Application of Criteria for a Project of Air Quality Concern

Project Title: San Jose Smart Intersections
Project Summary for Air Quality Conformity Task Force Meeting: October 22, 2015

Description

- Project will install an adaptive traffic signal control (ATSC) system at 35 signalized intersections along two corridors, Tullly Road and Saratoga Avenue, in San Jose.
- Utilizing real-time vehicle detection information, proposed ATSC system will adjust signal timings on a cycle-by-cycle basis in accordance with fluctuations in traffic demand
- 4 of the 35 intersections are in Caltrans ROW; however, San Jose performs O&M at these 4 locations under existing maintenance agreements.
- Project will install new vehicle detection equipment and related hardware/software at the TMC and in the traffic signal cabinet, if necessary. City anticipates utilizing non-intrusive vehicle detection technology, such as video detection and/or radar.
- The existing signal controller will remain in place and the project will leverage the existing traffic signal communications network.
- Project will improve travel time reliability, reduce congestion and improve air quality through a more efficient roadway operation all hours of the day.
- This project will not create any additional trips by diesel-powered vehicles.
- No bus stops will be relocated or added.
- Construction impacts are limited to temporary lane closures required by City forces to install vehicle detection equipment on traffic signal poles. No other impacts are anticipated.

Background

- This project is funded through the OneBayArea Grant (OBAG) – Complete Streets "Guarantee" program and has been coordinated with the Santa Clara Valley Transportation Authority and approved by the Metropolitan Transportation Commission.
- The environmental review process (PES) has been started, completion is pending the review of this air quality conformity determination
- Seeking air quality conformity determination on or before 10/30/2015
- Schedule based on deadline for CMAQ funding allocation

Not a Project of Air Quality Concern (40 CFR 93.123(b)(1))

(i) New or expanded highway projects with significant number/increase in diesel vehicles?

- Not a new or expanded highway project
- This is a traffic synchronization project that will improve signal operations.
- No anticipated change in traffic volumes, number of diesel vehicles, or diesel vehicle percentage of traffic inside or outside of the project area

(ii) Affects intersections at LOS D, E, or F with a significant number of diesel vehicles?

- Both project corridors experience light diesel truck traffic (possibly limited to 2% of daily traffic volumes).
- Project is expected to maintain or improve LOS levels at all signalized intersections located within the project corridors.
- This project does not change land use and will not lead to an increase in traffic volumes or an increase in diesel vehicle number or percentage of daily traffic volumes inside or outside of the project area.

(iii) New bus and rail terminals and transfer points?—Not Applicable

(iv) Expanded bus and rail terminals and transfer points?—Not Applicable

(v) Affects areas identified in PM_{10} or $PM_{2.5}$ implementation plan as site of violation?

- The project does not affect areas identified in PM_{10} or $PM_{2.5}$ implementation plan as site of violation. Furthermore, the project area is not identified in the plan as an area of possible violation.

RTIP ID# *(required)* 230251

TIP ID# *(required)* SCL130036

Air Quality Conformity Task Force Consideration Date
TBD

Project Description *(clearly describe project)*

This project proposes to deploy adaptive traffic signal control (ATSC) at up to thirty-five (35) intersections along Tully Rd in the eastern section of San Jose and Saratoga Ave in west San Jose. The Tully corridor encompasses signalized intersections along Tully Rd from Eastridge Ln to Seventh St. The Saratoga corridor includes the primary stretch of signals on Saratoga Ave from Steven Creek Blvd to Paseo de Saratoga and the intersecting coordinated system of Prospect Rd/Hamilton Av from Westgate West to Atherton Av.

For each signalized intersection located along the two project corridors, the proposed adaptive traffic signal control system will be principally comprised of: 1) a robust vehicle detection system, 2) a field communications network, and 3) depending on the system selected, some auxiliary equipment installed inside the existing wayside traffic signal cabinet. Some ATSC solution will also require a computer system to be installed centrally at the City's traffic management center for real-time data collection and analysis. Field construction will be limited to the installation of the vehicle detection equipment on existing traffic signal poles and/or signal mast arms and ATSC equipment inside the existing signal cabinet, if applicable. No new work will be required to provide the communications requirement as the City will leverage the existing traffic signal communications network already in place. Due to its cost effectiveness, non-intrusive vehicle detection technology, ie, video image processing, radar or magnetometers, will be utilized to provide the detection requirement. The proposed project does not anticipate the need for civil work or excavation such as conduit or signal pole installations.

Type of Project: Adaptive Traffic Signal Control (Synchronization)

County	*Narrative Location/Route & Postmiles*
Santa Clara	**Tully Rd between Eastridge Ln & 7th St. and Saratoga Ave between Stevens Creek Blvd & El Paseo de Saratoga** **Caltrans Projects – EA#**

Lead Agency: City of San Jose

Contact Person	*Phone#*	*Fax#*	*Email*
Ho Nguyen	408-975-3279	408-292-6093	ho.nguyen@sanjoseca.gov

Federal Action for which Project-Level PM Conformity is Needed *(check appropriate box)*

X *Categorical Exclusion (NEPA)*	**EA or Draft EIS**	**FONSI or Final EIS**	**PS&E or Construction**	*Other*

Scheduled Date of Federal Action:

NEPA Delegation – Project Type *(check appropriate box)*

Exempt	X **Section 6004 – Categorical Exemption**	**Section 6005 – Non-Categorical Exemption**

Current Programming Dates *(as appropriate)*

	PE/Environmental	**ENG**	**ROW**	**CON**
Start	Feb 2015	Jan 2016		Jun 2016
End	Jun 2016	Jun 2016		Mar 2017

Project Purpose and Need (Summary): *(please be brief)*

These two project corridors are home to a concentration of businesses, commercial and shopping districts. The two areas' mix of intersection geometries, proximity to freeway ramps and interchanges, high density and mixed-use land development create dynamic traffic conditions that cannot be effectively addressed by conventional pre-programmed, time-of-day, signal timing schedules. Traffic volume peaks not only during commute hours, but also weekend periods. These corridors also experience high seasonal traffic volume during holidays and special events.

The ATSC will be deployed to improve travel time reliability, reduce congestion and improve air quality through a more efficient roadway operation all hours of the day. The project will achieve these targets by specifically reducing the travel times, delays and the number of stops at signalized intersections. Conventional signal systems, in particular traditional time-of-day (TOD) signal timing plans, do not accommodate variable and unpredictable traffic demands. This often results in increased customer complaint, frustrated drivers, excess fuel consumption, increased delay, and degraded safety.

Surrounding Land Use/Traffic Generators *(especially effect on diesel traffic)*

The two corridors are fronted by high concentration of commercial and retail businesses, major shopping, entertainment and community centers, and high-density housing. The proposed project has a net zero effect on diesel traffic.

Brief summary of assumptions and methodology used for conducting analysis

This project is focused on improving the operations of traffic signals along two of San Jose's most congested corridors. It aims to provide more efficient, real-time traffic signal operations over the traditional, fixed, time-of-day signal timing. It involves no new or expanded highways and no change in truck volumes on the affected streets within the project limits or any other streets in the area. As shown below, the implementation of this project will produce a net zero effect on the cross street ADT. Specifically, this project will improve travel time reliability, reduce congestion and improve air quality. As such, the criteria for a project of air quality concern should not apply to this project.

Opening Year: If facility is a highway or street, Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

N/A

RTP Horizon Year / Design Year: If facility is a highway or street, Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

N/A

Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

Installation of the proposed adaptive traffic signal control system is expected to occur in Fiscal Year 2015-16. ADT at critical intersections mostly affected by this project is summarized below:

The ADT, truck ADT and % trucks listed below are a representative sample of the 35 intersections within the project limits. (The ADTs are also representative of AADTs.) Truck (or heavy vehicle) traffic on Tully Rd and Saratoga Av is limited to local deliveries, school buses, public utility vehicles, and refuse collection vehicles. Truck traffic represents up to 2% of the ADT on these streets.

Intersection	Build ADT	No Build ADT	Truck ADT	% Trucks
King/Tully	22,600	22,615	339	1.5
McLaughlin/Tully	25,600	25,627	410	1.6
Lucretia/Tully	12,100	12,127	242	2.0
Doyle/Saratoga	11,100	11,085	232	2.1
Kiely/Saratoga	13,100	13,100	314	2.4

No change in the ADT, truck percentage or truck ADT is expected at any of these intersections as a result of the proposed project (Build scenario).

RTP Horizon Year / Design Year: If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

Below ADT, Truck ADT and % Trucks are near term forecasts based on approved development and proposed changes to the local transportation network. % Trucks is expected to remain unchanged from current levels. City's General Plan 2040 is currently under development so a 2040 forecast is currently not available.

Intersection	Build ADT	No Build ADT	Truck ADT	% Trucks
King/Tully	25,600	25,600	384	1.5
McLaughlin/Tully	27,300	27,267	436	1.6
Lucretia/Tully	12,700	12,721	254	2.0
Dolye/Saratoga	11,300	11,334	238	2.1
Kiely/Saratoga	13,300	13,303	319	2.4

No change in the near term ADT, truck percentage or truck ADT is expected at any of these intersections as a result of the proposed project (Build scenario).

Opening Year: If facility is a bus, rail or intermodal facility/terminal/transfer point, # of bus arrivals for Build and No Build, % and # of bus arrivals will be diesel buses
N/A

RTP Horizon Year / Design Year: If facility is a bus, rail or intermodal facility/terminal/transfer point, # of bus arrivals for Build and No Build, % and # of bus arrivals will be diesel buses
N/A

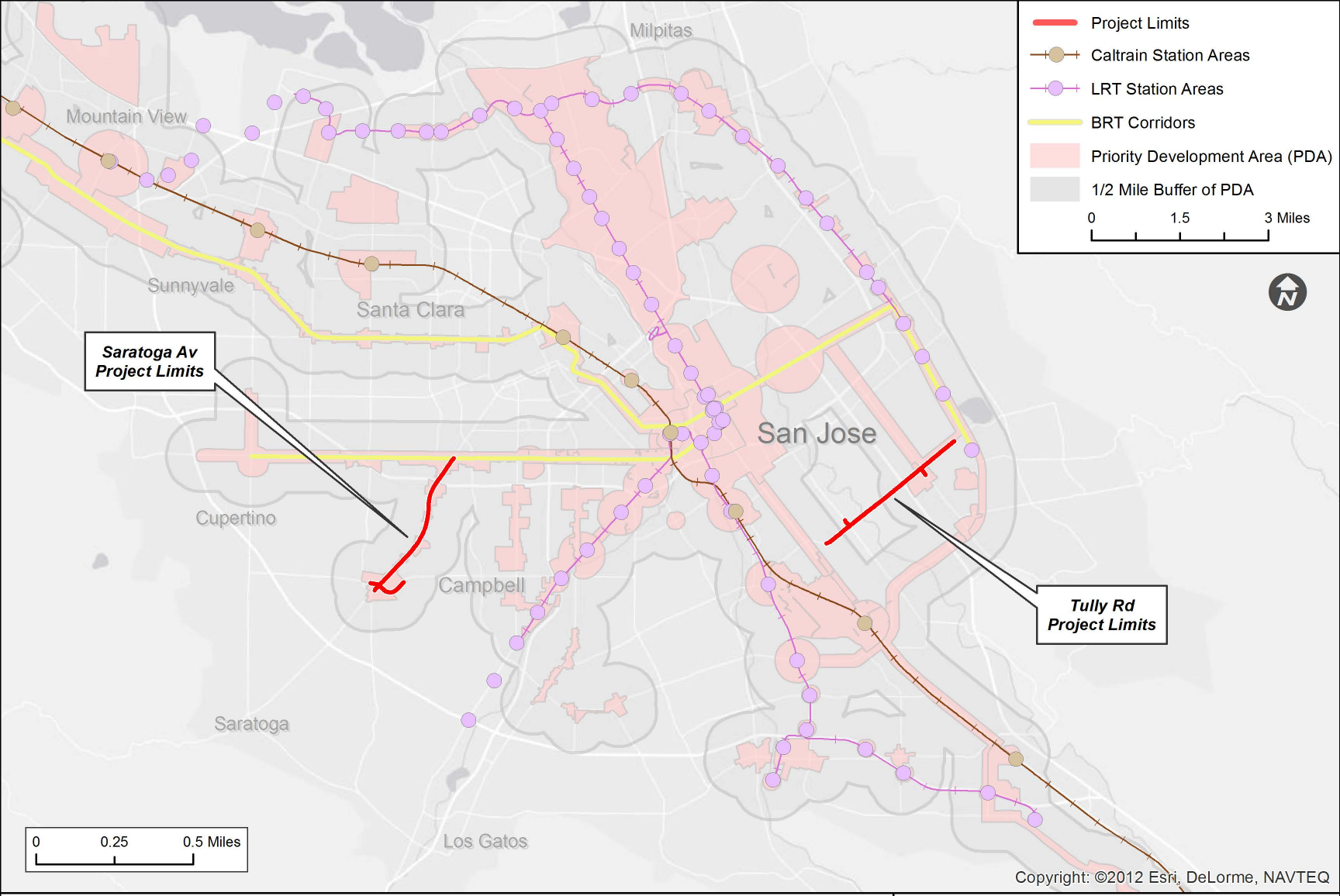
Describe potential traffic redistribution effects of congestion relief *(impact on other facilities)*

No redistribution of vehicular traffic is anticipated due to the implementation of the proposed project. As such, there should be no impact on other facilities as a result of this project.

Comments/Explanation/Details (please be brief)

This proposed project aims to provide more efficient traffic signal operation along two of the most congested corridors in San Jose, connecting major commute routes during peak periods and providing access to major commercial, business, and entertainment hubs in the surrounding areas. Its primary goals are to improve travel time reliability, reduce congestion, and reduce emissions of hydrocarbons and carbon monoxide due to the reduction in stops and delays. Therefore, no negative environmental or air quality impacts are anticipated as a result of this project.

Based on the project information provided in this report, we believe that it should not be considered a project of air quality concern and, therefore, should not be required to complete $PM_{2.5}$ hot-spot analysis for project-level conformity determination.



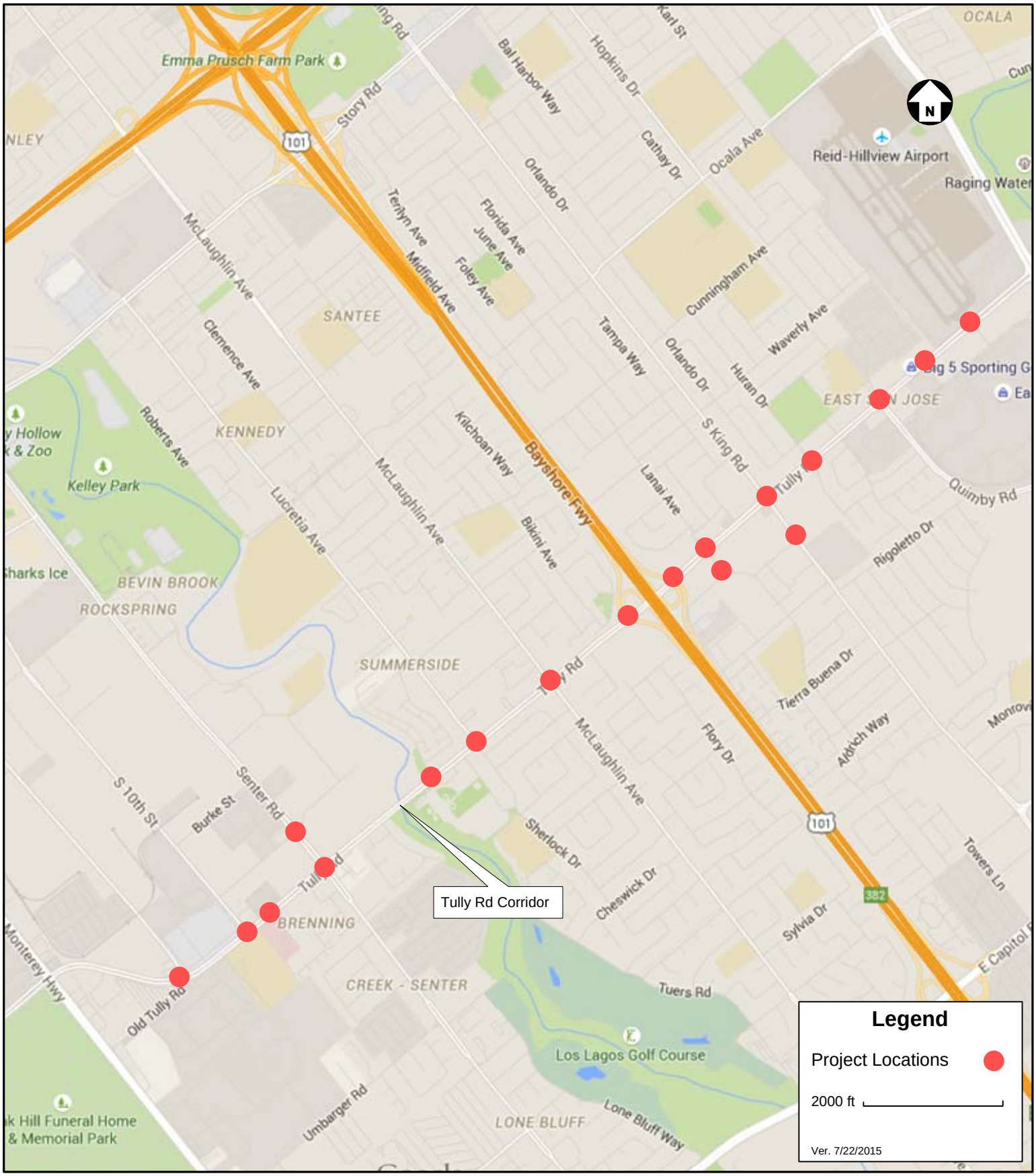
SAN JOSE SMART INTERSECTIONS PROGRAM

PRIORITY DEVELOPMENT AREA (PDA) MAP

CITY OF SAN JOSE
DEPARTMENT OF TRANSPORTATION
FEBRUARY 2013

OBAG Smart Intersections Project

Location Map – Tully Rd Corridor



OBAG Smart Intersections Project

Location Map – Saratoga Av Corridor