HEXAGON TRANSPORTATION CONSULTANTS, INC.

General Plan 4-Year Major Review

Long-Range Transportation Analysis

Prepared for:

City of San José

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Hexagon Transportation Consultants, Inc.
Hexagon Office: 8070 Santa Teresa Boulevard, Suite 230
Gilroy, CA 95020
Hexagon Job Number: 20RD10
Phone: 408.846.7410

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1. Introduction

This report presents the results of the long-range transportation analysis completed for the City of San José 2020 General Plan (GP) 4-Year Review of the Envision San José 2040 General Plan (referenced in the remainder of this report as the GP 4-Year Review). As part of the GP 4-Year Review, the City is considering adjustments to the current 2040 GP land uses that would result in the shift of jobs and residential units between Urban Villages, Neighborhood Business Districts, and Downtown. The land use adjustments also include the proposed land use amendments associated with the Downtown West (Google) project and Diridon Station Master Plan (DSAP) General Plan Amendments (GPAs).

The transportation analysis consists of a long-range evaluation of the effects of the proposed land use adjustments on the citywide transportation system following the standard City of San José procedures for GP transportation analysis.

Envision San José 2040 General Plan

The City of San José *Envision San José 2040 General Plan* was adopted in 2011 and was based on planned land uses within the City projected to the Year 2035. Since the adoption of the GP, proposed GPAs to the Land Use/Transportation Diagram have been considered on an annual basis. These GPAs were incorporated into the updated GP Land Use/Transportation Diagram once they became effective, which is generally 30 days after Council approval.

In addition, in 2016 the City completed its first GP 4-Year Review, which proposed minor adjustments to the adopted 2040 GP planned growth which resulted in a reduction in the total planned employment within the City. The 2016 GP 4-Year Review also included an update of the City's projected land uses between 2008 and 2015 to reflect the actual development that has occurred in the period since the adoption of the GP and its base year of 2008. In addition, the horizon year of the planned GP land uses and regional growth was updated from Year 2035 to Year 2040 to be consistent with projections provided in the most recent, Plan Bay Area 2040, or ABAG 2013.

Therefore, the Current General Plan includes all amendments that have been granted approval by Council since 2011 as well as the proposed land use adjustments adopted as part of the 2016 GP 4-Year Review. This report analyzes the second GP 4-Year Review which began in 2019 and the amendments are anticipated for consideration by City Council in late 2021.

Scope of Study

The Envision San José 2040 GP 4-Year Review consists of land use adjustments to the current GP land uses. However, the proposed changes would not result in a change to the total citywide growth of

the current GP. The GP 4-Year Review also does not propose any changes to the citywide transportation system and the transportation policies that were adopted in the Envision San José 2040 GP. The analysis focuses on the potential changes in the citywide transportation system in the horizon year of the GP (2040) when the GP capacities for housing and jobs are fully developed. The analysis includes the evaluation of the proposed land use adjustments on vehicle miles traveled, travel speeds on transit priority corridors, the citywide journey-to-work mode share, and impacts to pedestrian, bicycle, and transit facilities. Impacts are evaluated based on the same Measures of Effectiveness (MOEs) and significance criteria utilized in the Envision San José 2040 GP Traffic Impact Analysis (TIA).

Evaluation Approach

The GP 4-Year Review consists of an evaluation of impacts to ensure that the proposed land use adjustments within the City will result in no more impact on the transportation system than those impacts already identified for the adopted GP land uses approved in the Envision San José 2040 GP EIR and current GP. The Envision San José 2040 GP EIR remains valid should the evaluation indicate that the land use changes result in no new significant environmental effects or a substantial increase in the severity of previously identified significant effects.

The overall determination of impacts due to the proposed 2040 GP 4-Year Review is compared to Projected Year 2015 conditions and the current 2040 General Plan to determine if the proposed adjustments would result in any new or substantially more severe transportation impacts. Traffic conditions were evaluated for the following traffic scenarios using the City of San José's GP TDF model:

- **Projected Year 2015 Existing Conditions:** The Projected Year 2015 conditions represent a projection of transportation conditions in 2015 using the City's GP TDF model. The roadway network also reflects the Year 2015 roadway network and transportation system.
- **Current 2040 General Plan Conditions:** Future traffic due to the current GP land uses (i.e., including the adopted DTS 2040 plan, 2016 GP 4-Year Review Land Use adjustments, and adopted 2019 GP Amendments) is added to regional growth that can be reasonably expected to occur by 2040. Current 2040 GP conditions include the current roadway network as well as all transportation system improvements as identified in the current GP.
- **Proposed 2040 General Plan 4-Year Review Conditions:** Current 2040 GP conditions with the proposed land use adjustments that are part of the 2020 GP -Year Review and other land use amendments including the Downtown West (Google) and Diridon Station Area Plan (DASP). The proposed GP 4-Year Review Conditions are evaluated against Projected Year 2015 Conditions and impacts compared with the currently current 2040 GP Conditions to determine any changes to long-range traffic impacts.

Report Organization

The remainder of this report is divided into three chapters. Chapter 2 describes analysis methodology, including the City's TDF model, and the measures of effectiveness (MOEs) and significance thresholds used in the analysis. Chapter 3 presents the results of the analysis based on the TDF modeling and citywide MOEs. Chapter 4 presents the conclusions of the long-range impact analysis.

2. Analysis Methodology and Impact Criteria

This chapter describes the travel demand forecasting modeling methodology used for the analysis and the methods used to determine the traffic conditions for the study scenarios described in the previous chapter. It includes descriptions of the measures of effectiveness (MOE) and the applicable impact criteria for GP transportation analysis.

Travel Demand Forecasting Model

The citywide travel demand forecasting (TDF) model was prepared as part of the Envision San José 2040 GP. The TDF model was developed to provide improved citywide travel demand forecasting as part of continued planning efforts to address transportation infrastructure needs and to assist in the update of the City's General Plan. The model was developed from the VTA countywide travel demand model, which is based on the Metropolitan Transportation Commission (MTC's) BAYCAST trip-based regional model. The VTA model contains all cities and counties within the model's extents roughly bounded by southern Monterey County, eastern San Joaquin County, northern Sonoma County, and the Pacific Ocean. The San José model is a sub-area model of the VTA model – it maintains the general inputs (roadway network, land use, trip generation rates, etc.), structure, and process as the VTA model, but with refinement within the City of San José. This allows regional travel patterns and behavior to be accounted for in the focused area of San José, which will become more important with the recent legislative requirements associated with greenhouse gas quantification and impacts.

The VTA and San José models both include four elements traditionally associated with models of this kind. These elements include trip generation, trip distribution, mode choice, and traffic assignment.

- **Trip Generation.** Trip generation involves estimating the number of trips that would occur with the proposed General Plan land uses. The City's TDF model includes trip generation formulas that are based on the MTC regional travel demand model. Trip generation is estimated based on the type and amount of specific land uses within each travel analysis zone (TAZ). The TDF model produces trip estimates in person trips (as opposed to vehicle trips, which are typically used in near-term traffic analyses).
- **Trip Distribution.** Trip distribution is the second element of the model. Trip distribution involves distributing trips to various internal destinations and external gateways. The model pairs trip origins and trip destinations (starting and ending points) for each person trip based on the type of trip (e.g., home-to-work, home-to-school, etc.) and the distance a person is willing to travel for that purpose. The distance a person is willing to travel is determined by a gravity model, which is analogous to Newton's law of gravity. In a gravity model, estimates are made about how many trips occur between two locations, where the interaction between those two locations diminishes with increasing distance, time, and cost between them.

- **Mode Choice.** Mode choice is the third element of the model. Mode choice, as assigned by the model, determines which mode of transport a person will choose for each trip, based on the availability of a vehicle, the trip distance, and the trip purpose.
- **Traffic Assignment.** Traffic assignment is the fourth and final element of the model. Traffic assignment involves determining which route to take to travel between the trip origin and destination. The model assigns the trips to the roadway network to minimize travel time between the start and endpoints.

Subsequent trip distribution, assignment, and mode choice iterations are completed by the model to account for roadway congestion. These iterations continue under equilibrium traffic conditions until the optimal trip assignment is reached.

Transportation Network and Traffic Analysis Zones (TAZs)

The fundamental structure of the model includes a computer-readable representation of the roadway system (highway network) that defines roadway segments (links) identified by endpoints (nodes). Each roadway link is further represented by key characteristics (link attributes) that describe the length, travel speeds, and vehicular capacity of the roadway segment. Small geographic areas (TAZs) are used to quantify the planned land use activity throughout the City's planning area. The boundaries of these small geographic areas are typically defined by the modeled roadway system, as well as natural and man-made barriers that have an effect on traffic access to the modeled network. Transit systems are represented in the model by transit networks that are also identifiable by links and nodes. Unlike the roadway network, the key link attributes of a transit link are operating speed and headways – elapsed time between successive transit services. Transit stops and "dwelling times" (the time allowed for passengers embarking and disembarking transit vehicles) are described as transit node attributes. Transit networks are further grouped by type of transit (rail versus bus) and operator (VTA bus versus AC Transit bus). Transit accessibility for each TAZ is evaluated by proximity to transit stops or stations, and the connectivity of transit lines to destinations.

The socio-economic data for each TAZ in the model includes information about the number of households (stratified by household income and structure type), population, average income, population age distribution, and employment (stratified by groupings of Standard Industrial Codes). The worker per household ratios and auto ownership within a TAZ are calculated based on these factors and the types and densities of residences. The model projects trip generation rates and the traffic attributable to residents and resident workers, categorized by trip purposes, using set trip generation formulas that are based on the MTC regional travel demand model.

The land use data and roadway network used for the GP base year reflect land use development and roadway projects completed as of approximately mid-2015. The Year 2015 existing conditions baseline is used (as opposed to the existing physical condition) because the General Plan EIR and subsequent reviews have already evaluated the potential transportation CEQA impacts of building out the adopted General Plan using an existing condition baseline in 2015.

Traffic Assignment

Travel times within and between TAZs (intra-zonal, inter-zonal and terminal times) are developed from the network being modeled. Travel times within zones (intra-zonal travel times) are derived for each zone based on half its average travel time to the nearest three adjacent zones. Time to walk to and from the trip maker's car (terminal times) are also added. The projected daily trips are distributed using a standard gravity model and friction factors calibrated for the modeling region, which presently consists of 13 counties.

The City of San José TDF model is capable of estimating up to 7 modes of transportation:

- auto drive alone
- auto carpool with two persons
- auto carpool with three+ persons
- rail transit
- bus transit
- bicycle
- walk

Before the traffic is assigned to the roadway networks, time-of-day factors and directionality factors are applied to automobile trips occurring during the:

- AM peak hour
- AM 4-hour peak
- PM peak hour
- PM 4-hour peak
- mid-day 6-hour
- mid-night 10-hour periods

The assignment of the trip tables to the roadway network uses a route selection procedure based on minimum travel time paths (as opposed to minimum travel distance paths) between TAZs and is done using a capacity-constrained user equilibrium-seeking process. This capacity-constrained traffic assignment process enables the model to reflect the diversion of traffic around congested areas of the overall street system. High Occupancy Vehicle (HOV) lanes on freeways, expressways, and on-ramps are specifically dealt with in the model network, with access restricted to auto-shared-ride mode trips only, similar to real-world operations of roadway facilities with HOV lanes.

Transit Mode Share

Transit use is modeled for peak and non-peak periods based on computed transit levels of services (speeds and wait times). Based on the conditions that influence transit speeds and wait times (such as traffic congestion), transit use numbers are modified to reflect the likelihood of transit use, based on the constraints to the system. This feedback loop is a modern enhancement in the model to address the dynamics of transit ridership related to the expansion or contraction of roadway capacities.

In addition to providing projected peak hour and peak period volumes and ratios comparing projected traffic volume to available roadway capacity (V/C ratios) on each roadway segment, the model provides information on vehicle-miles and vehicle-hours of travel by facility type (freeway, expressways, arterial streets, etc.). These informational reports can be used to compare projected conditions under the adopted GP with the impacts of proposed land use amendments. The City's TDF model is intended for use as a "macro analysis tool" to project probable future conditions. Therefore, the TDF model is best used when comparing alternative future scenarios and is not designed to answer "microanalysis level" operational questions typically address in detailed transportation analyses (TAs).

General Plan Land Use

The GP TDF model includes the number of jobs and residents for each of the nine Bay Area counties based on the Association of Bay Area Governments (ABAG) 2013 Projections and Plan Bay Area 2040.

General Plan Transportation Network

The GP TDF model includes all major transportation infrastructure identified in the Envision San José 2040 *Land Use/Transportation Diagram*, including planned infrastructure that is not yet built and/or funded.

Measures of Effectiveness

This analysis addresses the long-range impacts of the proposed 2040 GP 4-Year Review land use adjustments on the citywide transportation system by applying measures of effectiveness (MOEs) developed for the Envision San José 2040 GP. The results of the analysis for the proposed 2040 GP 4-Year Review land use adjustments are compared to the current GP to determine if the proposed adjustments would result in any new or substantially more severe transportation impacts. The long-range analysis includes analysis of the following MOEs:

- **Vehicle Miles Traveled (VMT) per Service Population.** VMT per service population is a measure of the daily vehicle miles traveled divided by the number of residents and employees within the City of San José. VMT per service population (residents + employees) is used for the analysis as opposed to VMT per capita (residents only), since per service population more accurately captures the effects of land use on VMT. The City not only has residents that travel to and from jobs but also attract regional employees. VMT is calculated based on the number of vehicles multiplied by the distance traveled by each vehicle in miles.
- **Journey-to-Work Mode Share (Drive Alone %).** Mode share is the distribution of all daily work trips by travel mode, including the following categories: drive alone, carpool with two persons, carpool with three persons or more, transit (rail and bus), bike, and walk trips.
- **Average Travel Speeds within the City's Transit Priority Corridors.** Average travel speed for all vehicles (transit and non-transit vehicles) in the City's 14 transit corridors is calculated for the AM peak hour based on the segment distance dividing the vehicle travel time. A transit corridor is a segment of roadway identified as a Grand Boulevard in the Envision San José 2040 GP Land Use/Transportation Diagram. Grand Boulevards serve as major transportation corridors and, in most cases, are primary routes for Valley Transportation Authority (VTA) light-rail transit (LRT), bus rapid transit (BRT), local buses, and other public transit vehicles. Although transit services are found on other street types throughout the City, transit has the utmost priority on Grand Boulevards.

Significance Impact Criteria

The City of San José adopted policies and goals in Envision San José 2040 to reduce the drive alone mode share to no more than 40 percent of all daily commute trips, and to reduce the VMT per service population by 40 percent from existing (Year 2015) conditions. To meet these goals by the GP horizon year and to satisfy CEQA requirements, the City developed a set of MOEs and associated significance thresholds to evaluate long-range transportation impacts resulting from land use adjustments. Table 1 summarizes the significance thresholds associated with vehicular modes of transportation as defined in the City of San José *Transportation Analysis Handbook* (Thresholds of Significance for General Plan Amendments, Table 11) for the evaluation of long-range traffic impacts resulting from proposed land use adjustments and used in this analysis.

In addition to the MOEs described above the effects of the proposed 2040 GP 4-Year Review land use adjustments on transit, bicycle, and pedestrian facilities were evaluated. A significant long-range transportation impact would occur if the adjustments would:

Table 1
MOEs Significance Thresholds

Measure of Effectiveness	Significance Thresholds
VMT/Service Population	Any increase over Projected Year 2015 conditions
Mode Share (Drive Alone %)	Any increase in journey-to-work drive alone mode share over Projected Year 2015 conditions
Transit Corridor Travel Speeds	Decrease in average travel speed on a transit corridor below Projected Year 2015 conditions in the AM peak one-hour period when: 1. The average speed drops below 15 mph or decreases by 25% or more, or 2. The average speed drops by one mph or more for a transit corridor with average speed below 15 mph under current Projected Year 2015 conditions.
Source: City of San Jose Transportation Analysis Handbook, April 2020.	

- Disrupt existing, or interfere with planned transit services or facilities;
- Disrupt existing, or interfere with planned bicycle facilities;
- Conflict or create inconsistencies with adopted bicycle plans, guidelines, policies, or standards;
- Not provide secure and safe bicycle parking in adequate proportion to anticipated demand;
- Disrupt existing, or interfere with planned pedestrian facilities;
- Not provide accessible pedestrian facilities that meet current ADA best practices; or
- Create inconsistencies with adopted pedestrian plans, guidelines, policies, or standards.

3. General Plan 4-Year Review Land Use Adjustments Long-Range Analysis

The long-range transportation impacts resulting from the proposed 2040 GP 4-Year Review land use adjustments were determined based on the MOEs significance thresholds for vehicle modes of travel and the impact criteria for transit, bicycle, and pedestrian described in Chapter 2. The results of the long-range analysis are described below.

Proposed General Plan Adjustments

As part of the GP 4-Year Review, the City is considering adjustments to the current 2040 GP land uses that would result in the shift of jobs and residential units between Urban Villages, Neighborhood Business Districts, and Downtown as well as several changes to the City's transportation policies which include the effects of eliminating the Evergreen East Hills Development Policy (EEHDP).

Additionally, the proposed 2040 GP 4-Year Review also includes the land use amendments proposed by the DSAP Amendment and Downtown West Project (Google). The DSAP Amendment and Downtown West GPAs are described below:

- **Diridon Station Area Plan (DSAP) Amendment:** The DSAP Amendment proposes to increase the allowed office space within the DSAP area from 4,963,400 square feet (s.f.) to 7,838,000 s.f. and the number of residential units from 2,588 to 7,044 by 2040 (the horizon year of the current General Plan).
- **Downtown West Project (Google):** The Downtown West project proposes to increase the development capacity within the DSAP area by 6,306,000 s.f. of commercial and office space and 5,575 residential units.

However, as shown in Table 2, the proposed land use adjustments consist only of a redistribution of the planned growth within the City and will not result in a change in the total number of jobs and households citywide. The current 2040 GP includes a buildout projection of 429,350 households and 751,650 jobs within the City by the 2040 horizon year. The TDF model was used to rebalance the number of jobs and households citywide in order to maintain the General Plan Goal of 429,350 households and 751,650 jobs.

Table 2
General Plan Land Use Comparison

Year/Source	Housing Units	Employed Residents	Population	Jobs	Jobs to Employed Residents Ratio	Employed Residents to Housing Units Ratio
2015	319,870	472,917	1,016,043	374,225	0.8	1.48
Current Adopted GP	429,350	665,493	1,290,009	751,650	1.1	1.55
Proposed GP 4-Year Review	429,350	665,493	1,290,009	751,650	1.1	1.55
Change (Proposed GP 4-Year Review-Adopted GP)	0	0	0	0	0	

Vehicle Miles Traveled Per Service Population

The San José GP TDF model was used to calculate daily vehicle miles traveled (VMT) per service population, where the service population is defined as the number of residents plus the number of employees citywide. This approach focuses on the VMT generated by the new population and employment growth. VMT is calculated as the number of vehicle trips multiplied by the length of the trips in miles.

Since the City of San José not only has residents that travel to and from jobs within the City but also attract regional employees, the daily VMT includes some trips traveling outside of the City limits but with origins or destinations within San José. For this reason, the following trip types were included in the VMT calculation:

- Internal-Internal – All daily trips are made entirely within the San José City limits.
- One-half of Internal-External – One-half of the daily trips with an origin located within the San José City limits and a destination located outside of San José.
- One-half of External-Internal – One-half of the daily trips with an origin located outside the San José City limits and a destination located within San José.

Trips that travel through San José to and from other locations (External-External) are not included in the calculation of VMT. As defined in Table 1, any increase in VMT per service population over the current Projected Year 2015 conditions due to the proposed land use adjustments is considered a significant impact.

As shown in Table 3, the proposed 2040 GP 4-Year Review land use adjustments will result in an increase in VMT per service population when compared to Projected Year 2015 conditions. However, the current GP land uses also were shown to result in an increase in VMT. The citywide daily VMT and the VMT per service population are projected to decrease due to the proposed 2040 GP 4-Year Review land use adjustments when compared to the current GP. The reductions in citywide daily VMT and VMT per service population is because (1) the total number of jobs and households would not change citywide as a result of the proposed 2040 GP 4-Year Review land use amendments (only shifting of households and jobs would occur) and (2) the addition of households to areas with more jobs and transit options. Vehicle trips citywide would be reduced due to the reallocation of jobs and housing within and surrounding the downtown area, which provides for greater opportunities for multi-modal travel. The availability of current and planned transit, bicycle, and pedestrian facilities in the area of the sites with adjusted land uses will result in an increase in trips made by transit and other non-vehicular modes.

Table 3
Daily Vehicle Miles Traveled Per Service Population

	Projected (Year 2015)	Current 2040 General Plan	Proposed 2040 General Plan (4-Year Review)
Citywide Daily VMT	17,505,088	28,035,508	27,686,732
Citywide Service Population	1,392,946	2,041,659	2,041,659
- Total Households	319,870	429,350	429,350
- Total Residents	1,016,043	1,290,009	1,290,009
- Total Jobs	376,903	751,650	751,650
Daily VMT Per Service Population	12.57	13.73	13.56
Increase in Daily VMT Per Service Population over Projected 2015 Conditions		***1.16***	***0.99***
Significant Impact?		**Yes**	**Yes**

Note:
Service Population = Residents + Jobs

Findings: When compared to Projected Year 2015 Conditions, the proposed 2040 GP 4-Year Review land use adjustments would result in an increase of 0.99 vehicle miles per person. However, the current 2040 GP also was projected to result in an increase of 1.16 vehicle miles per person when compared to Projected Year 2015 Conditions, and result in an impact on the citywide daily VMT per service population. Therefore, the proposed 2040 GP 4-Year Review land use adjustments would not result in any new or substantially more severe transportation impacts on citywide daily VMT per service population than already identified for the current 2040 GP. It is important to note that the VMT per service population is based on raw model output and does not reflect the implementation of adopted GP policies and goals that would further reduce VMT by increased use of non-auto modes of travel.

Journey-to-Work Mode Share

The San José GP TDF model was used to calculate citywide journey-to-work mode share percentages. Journey-to-work mode share is the distribution of all daily work trips by travel mode, including drive alone, carpool with two persons, carpool with three persons or more, transit (rail and bus), bike, and walk trips. Although work trips may occur at any time of the day, a majority of work trips occur during typical peak commute periods (6:00 – 10:00 AM and 3:00 – 7:00 PM). As indicated in Table 1, any increase in the journey-to-work drive alone mode share percentage over the Projected Year 2015 conditions due to the proposed land use adjustments is considered a significant impact.

Table 4 summarizes the citywide journey-to-work mode share analysis results. When compared to Projected Year 2015 conditions, the percentage of drive alone trips would decrease by approximately 10 percent and the percentages of 3 or more-person carpool, transit, bike, and walk trips would increase as a result of the 2040 GP 4-Year Review land use adjustments. When compared with the current 2040 GP land uses, the percentages of journey-to-work drive alone and carpool trips would decrease slightly while the percentages of transit, bicycle, and walk trips would increase slightly as a result of the proposed 2040 GP 4-Year Review land use adjustments.

Table 4
Journey-to-Work Mode Share Percentages

Mode	Projected Year (2015)		Current 2040 General Plan		Proposed 2040 General Plan (4-Year Reveiew)	
	Trips	%	Trips	%	Trips	%
Drive Alone	753,264	79.7%	1,092,462	71.7%	1,064,205	70.0%
Carpool 2	85,496	9.0%	137,781	9.0%	134,271	8.8%
Carpool 3+	28,526	3.0%	54,781	3.6%	53,163	3.5%
Transit	48,181	5.1%	182,827	12.0%	206,582	13.6%
Bicycle	14,120	1.5%	26,337	1.7%	28,645	1.9%
Walk	15,666	1.7%	29,451	1.9%	33,584	2.2%
Increase in Drive Alone Percentage over Projected Year 2015 Conditions				-8.0%		-9.7%
Significant Impact?				**No**		**No**

Findings: The current 2040 GP land uses were shown to result in a decrease in the drive alone mode share when compared to Projected Year 2015 conditions and result in a less than significant impact on citywide journey-to-work mode share. The proposed 2040 GP 4-Year Review land use adjustments also will result in a decrease in the drive alone mode share while increasing the transit, bike, and walk mode shares when compared to the Projected Year 2015 conditions. Therefore, the proposed 2040 GP 4-Year Review land use adjustments would not result in any new or substantially more severe transportation impacts on citywide journey-to-work mode share when compared to the current 2040 GP.

Average Vehicle Speeds in Transit Priority Corridors

The San José GP TDF model was used to calculate the average vehicle travel speeds during the AM peak hour for the City's 14 transit corridors that were evaluated in the Envision San José 2040 General Plan TIA. A transit corridor is a segment of roadway identified as a Grand Boulevard in the Envision San José 2040 GP Land Use/Transportation Diagram. Grand Boulevards serve as major transportation corridors and, in most cases, are primary routes for VTA's LRT, BRT, local buses, and other public transit vehicles. The travel speeds are calculated by dividing the segment distance by the vehicle travel time. As defined in Table 1, land use amendments that result in a decrease in average travel speed on a transit corridor in the AM peak one-hour period when the average speed drops below 15 miles per hour (mph) or decreases by 25 percent (%) or more, or the average speed drops by one mph or more for a transit corridor with an average speed below 15 mph when compared to the current General Plan conditions is considered a significant impact.

Table 5 presents the average vehicle speeds on the City's 14 transit priority corridors (i.e., Grand Boulevard segments) during the AM peak hour of traffic. When compared to Projected Year 2015 conditions, the average travel speed on 12 of the 14 transit corridors are projected to decrease as a result of the Proposed 2040 GP 4-Year Review land use adjustments. The current 2040 GP is projected to decrease travel speed on all 14 of the transit corridors when compared to Projected Year 2015 conditions. The decrease in travel speed will be greater than 25% on six of the 14 transit corridors under the current 2040 GP land and Proposed 2040 GP 4-Year Review land use adjustments and are considered significant under the City's MOEs for transit corridors. Speed along three transit priority corridors also would drop below 15 miles per hour for the Proposed 2040 GP 4-Year Review land use assumptions and current 2040 GP land uses, which is considered significant. The adopted 2040 GP land uses also were shown to result in a decrease in

Table 5
AM Peak-Hour Vehicle Speeds (mph) in Transit Priority Corridors

Transit Priority Corridor	Projected Year 2015 (mph)	Current 2040 General Plan (mph)	% Change (Current 2040 General Plan - Projected Year 2015)	Proposed 2040 General Plan (4 Year Review) (mph)	% Change (Proposed 2040 GP 4 Year - Projected Year 2015)
2nd St from San Carlos St to St. James St	17	15	-7.8%	15	-11.4%
Alum Rock Av from Capitol Av to US 101	21	16	-23.7%	21	0.9%
Camden Av from SR 17 to Meridian Av	23	16	**-29.3%**	16	**-32.7%**
Capitol Av from S. Milpitas Bl to Capitol Expwy	27	23	-16.7%	23	-16.0%
Capitol Expwy from Capitol Av to Meridian Av	33	27	-19.1%	26	-19.8%
E. Santa Clara St from US 101 to Delmas Av	20	15	**-25.0%**	23	11.0%
Meridian Av from Park Av to Blossom Hill Rd	25	20	-19.6%	19	-23.6%
Monterey Rd from Keyes St to Metcalf Rd	27	19	**-29.4%**	19	**-30.0%**
N. 1st St from SR 237 to Keyes St	21	**14**	**-36.2%**	**13**	**-38.8%**
San Carlos St from Bascom Av to SR 87	25	20	-20.0%	16	**-34.6%**
Stevens Creek Bl from Bascom Av to Tantau Av	24	19	-22.8%	18	-24.3%
Tasman Dr from Lick Mill Bl to McCarthy Bl	23	**14**	**-39.3%**	**13**	**-41.6%**
The Alameda from Alameda Wy to Delmas Av	21	**14**	**-32.7%**	**13**	**-35.2%**
W. San Carlos St from SR 87 to 2nd St	20	19	-6.1%	16	-21.4%

travel speeds of greater than 25% and impact on 12 of the 14 transit corridors in the Envision San José 2040 GP EIR. The 12 transit corridors shown to be impacted by the adopted 2040 GP in the Envision San José GP EIR include the six transit corridors shown to be impacted by the Proposed 2040 GP 4-Year Review land uses. Note that Table 5 shows slight changes in travel speeds on several segments with the Proposed 2040 GP 4-Year Review when compared to the current 2040 GP. The reason for the minor variations in travel speeds is the result of changes in future travel patterns that would affect the traffic volumes on Grand Boulevard roadway segments resulting in lower speeds along some transit priority corridors and higher speeds on others.

Findings: The adopted 2040 GP land uses were shown to result in a decrease in travel speeds of greater than 25% and impact on 12 of the 14 transit corridors in the Envision San José 2040 GP EIR. The Proposed 2040 GP 4-Year Review land use adjustments will result in a decrease in travel speeds greater than 25 percent on six of the 14 transit priority corridors when compared to Projected Year 2015 conditions. The 12 transit corridors shown to be impacted by the adopted 2040 GP in the Envision San José GP EIR include the six transit corridors shown to be impacted by the Proposed 2040 GP 4-Year Review land uses. Therefore, the Proposed 2040 GP 4-Year Review land use adjustments would not result in any new or substantially more severe transportation impacts to transit priority corridors than those already identified for the adopted 2040 GP land uses in the adopted Envision San José 2040 GP EIR.

Impacts on Transit, Bicycle, and Pedestrian Circulation

The Circulation Element of the Envision San José 2040 General Plan includes a set of balanced, long-range, multimodal transportation goals and policies that provide for a transportation network that is safe, efficient, and sustainable (minimizes environmental, financial, and neighborhood impacts). In combination with land use goals and policies that focus growth into areas served by transit, these transportation goals and policies are intended to improve multi-modal accessibility to employment, housing, shopping, entertainment, schools, and parks and create a city where people are less reliant on driving to meet their daily needs. San José's Transportation Goals, Policies, and Actions aim to:

- Establish circulation policies that increase bicycle, pedestrian, and transit travel, while reducing motor vehicle trips, to increase the City's share of travel by alternative transportation modes.
- Promote San José as a walking- and bicycling-first city by providing and prioritizing funding for projects that enhance and improve bicycle and pedestrian facilities.

Included within the General Plan are a set of Goals and Policies to support a multimodal transportation system that gives priority to the mobility needs of bicyclists, pedestrians, and public transit users while also providing for the safe and efficient movement of automobiles, buses, and trucks. The effects of the proposed GP 4-Year Review land use adjustments on San José's Transportation Goals, Policies, and Actions are described below.

Transit Services or Facilities

Planned transit services and facilities include additional rail service via the future Bay Area Rapid Transit (BART) extension, light rail transit (LRT) extensions, new bus rapid transit (BRT) services, and the proposed California High-Speed Rail (HSR) project. The proposed GP 4-Year Review land use adjustments would not result in a change to the existing and planned roadway network that would result in an adverse effect on existing or planned transit facilities. Therefore, the proposed GP 4-Year Review land use adjustments would not substantially disrupt existing or interfere with planned transit services or facilities.

Bicycle Facilities

The adopted Envision San José 2040 GP supports the goals outlined in the City's Better Bike Plan 2025 and contains policies to encourage bicycle trips (Policies TR-1.1, TR-1.2, TR-1.4 through TR-1.9, TR 2.1 through TR 2.11, TR-7.1, TN-1.1 through TN-1.5, TN-2.1 through TN-2.7, and TN-3.1 through 3.6; Implementing Actions TR-1.12 through 1.15, TR-2.12 through TR-2.21, TR-7.2, TR-7.3, TN-1.6, TN-2.8 through 2.10, and TN-3.7; Performance Measures TN-2.11, TN-2.12). The proposed GP 4-Year Review land use adjustments would not result in a change to the existing and planned roadway network that would affect existing or planned bicycle facilities. Therefore, the proposed GP 4-Year Review land use adjustments would not substantially disrupt existing or interfere with planned bicycle facilities; conflict or create inconsistencies with adopted bicycle plans, guidelines, policies, or standards; and provide insecure and unsafe bicycle parking in adequate proportion to anticipated demand.

Pedestrian Facilities

The adopted Envision San José 2040 GP contains goals and policies (Policies TR-1.1, TR-1.2, TR-1.4 through TR-1.9, TR-2.1 through TR-2.11, TR-7.1, TN-1.1 through TN-1.5, TN-2.1 through TN-2.7, and TN-3.1 through 3.6; Implementing Actions TR-1.12 through TR-1.15, TR-2.12 through TR-2.21, TR-7.2, TR-7.3, TN-1.6, TN-2.8 through 2.10, and TN-3.7; Performance Measures TN-2.11, TN-2.12) to improve the pedestrian walking environment, increase pedestrian safety, and create a land use context to support non-motorized travel. The proposed GP 4-Year Review land use adjustments would not

result in a change to the existing and planned roadway network that would affect existing or planned pedestrian facilities. Therefore, the proposed GP 4-Year Review land use adjustments would not substantially disrupt existing or interfere with planned pedestrian facilities; create inconsistencies with adopted pedestrian plans, guidelines, policies, or standards; and provide accessible pedestrian facilities that would not meet current Americans with Disabilities Act (ADA) best practice.

4. Conclusions

This section presents a summary of the long-range transportation analysis completed for the City of San José GP 4-Year Review of the Envision 2040 General Plan (GP). The analysis evaluated the long-range impacts of the proposed 2040 General Plan 4-Year Review land use adjustments on the citywide transportation system based on measures of effectiveness (MOEs) developed for the Envision San José 2040 General Plan. The results of the analysis for the Proposed 2040 GP 4-Year Review adjustments were then compared to the results of the previously identified impacts in the Envision San José GP 2040 EIR and current 2040 GP land uses to determine if the proposed adjustments would result in any new or substantially more severe transportation impacts.

Long-Range Traffic Impacts

Vehicle Miles Traveled Per Service Population

When compared to Projected Year 2015 Conditions, the proposed 2040 GP 4-Year Review land use adjustments would result in an increase of 0.99 vehicle miles per person. However, the current 2040 GP also was projected to result in an increase of 1.16 vehicle miles per person when compared to Projected Year 2015 Conditions, and result in an impact on the citywide daily VMT per service population. Therefore, the proposed 2040 GP 4-Year Review land use adjustments would not result in any new or substantially more severe transportation impacts on citywide daily VMT per service population than already identified for the current 2040 GP.

Journey-to-Work Mode Share

The current 2040 GP land uses were shown to result in a decrease in the drive alone mode share when compared to Projected Year 2015 conditions and result in a less than significant impact on citywide journey-to-work mode share. The proposed 2040 GP 4-Year Review land use adjustments also will result in a decrease in the drive alone mode share while increasing the transit, bike, and walk mode shares when compared to the Projected Year 2015 conditions. Therefore, the proposed 2040 GP 4-Year Review land use adjustments would not result in any new or substantially more severe transportation impacts on citywide journey-to-work mode share when compared to the current 2040 GP.

Average Vehicle Speeds in Transit Priority Corridors

The adopted 2040 GP land uses were shown to result in a decrease in travel speeds of greater than 25% and impact on 12 of the 14 transit corridors in the Envision San José 2040 GP EIR. The Proposed 2040 GP 4-Year Review land use adjustments will result in a decrease in travel speeds greater than 25 percent on six of the 14 transit priority corridors when compared to Projected Year 2015 conditions. The

12 transit corridors shown to be impacted by the adopted 2040 GP in the Envision San José GP EIR include the six transit corridors shown to be impacted by the Proposed 2040 GP 4-Year Review land uses. Therefore, the Proposed 2040 GP 4-Year Review land use adjustments would not result in any new or substantially more severe transportation impacts to transit priority corridors than those already identified for the adopted 2040 GP land uses in the adopted Envision San José 2040 GP EIR.

Impacts on Transit, Bicycle, and Pedestrian Circulation

Transit Services or Facilities

The proposed 2040 GP 4-Year Review land use adjustments would not result in a change to the existing and planned roadway network that would have an adverse effect on existing or planned transit facilities. Therefore, the proposed 2040 GP 4-Year Review land use adjustments would not substantially disrupt existing or interfere with planned transit services or facilities.

Bicycle Facilities

The proposed 2040 GP 4-Year Review land use adjustments would not result in a change to the existing and planned roadway network that would affect existing or planned bicycle facilities. Therefore, the adjustments would not substantially disrupt existing, or interfere with planned bicycle facilities; conflict or create inconsistencies with adopted bicycle plans, guidelines, policies, or standards; and provide insecure and unsafe bicycle parking in adequate proportion to anticipated demand.

Pedestrian Facilities

The proposed 2040 GP 4-Year Review land use adjustments would not result in a change to the existing and planned roadway network that would affect existing or planned pedestrian facilities. Therefore, the adjustments would not substantially disrupt existing, or interfere with planned pedestrian facilities; create inconsistencies with adopted pedestrian plans, guidelines, policies, or standards; and provide accessible pedestrian facilities that would not meet current ADA best practices.