject: **Use Permit UPR-11-15-11833 — Rental Car Defueling Facility at 2600 Geneva Avenue (Cow Palace Parking Lot)**

Recommended Action

Approve Use Permit UPR-11-15-11833.

Planning Commission Discussion

On February 2, 2016, the Planning Commission voted 4-1 to recommend that the City Council approve Use Permit UPR-11-15-11833. Comments provided at the Planning Commission meeting are provided in bold italics.

Project Description

The applicant, Enterprise Rent-A-Car, has submitted an application to use an existing warehouse on the Cow Palace site to remove gasoline from vehicles no longer being used for rental (see Attachment A –Site Location). The proposed defueling would occur in an approximately 2,600 square foot warehouse space located on the southerly portion the Cow Palace property, where Enterprise leases an approximately seven-acre area from the Cow Palace for the storage and defueling facility (see Attachment B – Project Plans).

Use Permit

Although vehicle storage is allowed in the C-2 Heavy Commercial district without the requirement for a use permit, staff has determined that removing fuel is subject to use permit approval. The purpose of the use permit is to ensure that the proposed use will not adversely affect surrounding properties, public rights-of-way, or public infrastructure.

The proposed use would involve the removal of gasoline from returned rental vehicles that are being stored on the subject property and awaiting sale at off-site locations. At any given time, as many as 400 vehicles would be stored on the subject property and, of those, approximately 45 to 50 percent (180 to 200 vehicles) 0would be defueled for sale purposes. As indicated in the project plans, as many as five vehicles could be defueled at any given time. Defueling would occur within a bermed fuel spill containment area and fuel removed from vehicles would be stored in a 500 gallon receiving tank that would be removed from the site by truck once full.

The primary use of the property for both storage and defueling would occur in the autumn months after the summer peak vehicle rental months, i.e., October through December. All access to the site associated with the proposed use would be from Martin Street, with vehicle delivery to the site occurring primarily between the hours of 8:00 AM and 5:00 PM, Monday through Friday. According to the applicant, vehicles would be delivered after 5:00 PM on rare occasion. Similarly, defueling operations would occur during the 8:00 AM and 5:00 PM time period.

The North County Fire Authority (NCFA), Department of Water and Wastewater Resource (DWWR), and City Engineer have reviewed the proposal to ensure the proposed fuel removal and storage will not be detrimental to surrounding uses or to the City storm drain system in the event of a spill. Consequently, the City Engineer has added a Condition of Approval requiring that the gasoline receiving tank be stored within the containment area and that the size of the containment area be greater than the total volume of the receiving tank.

- ***Rachel Garibaldi, resident of 557 Alexis Circle (Bay Ridge) expressed concern about the safety of having 500-gallon tanks associated with the subject use so close to residents. She added that access to site is provided at location across from the Boys and Girls Club and expressed concern about the proposal's interface with children crossing the street with their parents.***

- ***Herb Ng, resident of 91 Parkside Avenue, indicated that transport trucks coming up Rio Verde Street did not provide a safe environment for residents.***

- ***Jack Tan, resident of 360 Rio Verde Street, provided pictures to the Planning Commission showing vehicle transport vehicles associate with the proposed use off-loading in Martin Street.***

- ***Thomas Cheng, resident of 378 Rio Verde Street, indicated that the use has been operating for a year, that it has operated in the early morning hours, and oftentimes trucks associated with the use block area crosswalks. He said that he is also afraid that the gasoline storage use at the site will contaminate the soil.***

- ***Cheng Cheng U, resident of 346 Rio Verde Street, expressed her opposition to the project because of the gasoline storage, which she feared could ignite or cause other health problems.***

- ***Doug Hattori, representing Enterprise Rent-A-Car, indicated that the use of the facility as a vehicle storage lot had been on-going for about a year because the storage was not subject to a use permit and that the Cow Palace had indicated to Enterprise that its defueling operation was under the State authority. He said that Enterprise ceased the defueling once informed by the City that a use permit was required. He added that the transport trucks had been using Rio Verde Street to exit toward Geneva Avenue, but the City informed Enterprise that this was not allowed. He indicated that unloading vehicles in the street will not happen, that late night unloading of vehicles should not happen, and that the storage tanks used are much safer than the underground tanks found in gasoline stations. He added that Enterprise is addressing the situation with the transport trucks.***

- ***Commissioner Tallerico asked the applicant how the Commission can depend on the Enterprise to stop the problems that have occurred. Mr. Hattori indicated that significant improvements have been made to the property.***

- ***Commissioner Edelman expressed concern about trucks blocking the streets and crosswalks, and requested an additional Condition of Approval to address the issues. Commissioner Crump requested the same. Staff has conferred with the Police Department and has proposed Conditions of Approval limiting hours of operation, requiring that the applicant post permanent signs indicating that vehicle parking and off-loading in the street is a ticketable offences and providing a phone number to the City's traffic enforcement office, and requiring that Geneva Avenue be used as the sole entrance to the facility should problems persist. The latter requirement could be complied with voluntarily or rescheduled for a public hearing to allow the Planning Commission and City Council further consideration of the appropriateness of the use. The proposed Conditions of Approval are identified below in bold italics.***

Environmental Assessment

The Planning Commission has reviewed the proposal under the requirement of the California Environmental Quality Act (CEQA) and has determined that the project is Categorically Exempt per CEQA Guidelines Section 15303 – New Construction or Conversion of Small Structures.

Findings

The Planning Commission has found that, as conditioned, the proposed project is in compliance with Title 17 (Zoning) of the Daly City Municipal Code. Approval of the proposed project would not be detrimental to the health, safety, morals, comfort and general welfare of persons residing in or working in the neighborhood, or be injurious or detrimental to the property and improvements in the neighborhood or the general welfare of the city. Approval of the proposed Use Permit UPR-11-15-11833**,** as conditioned herein, is in the best interest of the public health, safety, and general welfare of the community, and that the general site, architecture, and landscape considerations have been incorporated to ensure compatibility with adjacent buildings and to provide an attractive environment. These findings are based on the following facts:

1. In accordance with Title 17 of the Daly City Municipal Code, as well as applicable State zoning enabling legislation, the City Council will conduct a public hearing on February 22, 2016; notice of said hearing was by newspaper publication on February 12, 2016, and first class mailing to property owners within 300 feet;

2. The Planning Commission has reviewed the proposal under the requirements of the California Environmental Quality Act (CEQA) and has determined the project is Categorically Exempt per Section 15303(c), New Construction or Conversion of Small Structures;

3. The subject property is zoned C-2 Heavy Commercial, which requires a Use Permit for the establishment of a vehicle defueling facility;

4. The subject use is consistent with the General Plan and the C-2 Heavy Commercial and, together with the provisions for its design and operation, would not be detrimental to the health, safety, morals, comfort and general welfare of the neighborhood; and

5. The North County Fire Authority, Department of Water and Wastewater Resource, and City Engineer have reviewed the proposal to ensure the proposed fuel removal and storage will not be detrimental to surrounding uses or to the City storm drain system in the event of a spill and have added Conditions of Approval ensuring such.

Conditions of Approval

The Planning Commission recommends approval of Use Permit UPR-11-15-11833, based on the following conditions as specified by each Department and Division. These conditions need to be complied with prior to, or as part of, any building permit for the proposed improvements.

A. DEPARTMENT OF ECONOMIC AND COMMUNITY DEVELOPMENT

1. Within ten (10) days of City Council approval, the applicant shall file with the Planning Division a Declaration of Acceptance of all conditions. Until said Declaration is filed, the use shall not be valid and no permits may be issued for this business.

2. The Use Permit approval shall be valid for a period of one year from the date of City Council approval. The approval shall terminate if a building permit has not been obtained and construction commenced within one-year of City Council approval of the project or if the applicant fails to obtain a valid business license.

3. The Use Permit approval shall be valid only in conjunction with plans submitted and approved by the City Council. Any significant modifications and changes to the plans shall be treated as an amendment and shall be subject to review by a Council Committee appointed by the Mayor.

4. The City shall reserve the right to revisit and review Use Permit UPR-11-15-11833 periodically to ascertain that no adverse impacts are being generated by the business operations in the area and along the surrounding City streets.

5. The hours of operation at the subject use, including any vehicle loading or unloading, shall occur between the hours of 8:00AM to 5:00PM, Monday through Friday. Transport vehicles associated with the subject use shall not utilize public streets other than Geneva Avenue other than 8:00AM to 5:00PM, Monday through Friday.

6. Prior to the commencement of defueling operations, the applicant shall post permanent signs indicating that vehicle parking and off-loading in the street is a ticketable offence and the amount of the ticket, and providing a phone number to the City's traffic enforcement office. The size, design, quantity, and location of signs shall be approved by the City Engineer.

7. ***Transport vehicles associated with transporting vehicles to and from the site shall only be permitted to use Geneva Avenue, Carter Street, and Martin Street. Should the Planning Division determine that these vehicles are using streets other than Geneva, Carter, and Martin, the Planning Division shall notify the Enterprise that it shall use Geneva Avenue as the sole entrance to the facility. This requirement shall be complied with voluntarily or rescheduled for a public hearing to allow the Planning Commission and City Council further consideration of the appropriateness of the use. Violations if this requirement could result in in revocation of this use permit.***

B. ENGINEERING DIVISION

8. The containment area shall include all fuel storage vessels and that the size of the containment area be greater than the total volume of fuel spill containment area be at least the total size of the receiving tank.

C. NORTH COUNTY FIRE AUTHORITY

9. The applicant shall file a Hazardous Materials Business plan through County of San Mateo Health Department CUPA and maintain a yearly update of said plan.

10. The Applicant shall obtain approval from San Mateo Health department as the CUPA.

11. The applicant shall provide a written consent from the building owner approving the specific use intended.

12. The project shall comply with 2013 CFC Chapter 23 Motor Fuel-Dispensing Facilities and repair Garages - Provide plans showing the implementation of these requirements along with the San Mateo County CUPA approval.

D. BAYSHORE SANITARY DISTRICT

13. No fuel or automotive products shall be discharged into the sanitary sewer system. The project shall provide no new domestic sanitary sewage facilities and shall instead use existing on-site domestic facilities.

<u>Recommendations</u>

The Planning Commission recommends the following actions:

1. Adopt the Findings as outlined herein;

2. Affirm the project as Categorically Exempt per Section 15303 of the California Environmental Quality Act; and

3. Approve Use Permit UPR-8-15-11833, subject to the Findings and Conditions outlined herein.

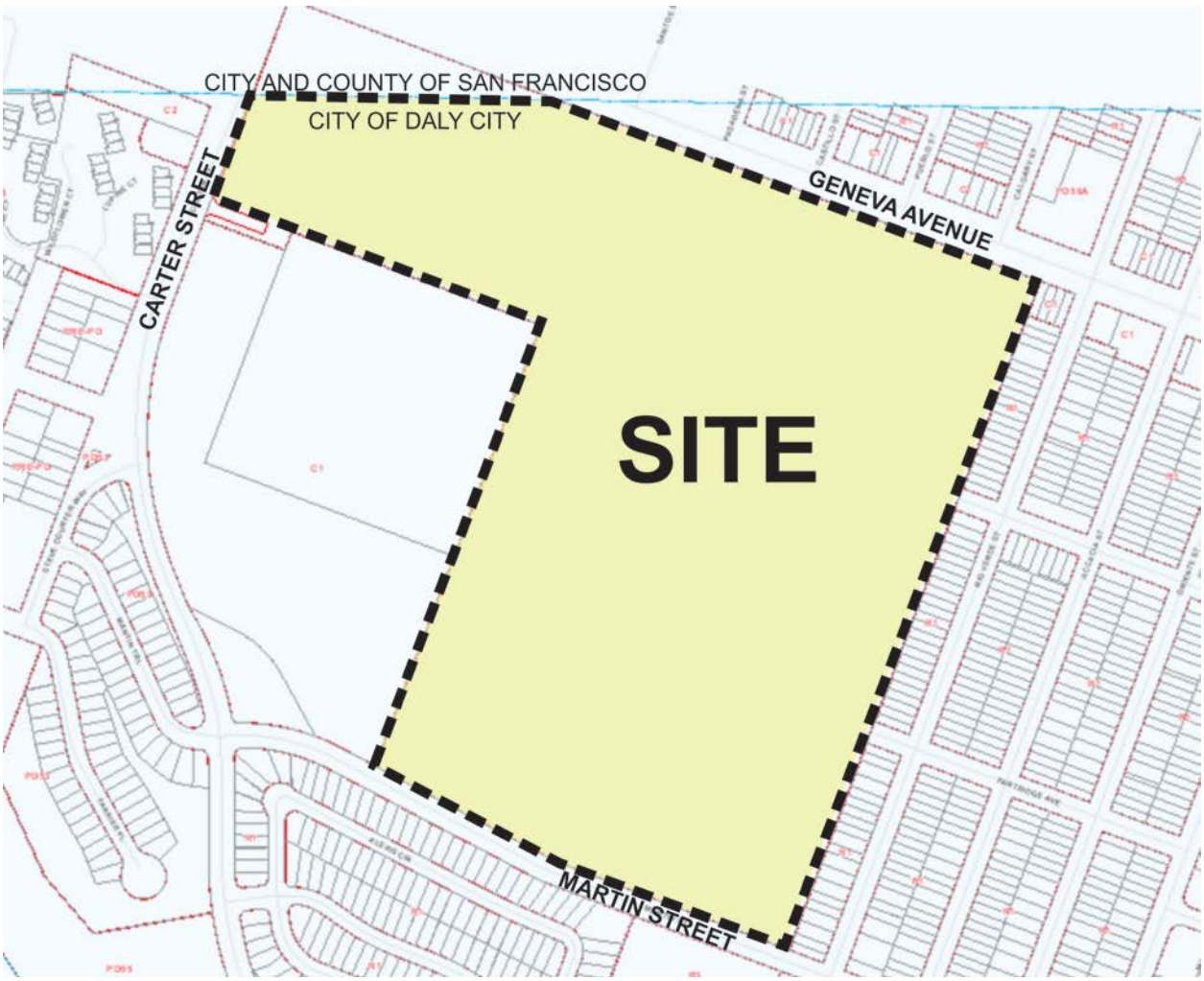
Respectfully submitted,

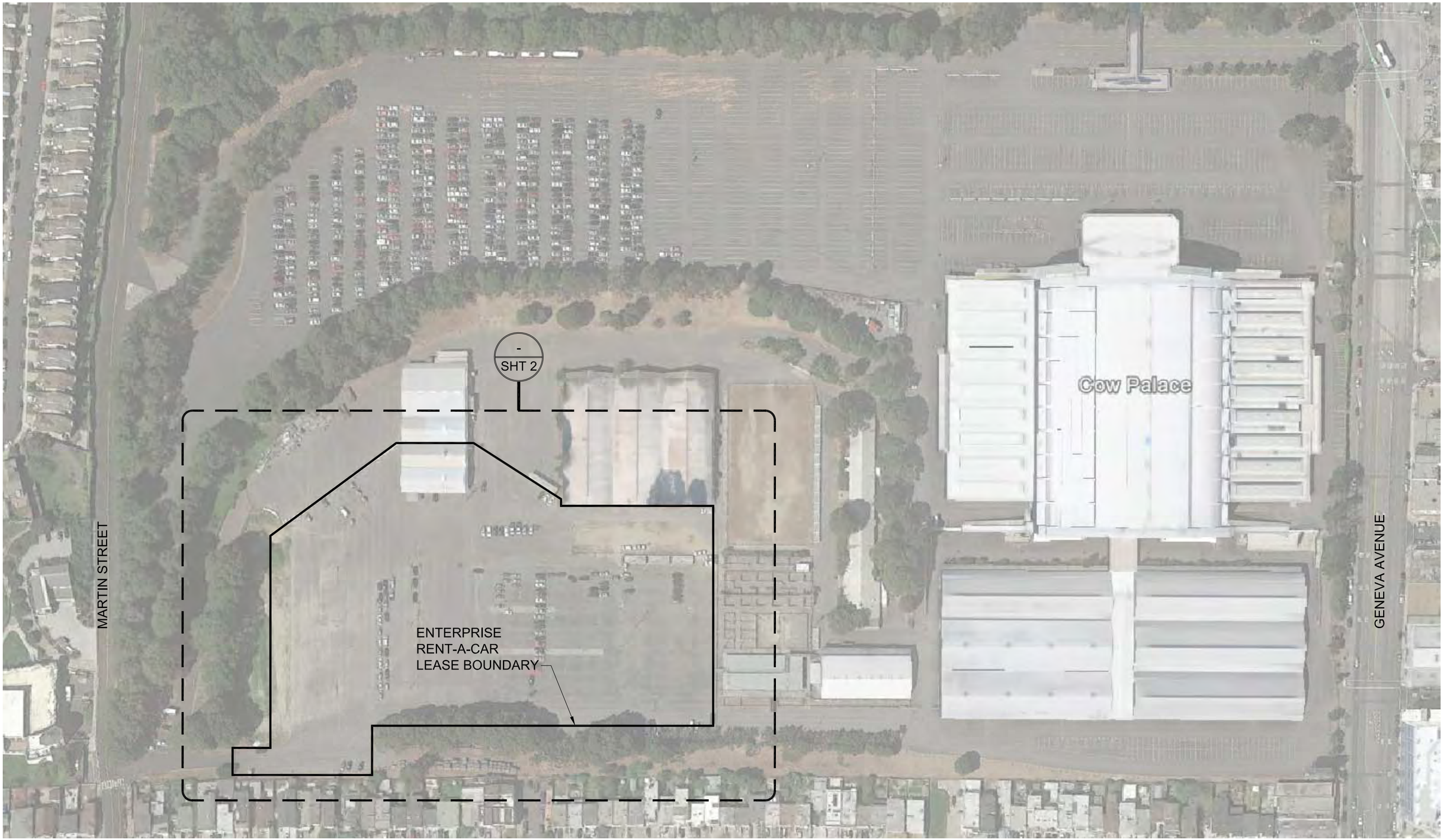
Michael Van Lonkhuysen
Interim Planning Manager

Tatum Mothershead
Interim Director Economic and Community Development

Attachments

Attachment A – Location Map
Attachment B – Project Plans


CITY AND COUNTY OF SAN FRANCISCO
CITY OF DALY CITY
CARTER STREET
GENEVA AVENUE
SITE
MARTIN STREET



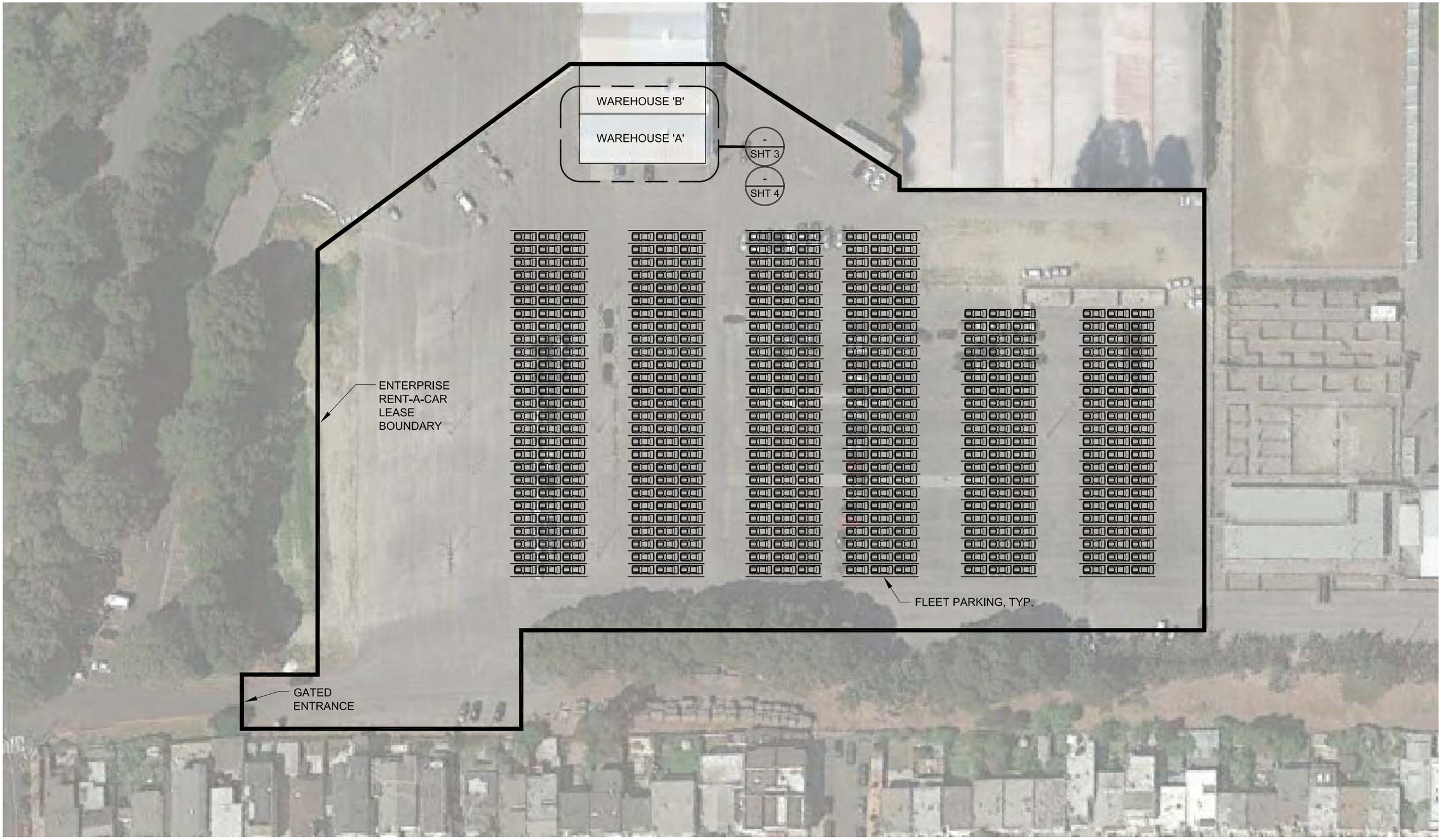
Harvey Hacker
Architects
528 Bryant Street
San Francisco, CA 94107
Telephone 415 957 0579

ENTERPRISE
RENT-A-CAR

LOCATION MAP

N

2600 GENEVA AVENUE
SAN FRANCISCO, CA
PROJECT #1564
11/18/15 SHEET 1 OF 4



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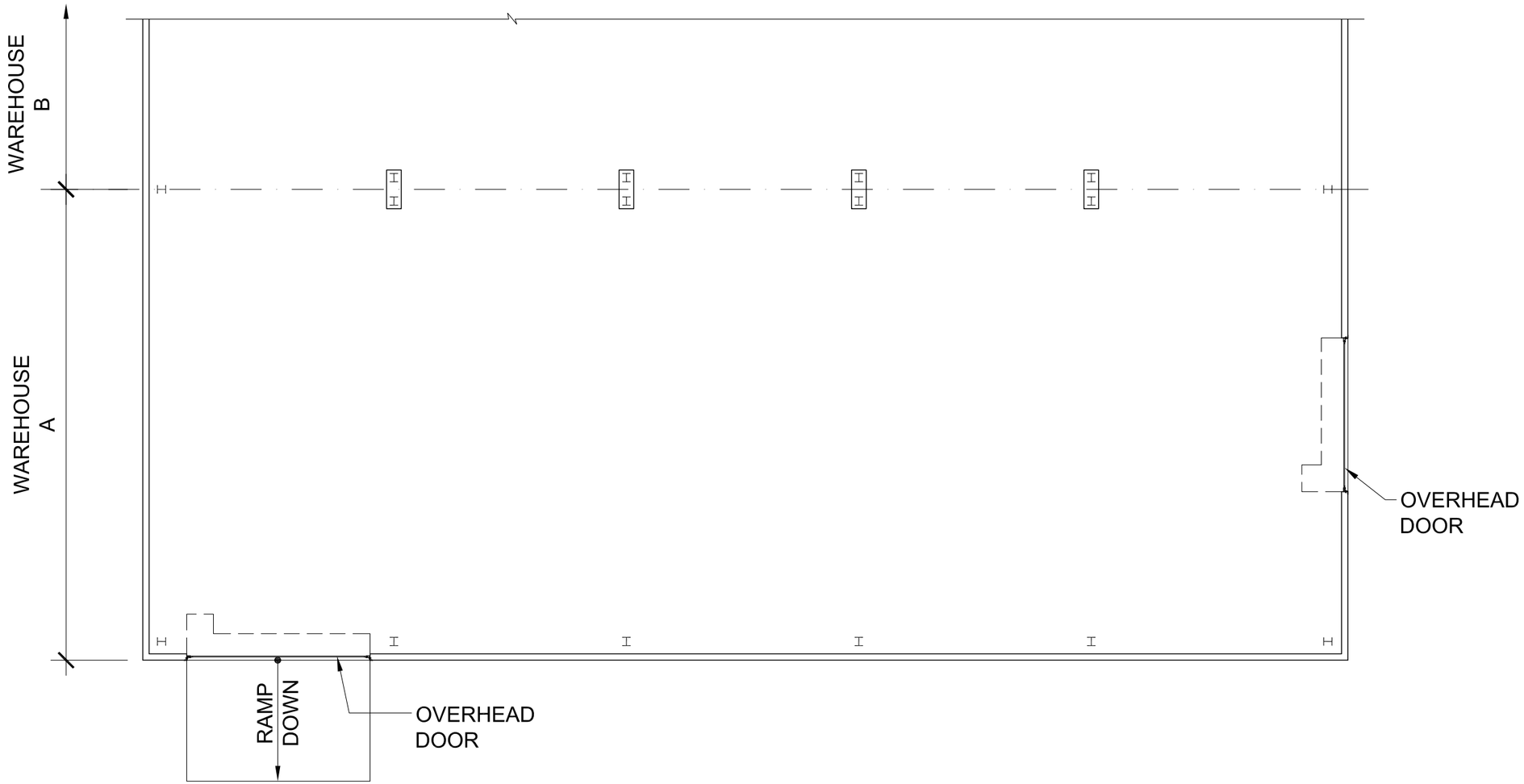
ENTERPRISE
RENT-A-CAR

SITE PLAN

N

2600 GENEVA AVENUE
SAN FRANCISCO, CA
PROJECT #1564
11/18/15 SHEET 2 OF 4



1 EXISTING WAREHOUSE FLOOR PLAN

SCALE: 1/8" = 1'-0"

0' 4' 8' 16'

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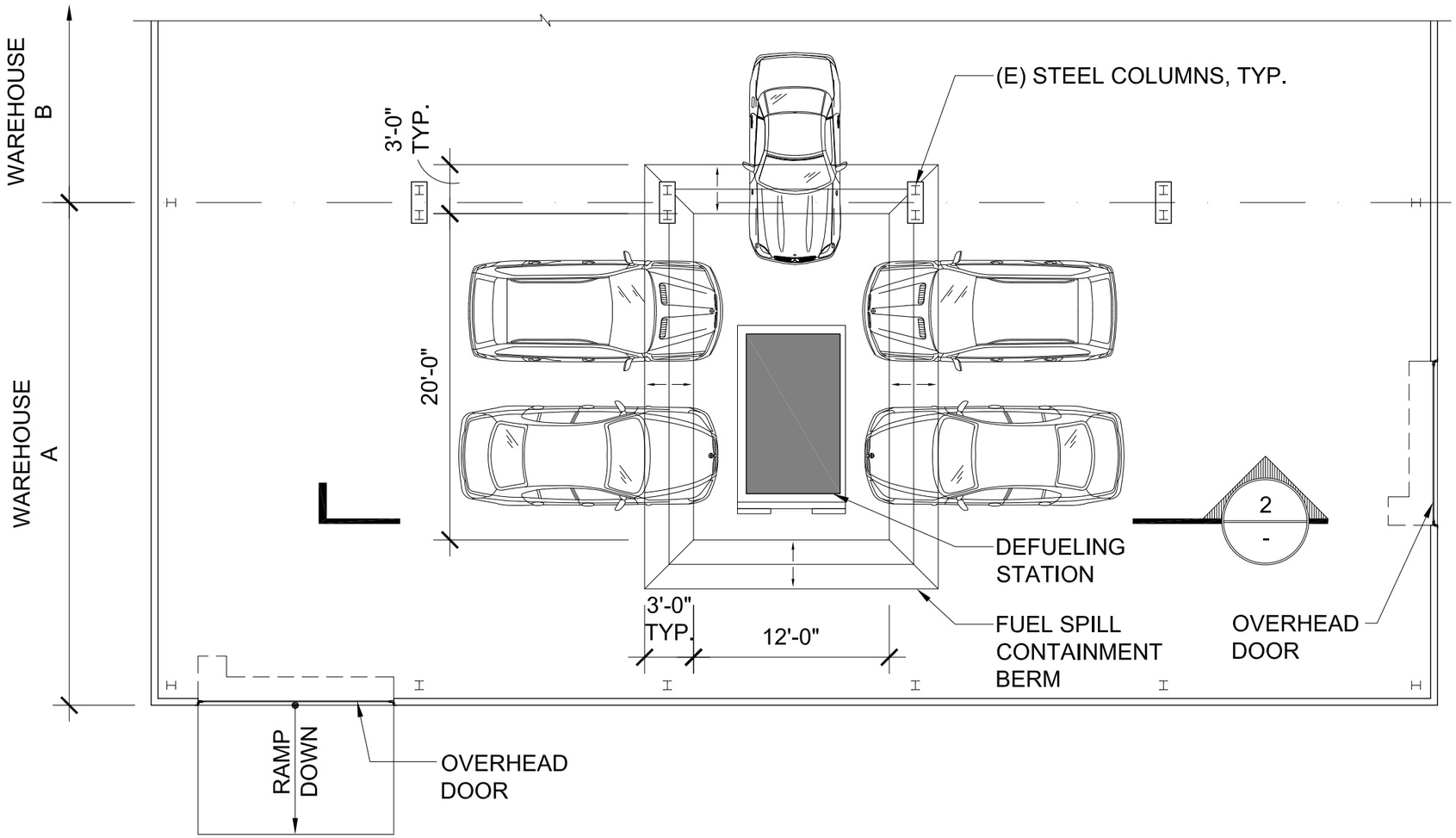
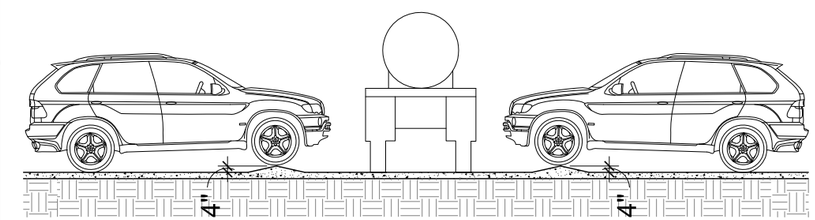
ENTERPRISE RENT-A-CAR

N

2600 GENEVA AVENUE
SAN FRANCISCO, CA
PROJECT #1564
11/18/15 SHEET 3 OF 4





1 PROPOSED WAREHOUSE FLOOR PLAN

SCALE: 1/8" = 1'-0"

0' 4' 8' 16'

2 PROPOSED WAREHOUSE SECTION

SCALE: 1/8" = 1'-0"

0' 4' 8' 16'

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ENTERPRISE RENT-A-CAR

N

2600 GENEVA AVENUE
SAN FRANCISCO, CA
PROJECT #1564
11/18/15 SHEET 4 OF 4

ORDINANCE NO. 1406

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF DALY CITY AUTHORIZING THE IMPLMENETATION OF A COMMUNITY CHOICE AGGREGATION PROGRAM

The City Council of the City of Daly City, DOES ORDAIN as follows:

SECTION 1. **FINDINGS.** The City of Daly City has investigated options to provide electric services to customers within the County, including incorporated and unincorporated areas, with the intent of achieving greater local control and involvement over the provision of electric services, competitive electric rates, the development of clean, local, renewable energy projects, reduced greenhouse gas emissions, and the wider implementation of energy conservation and efficiency projects and programs; and hereby finds and declares as follows:.

WHEREAS, the County of San Mateo prepared a Feasibility Study for a community choice aggregation ("CCA") program in San Mateo County with the cooperation of the cities under the provisions of the Public Utilities Code section 366.2. The Feasibility Study shows that implementing a community choice aggregation program would provide multiple benefits, including:

- Providing customers a choice of power providers;
- Increasing local control and involvement in and collaboration on energy rates and other energy-related matters;
- Providing more stable long-term electric rates that are competitive with those provided by the incumbent utility;
- Reducing greenhouse gas emissions arising from electricity use within San Mateo County;
- Increasing local renewable generation capacity;
- Increasing energy conservation and efficiency projects and programs;
- Increasing regional energy self-sufficiency;

Improving the local economy resulting from the implementation of local renewable and energy conservation and efficiency projects; and

WHEREAS, the County of San Mateo Board of Supervisors has directed staff to bring for its approval a Joint Powers Agreement creating the Peninsula Clean Energy Authority ("Authority"). Under the Joint Powers Agreements, cities and towns within San Mateo County may participate in the Peninsula Clean Energy CCA program by adopting the resolution and ordinance required by Public Utilities Code section 366.2. Cities and towns choosing to participate in the CCA program will have membership on the Board of Directors of the Authority as provided in the Joint Powers Agreements; and

WHEREAS, the Authority will enter into Agreements with electric power suppliers and other service providers, and based upon those Agreements the Authority will be able to provide power to residents and business at rates that are competitive with those of the incumbent utility ("PG&E"). Once the California Public Utilities Commission approves the implementation plan created by the Authority, the Authority will provide service to customers within the unincorporated area of San Mateo County and within the jurisdiction of those cities who have chosen to participate in the CCA program; and

WHEREAS, on January 25, 2016, the City Council held a public hearing at which time interested persons had an opportunity to testify either in support or opposition to implementation of the Peninsula Clean Energy CCA program in the City; and

WHEREAS, this ordinance is exempt from the requirements of the California Environmental Quality Act (CEQA) pursuant to the CEQA Guidelines, as it is not a "project" as it has no potential to result in a direct or reasonably foreseeable indirect physical change to the environment. (14 Cal. Code Regs. § 15378(a)). Further, the ordinance is exempt from CEQA as there is no possibility that the ordinance or its implementation would have a significant effect on the environment. (14 Cal. Code Regs. § 15061(b)(3)). The ordinance is also categorically exempt because it is an action taken by a regulatory agency to assume the maintenance, restoration, enhancement or protection of the environment. (14 Cal. Code Regs. § 15308). The Director of Community Development shall cause a Notice of Exemption to be filed as authorized by CEQA and the CEQA guidelines.

NOW, THEREFORE, LET IT BE RESOLVED the City Council does ordain as follows:

SECTION 1. The above recitations are true and correct and material to this Ordinance.

SECTION 2. Authorization to Implement a Community Choice Aggregation Program. Based upon the forgoing, and in order to provide business and residents within the City of Daly City with a choice of power providers and with the benefits described above, the City of Daly City City Council ordains that it shall implement a community choice aggregation program within its jurisdiction by participating as a group with the County of San Mateo and other cities and towns as described above in the Community Choice Aggregation program of the Peninsula Clean Energy Authority, as generally described in the Joint Powers Agreement.

SECTION2. Environmental Determination. The City Council of the City of Daly City finds and determines that the implementation of this ordinance is exempt from the requirements of the California Environmental Quality Act (CEQA) pursuant to the CEQA Guidelines, as it is not a "project" as it has no potential to result in a direct or reasonably foreseeable indirect physical change to the environment. (14 Cal. Code Regs. § 15378(a)). Further, the ordinance is exempt from CEQA as there is no possibility that the ordinance or its implementation would have a significant effect on the environment. (14 Cal. Code Regs. § 15061(b)(3)). The ordinance is also categorically exempt because it is an action taken by a regulatory agency to assume the maintenance, restoration, enhancement or protection of the environment. (14 Cal. Code Regs. § 15308). The Director of Community Development shall cause a Notice of Exemption to be filed as authorized by CEQA and the CEQA guidelines.

SECTION 3. Severability: If any section, subsection or sentence of this Ordinance is found by a court of competent jurisdiction to be invalid or unlawful, the City Council finds and declares that the remainder of this ordinance would be and is enforceable and would have been adopted notwithstanding the finding of invalidity as to any section, subsection or sentence.

SECTION 4. Publication/Summary Pursuant to the provisions of Government Code Section 36933, a summary of this ordinance shall be prepared by the City Attorney. At least five (5) days prior to the Council meeting at which this ordinance is scheduled to be adopted, the City Clerk shall (1) publish the summary, and (2) post it in the City Clerk's office a certified copy of this ordinance. Within fifteen (15) days after the adoption of this ordinance, the City Clerk shall (1) publish the summary and (2) post in the City Clerk's office a certified copy of the full text of this ordinance along with the names of those City Council members voting for and against this ordinance or otherwise voting. This ordinance shall become effective thirty (30) days from and after its adoption.

Introduced this _____25th____day of_____January_____, 2016.

Passed and adopted as an Ordinance of the City of Daly City at a regular meeting of the City Council of the City of Daly City held on the _____day of_____, 2016, by the following vote:

AYES, Councilmembers:_____

_____

NOES, Councilmembers:_____

ABSENT, Councilmembers:_____

_____

CITY CLERK OF THE CITY OF DALY CITY

APPROVED:

_____

MAYOR OF THE CITY OF DALY CITY

ORDINANCE NO. 1407

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF DALY CITY REPEALING AND REPLACING CHAPTER 17.41 OF THE DALY CITY MUNICIPAL CODE RE: WATER CONSERVATION IN LANDSCAPING REGULATIONS

THIS ORDINANCE is adopted in light of the following facts and circumstances, which are hereby found and declared by the City of Daly City City Council:

WHEREAS, a reliable minimum supply of potable water is essential to the public health, safety and welfare of the people and economy of the City of Daly City;

WHEREAS, the California Water Conservation in Landscaping Act, also known as the State Landscape Model Ordinance ("Model Ordinance"), has been implemented by a Statewide Landscape Task Force which was overseen by the California Urban Water Conservation Council. The California Water Conservation in Landscaping Act was amended pursuant to AB 2717 (Chapter 682, Stats. 2004) and AB 1881 (Chapter 559, Stats. 2006);

WHEREAS, AB 1881 requires cities and counties, no later than January 1, 2010, to adopt the updated Model Ordinance or an equivalent document which is "at least as effective as" the Model Ordinance in conserving water. In the event cities and counties do not take such action, the State's Model Ordinance will be deemed to be automatically adopted by statute;

WHEREAS, the City of Daly City adopted a Water Conservation in Landscaping Ordinance on March 22, 2010, to comply with the requirements of AB 1881.

WHEREAS, Governor Brown issued Executive Order B-29 on April 1, 2015 which directed State agencies to implement immediate measures to save water, increase enforcement against water waste, and streamline government response to ongoing drought conditions.

WHEREAS, Executive Order B-29 directed the Department of Water Resources ("DWR") to update the State Model Ordinance through expedited regulation to increase water efficiency standards for new and existing landscapes through more efficient standards, greywater usage, onsite storm water capture, and limitations of the portions of landscape that can be covered in turf.

WHEREAS, the California Water Commission approved the proposed revisions to the State Model Ordinance on July 15, 2015.

WHEREAS, , local agencies are required to adopt the revised State Model Ordinance or adopt a local or regional ordinance at least as effective in conserving water.

WHEREAS, the City of Daly City has developed this regional Water Conservation In Landscaping Ordinance in conjunction with the Bay Area Water Supply and Conservation Agency and other local agencies to meet the requirements and guidelines of the Model Ordinance and to address the unique physical characteristics, including average landscaped areas, within the City of Daly City's jurisdiction in order to ensure that this Ordinance will be "at least as effective as" the Model Ordinance in conserving water.

WHEREAS, , although this Water Conservation in Landscaping Ordinance is more streamlined and simplified than the Model Ordinance, the City Council finds that it is "at least as effective as" the Model Ordinance for the following reasons: (1) this Ordinance applies to more accounts than the Model Ordinance does because it lowers the size threshold for applicable rehabilitated landscapes from 2,500 square feet to 1,000 square feet, to better reflect the typical landscaped areas located within this City's boundaries; (2) this Ordinance includes a default turf restriction of no turf or high water use plants in the irrigated area and requires that at least 80% of the plants in non-turf landscape areas be native plants, low-water using plants, or no-water using plants (unless the applicant elects to perform a water budget); (3) this Ordinance requires covers on newly constructed pools and spas. The Model Ordinance does not contain any such default turf restrictions or specified plant requirements.

WHEREAS, although this Water Conservation in Landscaping Ordinance is more streamlined and simplified than the Model Ordinance, the City Council further finds that it is "at least as effective as" the Model Ordinance because this Ordinance includes water budget parameters and values and landscape parameters that are consistent with the Model Ordinance. By using the same water budget parameters as the Model Ordinance (e.g., plant factors, irrigation efficiency), this Ordinance will be as effective as the Model Ordinance in developing landscape water budgets. By using the same landscape parameters as the Model Ordinance for, among other things, slope restrictions and width restrictions for turf, irrigation times, and minimum mulch requirements, this Ordinance will be at least as effective as the Model Ordinance in achieving water savings.

WHEREAS, Article X, Section 2 of the California Constitution and Section 100 of the California Water Code declare that the general welfare requires water resources be put to beneficial use, waste or unreasonable use or unreasonable method of use of water be prevented, and conservation of water be fully exercised with a view to the reasonable and beneficial use thereof.

WHEREAS, the City Council finds and determines that this Ordinance is consistent with the provisions requiring reductions in outdoor water use for landscaping in the California Green Building Standards Code, as such provisions will be implemented in the coming years. Such requirements include the development of a water budget for landscape irrigation in accordance with methodology outlined in either the Model Ordinance or pursuant to a locally adopted ordinance.

WHEREAS, , the State Legislature has identified the provision of a more reliable water supply and the protection, restoration and enhancement of the Delta ecosystem as a high priority for the state. Pursuant to this, in November 2009, the State Legislature passed Senate Bill 7 (7th Extraordinary Session) requiring certain urban water suppliers to reduce per capita urban water use by 20% by the year 2020. Accordingly, the City Council finds that implementation of this Ordinance is consistent with the policies and goals established by the State Legislature in enacting SB 7 (7th Extraordinary Session).

WHEREAS, Article XI, Section 7 of the California Constitution declares that a city or county may make and enforce within its limits all local, policy, sanitary, and other ordinances and regulations not in conflict with general laws.

WHEREAS, the City Council finds and determines that this Ordinance is not subject to the California Environmental Quality Act (Public Resources Code Section 2100 et seq.) ("CEQA") pursuant to Section 15307 (the activity assures the maintenance, restoration, enhancement, or protection of a natural resource) and Section 15378(b)(2) (the activity is not a project as it involves general policy and procedure making) of the State CEQA Guidelines, California Code of Regulations, Title 14, Chapter 3, since it makes and implements policies and procedures to ensure that water resources are conserved by reducing water consumption through the establishment of a structure for planning, designing, installing, maintaining and managing water-efficient landscapes.

WHEREAS, the adoption and enforcement of this Ordinance is necessary to manage the City of Daly City's potable water supply in the short and long-term and to avoid or minimize the effects of drought and shortage within the City of Daly City. This Ordinance is essential to ensure a reliable and sustainable minimum supply of water for the public health, safety and welfare.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF DALY CITY DOES ORDAIN AS FOLLOWS:

Section 1. Chapter 17.41 of the Municipal Code is hereby repealed.

Section 2. Chapter 17.41 of the Municipal Code is hereafter added to read as follows:

CHAPTER 17.41
WATER CONSERVATION IN LANDSCAPING

Sections:

17.41.010 Applicability
17.41.020 Definitions
17.41.030 Water Conservation in Landscaping Requirements
17.41.040 Compliance with Chapter
17.41.050 Landscape Project Application and Documentation Package
17.41.060 Soil Management Report
17.41.070 Water Budget Calculations
17.41.080 Landscape Design Plan
17.41.090 Irrigation Design Plan
17.41.100 Grading Design Plan
17.41.110 Certificate of Completion
17.41.120 Landscape Audit Report
17.41.130 Irrigation Scheduling
17.41.140 Landscape and Irrigation Maintenance
17.41.150 Stormwater Management and Rainwater Retention
17.41.160 Recycled Water
17.41.170 Greywater Systems
17.41.180 Environmental Review
17.41.190 Provisions of Existing Landscapes
17.41.200 Provisions for Existing Landscapes Over One Acre in Size

17.41.210 Penalties

17.41.220 Public Education

17.41.010. Applicability.

A. The provisions of this Ordinance shall apply to all of the following landscape projects:

i. New construction projects with an aggregate landscape area equal to or greater than 500 square feet requiring a building or landscape permit, plan check or design review,

ii. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 1,000 square feet requiring a building or landscape permit, plan check, or design review;

iii. Existing landscapes limited to Sections 493, 493.1 and 493.2 in Division 2, Title 23 of the California Code of Regulations; all other existing landscapes shall only be subject to the provisions for existing landscapes provided for in Section XIII ”Provisions for Existing Landscapes Over One Acre in Size”.

iv. Cemeteries. New and rehabilitated cemeteries shall only be subject to the provisions of Section VIII “Water Budget Calculations”, Section XIII “Landscape Audit Report”, and Section XV “Landscape and Irrigation Maintenance Schedule.” Existing cemeteries are limited to Section XXII ”Provisions for Existing Landscapes Over One Acre in Size”.

B. Any project with an aggregate landscape area of 2,500 square feet or less may comply with the performance requirements of this ordinance or conform to the prescriptive measures contained in Appendix D.

C. For projects using treated or untreated graywater or rainwater captured on site, any lot or parcel within the project that has less than 2500 sq. ft. of landscape and meets the lot or parcel’s landscape water requirement (Estimated Total Water Use) entirely with treated or untreated graywater or through stored rainwater captured on site is subject only to Appendix D section (b)(5).

D. This ordinance does not apply to:

i. New construction with irrigated landscape areas less than 500 square feet, rehabilitated landscapes with irrigated landscape areas less than 1,000 square feet, or landscapes that do not require a building or landscape permit, plan check or design review, or new or expanded water service;

ii. Landscapes, or portions of landscapes, that are only irrigated for an establishment period;

iii. Registered local, state or federal historical sites where landscaping establishes a historical landscape style, as determined by a public board or commission responsible for architectural review or historic preservation;

iv. Ecological restoration or mined-land reclamation projects that do not require a permanent irrigation system; or

v. Community gardens or plant collections, as part of botanical gardens and arboretums open to the public, agricultural uses, commercial nurseries and sod farms.

17.41.020. Definitions

(a) "applied water" means the portion of water supplied by the irrigation system to the landscape.

(b) "automatic irrigation controller" means a timing device used to remotely control valves that operate an irrigation system. Automatic irrigation controllers are able to self-adjust and schedule irrigation events using either evapotranspiration (weather-based) or soil moisture data.

(c) "backflow prevention device" means a safety device used to prevent pollution or contamination of the water supply due to the reverse flow of water from the irrigation system.

(d) "Certificate of Completion" means the document required under Section 492.9.

(e) "certified irrigation designer" means a person certified to design irrigation systems by an accredited academic institution, a professional trade organization or other program such as the US Environmental Protection Agency's WaterSense irrigation designer certification program and Irrigation Association's Certified Irrigation Designer program.

(f) "certified landscape irrigation auditor" means a person certified to perform landscape irrigation audits by an accredited academic institution, a professional trade organization or other program such as the US Environmental Protection Agency's WaterSense irrigation auditor certification program and Irrigation Association's Certified Landscape Irrigation Auditor program.

(g) "check valve" or "anti-drain valve" means a valve located under a sprinkler head, or other location in the irrigation system, to hold water in the system to prevent drainage from sprinkler heads when the sprinkler is off.

(h) "common interest developments" means community apartment projects, condominium projects, planned developments, and stock cooperatives per Civil Code Section 1351.

(i) "compost" means the safe and stable product of controlled biologic decomposition of organic materials that is beneficial to plant growth.

(j) "conversion factor (0.62)" means the number that converts acre-inches per acre per year to gallons per square foot per year.

(k) “distribution uniformity” means the measure of the uniformity of irrigation water over a defined area.

(l) “drip irrigation” means any non-spray low volume irrigation system utilizing emission devices with a flow rate measured in gallons per hour. Low volume irrigation systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.

(m) “ecological restoration project” means a project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.

(n) “effective precipitation” or “usable rainfall” (Eppt) means the portion of total precipitation which becomes available for plant growth.

(o) “emitter” means a drip irrigation emission device that delivers water slowly from the system to the soil.

(p) “established landscape” means the point at which plants in the landscape have developed significant root growth into the soil. Typically, most plants are established after one or two years of growth.

(q) “establishment period of the plants” means the first year after installing the plant in the landscape or the first two years if irrigation will be terminated after establishment. Typically, most plants are established after one or two years of growth. Native habitat mitigation areas and trees may need three to five years for establishment.

(r) “Estimated Total Water Use” (ETWU) means the total water used for the landscape as described in Section VIII.

(s) “ET adjustment factor” (ETAF) means a factor of 0.55 for residential areas and 0.45 for non-residential areas, that, when applied to reference evapotranspiration, adjusts for plant factors and irrigation efficiency, two major influences upon the amount of water that needs to be applied to the landscape. The ETAF for new and existing (non-rehabilitated) Special Landscape Areas shall not exceed 1.0. The ETAF for existing non-rehabilitated landscapes is 0.8.

(t) “evapotranspiration rate” means the quantity of water evaporated from adjacent soil and other surfaces and transpired by plants during a specified time.

(u) “flow rate” means the rate at which water flows through pipes, valves and emission devices, measured in gallons per minute, gallons per hour, or cubic feet per second.

(v) “flow sensor” means an inline device installed at the supply point of the irrigation system that produces a repeatable signal proportional to flow rate. Flow sensors must be connected to an automatic irrigation controller, or flow monitor capable of receiving flow signals and operating master valves. This combination flow sensor/controller may also function as a landscape water meter or submeter.

(w) “friable” means a soil condition that is easily crumbled or loosely compacted down to

a minimum depth per planting material requirements, whereby the root structure of newly planted material will be allowed to spread unimpeded.

(x) "Fuel Modification Plan Guideline" means guidelines from a local fire authority to assist residents and businesses that are developing land or building structures in a fire hazard severity zone.

(y) "graywater" means untreated wastewater that has not been contaminated by any toilet discharge, has not been affected by infectious, contaminated, or unhealthy bodily wastes, and does not present a threat from contamination by unhealthful processing, manufacturing, or operating wastes. "Graywater" includes, but is not limited to, wastewater from bathtubs, showers, bathroom washbasins, clothes washing machines, and laundry tubs, but does not include wastewater from kitchen sinks or dishwashers. See Health and Safety Code Section 17922.12.

(z) "hardscapes" means any durable material (pervious and non-pervious).

(aa) "hydrozone" means a portion of the landscaped area having plants with similar water needs and rooting depth. A hydrozone may be irrigated or non-irrigated.

(bb) "infiltration rate" means the rate of water entry into the soil expressed as a depth of water per unit of time (e.g., inches per hour).

(cc) "invasive plant species" means species of plants not historically found in California that spread outside cultivated areas and can damage environmental or economic resources. Invasive species may be regulated by county agricultural agencies as noxious species. Lists of invasive plants are maintained at the California Invasive Plant Inventory and USDA invasive and noxious weeds database.

(dd) "irrigation audit" means an in-depth evaluation of the performance of an irrigation system conducted by a Certified Landscape Irrigation Auditor. An irrigation audit includes, but is not limited to: inspection, system tune-up, system test with distribution uniformity or emission uniformity, reporting overspray or runoff that causes overland flow, and preparation of an irrigation schedule. The audit must be conducted in a manner consistent with the Irrigation Association's Landscape Irrigation Auditor Certification program or other U.S. Environmental Protection Agency "Watersense" labeled auditing program.

(ee) "irrigation efficiency" (IE) means the measurement of the amount of water beneficially used divided by the amount of water applied. Irrigation efficiency is derived from measurements and estimates of irrigation system characteristics and management practices. The irrigation efficiency for purposes of this ordinance are 0.75 for overhead spray devices and 0.81 for drip systems.

(ff) "irrigation survey" means an evaluation of an irrigation system that is less detailed than an irrigation audit. An irrigation survey includes, but is not limited to: inspection, system test, and written recommendations to improve performance of the irrigation system.

(gg) “irrigation water use analysis” means an analysis of water use data based on meter readings and billing data.

(hh) “landscape architect” means a person who holds a license to practice landscape architecture in the state of California, See Business and Professions Code Section 5615.

(ii) “landscape area” means all the planting areas, turf areas, and water features in a landscape design plan subject to the Maximum Applied Water Allowance calculation. The landscape area does not include footprints of buildings or structures, sidewalks, driveways, parking lots, decks, patios, gravel or stone walks, other pervious or non-pervious hardscapes, and other non-irrigated areas designated for non-development (e.g., open spaces and existing native vegetation).

(jj) “landscape contractor” means a person licensed by the state of California to construct, maintain, repair, install, or subcontract the development of landscape systems.

(kk) “Landscape Documentation Package” means the documents required under Section IV.

(ll) “landscape project” means total area of landscape in a project as defined in “landscape area” for the purposes of this ordinance, meeting requirements under Section II.

(mm) “landscape water meter” means an inline device installed at the irrigation supply point that measures the flow of water into the irrigation system and is connected to a totalizer to record water use.

(nn) “lateral line” means the water delivery pipeline that supplies water to the emitters or sprinklers from the valve.

(oo) “local agency” means a city or county, including a charter city or charter county, that is responsible for adopting and implementing the ordinance. The local agency is also responsible for the enforcement of this ordinance, including but not limited to, approval of a permit and plan check or design review of a project.

(pp) “local water purveyor” means any entity, including a public agency, city, county, or private water company that provides retail water service.

(qq) “low volume irrigation” means the application of irrigation water at low pressure through a system of tubing or lateral lines and low-volume emitters such as drip, drip lines, and bubblers. Low volume irrigation systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.

(rr) “low water use plant” means a plant species whose water needs are compatible with local climate and soil conditions. Species classified as "very low water use" and "low water use" by WUCOLS, having a regionally adjusted plant factor of 0.0 through 0.3, shall be considered low water use plants.

(ss) “main line” means the pressurized pipeline that delivers water from the water source

to the valve or outlet.

(tt) “master shut-off valve” is an automatic valve installed at the irrigation supply point which controls water flow into the irrigation system. When this valve is closed water will not be supplied to the irrigation system. A master valve will greatly reduce any water loss due to a leaky station valve.

(uu) “Maximum Applied Water Allowance” (MAWA) means the upper limit of annual applied water for the established landscaped area as specified in Section IX. It is based upon the area’s reference evapotranspiration, the ET Adjustment Factor, and the size of the landscape area. The Estimated Total Water Use shall not exceed the Maximum Applied Water Allowance. Special Landscape Areas, including recreation areas, areas permanently and solely dedicated to edible plants such as orchards and vegetable gardens, and areas irrigated with recycled water are subject to the MAWA with an ETAF not to exceed 1.0. MAWA = (ETo) (0.62) [(ETAF x LA) + ((1-ETAF) x SLA)]

(vv) “median” is an area between opposing lanes of traffic that may be unplanted or planted with trees, shrubs, perennials, and ornamental grasses.

(ww) “microclimate” means the climate of a small, specific area that may contrast with the climate of the overall landscape area due to factors such as wind, sun exposure, plant density, or proximity to reflective surfaces.

(xx) “”microspray” means a microirrigation emission device with one or more orifices to convert irrigation water pressure to water discharge with a flow rate not to exceed 30 gallons per hour at the largest area of coverage available for the nozzle series when operated at 30 psi. Microsprays are inclusive of microbubbers, microspinners, and microspray jets.

(yy) “mined-land reclamation projects” means any surface mining operation with a reclamation plan approved in accordance with the Surface Mining and Reclamation Act of 1975.

(zz) “mulch” means any organic material such as leaves, bark, straw, compost, or inorganic mineral materials such as rocks, gravel, or decomposed granite left loose and applied to the soil surface for the beneficial purposes of reducing evaporation, suppressing weeds, moderating soil temperature, and preventing soil erosion.

(aaa) “native plant” means a plant indigenous to a specific area of consideration. For the purposes of these guidelines, the term shall refer to plants indigenous to the coastal ranges of Central and Northern California, and more specifically to such plants that are suited to the ecology of the present or historic natural community(ies) of the project’s vicinity.

(bbb) “new construction” means, for the purposes of this ordinance, a new building with a landscape or other new landscape, such as a park, playground, or greenbelt without an associated building.

(ccc) “non-residential landscape” means landscapes in commercial, institutional,

industrial and public settings that may have areas designated for recreation or public assembly. It also includes portions of common areas of common interest developments with designated recreational areas and multifamily homes where landscaping is managed by a homeowners association or other common interest development

(ddd) "no-water using plant" means a plant species with water needs that are compatible with local climate and soil conditions such that regular supplemental irrigation is not required to sustain the plant after it has become established.

(eee) “operating pressure” means the pressure at which the parts of an irrigation system are designed by the manufacturer to operate.

(fff) “overhead sprinkler irrigation systems” or “overhead spray irrigation systems” means systems that deliver water through the air (e.g., spray heads and rotors).

(ggg) “overspray” means the irrigation water which is delivered beyond the target area.

(hhh) “parkway” means the area between a sidewalk and the curb or traffic lane. It may be planted or unplanted, and with or without pedestrian egress.

(iii) “permit” means an authorizing document issued by local agencies for new construction or rehabilitated landscapes.

(jjj) “pervious” means any surface or material that allows the passage of water through the material and into the underlying soil.

(kkk) “plant factor” or “plant water use factor” is a factor, when multiplied by ETo, estimates the amount of water needed by plants. For purposes of this ordinance, the plant factor range for very low water use plants is 0 to 0.1, the plant factor range for low water use plants is 0.1 to 0.3, the plant factor range for moderate water use plants is 0.4 to 0.6, and the plant factor range for high water use plants is 0.7 to 1.0. Plant factors cited in this ordinance are derived from the publication “Water Use Classification of Landscape Species”. Plant factors may also be obtained from horticultural researchers from academic institutions or professional associations as approved by the California Department of Water Resources (DWR).

(lll) “project applicant” means the individual or entity submitting a Landscape Documentation Package required under Section IV, to request a permit, plan check, or design review from the local agency. A project applicant may be the property owner or his or her designee.

(mmm) “rain sensor” or “rain sensing shutoff device” means a component which automatically suspends an irrigation event when it rains.

(nnn) “record drawing” or “as-builts” means a set of reproducible drawings which show significant changes in the work made during construction and which are usually based on drawings marked up in the field and other data furnished by the contractor.

(ooo) “recreational area” means areas, excluding private single family residential areas,

designated for active play, recreation or public assembly in parks, sports fields, picnic grounds, amphitheaters or golf course tees, fairways, roughs, surrounds and greens.

(ppp) “recycled water,” “reclaimed water,” or “treated sewage effluent water” means treated or recycled waste water or reused water of a quality suitable for nonpotable uses such as landscape irrigation and water features. This water is not intended for human consumption.

(qqq) “reference evapotranspiration” or “ETo” means a standard measurement of environmental parameters which affect the water use of plants. ETo is expressed in inches per day, month, or year as represented in Appendix A, and is an estimate of the evapotranspiration of a large field of four- to seven-inch tall, cool-season grass that is well watered. Reference evapotranspiration is used as the basis of determining the Maximum Applied Water Allowances so that regional differences in climate can be accommodated.

(rrr) “Regional Water Efficient Landscape Ordinance” means a local Ordinance adopted by two or more local agencies, water suppliers and other stakeholders for implementing a consistent set of landscape provisions throughout a geographical region. Regional ordinances are strongly encouraged to provide a consistent framework for the landscape industry and applicants to adhere to.

(sss) “rehabilitated landscape” means any relandscaping project that requires a permit, plan check, or design review, meets the requirements of Section 490.1, and the modified landscape area is equal to or greater than 2,500 square feet.

(ttt) “residential landscape” means landscapes surrounding single family homes or multifamily homes where landscapes are managed by individual homeowners.

(uuu) “run off” means water which is not absorbed by the soil or landscape to which it is applied and flows from the landscape area. For example, run off may result from water that is applied at too great a rate (application rate exceeds infiltration rate) or when there is a slope.

(vvv) “soil moisture sensing device” or “soil moisture sensor” means a device that measures the amount of water in the soil. The device may also suspend or initiate an irrigation event.

(www) “soil texture” means the classification of soil based on its percentage of sand, silt, and clay.

(xxx) “Special Landscape Area” (SLA) means an area of the landscape dedicated solely to edible plants, recreational areas, areas irrigated with recycled water, or water features using recycled water.

(yyy) “sprinkler head” or “spray head” means a device which delivers water through a nozzle.

(zzz) “static water pressure” means the pipeline or municipal water supply pressure when

water is not flowing.

(aaaa) "station" means an area served by one valve or by a set of valves that operate simultaneously.

(bbbb) "swimming pool" means any structure intended for swimming, recreational bathing or wading that contains water over 24 inches (610 mm) deep. This includes in-ground, above ground, and on-ground pools; hot tubs; spa and fixed in place wading pools

(cccc) "swing joint" means an irrigation component that provides a flexible, leak-free connection between the emission device and lateral pipeline to allow movement in any direction and to prevent equipment damage.

(dddd) "submeter" means a metering device to measure water applied to the landscape that is installed after the primary utility water meter.

(eeee) "turf" means a ground cover surface of mowed grass. Annual bluegrass, Kentucky bluegrass, Perennial ryegrass, Red fescue, and Tall fescue are cool-season grasses. Bermudagrass, Kikuyugrass, Seashore Paspalum, St. Augustinegrass, Zoysiagrass, and Buffalo grass are warm-season grasses.

(ffff) "valve" means a device used to control the flow of water in the irrigation system.

(gggg) "water conserving plant species" means a plant species identified as having a very low or low plant factor.

(hhhh) "water feature" means a design element where open water performs an aesthetic or recreational function. Water features include ponds, lakes, waterfalls, fountains, artificial streams, spas, and swimming pools (where water is artificially supplied). The surface area of water features is included in the high water use hydrozone of the landscape area. Constructed wetlands used for on-site wastewater treatment or stormwater best management practices that are not irrigated and used solely for water treatment or stormwater retention are not water features and, therefore, are not subject to the water budget calculation.

(iiii) "watering window" means the time of day irrigation is allowed.

(jjjj) "WUCOLS" means the current version of the Water Use Classification of Landscape Species current edition published by the University of California Cooperative Extension and the Department of Water Resources, available at: *http://ucanr.edu/sites/WUCOLS/Download_WUCOLS_IV_List/*

17.41.030. Water Conservation in Landscaping Requirements.

A. All owners of new construction and rehabilitated landscapes of applicable sizes shall: (1) complete the Landscape Project Application and Documentation Package (Section VI) and (2) comply with the Landscape and Irrigation Maintenance Schedule (Section XV) requirements of this Ordinance.

B. All owners of existing landscapes over one acre in size, even if installed before enactment of this Ordinance, shall: (1) comply with local agency programs that may be instituted relating to irrigation audits, surveys and water use analysis, and (2) shall maintain landscape irrigation facilities to prevent water waste and runoff.

17.41.040 Compliance with this Chapter.

A. The local agency shall:

i. Provide the project applicant with the Ordinance and Landscape Project Application and Documentation Package requirements and the procedures for permits, plan checks, design reviews, or new or expanded water service;

ii. Review the Landscape Project Application submitted by the project applicant;

iii. Approve or deny the project applicant's Landscape Project Application submittal;

iv. Issue or approve a permit, plan check or design review that complies with the approved Landscape Project Application or approve a new or expanded water service application that complies with the approved Landscape Project Application;

v. Submit a copy of the complete Landscape Project Application to the local water purveyor or land use authority, as the case may be.

B. The project applicant shall:

i. **P**rior to construction, submit all portions of the Landscape Project Application, except the Landscape Audit Report, to the local agency; and

ii. Upon approval of the Landscape Project Application by the local agency:

a. receive a permit or approval of the plan check or design review and record the date of the permit in the Certificate of Completion;

b. submit a copy of the approved Landscape Documentation Package along with the record drawings, and any other information to the property owner or his/her designee; and

c. submit a copy of the Water Efficient Landscape Worksheet to the local water purveyor.

17.41.050. Landscape Project Application and Documentation Package.

A. The elements of a landscape must be designed to achieve water efficiency and will comply with the criteria described in this Ordinance. In completing the Landscape Project Application, project applicants may choose one of two options

to demonstrate that the landscape meets the Ordinance's water efficiency goals. Regardless of which option is selected, the applicant must complete and comply with all other elements of the Ordinance. The options include:

i. Planting restrictions:

a. The landscape areas may include no turf or high-water using plants; and

b. At least 80% of the plants in landscape areas shall be native plants, low-water using plants, or no-water using plants; or the

ii. Water Budget Calculation option (Section VIII).

A. The Landscape Project Application shall include the following elements:

i. Project Information;

a. Date

b. Project Applicant

c. Project address (if available, parcel and/or lot numbers)

d. Project type (e.g., new, rehabilitated, public, private, cemetery, homeowner-installed)

e. Total landscape area (Square feet)

f. Water supply type (e.g., potable, recycled, well) and identify the local retail water purveyor if the applicant is not served by a private well

g. Checklist of all documents in Landscape Documentation Package

h. Project contacts to include contact information for the project applicant and property owner

i. Applicant signature and date with statement, "I agree to comply with the requirements of the water efficient landscape ordinance and submit a complete Landscape Documentation Package".

ii. Water Budget Calculations, if applicant selects to use a water budget approach rather than comply with the turf area limitations or specified plant type restrictions (Section VIII);

iii. Soil Management Report or Soil Management Survey (Section VII)

iv. Landscape Design Plans (Section IX);

v. Irrigation System Design Plans (Section X); and

vi. Landscape Audit Report (Section XIII).

vii. Grading Design Plan or Grading Design Survey (Section XI)

17.41.060. Soil Management Report.

A. In order to reduce runoff and encourage healthy plant growth, a soil management report shall be completed by the project applicant, or his/her designee, or the applicant shall complete a Soil Management Survey (Appendix E). The soil management report shall be completed as follows:

i. Submit soil samples to a laboratory for analysis and recommendations.

a. Soil sampling shall be conducted in accordance with laboratory protocol, including protocols regarding adequate sampling depth for the intended plants.

b. The soil analysis shall include:

1. soil texture;

2. infiltration rate determined by laboratory test or soil texture infiltration rate table;

3. pH;

4. total soluble salts;

5. sodium

6. percent organic matter; and

7. recommendations

c. In projects with multiple landscape installations (i.e. production home developments) a soil sampling rate of 1 in 7 lots or approximately 15% will satisfy this requirement. Large landscape projects shall sample at a rate equivalent to 1 in 7 lots.

ii. The project applicant, or his/her designee, shall comply with one of the following:

a. If significant mass grading is not planned, the soil analysis report shall be submitted to the local agency as part of the Landscape Documentation Package; or

b. If significant mass grading is planned, the soil analysis report shall be submitted to the local agency as part of the Certificate of Completion.

iii. The soil analysis report shall be made available, in a timely manner, to the professionals preparing the landscape design plans and irrigation design plans to make any necessary adjustments to the design plans.

iv. The project applicant, or his/her designee, shall submit documentation verifying implementation of soil analysis report recommendations to the local agency with Certificate of Completion.

17.41.070 Water Budget Calculations.

Project applicant may elect to complete a water budget calculation for the landscape project using the Water Efficient Landscape Worksheet in Appendix B.

Water budget calculations, if prepared, shall adhere to the following requirements:

A. The plant factor used shall be from WUCOLS or from horticultural researchers with academic institutions or professional associations as approved by the California Department of Water Resources (DWR). The plant factor ranges from from 0 to 0.1 for very low water using plants, 0.1 to 0.3 for low water use plants, from 0.4 to 0.6 for moderate water use plants, and from 0.7 to 1.0 for high water use plants.

B. All water features shall be included in the high water use hydrozone and temporarily irrigated areas shall be included in the low water use hydrozone..

C. All Special Landscape Areas (SLA) shall be identified and their water use included in the water budget calculations.

D. The reference evapotranspiration adjustment factor (ETAF) for SLA shall not exceed 1.0. The ETAF for all other landscaped areas shall not exceed 0.55 for residential areas and 0.45 for non-residential areas.

E. ETo values from the Reference Evapotranspiration Table in Appendix A shall be used In calculating the Maximum Applied Water Allowance (MAWA) and Estimated Total Water Use (ETWU). For geographic areas not covered in Appendix A, use data from other cities located nearby in the same reference evapotranspiration zone, as found in the CIMIS Reference Evapotranspiration Zones Map, Department of Water Resources, 1999.For the purpose of determining Estimated Total Water Use, average irrigation efficiency is assumed to be 0.75 for overhead spray devices and 0.81 for drip system devices.

F. MAWA shall be calculated using the equation below:

MAWA = (ETo) (0.62) [(0.55 x LA) + (0.45 x SLA)] for residential areas

MAWA = (ETo) (0.62) [(0.45 x LA) + (0.55 x SLA)] for non-residential areas

Where:
MAWA = Maximum Applied Water Allowance (gallons per year)
ETo = Reference Evapotranspiration (inches per year)
0.62 = Conversion Factor (to gallons)

0.55 = Reference Evapotranspiration Adjustment Factor (ETAF) for residential areas
0.45 = Reference Evapotranspiration Adjustment Factor (ETAF) for non-residential areas
LA = Landscape Area including SLA (square feet)
0.45 = Additional Water Allowance for SLA in residential areas
0.55 = Additional Water Allowance for SLA in non-residential areas
SLA = Special Landscape Area (square feet)

G. A local agency or project applicant may consider Effective Precipitation (25% of annual precipitation) in tracking water use and may use the following equation to calculate the MAWA:

i. MAWA = (ETo - Eppt) (0.62) [(0.55 x LA) + (0.45 x SLA)] for residential areas.
ii. MAWA = (ETo - EPPT) (0.62) [(0.45 x LA) + (0.55 x SLA)] for non-residential areas.

H. Estimated Total Water Use (ETWU) will be calculated using the equation below. The sum of the ETWU calculated for all hydrozones will not exceed the MAWA.

$$ETWU = (ETo)(0.62)\left(\frac{PF\ x\ HA}{IE} + SLA\right)$$

Where:
ETWU = Estimated Total Water Use per year (gallons)
ETo = Reference Evapotranspiration (inches)
PF = Plant Factor from WUCOLS (see Section 491)
HA = Hydrozone Area [high, medium, and low water use areas] (square feet)
0.75 = Irrigation Efficiency (IE) for overhead spray devices
0.81 = Irrigation Efficiency (IE) for drip system devices
SLA = Special Landscape Area (square feet)
0.62 = Conversion Factor

17.41.080. Landscape Design Plan.

A. For the efficient use of water, a landscape shall be carefully designed and planned for the intended function of the project. A landscape design plan meeting the following design criteria shall be submitted as part of the Landscape Documentation Package.

i. Plant Material

a. Any plant may be selected for the landscape, providing the Estimated Total Water Use in the landscape area does not exceed the Maximum Applied Water Allowance. Methods to achieve water efficiency shall include one or more of the following:

1. Protection and preservation of native species and natural vegetation

2. selection of water-conserving plant, tree and turf species, especially local native plants;

3. selection of plants based on local climate suitability, disease and pest resistance;

4. selection of trees based on applicable local tree ordinances or tree shading guidelines, and size at maturity as appropriate for the planting area; and

5. selection of plants from local and regional landscape program plant lists.

6. selection of plants from local Fuel Modification Plan Guidelines.

b. Each hydrozone shall have plant materials with similar water use, with the exception of hydrozones with plants of mixed water use, as specified in Section X (A)(ii)(4).

c. Plants shall be selected and planted appropriately based upon their adaptability to the climatic, geologic, and topographical conditions of the project site. Methods to achieve water efficiency shall include one or more of the following:

1. use the Sunset Western Climate Zone System which takes into account temperature, humidity, elevation, terrain, latitude, and varying degrees of continental and marine influence on local climate;

2. recognize the horticultural attributes of plants (i.e., mature plant size, invasive surface roots) to minimize damage to property or infrastructure [e.g., buildings, sidewalks, power lines]; allow for adequate soil volume for healthy root growth;

3. consider the solar orientation for plant placement to maximize summer share and winter solar gain.

d. Turf is not allowed on slopes greater than 25% where the toe of the slope is adjacent to an impermeable hardscape and where 25% means 1 foot of vertical elevation change for every 4 feet of horizontal length (rise divided by run x 100 = slope percent).

e. High water use plants, characterized by a plant factor of 0.7 to 1.0, are prohibited in street medians.

f. A landscape design plan for projects in fire-prone areas shall address fire safety and prevention. A defensible space or zone around a building or structure is required per Public Resources Code Section 4291(a) and (b). Avoid fire-prone plant materials and highly flammable mulches. Refer to the local Fuel Modification Plan guidelines.

g. The use of invasive plant species, such as those listed by the California Invasive Plant Council, is strongly discouraged.

h. The architectural guidelines of a common interest development, which include community apartment projects, condominiums, planned developments, and stock cooperatives, shall not prohibit or include conditions that have the effect of prohibiting the use of low-water use plants as a group.

ii. Water Features

a. Recirculating water systems shall be used for water features.

b. Where available, recycled water shall be used as a source for decorative water features.

c. Surface area of a water feature shall be included in the high water use hydrozone area of the water budget calculation.

d. Pool and spa covers are required on any newly constructed pool or spa.

iii. Soil Preparation, Mulch and Amendments

a. Prior to the planting of any materials, compacted soils shall be transformed to a friable condition. On engineered slopes, only amended planting holes need meet this requirement.

b. Soil amendments shall be incorporated according to recommendations of the soil report and what is appropriate for the plants selected (see Section VII).

c. For landscape installations, compost at a rate of a minimum of four cubic yards per 1,000 square feet of permeable area shall be incorporated to a depth of six inches into the soil. Soils with greater than 6% organic matter in the top 6 inches of soil are exempt from adding compost and tilling.

d. A minimum three inch (3″) layer of mulch shall be applied on all exposed soil surfaces of planting areas except in turf areas, creeping or rooting groundcovers, or direct seeding applications where mulch is contraindicated. To provide habitat for beneficial insects and other wildlife, up to 5% of the landscape area may be left without mulch.

Designated insect habitat must be included in the landscape design plan as such.

e. Stabilizing mulching products shall be used on slopes that meet current engineering standards.

f. The mulching portion of the seed/mulch slurry in hydro-seeded applications shall meet the mulching requirement.

g. Organic mulch materials made from recycled or post-consumer shall take precedence over inorganic materials or virgin forest products unless the recycled post-consumer organic products are not locally available. Organic mulches are not required where prohibited by local Fuel Modification Plan Guidelines or other applicable local ordinances.

B. The landscape design plan, at a minimum, shall:

i. delineate and label each hydrozone by number, letter, or other method;

ii. identify each hydrozone as low, moderate, high water, or mixed water use. Temporarily irrigated areas of the landscape shall be included in the low water use hydrozone for the water budget calculation;

iii. identify recreational areas;

iv. identify areas permanently and solely dedicated to edible plants;

v. identify areas irrigated with recycled water;

vi. identify type of mulch and application depth;

vii. identify soil amendments, type, and quantity;

viii. identify type and surface area of water features;

ix. identify hardscapes (pervious and non-pervious);

x. identify location, installation details, and 24-hour retention or infiltration capacity of any applicable stormwater best management practices that encourage on-site retention and infiltration of stormwater. Project applicants shall refer to the local agency or regional Water Quality Control Board for information on any applicable stormwater technical requirements. Stormwater best management practices are encouraged in the landscape design plan and examples are provided in Section XVI.

xi. identify any applicable rain harvesting or catchment technologies as discussed in Section XVI and their 24-hour retention or infiltration capacity;

xii. identify any applicable graywater discharge piping, system components and area(s) of distribution;

xiii. contain the following statement: "I have complied with the criteria of the ordinance and applied them for the efficient use of water in the landscape design plan"; and

xiv. bear the signature of a licensed landscape architect, licensed landscape contractor, or any other person authorized to design a landscape. (See Sections 5500.1, 5615, 5641, 5641.1, 5641.2, 5641.3, 5641.4, 5641.5, 5641.6, 6701, 7027.5 of the Business and Professions Code, Section 832.27 of Title 16 of the California Code of Regulations, and Section 6721 of the Food and Agriculture Code.).

17.41.090. Irrigation Design Plan.

A. This section applies to landscaped areas requiring permanent irrigation, not areas that require temporary irrigation solely for the plant establishment period. For the efficient use of water, an irrigation system shall meet all the requirements listed in this section and the manufacturers' recommendations. The irrigation system and its related components shall be planned and designed to allow for proper installation, management, and maintenance. An irrigation design plan meeting the following design criteria shall be submitted as part of the Landscape Documentation Package.

i. System

a. Landscape water meters, defined as either a dedicated water service meter or private submeter, shall be installed for all non-residential irrigated landscapes of 1,000 sq. ft. but not more than 5,000 sq.ft. (the level at which Water Code 535 applies) and residential irrigated landscapes of 5,000 sq. ft. or greater. A landscape water meter may be either:

1. a customer service meter dedicated to landscape use provided by the local water purveyor; or

2. a privately owned meter or submeter.

b. Automatic irrigation controllers utilizing either evapotranspiration or soil moisture sensor data utilizing non-volatile memory shall be required for irrigation scheduling in all irrigation systems.

c. If the water pressure is below or exceeds the recommended pressure of the specified irrigation devices, the installation of a pressure regulating device is required to ensure that the dynamic pressure at each emission device is within the manufacturer's recommended pressure range for optimal performance.

1. If the static pressure is above or below the required dynamic pressure of the irrigation system, pressure-regulating devices such as inline pressure regulators, booster pumps, or other devices shall be installed to meet the required dynamic pressure of the irrigation system.

2. Static water pressure, dynamic or operating pressure, and flow reading of the water supply shall be measured at the point of connection. These pressure and flow measurements shall be conducted at the design stage. If the measurements are not available at the design stage, the measurements shall be conducted at installation.

d. Sensors (rain, freeze, wind, etc.), either integral or auxiliary, that suspend or alter irrigation operation during unfavorable weather conditions shall be required on all irrigation systems, as appropriate for local climatic conditions. Irrigation should be avoided during windy or freezing weather or during rain.

e. Manual shut-off valves (such as a gate valve, ball valve, or butterfly valve) shall be required, as close as possible to the point of connection of the water supply, to minimize water loss in case of an emergency (such as a main line break) or routine repair.

f. Backflow prevention devices shall be required to protect the water supply from contamination by the irrigation system. A project applicant shall refer to the applicable local agency code (i.e., public health) for additional backflow prevention requirements.

g. Flow sensors that detect high flow conditions created by system damage or malfunction are required for all on non-residential landscapes and residential landscapes of 5000 sq. ft. or larger.

h. Master shut-off valves are required on all projects except landscapes that make use of technologies that allow for the individual control of sprinklers that are individually pressurized in a system equipped with low pressure shut down features.

i. The irrigation system shall be designed to prevent runoff, low head drainage, overspray, or other similar conditions where irrigation water flows onto non-targeted areas, such as adjacent property, non-irrigated areas, hardscapes, roadways, or structures.

j. Relevant information from the soil management plan, such as soil type and infiltration rate, shall be utilized when designing irrigation systems.

k. The design of the irrigation system shall conform to the hydrozones of the landscape design plan.

l. The irrigation system must be designed and installed to meet, at a minimum, the irrigation efficiency criteria as described in Section VIII regarding the Maximum Applied Water Allowance.

m. All irrigation emission devices must meet the requirements set in

the American National Standards Institute (ANSI) standard, American Society of Agricultural and Biological Engineers'/International Code Council's (ASABE/ICC) 802-2014 "Landscape Irrigation Sprinkler and Emitter Standard, All sprinkler heads installed in the landscape must document a distribution uniformity low quarter of 0.65 or higher using the protocol defined in ASABE/ICC 802-2014.

n. It is highly recommended that the project applicant or local agency inquire with the local water purveyor about peak water operating demands (on the water supply system) or water restrictions that may impact the effectiveness of the irrigation system.

o. In mulched planting areas, the use of low volume irrigation is required to maximize water infiltration into the root zone.

p. Sprinkler heads and other emission devices shall have matched precipitation rates, unless otherwise directed by the manufacturer's recommendations.

q. Head to head coverage is recommended. However, sprinkler spacing shall be designed to achieve the highest possible distribution uniformity using the manufacturer's recommendations.

r. Swing joints or other riser-protection components are required on all risers subject to damage that are adjacent to hardscapes or in high traffic areas of turfgrass.

s. Check valves or anti-drain valves are required on all sprinkler heads where low point drainage could occur.

t. Areas less than ten (10) feet in width in any direction shall be irrigated with subsurface irrigation or other means that produces no runoff or overspray.

u. Overhead irrigation shall not be permitted within 24 inches of any non-permeable surface. Allowable irrigation within the setback from non-permeable surfaces may include drip, drip line, or other low flow non-spray technology. The setback area may be planted or unplanted. The surfacing of the setback may be mulch, gravel, or other porous material. These restrictions may be modified if:

1. the landscape area is adjacent to permeable surfacing and no runoff occurs; or

2. the adjacent non-permeable surfaces are designed and constructed to drain entirely to landscaping; or

3. the irrigation designer specifies an alternative design or technology, as part of the Landscape Documentation Package and clearly demonstrates strict adherence to irrigation system design criteria in Section X (A)(1)Prevention of overspray and runoff must be confirmed during the irrigation audit.

v. Slopes greater than 25% shall not be irrigated with an irrigation system with a application rate exceeding 0.75 inches per hour. This restriction may be modified if the landscape designer specifies an alternative design or technology, as part of the Landscape Documentation Package, and clearly demonstrates no runoff or erosion will occur. Prevention of runoff and erosion must be confirmed during the irrigation audit.

ii. Hydrozone

a. Each valve shall irrigate a hydrozone with similar site, slope, sun exposure, soil conditions, and plant materials with similar water use.

b. Sprinkler heads and other emission devices shall be selected based on what is appropriate for the plant type within that hydrozone.

c. Where feasible, trees shall be placed on separate valves from shrubs, groundcovers, and turf to facilitate the appropriate irrigation of trees. The mature size and extent of the root zone shall be considered when designing irrigation for the tree.

d. Individual hydrozones that mix plants of moderate and low water use, or moderate and high water use, may be allowed if:

1. plant factor calculation is based on the proportions of the respective plant water uses and their plant factor; or

2. the plant factor of the higher water using plant is used for calculations.

e. Individual hydrozones that mix high and low water use plants shall not be permitted.

f. On the Landscape Design Plan and Irrigation Design Plan, hydrozone areas shall be designated by number, letter, or other designation. On the Irrigation Design Plan, designate the areas irrigated by each valve, and assign a number to each valve. Use this valve number in the Hydrozone Information Table (see Appendix B Section A). This table can also assist with the irrigation audit and programming the controller.

B. The Irrigation Design Plan, at a minimum, shall contain:

i. location and size of separate water meters for landscape;

ii. location, type and size of all components of the irrigation system, including controllers, main and lateral lines, valves, sprinkler heads, moisture sensing devices, rain switches, quick couplers, pressure regulators, and backflow prevention devices;

iii. static water pressure at the point of connection to the public water supply;

iv. flow rate (gallons per minute), application rate (inches per hour), and design operating pressure (pressure per square inch) for each station;

v. recycled water irrigation systems as specified in Section XVII;

vi. the following statement: "I have complied with the criteria of the ordinance and applied them accordingly for the efficient use of water in the irrigation design plan"; and

vii. the signature of a licensed landscape architect, certified irrigation designer, licensed landscape contractor, or any other person authorized to design an irrigation system. (See Sections 5500.1, 5615, 5641, 5641.1, 5641.2, 5641.3, 5641.4, 5641.5, 5641.6, 6701, 7027.5 of the Business and Professions Code, Section 832.27 of Title 16 of the California Code of Regulations, and Section 6721 of the Food and Agricultural Code.)

17.41.100. Grading Design Plan.

A. For the efficient use of water, grading of a project site shall be designed to minimize soil erosion, runoff, and water waste. A grading plan or completed Grading Design Survey (Appendix E)shall be submitted as part of the Landscape Documentation Package. A comprehensive grading plan prepared by a civil engineer for other local agency permits satisfies this requirement.

i. The project applicant shall submit a landscape grading plan that indicates finished configurations and elevations of the landscape area including:

a. height of graded slopes;

b. drainage patterns;

c. pad elevations;

d. finish grade; and

e. storm water retention improvements, if applicable

ii. To prevent excessive erosion and runoff, it is highly recommended that project applicants:

a. grade so that all irrigation and normal rainfall remains within property lines and does not drain on to non-permeable hardscapes;

b. avoid disruption of natural drainage patterns and undisturbed soil; and avoid soil compaction in landscape areas.

17.41.110. Certificate of Completion.

A. The Certificate of Completion (see Appendix C for a sample certificate) shall include the following six (6) elements:

i. Project information sheet that contains:

a. Date

b. Project name

c. Project applicant name, telephone, and mailing address;

d. Project address and location; and

e. Property owner name, telephone, and mailing address;

ii. certification by either the signer of the landscape design plan, the signer of the irrigation design plan, or the licensed landscape contractor that the landscape project has been installed per the approved Landscape Documentation Package;

a. where there have been significant changes made in the field during construction, these "as-built" or record drawings shall be included with the certification;

b. A diagram of the irrigation plan showing hydrozones shall be kept with the irrigation controller for subsequent management purposes.

iii. irrigation scheduling parameters used to set the controller (see Section XIV);

iv. landscape and irrigation maintenance schedule (see Section XV);

v. irrigation audit report (see Section XIII); and

vi. soil analysis report or soil management survey, if not submitted with Landscape Documentation Package, and documentation verifying implementation of soil report recommendations (see Section VII).

B. The project applicant shall:

i. submit the signed Certificate of Completion to the local agency for review;

ii. ensure that copies of the approved Certificate of Completion are submitted to the local water purveyor and property owner or his or her designee.

C. The local agency shall:

i. receive the signed Certificate of Completion from the project applicant;approve or deny the Certificate of Completion. If the Certificate of Completion is denied, the local agency shall provide information to the project applicant regarding reapplication, appeal, or other assistance.

17.41.120. Landscape Audit Report.

A. The Landscape Audit Report shall include, but is not limited to: inspection to confirm that the landscaping and irrigation system were installed as specified in the Landscape and Irrigation Design Plan, system tune-up, system test with distribution uniformity, reporting overspray or run off that causes overland flow, and preparation of an irrigation schedule.

B. The Landscape Audit Report shall include the following statement: "The landscape and irrigation system has been installed as specified in the Landscape and Irrigation Design Plan and complies with the criteria of the Ordinance and the permit".

C. Local agency shall administer on-going programs that may include, but not be limited to, post-installation landscape inspection, irrigation water use analysis, irrigation audits, irrigation surveys and water budget calculations to evaluate compliance with the MAWA.

17.41.130. Irrigation Scheduling

A. For the efficient use of water, all irrigation schedules shall be developed, managed, and evaluated to utilize the minimum amount of water required to maintain plant health. Irrigation schedules shall meet the following criteria:

i. Irrigation scheduling shall be regulated by automatic irrigation controllers.

ii. Overhead irrigation shall be scheduled between 8:00 p.m. and 10:00 a.m. unless weather conditions prevent it. If allowable hours of irrigation differ from the local water purveyor, the stricter of the two shall apply. Operation of the irrigation system outside the normal watering window is allowed for auditing and system maintenance.

iii. For implementation of the irrigation schedule, particular attention must be paid to irrigation run times, emission device, flow rate, and current reference evapotranspiration, so that applied water meets the Estimated Total Water Use. Total annual applied water shall be less than or equal to Maximum Applied Water Allowance (MAWA). Actual irrigation schedules shall be regulated by automatic irrigation controllers using current reference evapotranspiration data (e.g., CIMIS) or soil moisture sensor data.

iv. Parameters used to set the automatic controller shall be developed and submitted for each of the following:

a. The plant establishment period;

b. The established landscape; and

c. Temporarily irrigated areas

v. Each irrigation schedule shall consider for each station all of the following that apply:

a. irrigation interval (days between irrigation);

b. irrigation run times (hours or minutes per irrigation event to avoid runoff);

c. number of cycle starts required for each irrigation event to avoid runoff;

d. amount of applied water scheduled to be applied on a monthly basis;

e. application rate setting;

f. root depth setting;

g. plant type setting;

h. soil type;

i. slope factor setting;

j. shade factor setting; and irrigation uniformity or efficiency setting.

17.41.140 Landscape and Irrigation Maintenance.

A. Landscapes shall be maintained to ensure water use efficiency. A regular maintenance schedule shall be submitted with the Certificate of Completion.

B. A regular maintenance schedule shall include, but not be limited to, routine inspection; auditing; adjustment and repair of the irrigation system and its components; aerating and dethatching turf areas; topdressing with compost; replenishing mulch; fertilizing; pruning; weeding in all landscape areas; and removing obstructions to emission devices. Operation of the irrigation system outside the normal watering window is allowed for auditing and system maintenance.

C. Repair of all irrigation equipment shall be done with the originally installed components or their equivalents or with components with greater efficiency.

D. A Project applicant is encouraged to implement established landscape industry sustainable Best Practices for all landscape maintenance activities.

17.41.150 Stormwater Management and Rainwater Retention.

A. Stormwater management practices minimize runoff and increase infiltration which recharges groundwater and improves water quality. Implementing stormwater best management practices into the landscape and grading design plans to minimize runoff and to increase on-site rainwater retention and infiltration are encouraged.

B. Project applicants shall refer to the local agency or Regional Water Quality Control Board for information on any applicable stormwater technical requirements.

C. All planted landscape areas are required to have friable soil to maximize water retention and infiltration. Refer to Section IX (A)(iii).

D. It is strongly recommended that landscape areas be designed for capture and infiltration capacity that is sufficient to prevent runoff from impervious surfaces (i.e. roof and paved areas) from either: the one inch, 24-hour rain event or (2) the 85th percentile, 24-hour rain event, and/or additional capacity as required by any applicable local, regional, state or federal regulation.

E. It is recommended that storm water projects incorporate any of the following elements to improve on-site storm water and dry weather runoff capture and use:

i. Grade impervious surfaces, such as driveways, during construction to drain to vegetated areas.

ii. Minimize the area of impervious surfaces such as paved areas, roof and concrete driveways.

iii. Incorporate pervious or porous surfaces (e.g., gravel, permeable pavers or blocks, pervious or porous concrete) that minimize runoff.

iv. Direct runoff from paved surfaces and roof areas into planting beds or landscaped areas to maximize site water capture and reuse.

v. Incorporate rain gardens, cisterns, and other rain harvesting or catchment systems.

vi. Incorporate infiltration beds, swales, basins and drywells to capture storm water and dry weather runoff and increase percolation into the soil.

vii. Consider constructed wetlands and ponds that retain water, equalize excess flow, and filter pollutants.

17.41.160 Recycled Water.

A. The installation of recycled water irrigation systems shall allow for the current and future use of recycled water.

B. All recycled water irrigation systems shall be designed and operated in accordance with all applicable local and State laws.

C. Landscapes using recycled water are considered Special Landscape Areas. The ET Adjustment Factor for new and existing (non-rehabilitated) Special Landscape Areas shall not exceed 1.0.

17.41.170 Greywater Systems.

A. Graywater systems promote the efficient use of water and are encouraged to assist in on-site landscape irrigation. All graywater systems shall conform to the California Plumbing Code (Title 24, Part 5, Chapter 16) and any applicable local ordinance standards. Refer to Section II (B) for the applicability of this ordinance to landscape areas less than 2,500 square feet with the Estimated Total Water Use met entirely by graywater.

17.41.180 Environmental Review.

The local agency must comply with the California Environmental Quality Act (CEQA), as appropriate.

17.41.190 Provisions of Existing Landscapes.

A local agency may by mutual agreement, designate another agency, such as a water purveyor, to implement some or all of the requirements contained in this ordinance. Local agencies may collaborate with water purveyors to define each entity's specific responsibilities relating to this ordinance.

17.41.200 Provisions for Existing Landscapes Over One Acre in Size.

This section shall apply to all existing landscapes that were installed before March 8, 2016 and are over one acre in size.

A. Irrigation Audit, Irrigation Survey, and Irrigation Water Use Analysis.

i. For landscapes that have a water meter, the local agency shall administer programs that may include, but not be limited to, irrigation water use analyses, irrigation surveys, and irrigation audits to evaluate water use and provide recommendations as necessary to reduce landscape water use to a level that does not exceed the MAWA for existing landscapes. The MAWA for existing landscapes shall be calculated as:
MAWA = (0.8) (ETo)(LA)(0.62).

ii. For landscapes that do not have a meter, the local agency shall administer programs that may include, but not be limited to, irrigation surveys and irrigation audits to evaluate water use and provide recommendations as necessary in order to prevent water waste.

iii. All landscape irrigation audits for existing landscapes that are greater than one acre in size shall be conducted by a certified landscape irrigation auditor.

B. Water Waste Prevention.

i. Local agencies shall prevent water waste resulting from inefficient landscape irrigation by prohibiting runoff from leaving the target landscape due to low head drainage, overspray, or other similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways, parking lots, or structures.

ii. Restrictions regarding overspray and runoff may be modified if:

iii. the landscape area is adjacent to permeable surfacing and no runoff occurs; or the adjacent non-permeable surfaces are designed and constructed to drain entirely to landscaping.

17.41.210 Penalties.

A. Violation and Notice of Correction.

It is unlawful for any person, firm, partnership, association, or corporation subject to the requirements of this Ordinance to fail to comply with the outdoor water use efficiency requirements of this Ordinance. The City of Daly City has the authority to conduct such inquiries, audits or surveys to ensure compliance with the requirements of this Ordinance. Whenever the City of Daly City determines that a violation of this Ordinance has occurred, the City of Daly City may serve a notice of correction on the owner(s) of the property on which the violation is situated. The owner(s) of record shall have ninety (90) days to take corrective action.

B. Administrative Enforcement.

In addition to any other remedy provided by the Daly City's Municipal Code, any provision of this Chapter may be enforced by an administrative order issued pursuant to the administrative processes set forth in Section 8.16.100 et. seq. of the Daly City Municipal Code. The Administrative Appeal Board shall serve as the administrative enforcement hearing board for the purposes of considering any appeals. All notices shall be served in accordance with Article II of Section 8.16 of the Daly City Municipal Code.

17.41.220 Public Education

A. Publications. Education is a critical component to promote the efficient use of water in landscapes. The use of appropriate principles of design, installation, management and maintenance that save water is encouraged in the community.

i. The local agency shall provide information to all applicants regarding the design, installation, management, and maintenance of water-efficient landscapes and irrigation systems.

B. Model Homes. All model homes that are landscaped shall use signs and written information to demonstrate the principles of water-efficient landscapes that are described in this Ordinance.

i. Signs shall be used to identify the model as an example of a water efficient landscape featuring elements such as hydrozones, irrigation equipment, and others that contribute to the overall water efficient theme. Signage shall include information about the site water use as designed per the local ordinance; specify who designed and installed the water efficient landscape; and demonstrate low water use approaches to landscaping such as using native plants, graywater systems, and rainwater catchment systems.

Information shall be provided about designing, installing, managing, and maintaining water efficient landscapes..

Section 3. **Severability**. If any section, subsection, provision or part of this Ordinance, or its application to any person or circumstance, is held to be unconstitutional or otherwise invalid, the remainder of this Ordinance, and the application of such provision to other person or circumstances, shall not be affected thereby and shall remain in full force and effect and, to that end, the provisions of this Ordinance are severable.

Section 4. **Environmental Determination**. The City Council finds and determines that this Ordinance is not subject to the California Environmental Quality Act (Public Resources Code Section 2100 et seq.) ("CEQA") pursuant to Section 15307 (the activity assures the maintenance, restoration, enhancement, or protection of a natural resource) and Section 15378(b)(2) (the activity is not a project as it involves general policy and procedure making) of the State CEQA Guidelines, California Code of Regulations, Title 14, Chapter 3, since it makes and implements policies and procedures to ensure that water resources are conserved by reducing water consumption through the establishment of a structure for planning, designing, installing, maintaining and managing water-efficient landscapes.

Section 5. **Publication and Effective Date.** Pursuant to the provisions of Government Code Section 36933, a summary of this ordinance shall be prepared by the City Attorney. At least five (5) days prior to the Council meeting at which this ordinance is scheduled to be adopted, the City Clerk shall (1) publish the summary, and (2) post it in the City Clerk's Office a certified copy of this ordinance. Within fifteen (15) days after the adoption of this ordinance, the City Clerk shall (1) publish the summary and (2) post in the City Clerk's Office a certified copy of the full text of this ordinance along with the names of those City Council members voting for and against this ordinance or otherwise voting. This ordinance shall be in full force and effect thirty (30) days after adoption by the City Council of the City of Daly City.

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF DALY CITY REPEALING AND REPLACING CHAPTER 17.41 OF THE DALY CITY MUNICIPAL CODE
RE: WATER CONSERVATION IN LANDSCAPING REGULATIONS

Introduced this _____25th____day of_____January_____, 2016.

Passed and adopted as an Ordinance of the City of Daly City at a regular meeting of the City Council of the City of Daly City held on the ___day of_____, 2016 , by the following vote:

AYES, Councilmembers:_____

_____

NOES, Councilmembers:_____

Absent, Councilmembers:_____

_____
CITY CLERK OF THE CITY OF DALY CITY

APPROVED:

_____
MAYOR OF THE CITY OF DALY CITY