

# TRANSPORTATION STUDY YORK DRIVE INDEPENDENT LIVING PROJECT

San Diego County, California May 22, 2025

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#### TRANSPORTATION STUDY

#### YORK DRIVE INDEPENDENT LIVING PROJECT

San Diego County, California May 22, 2025

## 1.0 PURPOSE OF THE STUDY

The following transportation study has been prepared for the proposed York Drive Independent Living project ("Project") in the County of San Diego. This transportation study addresses both CEQA transportation analysis (VMT analysis) and non-CEQA transportation analysis related to General Plan requirements (site access and local mobility).

A scoping agreement was prepared and submitted to a County Planning and Development Services staff to determine study requirements including CEQA transportation screening and Local Mobility Analysis (LMA) study area, scenarios, trip generation, and distribution. The signed scoping agreement is included in *Appendix A*.

The Project site comprises 4.27 acres located at 1822, 1844, and 1864 York Drive, south of York Drive and east of S. Santa Fe Avenue in the North County Metropolitan Subregional Plan area. The proposed Project includes the construction of up to 183 independent senior living dwelling units. Access to the project will be provided from one proposed driveway on York Drive.

The following items are included in this transportation study:

- Project Description
- CEQA VMT Screening
- Local Mobility Analysis Methodology & Thresholds
- Existing Conditions Discussion
- Analysis of Existing Conditions
- Project Trip Generation, Distribution, and Assignment
- Opening Year Conditions
- Analysis of Opening Year Scenarios
- Site Access, Safety, and Other Analyses
- Active Transportation Review
- Conclusions and Recommendations

## 2.0 PROJECT DESCRIPTION

## 2.1 Project Location

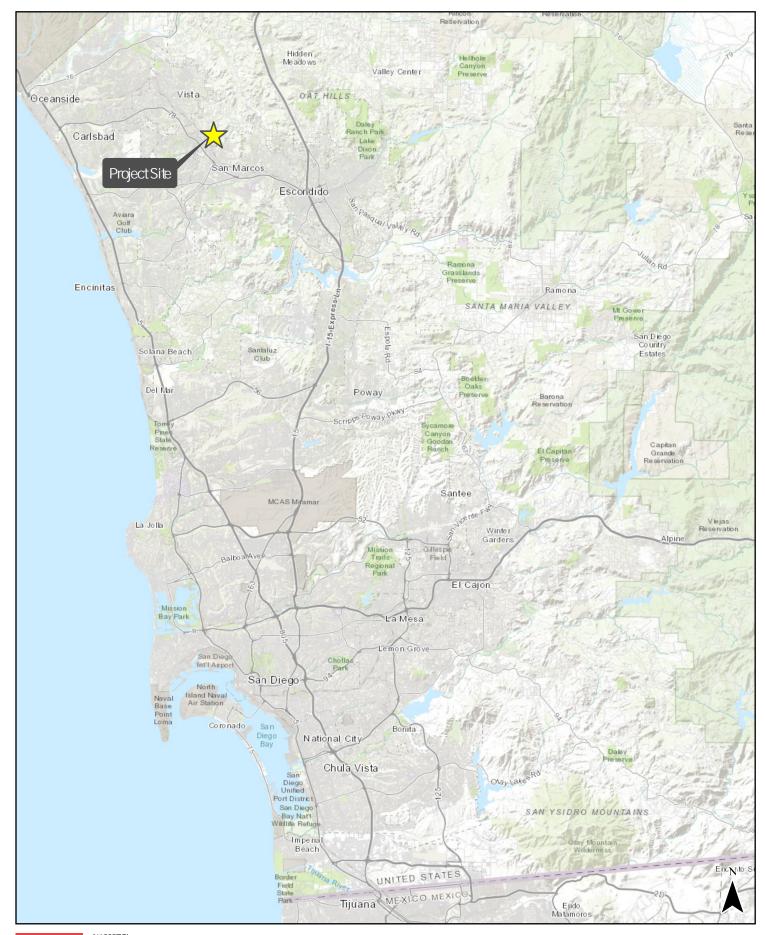
The York Drive Independent Living project is located at 1822, 1844, and 1864 York Drive, south of York Drive and east of S. Santa Fe Avenue, in the North County Metropolitan Subregional Plan area of San Diego County.

Figure 2–1 shows the general vicinity of the Project and Figure 2–2 illustrates, in more detail, the site location.

## 2.2 Project Description

The Project site was recently occupied by single family residential homes. The project would construct one four-story building of 138,139 square feet with 183 senior apartment units. The apartments include 121 studios, 51 one-bedroom units and 11 two-bedroom units. Access to the project will be provided from one proposed driveway on York Drive.

Figure 2–3 shows the Project's conceptual site plan.



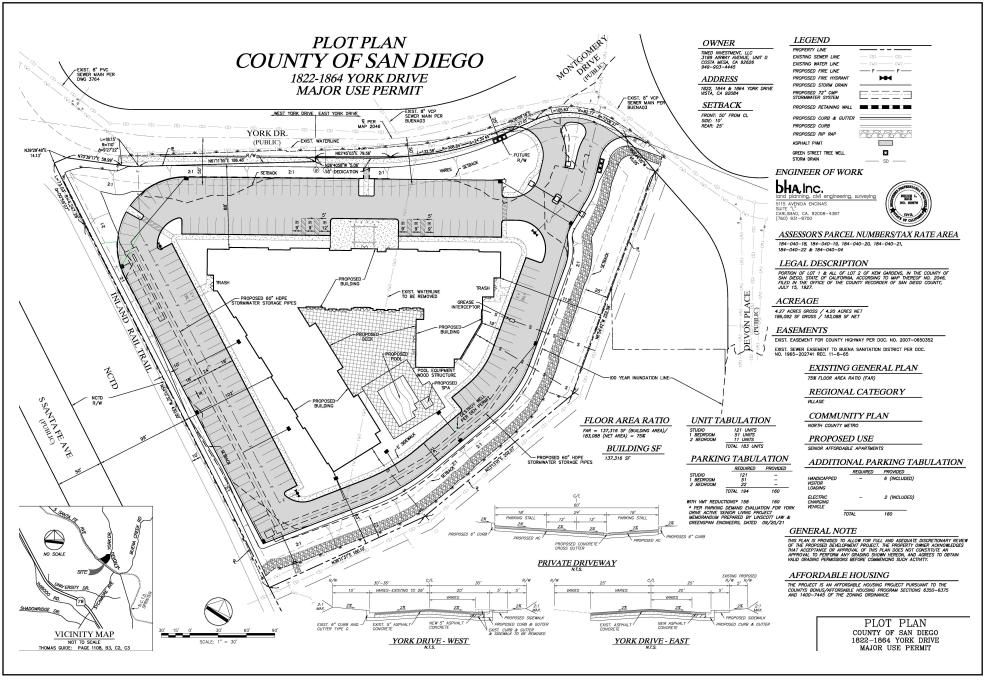


N:\3385\Figure Date: 6/23/2021 Time: 1:30PM Figure 2-1 Vicinity Map



LINSCOTT
LAW &
GREENSPAN
engineers

N:\3385\Figure Date: 6/23/2021 Time: 3:19 PM Figure 2-2 Project Area Map



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N:\3385\Figure Date: 10/8/2021 Time: 4:05 PM Figure 2-3 Project Site Plan

# CALIFORNIA ENVIRONMENTAL QUALITY ACT VEHICLE MILES TRAVELED (CEQA VMT)

#### 3.0 CEQA VMT Screening Process

#### 3.1 VMT Background

Vehicle miles traveled (VMT) is a measurement of miles traveled by vehicles within a specified region and for a specified period. VMT measures the efficiency of the transportation network. VMTs are calculated based on individual vehicle trips generated and their associated trip lengths. VMT accounts for two-way (round-trip) travel and is often estimated for a typical weekday to measure transportation impacts.

## 3.2 Local / Regional Agency Transition to SB743

The County of San Diego has published Transportation Study Guidelines (TSG) which were adopted in September 2022 by the County of San Diego Board of Supervisors. Given that the County of San Diego has developed methodologies and thresholds, the TSG was used. Technical Methodology

According to the *TSG*, a detailed transportation VMT analysis is required for all land development projects, except those that meet one of the screening criteria. A project that meets at least one of the screening criteria below would have less than significant VMT impact due to the project characteristics and/or location.

1. **Projects Located in a VMT Efficient Area:** A VMT efficient area is any area with an average VMT per Resident, VMT per Employee, or VMT per Service Population 15% below the baseline average for the entire San Diego County region, including the incorporated cities. Land use projects may qualify for the use of VMT efficient area screening if the project can be reasonably expected to generate VMT per Resident, per employee, or per Service Population, respectively, that is similar to the existing land uses in the VMT efficient area.

<u>Residential projects</u> located within a VMT efficient area may be presumed to have a less than significant impact absent substantial evidence to the contrary. A VMT efficient area for residential projects is an area with an average VMT per Resident 15% below the baseline average for the entire San Diego County region, including the incorporated cities.

<u>Employment projects</u> located within a VMT efficient area may be presumed to have a less than significant impact absent substantial evidence to the contrary. A VMT efficient area for employment projects is any area with an average VMT per Employee 15% below the baseline average for the entire San Diego County region, including the incorporated cities.

<u>Mixed-Use projects</u> located within a VMT efficient area may be presumed to have a less than significant impact absent substantial evidence to the contrary. A VMT efficient area for mixed-use projects is any area with an average VMT per Resident <u>and</u> VMT per Employee that is 15%

below the baseline average for the entire San Diego County region, including the incorporated cities.

<u>Retail/Service projects</u> located within a VMT efficient area may be presumed to have a less than significant impact absent substantial evidence to the contrary. A VMT efficient area for retail/service is an area with an average VMT per Service Population 15% below the baseline average for the entire San Diego County region, including the incorporated cities.

#### 2. Projects Located in Infill Village Area in TOAs

An Infill development is defined by OPR as "...building within unused and underutilized lands within existing development patterns, typically but not exclusively within urban areas." Multiple land use and transportation network variables were identified to create a quantitative definition for "infill development" in the County, including household density, intersection density, and job accessibility.

The County's General Plan identifies villages as areas where a higher intensity and a wide range of land uses are established or have been planned. Typically, Village areas function as the center of community planning areas and contain the highest population and development densities. Village areas typically served by both water and wastewater systems. Ideally, a Village would reflect a development pattern that is characterized by compact, higher density development that is located within walking distance of commercial services, employment centers, civic uses, and transit (when feasible).

Transit Opportunity Areas (TOAs) are identified areas which the regional transit network has the best opportunity to expand within the unincorporated county and are near or adjacent to SANDAG-identified "Mobility Hubs."

Development in more dense areas with high job accessibility leads to more diversity in land use, demand for transit and multimodal infrastructure, and shorter vehicle trips which reduce greenhouse gas emissions and VMT. Thus, projects located within the established infill area may be presumed to have a less than significant impact absent substantial evidence to the contrary.

- 3. **Small Residential and Employment Projects:** Projects generating less than 110 daily vehicle trips (trips are based on the number of vehicle trips calculated using national ITE trip generation rates with any alternative modes/location-based adjustments are applied) may be presumed to have a less than significant impact absent substantial evidence to the contrary.
- 4. **Projects Located in a Transit Accessible Area:** Projects located within a half-mile of an existing *major transit stop\** or an existing stop along a *high-quality transit corridor\** may be presumed to have a less than significant impact absent substantial evidence to the contrary. Note that Sprinter stations are considered major transit stops. This presumption may not apply if the project:

- Has a Floor Area Ratio (FAR) of less than 0.75.
- Includes more parking for use by residents, customers, or employees of the project than required by the County.
- Is inconsistent with SANDAG's most recent Sustainable Communities Strategy (SCS).
- Replaces affordable residential units with a smaller number of moderate- or high-income residential units

\*As defined in CEQA Guidelines Section 21064.3, a *major transit stop* is a site containing an existing rail transit station, a ferry terminal serviced by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods. *A high-quality transit corridor* contains a fixed route bus service with service intervals no longer than 15 minutes during peak commute periods.

- 5. **Locally Serving Retail/Service Projects:** Local serving retail/service projects less than 50,000 square feet may be presumed to have a less than significant impact absent substantial evidence to the contrary. Local serving retail/service generally improves the convenience of shopping close to home and has the effect of reducing vehicle travel
- 6. Locally Serving Public Facilities and Other Uses: Public facilities that serve the surrounding community or public facilities that are passive use may be presumed to have a less than significant impact absent substantial evidence to the contrary. These do not include facilities or uses that would attract users from outside the vicinity of the use. The following are examples of locally serving facilities and uses:
  - Transit Centers
  - Libraries
  - Post Offices
  - Park-and-Ride Lots
  - Local Health/Medical Clinics
  - Law Enforcement & Fire Facilities
- Schools
- Local Parks & Trailheads
- Government Offices
- Communication & Utility Buildings
- Water Sanitation Buildings
- Waste Management Buildings
- 7. **Redevelopment Projects with Greater VMT Efficiency:** Where a project replaces existing VMT-generating land uses, the project may be presumed to have a less than significant impact if the total project VMT is less than the existing land use's total VMT, absent substantial evidence to the contrary.
- 8. **Affordable Housing:** An affordable housing project may be presumed to have a less than significant impact absent substantial evidence to the contrary if 100% of units are affordable.

#### 3.3 VMT Assessment

Based on the screening criteria described in *Section 3.3*, Criteria 4 – Projects Located in a Transit Accessible Area is applicable and is detailed below.

#### Criteria 4 – Projects Located in a Transit Accessible Area:

As outlined in CEQA Guidelines Section 15064.3(b)(1) and consistent with the County's *TSG*, projects within a half-mile of a major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant impact. These areas have been defined as transit priority areas (TPA) by the OPR Technical Advisory.

The Project is located in a TPA within ½ mile walking distance of Buena Creek Station, located at Buena Creek Road and S. Santa Fe Avenue. Buena Creek Station serves the Sprinter light rail service and is considered a major transit stop.

The project is also located immediately adjacent to bus service with stops located at the intersection of S. Santa Fe Avenue / York Drive. NCTD Route 305 serving these stops does not independently qualify as a *high-quality transit corridor* but serves to further enhance the transit accessibility of the area in conjunction with the Sprinter.

As a project feature and condition of approval, the Project will also enhance the existing bus stop adjacent to the site by replacing the existing bench with a shelter consistent with NCTD standards and repainting the existing crosswalk at the intersection of S. Santa Avenue and York Drive. It should be noted that the existing bus stop in the opposite direction of travel (south/west side of S. Santa Fe Avenue) is currently constructed with a shelter.

#### Further, the project:

- Has a FAR more than 0.75.
- Does not include more parking than required by the County and in fact seeks to provide fewer parking spaces than required based on its transit accessibility, provision of 100% age-restricted housing, and transportation demand management (TDM) policies to support reduced vehicle ownership.
- Is consistent with SANDAG's most recent SCS.
- Does not replace affordable residential units with a smaller number of moderate or high-income units. The project site is currently undeveloped.

Based on the above screening criteria evaluation, the Project is presumed to have less than significant VMT impact due to the Project's characteristics and location. Therefore, the Project is screened out and a detailed transportation VMT analysis is not required.

## LOCAL MOBILITY ANALYSIS

#### 4.0 Methodology & Thresholds

## 4.1 Study Area

The following criteria described below were used to determine the project study area:

500 or greater daily trips - Site access driveways and intersections where at least 50 project peak hour trips are added or have known operational concerns (if the project does not contribute 50 peak hour trips total to any intersection, then the study intersections will be intersections that receive 50% or more of the total peak hour project generated trips).

Based on these criteria, the intersections included in the study area are listed below.

#### Intersections

- 1. York Drive / Montgomery Drive (Unsignalized)
- 2. S. Santa Fe Avenue / York Drive (Signal)
- 3. S. Santa Fe Avenue / Robelini Drive (Signal)
- 4. Sycamore Avenue / University Drive (Signal)

## 4.2 Study Scenarios

The following scenarios are evaluated for the LMA:

**Existing conditions** – Establishes the existing baseline of traffic conditions within the study area.

*Opening Year Conditions* – Represents near-term cumulative traffic conditions for the project's anticipated Opening Year, including existing baseline traffic and traffic from anticipated land development projects.

*Opening Year* + *Project Conditions* – The project's generated traffic is added to the Opening Year Conditions to evaluate the *plus project* conditions.

## 4.3 Methodology

Level of service (LOS) is the term used to denote the different operating conditions which occur on a given intersection under various traffic volume loads. It is a qualitative measure used to describe a quantitative analysis considering factors such as roadway geometries, signal phasing, speed, travel delay, freedom to maneuver, and safety. Level of service provides an index to the operational qualities of an intersection. Level of service designations ranges from A to F, with LOS A representing the best-operating conditions and LOS F representing the worst operating conditions. Level of service designation is reported differently for signalized intersections and unsignalized intersections.

**Signalized intersections** were analyzed under AM and PM peak hour conditions. Average vehicle delay was determined using the methodology in Chapter 19 of the *Highway Capacity Manual* 6<sup>th</sup> *Edition (HCM 6)*, with the assistance of the *Synchro* (version 10) computer software. The delay values (represented in seconds) were qualified with a corresponding intersection Level of Service (LOS).

In addition, where applicable, the presence of railroad/trolley crossings near intersections were accounted for in the analysis. The frequency and duration of gate closures due to rail crossings were observed in the field. This added delay was apportioned among the affected movements by reducing capacity using an adjustment to the saturated flow rate within Synchro.

*Unsignalized intersections* were analyzed under AM and PM peak hour conditions. Average vehicle delay and LOS was determined based on the procedures in Chapter 19 and Chapter 20 of the *HCM* 6, with the assistance of *Synchro* (version 10) computer software.

#### 4.4 Thresholds

The Project study area includes intersections that lie within the County of San Diego as well as the City of Vista. The need to implement roadway improvements was determined based on the criteria of the jurisdiction within which each study area intersection is located. The following is a summary of the thresholds used in this study.

## 4.4.1 County of San Diego Thresholds

The County *TSG* provides the following thresholds to determine the need for roadway improvements:

#### Signalized Intersections

An improvement is required at signalized intersections if any of the following are triggered.

- Any intersection that is operating at an acceptable LOS or better without project traffic in which the addition of project traffic causes the intersection to degrade to a LOS E or F should identify improvements to improve operations to LOS D or better.
- Any signalized intersection that is operating at LOS E or F without project traffic where the project increased delay by 5.0 or more seconds should identify improvements to offset the increase in delay.
- If the left-turn volume exceeds 100 vehicles per hour, an exclusive left-turn lane is recommended.
- If the left-turn volume exceeds 150 vehicles per hour and posted speed 45 mph or greater, a protected left-turn phasing is recommended.
- If the left-turn volume exceeds 300 vehicles per hour, a second left-turn lane is recommended.
- If the right-turn volume exceeds 150 vehicles per hour, a dedicated right-turn lane is recommended.

• The project causes the 95<sup>th</sup> percentile queue at a turn lane to exceed the existing turn lane length/storage.

#### Unsignalized Intersections

An improvement is required at unsignalized intersections if any of the following are triggered.

## Side-Street Stop Intersection

- The project causes the average intersection delay to be LOS E or F during the peak hour
- If the worst-case movement is currently operating at LOS E or F
  - o The project adds five (5) or more seconds to the overall intersection, AND
  - The project adds ten (10) or more trips to the worst-case movements or 50 or more trips to the overall intersection.
- The intersection meets the peak hour traffic signal warrants after the addition of project traffic per the *California Manual on Uniform Traffic Control Devices* (*CA MUCTD*—latest edition). An investigation of the need for a traffic control signal may also include an analysis of factors related to the existing operations and safety at a study intersection and the potential to improve these conditions. A warrant analysis is not required for right-turn in/right-turn out only intersections or driveways that are physically restricted by a raised center median.

#### All-Way Stop and Roundabout Intersection

- The project causes the average intersection delay to be LOS E or F during the peak hour.
- The project adds five (5) or more seconds of delay to an intersection that is currently operating at LOS E or F during the peak hour.
- The intersection meets the peak hour traffic signal warrants after the addition of project traffic per the *California Manual on Uniform Traffic Control Devices (CA MUTCD*—latest edition). An investigation of the need for a traffic control signal may also include an analysis of factors related to the existing operations and safety at a study intersection and the potential to improve these conditions. A warrant analysis is not required for a right turn in/right turn out only intersections or driveways that are physically restricted by a raised center median.

#### 4.4.2 City of Vista Thresholds

The City of Vista's *Transportation Impact Analysis Guidelines* (December 2020) provide the following thresholds.

A project will need to implement improvements to operation of an intersection when one of the following occurs:

1. In either the Existing Conditions Plus Project or Existing Conditions Plus Near-Term Cumulative Projects scenarios, the addition of project traffic results in a service drop from LOS D or better to LOS E or F. Under this condition, the project is responsible for improvements necessary to restore the intersection to LOS D conditions of better.

- 2. In either the Existing Conditions Plus Project or Existing Conditions Plus Near-Term Cumulative Projects scenarios, an intersection is operating at LOS E or F under the noproject scenario and the project adds more than an additional two seconds of average vehicle delay.
- 3. In the longer-range cumulative condition, if the addition of project traffic results in a service drop from LOS D or better to LOS E or F, or if an intersection is operating at LOS E or F and the project contributes to the average vehicle delay (regardless of time), the project is determined to have a cumulative impact. Under this condition, the project applicant is responsible for mitigating the intersection LOS to pre-development conditions or better. Identified cumulative transportation related impacts can be mitigated by participation in the City of Vista's Impact Fees for Arterial Streets and Traffic Signals program.

#### 5.0 Existing Conditions

#### 5.1 Existing Roadway Network

The following is a description of the existing off-site roadway network in the study area. *Figure 5–1* shows an existing conditions diagram.

**York Drive** is not classified in the County's North County Metro Mobility Element but operates as a *Residential Road*. Currently, York Drive is a two-lane undivided roadway in the project vicinity. The posted speed limit is 25 MPH. Curbside parking is prohibited, and no bike lanes or bus stops are provided.

**S. Santa Fe Avenue** is classified as a 4.14 Major Road in the County's North County Metro Mobility Element. Currently, S. Santa Fe Avenue is a four-lane roadway with a raised median (2 eastbound and 2 westbound) between Vista City Limits to York Drive and a three-lane roadway with a striped median (2 eastbound and 1 westbound) between York Drive to Buena Creek Road. The posted speed limit in the project area is 45 MPH. Curbside parking is prohibited, and bike lanes are provided. Bus stops are provided along S. Santa Fe Avenue in the project vicinity.

**Robelini Drive** is not classified in the County's North County Metro Mobility Element but operates as a *Community Collector*. Currently, Robelini Drive is a two-lane undivided roadway in the project vicinity. It is not built to its functional classification. The posted speed limit is 25 MPH. Bike lanes are not provided, and curbside parking is permitted. Bus service is provided along Robelini Drive.

**Sycamore Avenue** is classified as a 6.2 *Prime Arterial* in the County's North County Metro Mobility Element. Currently, Sycamore Avenue is a six-lane roadway with a raised median between University Drive and SR-78 Ramps. The posted speed limit is 45 MPH. Curbside parking is prohibited, and bike lanes are provided. Bus stops are provided along Sycamore Avenue in the project vicinity.

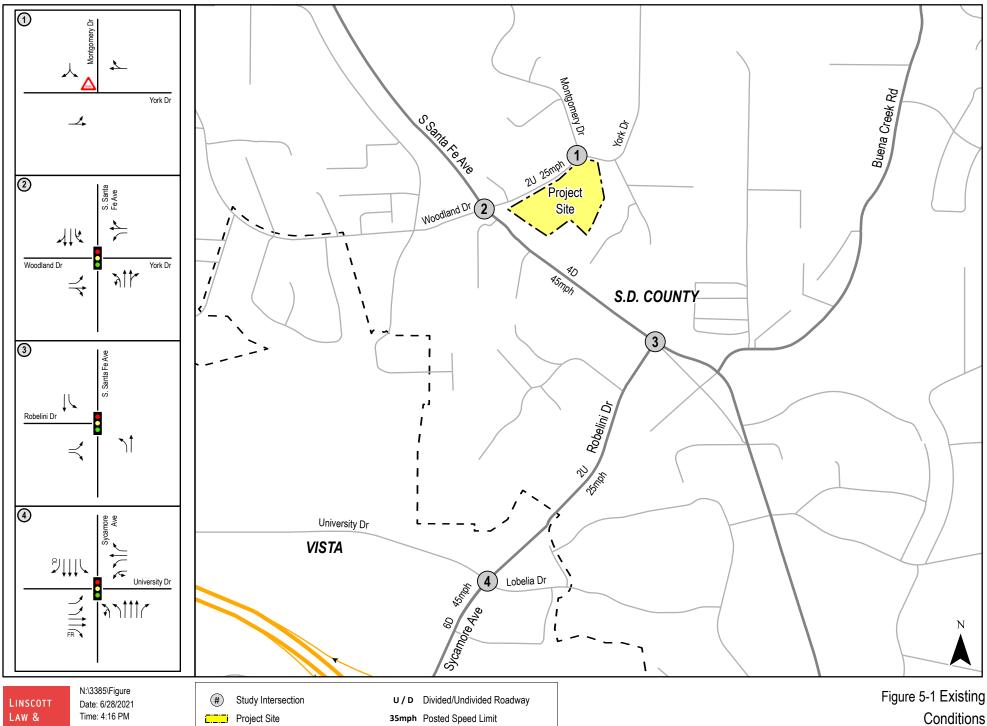
## 5.2 Existing Traffic Volumes

Weekday AM/PM peak hour intersection turning movement traffic counts were conducted at the study area intersections on Wednesday, June 2, 2021. The peak hour counts were conducted during the commuter peak hours of 7:00-9:00 AM and 4:00-6:00 PM.

The effects of the coronavirus (COVID-19) pandemic on local traffic volumes had substantially, though not entirely, waned at the time of traffic data collection as restrictions and limitations on business, school, and other activities were being lifted. To validate this, monthly ADT data were obtained from Caltrans PeMS for SR-78 at Sycamore Avenue as a proxy for local traffic levels. The month of May was used as the last full month prior to traffic count collection on June 2, 2021. According to the data, traffic volumes in May 2020 had dropped 28% as compared to the same month in 2019. However, as of May 2021, traffic volumes were only 5% below May 2019 levels.

To be conservative, all June 2021 traffic counts were increased by 10% for use in this analysis, exceeding the 5% difference from 2019 traffic levels.





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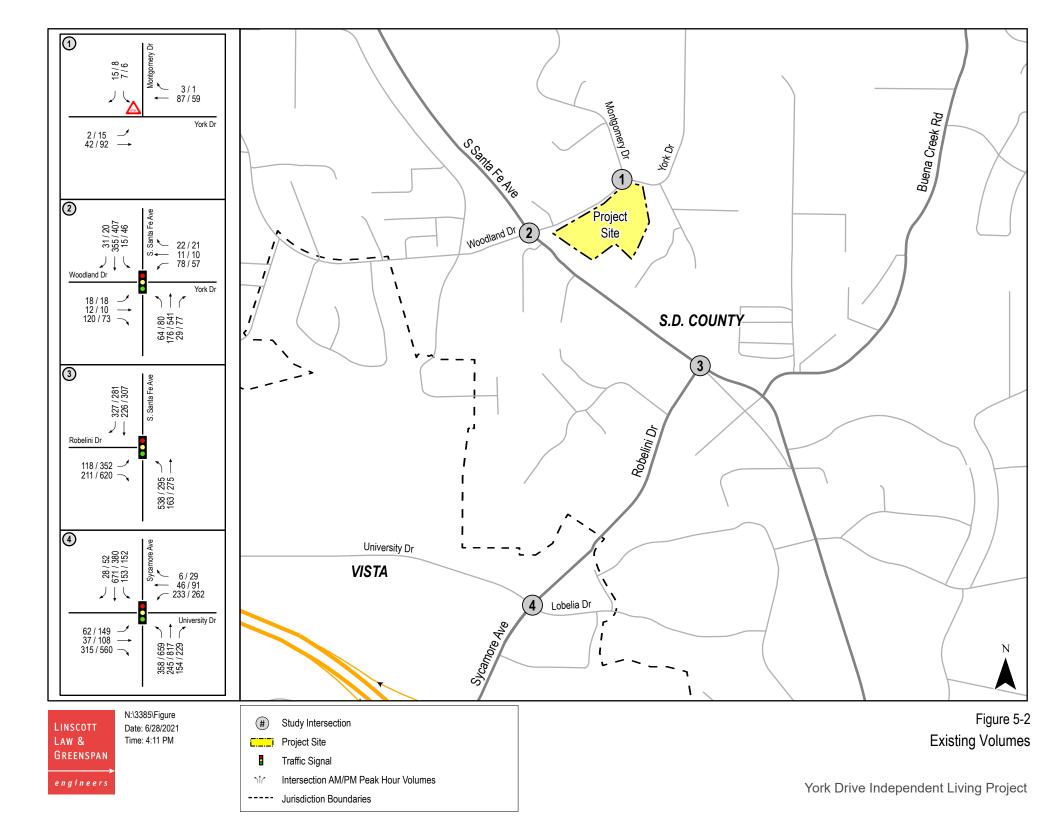
Project Site

---- Jurisdiction Boundaries

35mph Posted Speed Limit

Right-Turn Overlap Intersection AM/PM Peak Hour Volumes Free Right-Turn

York Drive Independent Living Project



#### 6.0 Analysis of Existing Conditions

The following section presents the analysis of existing study area locations.

#### 6.1 Peak Hour Intersection Analysis

#### 6.1.1 Intersection LOS

*Table 6–1* summarizes the peak hour intersection operations under Existing conditions in the study area. As shown, the study area intersections are calculated to currently operate acceptably at LOS C or better during the AM and PM peak hours.

*Appendix C* contains the Existing intersection analysis worksheets.

#### 6.1.2 Intersection Queuing

**Table 6–2** presents the 95<sup>th</sup> percentile queue length for intersection turn pockets within the study area. As shown in *Table 6–2*, existing peak hour queues are contained within existing turn pockets, except for:

- Intersection #2. S. Santa Fe Avenue / York Drive
  - Westbound left (AM peak hour)
- Intersection #3. S. Santa Fe Avenue / York Drive
  - o Eastbound left (PM peak hour)

#### 6.1.3 Intersection Turn Lane Evaluation

Table 6–2 also shows the turn lane volumes for the same study are turn pockets. These volumes were compared to the criteria for consideration of an additional turn lane presented in Section 4.4.1. As shown in Table 6–2, the following turn movement meets the traffic volume criteria for an additional turn lane under existing conditions.

- Intersection #3. S. Santa Fe Avenue / Robelini Drive
  - o Eastbound left (PM peak hour)

TABLE 6–1
EXISTING INTERSECTION OPERATIONS

Intergration		Intersection Jur. Contr		Peak	Existing		
	intersection	Type		Hour	Delay <sup>a</sup>	LOSb	
1.	York Dr./ Montgomery Dr.	County	TWSC °	AM PM	9.2 9.3	A A	
2.	S. Santa Fe Ave. / York Dr.	County	Signal	AM PM	22.6 18.2	C B	
3.	S. Santa Fe Ave. / Robelini Dr.	County	Signal	AM PM	28.4 22.0	C C	
4.	Sycamore Ave. / University Dr.	Vista	Signal	AM PM	23.9 23.8	C C	

Footnotes:	SIGNALIZ	ED	UNSIGNAL	IZED
<ul><li>a. Average delay expressed in seconds per vehicle.</li><li>b. Level of Service.</li></ul>	Delay	LOS	Delay	LOS
c. Two-Way Stop-Control. Worst turning movement	$0.0 \le 10.0$	A	$0.0 \le 10.0$	A
delay reported.	10.1 to 20.0	В	10.1 to 15.0	В
General Notes:	20.1 to 35.0	C	15.1 to 25.0	C
<ul> <li>Jur. = Jurisdiction</li> </ul>	35.1 to 55.0	D	25.1 to 35.0	D
	55.1 to 80.0	E	35.1 to 50.0	E
	≥ 80.1	F	≥ 50.1	F

**TABLE 6–2 EXISTING INTERSECTION QUEUING** 

Intersection	Movement <sup>a</sup>	Turn	Storage	Peak	Exist	ing
intersection	Intersection Movement Lanes		(ft)	Hour	Queue (ft) b	Volume
	CDI	1	240	AM	32	19
	SBL	1	340	PM	81	46
	II/DD		c	AM	С	22
3. S. Santa Fe Ave/	WBR	0		PM	c	21
York Dr		4	110	AM	100	90
	WBL	1	110	PM	76	57
	3.15.5		_	AM	С	29
	NBR	0	С	PM	С	77
	ann	_	200	AM	122	327
4. S. Santa Fe Ave/	SBR	1	300	PM	52	281
Robelini Dr			4.50	AM	108	118
	EBL	1	150	PM	231	352
	ann.	1	2.50	AM	0	28
	SBR	1	250	PM	0	52
	ant	_		AM	218	153
5. Sycamore Ave /	SBL	1	250	PM	195	152
University Dr	W/DD	1	120	AM	0	6
	WBR	1	130	PM	0	29
			400	AM	48	62
	EBL	2	490	PM	104	149

#### Footnotes:

- The Project will add trips to turning movements shown. a.
- b.
- 95<sup>th</sup> percentile queue length.
  Shared turn movement lane. Turn movement queue not separately calculated. c.
- Storage distance measured to upstream signalized intersection.

#### General Notes:

- **BOLD** indicates queue is calculated to exceed available storage or volume threshold for consideration of an additional turn lane.
- Ft = Feet
- SBR = Direction/Turn Lane, e.g., southbound right-turn lane.

## 7.0 Project Trip Generation, Distribution and Assignment

#### 7.1 Trip Generation

As described in Section 2 of this study, the Project proposes to develop a total of 183 independent senior living dwelling units. The trip generation rate for the Project was obtained from the Institute of Transportation Engineers (ITE) Trip Generation Manual (10<sup>th</sup> Edition). The Project site is a ½ mile to bus stops for NCTD Route 305 and a ½ mile from Buena Creek Station (SPRINTER). According to SANDAG, a 5% daily trip reduction for land uses with transit access or near transit stations accessible with ¼ mile was used for the project trip generation. The Project site was recently occupied by single family residential homes. No credit is taken for this land use in the trip generation table.

**Table 7–1** summarizes the trip generation for the Project. As shown in *Table 7–1*, the Project is calculated to generate 643 ADT with a total of 35 trips during the AM peak hour (12 inbound/23 outbound trips) and 46 total trips during PM peak hour (25 inbound/21 outbound trips).

## 7.2 Trip Distribution and Assignment

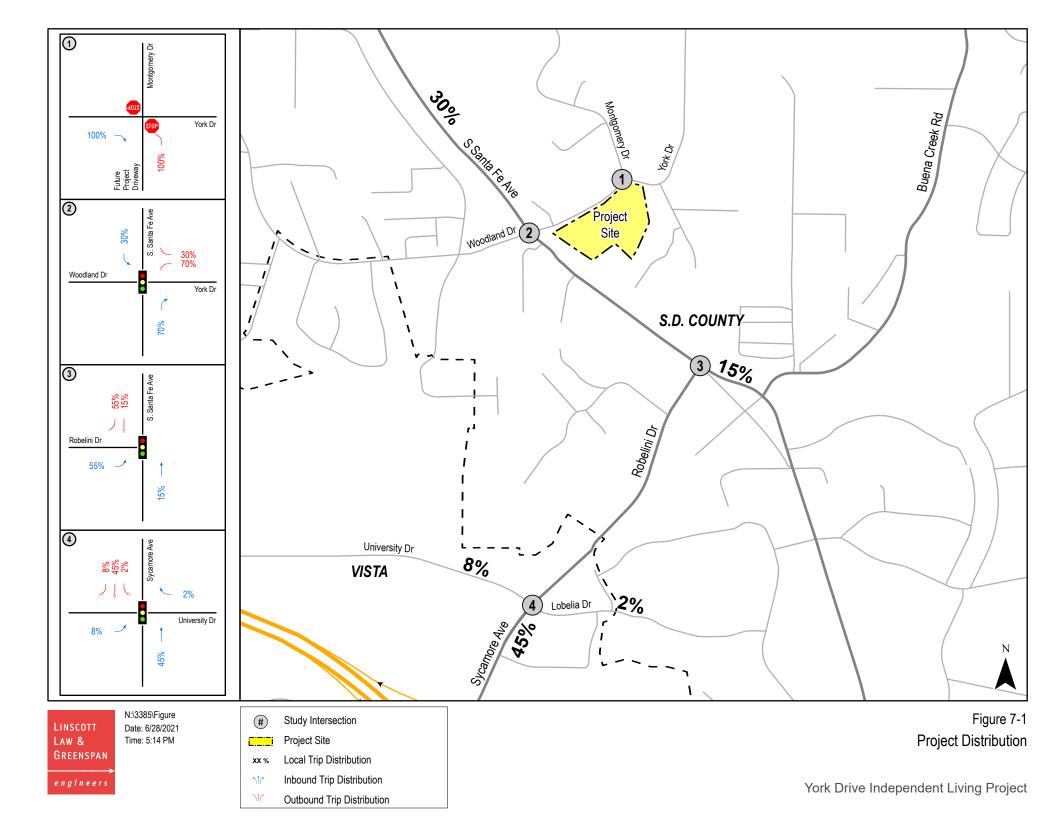
The project traffic was distributed and assigned to the street system based on the existing traffic counts, the project's access points and the proximity of the project to SR-78 and potential employment, retail, restaurant, entertainment, and educational opportunities. *Figure 7–1* depicts the Project trip distribution percentages. *Figure 7–2* depicts the Project traffic volumes.

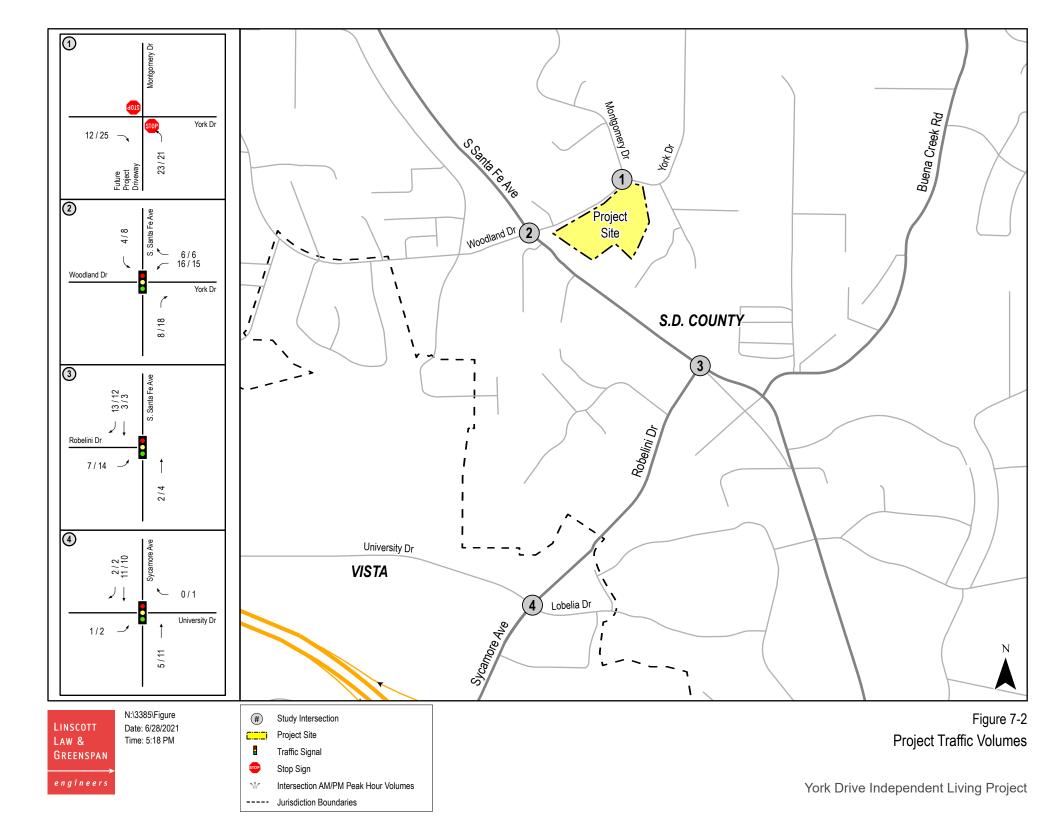
TABLE 7-1 PROJECT TRIP GENERATION

		Daily Trip Ends (ADTs) <sup>b</sup>		AM Peak Hour			PM Peak Hour				
Land Use	Size	<b>D</b> 4 9	Valores e		In:Out	Vol	ume	Data	In:Out	Vol	lume
		Kate "	Rate <sup>a</sup> Volume		Split	In	Out	Rate	Split	In	Out
Senior Adult Housing (252)	183 DU	3.7 / DU	677	0.20	35:65	13	24	0.26	55:45	26	22
Transit Reduction <sup>b</sup>	5%		-34			-1	-1			-1	-1
Total			643			12	23			25	21

#### Footnotes:

<sup>a. Trip rates based on ITE Trip Generation Manual (10th Edition).
b. Per SANDAG, a 5% daily trip reduction for land uses with transit access or near transit stations accessible within ¼ mile. Project site is immediately adjacent to stops NTCD Route 305. Buena Creek Station (SPRINTER) is within ½ mile.</sup> 





## 8.0 OPENING YEAR (YEAR 2023) CONDITIONS

This section describes Opening Year (Year 2023) roadway network and traffic volume conditions. Year 2023 was selected based on the Project's anticipated completion.

#### 8.1 Network Conditions

The existing street system as illustrated in *Figure 5–1* is assumed for Opening Year (Year 2023) conditions with no notable improvements within the study area.

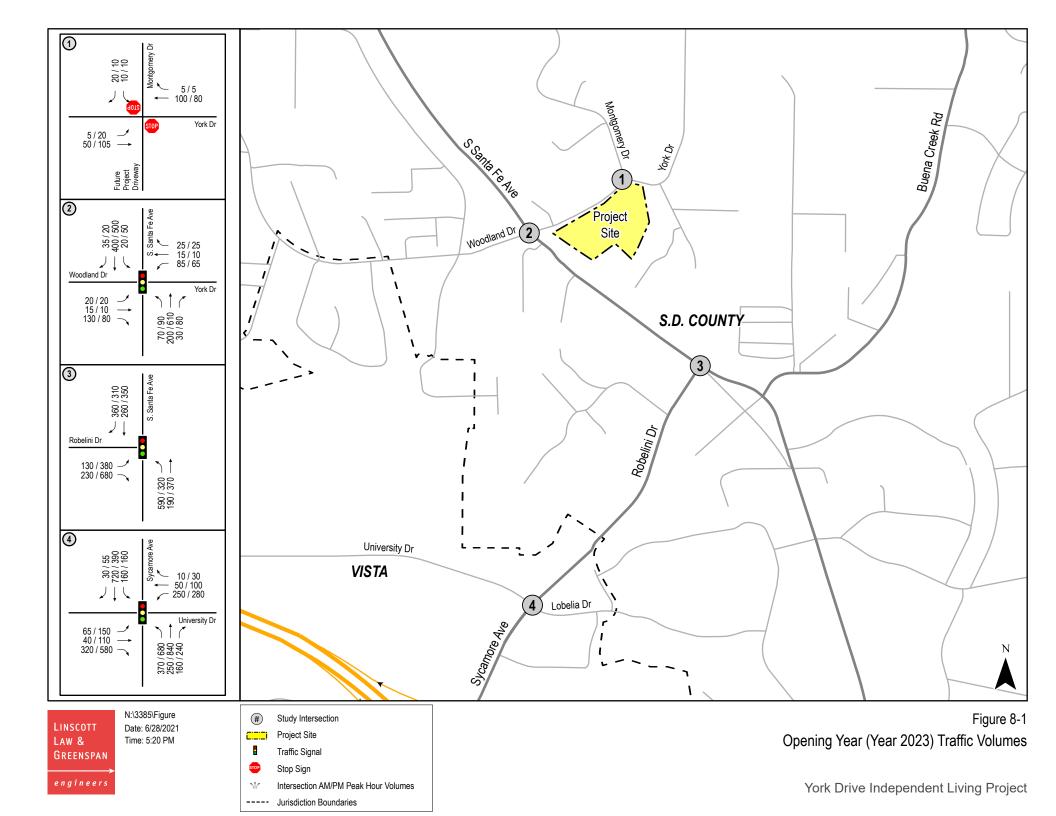
The development of other projects in the vicinity could potentially add traffic to the roadways and intersections in the study area. LLG coordinated with County of San Diego staff and determined that it was most appropriate to account for this traffic using a growth factor, discussed in the following section.

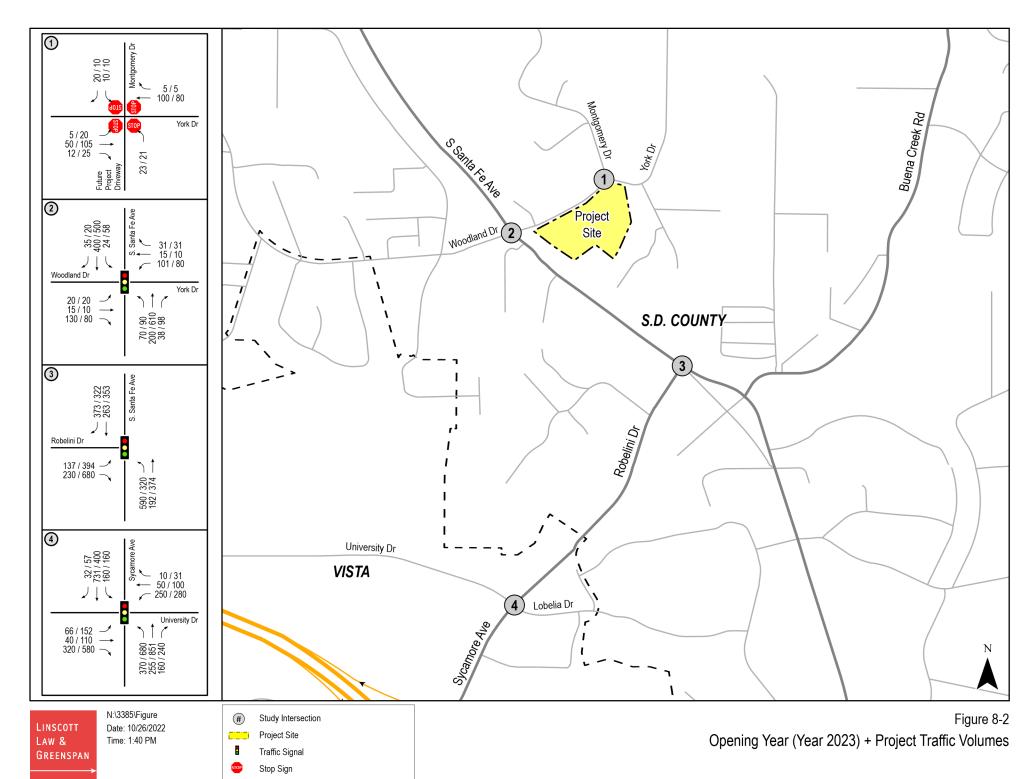
#### 8.2 Traffic Volumes

To forecast future traffic volumes for the Opening Year (Year 2023) conditions, the SANDAG Series 14 model was used. The average annual growth between the Base Year 2016 and Interim Year 2025 scenarios in the Series 14 model was calculated for all roadway segments adjacent to study area intersections. Based on this, Opening Year (Year 2023) ADT volumes were estimated. The forecasted ADT volumes were then used to calculated peak hour volumes based partially on the existing relationship between ADT and peak hour volumes.

Traffic engineering principles and factors such as the K-factor (the proportion of daily volume that occurs during the peak period) and D-factor (the directional split of the traffic volumes) were also considered in the forecast analysis. The forecast volumes were also checked for consistency between intersections, where no driveways or roadways exist between intersections, and were compared to existing volumes for accuracy.

*Figure 8–1* shows the Opening Year traffic volumes. *Figure 8–2* shows the Opening Year + Project traffic volumes.





Intersection AM/PM Peak Hour Volumes

---- Jurisdiction Boundaries

York Drive Independent Living Project

## 9.0 ANALYSIS OF OPENING YEAR SCENARIOS

The following section discusses the intersection operations for the Opening Year and Opening Year + Project scenarios.

## 9.1 Opening Year (2023) without Project Analysis

#### 9.1.1 Intersection LOS Analysis

**Table 9–1** summarizes intersection operations under the Opening Year 2023 scenario. As shown in *Table 9–1*, the study intersections are calculated to operate acceptably at LOS C or better during the AM and PM peak hours.

Appendix D contains the Opening Year intersection analysis worksheets.

#### 9.1.2 Intersection Queueing

**Table 9–2** presents the 95<sup>th</sup> percentile queue length for intersection turn pockets within the study area under Opening Year (2023) without Project conditions. As shown in *Table 9–2*, peak hour queues are contained within existing turn pockets, except for:

- Intersection #2. S. Santa Fe Avenue / York Drive
  - Westbound left (AM peak hour)
- Intersection #3. S. Santa Fe Avenue / York Drive
  - Eastbound left (PM peak hour)

#### 9.1.3 Intersection Turn Lane Evaluation

Table 9–2 also shows the turn lane volumes for the same study are turn pockets under Opening Year (2023) without Project conditions. These volumes were compared to the criteria for consideration of an additional turn lane presented in *Section 4.4.1*. As shown in *Table 9–2*, the following turn movement meets the traffic volume criteria for an additional turn lane.

- Intersection #3. S. Santa Fe Avenue / Robelini Drive
  - o Eastbound left (PM peak hour)

## 9.2 Opening Year (2023) + Project Analysis

#### 9.2.1 Intersection LOS Analysis

*Table 9–1* also summarizes Opening Year 2023 + Project intersection operations. As seen in *Table 9–1*, with the addition of the Project traffic, the study intersections are calculated to continue to operate acceptably at LOS C or better during the AM and PM peak hours.

*Appendix E* contains the Opening Year + Project intersection analysis worksheets.

#### 9.2.2 Intersection Queueing

Table 9–2 also presents the 95<sup>th</sup> percentile queue length for intersection turn pockets within the study area under Opening Year (2023) + Project conditions. As shown in *Table 9–2*, peak hour queues are contained within existing turn pockets, except for:

- Intersection #2. S. Santa Fe Avenue / York Drive
  - Westbound left (AM peak hour)
- Intersection #3. S. Santa Fe Avenue / York Drive
  - o Eastbound left (PM peak hour)

#### 9.2.3 Intersection Turn Lane Evaluation

Table 9–2 also shows the turn lane volumes for the same study are turn pockets under Opening Year (2023) + Project conditions. These volumes were compared to the criteria for consideration of an additional turn lane presented in Section 4.4.1. As shown in Table 9–2, the following turn movement meets the traffic volume criteria for an additional turn lane.

- Intersection #3. S. Santa Fe Avenue / Robelini Drive
  - Eastbound left (PM peak hour)

**Intersection #3. S. Santa Fe Avenue** / **Robelini Drive** — The volume in the eastbound left turn (Robelini Drive) exceeds the 300 vehicles per hour during the PM peak hour. Per the *TSG*, at this threshold a second left turn lane should be considered. The threshold is exceeded under existing conditions prior to the addition of cumulative and Project-related traffic.

Robelini Drive terminates at S. Santa Fe Avenue at this T-intersection. Due to the limited number of conflicting movements at T-intersection, both the overall intersection and left-turn movement LOS operate at acceptable levels despite these volumes. There is no southbound through movement on Robelini Drive that conflicts with this left turn, nor a northbound through which could be impeded by excess queueing or delay in the left-turn movement.

Finally, widening Robelini Drive to either provide a second left turn lane or extend the storage of the existing left turn lane is not feasible within the available right-of-way. Therefore, no improvement is recommended.

Table 9–1
Opening Year Intersection Operations

Intersection	Jur.	Ing   Control   Peak   Opening Year   Pr			Opening Year + Project		Threshold Met?		
		Type	Hour	Delay	LOS	Delay	LOS	Δ <sup>c</sup>	Met:
1. York Dr. /	G	TWSC d	AM	9.5	A	7.8	A	(1.7)	NI.
Montgomery Dr.	County	(AWSC) <sup>e</sup>	PM	9.7	A	8.0	A	(1.7)	No
2. S. Santa Fe Ave. /		g: 1	AM	24.6	С	25.5	С	0.9	
York Dr.	County	Signal	PM	19.3	В	20.3	C	1.0	No
3. S. Santa Fe Ave. /		~· .	AM	34.1	С	34.4	С	0.3	
Robelini Dr.	County	Signal	PM	27.6	С	27.9	С	0.3	No
4. Sycamore Ave. /			AM	24.7	С	24.8	С	0.1	
University Dr.	Vista	Signal	PM	24.5	С	24.5	С	0.0	No

Footnotes:		SIGNALIZI	ED	UNSIGNALIZED	
a. b	Average delay expressed in seconds per vehicle.  Level of Service.	DELAY/LOS THRI	ESHOLDS	DELAY/LOS THR	ESHOLDS
b. с.	$\Delta$ denotes the increase in delay due to Project.	Delay	LOS	Delay	LOS
d.	Two-Way Stop-Control. Worst turning movement delay reported.	$0.0 \le 10.0$	A	$0.0 \le 10.0$	A
e.	All-Way Stop-Control proposed for this intersection to address existing	10.1 to 20.0	В	10.1 to 15.0	В
	sight distance deficiencies (see Section 10.1.1). Average delay reported.	20.1 to 35.0	C	15.1 to 25.0	C
		35.1 to 55.0	D	25.1 to 35.0	D
General	Notes:	55.1 to 80.0	E	35.1 to 50.0	E
	Jur - Iurisdiction	> 80.1	F	> 50.1	F

TABLE 9-2 NEAR-TERM (OPENING YEAR 2023) INTERSECTION QUEUING

Intersection		Movement <sup>a</sup>	Turn Lanes	Storage (ft)	Peak Hour	Near T (Opening Y Without	ear 2023)	Near Term (Opening Year 2023) With Project	
						Queue (ft) b	Volume	Queue (ft)	Volume
		977			AM	38	20	43	24
		SBL	1	340	PM	90	50	105	58
		WDD	0	c	AM	С	25	с	31
2.	S. Santa Fe Ave/	WBR	0	C	PM	с	25	с	31
	York Dr	WDI	1	110	AM	108	85	124	101
		WBL	1	110	PM	84	65	101	80
		NBR	0	С	AM	С	30	С	38
					PM	С	80	С	98
	S. Santa Fe Ave/ Robelini Dr	SBR EBL	1	300	AM	155	360	164	373
3.				300	PM	64	310	68	322
				150	AM	117	130	123	137
				130	PM	260	380	292	394
		SBR	1	250	AM	3	30	4	32
		SDK	1		PM	0	55	0	57
		SBL	1	250	AM	234	160	234	160
4.	Sycamore Ave /	SBL	1	230	PM	205	160	205	160
	University Dr	WBR	1	130	AM	0	10	0	10
		,, DIC	1	150	PM	0	30	0	31
		EBL	EBL 2	490	AM	51	65	51	66
				.,,	PM	104	150	105	152

#### Footnotes:

- The Project will add trips to turning movements shown.

  95<sup>th</sup> percentile queue length.

  Shared turn movement lane. Turn movement queue not separately calculated. Criteria for adding a turn lane are described in *Section 4.4.1*.

#### General Notes:

- BOLD indicates queue is calculated to exceed available storage or volume threshold for consideration of an additional turn lane.
- SBR = Direction/Turn Lane, e.g., southbound right-turn lane.

## 10.0 SITE ACCESS, SAFETY, AND OTHER ANALYSES

This section addressing site access, safety, and other related analyses. Active transportation is assessed separately in the following section.

#### 10.1 Site Access

Access to the Project site is proposed via one proposed driveway on York Drive, located in the vicinity of Montgomery Drive. The existing southbound approach of Montgomery Drive is yield-controlled at York Drive.



## 10.1.1 Sight Distance

LLG prepared a detailed sight distance review (September 27, 2023), which is included in *Appendix F*. As noted in this review, there is inadequate sight distance in the eastbound and westbound directions of travel on York Drive approaching Montgomery Drive (future Project Driveway) due to

the horizontal curvature of the roadway and existing obstructions outside the right-of-way including trees and chain link fence.

The Project will address the existing sight distance deficiency by providing all-way stop control at the York Drive / Montgomery Drive / Project Driveway intersection. At the stop lines, clear line of sight between all vehicles will be provided.

#### 10.1.2 Queueing

Vehicular access to the site will be gated and controlled by a keypad at the Project's entrance south of York Drive. The keypad will be located 40 feet from York Drive, which will provide storage for approximately two (2) vehicles. The gate is located 75 feet from York Drive (i.e., 35 feet from the keypad), which provides an adequate turnaround for vehicles denied access.

LLG conducted a queuing analysis for inbound traffic to the Project site. To evaluate the queueing, the appropriate parking control service rates were identified from Table 13-5 of the ITE *Traffic Engineering Handbook* (7<sup>th</sup> Edition), included in *Appendix G*. Based on this table, the service rate for "insertion card" is 8.3 seconds per vehicle, or a capacity of 435 vehicles per hour. However, to be conservative, a processing rate of 15 seconds per vehicle was selected for this analysis.

To determine the design queues, the graph recommended by the ITE Traffic Engineering Handbook based on the Crommelin (1972) methodology was used (also in *Appendix G*). As shown in *Table 10–1*, the gated entrance on York Drive is calculated to have a 95<sup>th</sup> percentile queue of one (1) vehicle or less during both the AM and PM peak hours. Thus, the required storage to accommodate this queue is 25 feet. The Project proposed approximately 40 feet of storage between the gate and York Drive. Therefore, based on the calculated queueing and storage provided, no gate queuing issues are identified.

Table 10–1
Parking Entry Gate Queueing Operations

Queue Parameters	York Drive Vehicular Entrance				
	AM Peak	PM Peak			
Arrival Rate (veh/hr) <sup>a</sup>	12	25			
Service Rate (veh/hr/gate)	240	240			
# of Gates	1	1			
Traffic Intensity <sup>b</sup>	0.05	0.10			
Design Queue (veh) <sup>c</sup>	1	1			
Required Storage Behind Gate (feet) <sup>d</sup>	25	25			

#### Footnotes:

- a. See Table 7-1.
- b. Traffic Intensity = Arrival Rate / [#of gates] x Service Rate]
- c. Value obtained from "Design Queues" graph included in  $Appendix\ G$  rounded up to the nearest whole number.
- d. The required storage was calculated by multiply the design queue by the average length of a vehicle (e.g., 25 feet).

## 10.2 Fire/Emergency Services

Secondary/emergency vehicular access to the site is not practical due to the grade differential with York Drive, the site being approximately 11 feet below the center line of York Drive at the northwest corner. However, secondary pedestrian access will be provided to facilitate egress in the event of an emergency.

## 11.0 ACTIVE TRANSPORTATION REVIEW

## 11.1 Existing Bicycle Network

In January 2021, SANDAG completed the construction of Phase 2 of the Inland Rail Trail, a three-mile section of Class I bikeway in unincorporated San Diego County and the City of Vista. Within the study area, the bike path is located on the north side of the North County Transit District (NTCD) rail tracks between Cherimoya Drive and York Drive.

Elsewhere, Class II bike lanes are provided on the following study area street segments:

- S. Santa Fe Avenue, from Vista City Limits to York Drive (both sides); and
- Sycamore Avenue, from University Drive to SR-78 Ramps (both sides)

*Figure 11–1* illustrates the existing bicycle network. No other bicycle facilities are currently constructed within the study area.

#### 11.2 Proposed Bicycle Network

In the County of San Diego's *Bicycle Transportation Plan*, bike facilities are recommended in the following study street segments:

Robelini Drive, from Vista City Limit to Santa Fe Avenue (Class II: Bike Lane)

It should also be noted that Phase 3 and 4 extensions of the Inland Rail Trail are in the final design phase with construction anticipated in 2022 and 2024, respectively. Phase 3 is a one-mile segment between Mar Vista Drive and Civic Center Drive in the City of Vista. Phase 4 is a two-mile segment between Civic Center Drive and North Drive in the City of Vista.

#### 11.3 Existing Pedestrian Conditions

Pedestrian sidewalks are generally provided throughout the study area, except for:

- York Drive, from S. Santa Fe Avenue to Montgomery Drive (north side, partially south side)
- S. Santa Fe Avenue, from York Drive to Robelini Drive (partially both sides)
- Robelini Drive, from S. Santa Fe to University Drive (partially both sides)

Pedestrian crossings are provided in all directions at the intersection of Sycamore Avenue / University Drive. Pedestrian crossings are prohibited at the following locations:

- S. Santa Fe Avenue / York Drive (across the east leg)
- S. Santa Fe Avenue / Robelini Drive (across the west leg)

*Figure 11–2* illustrates the existing pedestrian network.

#### 11.4 Proposed Pedestrian Conditions

The Project should construct the missing sidewalk on the south side of York Drive along its frontage consistent with County *Public Roads Standards*. In addition, the Project should construct sidewalks from the site building to the street (via the driveway) to ensure pedestrian access.

## 11.5 Existing Transit Conditions

Transit service is provided to the project area by the North County Transit District (NCTD). The Project is located within ½ mile of the Buena Creek Sprinter Station. The study area is also served by bus routes 305 and 332. Based on the information obtained from the NTCD, the following transit conditions are noted.

**Buena Creek SPRINTER Station** – The SPRINTER hybrid rail connects Oceanside, Vista, San Marcos, and Escondido serving 15 stations along the Highway 78 corridor. The Sprinter runs every 30 minutes in each direction Monday through Friday, from approximately 4:00am to 9:00pm. Saturday, Sunday, and holiday trains operate every 30 minutes between 10:00am to 6:00pm and hourly before 10:00am and after 6:00pm.

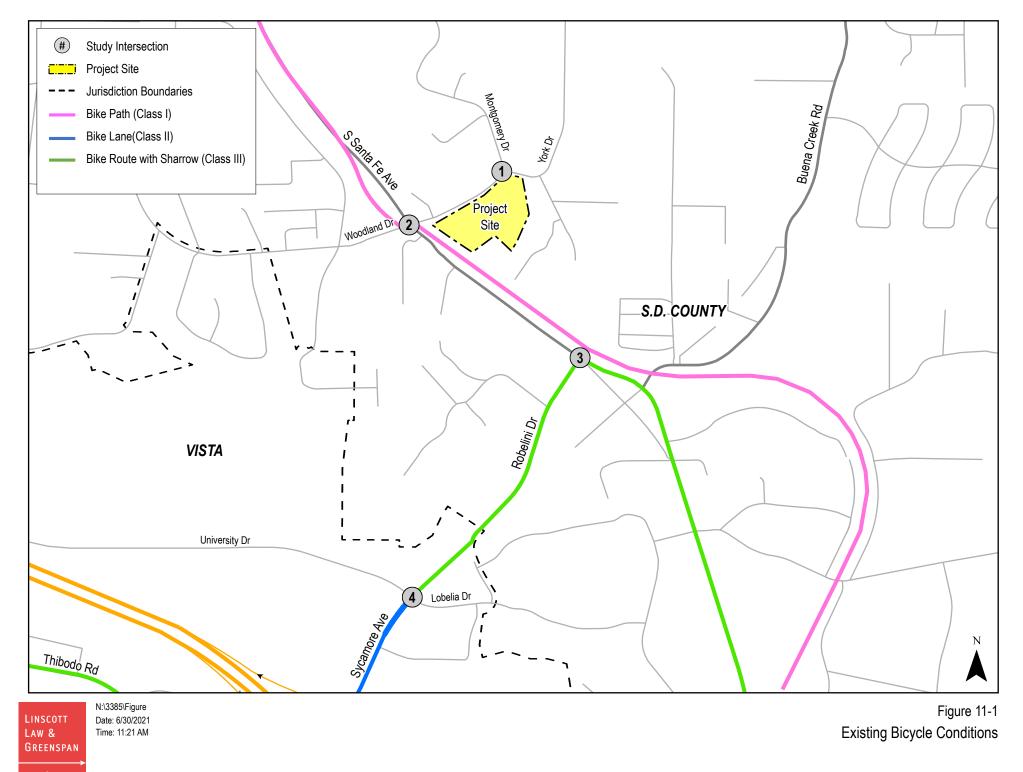
**Route 305** – operates from Vista Transit Center and Escondido Transit Center and travels along S. Santa Fe Avenue within the study area. This route provides a direct connection to Buena Creek SPRINTER Station and Route 332. The route operates hourly between the hours of 4:30am to 11:00pm, Monday through Friday.

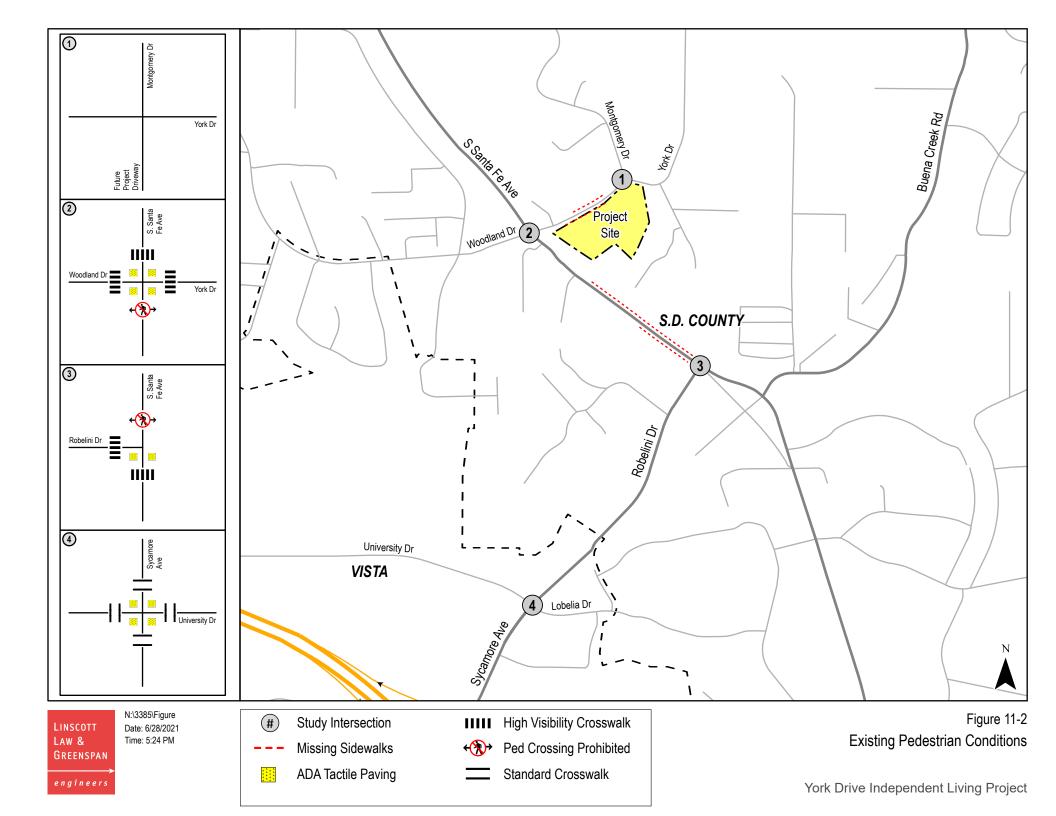
**Route 332** – operates from Vista Transit Center and Buena Creek SPRINTER Station and travels along Sycamore Avenue and Robelini Drive. This route provides a direct connection to Buena Creek SPRINTER Station and Route 305. The route operates hourly between the hours of 4:30am and 9:00pm, Monday through Friday, and between 6:00am and 7:00pm on Saturday. Route 332 does not operate on Sundays.

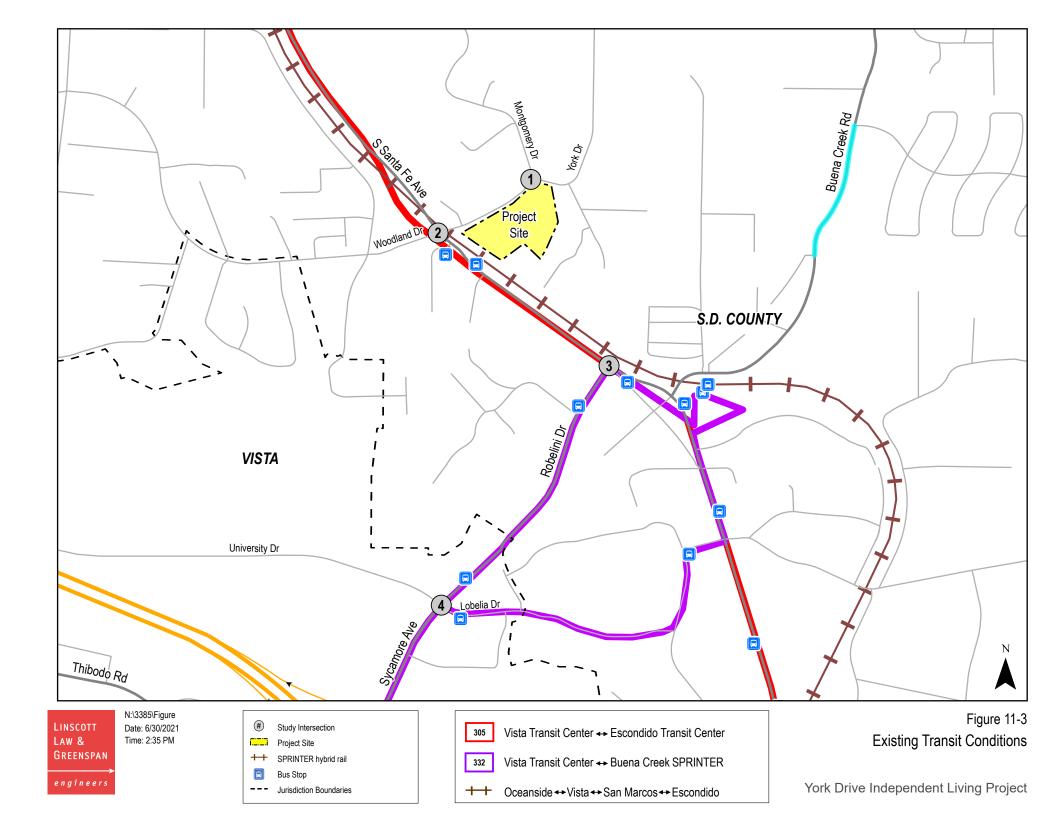
The project site is located within ¼ mile walking distance, depending on ultimate pedestrian site access, from one bus stop serving Route 305 located along S. Santa Fe Avenue. The closest bus stop to the project site is located near the intersection of S. Santa Fe Avenue / York Drive on the south side of the street. The project site is also within ½ mile walking or biking distance from Buena Creek Station.

At the intersection of S. Santa Fe Avenue / York Drive, the bus stop in the westbound direction provides route signage, route designations, seating with shade, and a trash receptacle and in the eastbound direction the stop provides route signage, seating, and a trash receptacle. At intersection of S. Santa Fe Avenue / Robelini Drive, the bus stop in the westbound direction provides route signage, route designation, seating, and a trash receptacle.

*Figure 11–3* illustrates the existing transit network.







## 12.0 CONCLUSIONS AND RECOMMENDATIONS

## 12.1 VMT Analysis Summary

The Project is in a transit accessible area and is presumed to have a less than significant CEQA VMT impact. The Project is not required to prepare a detailed transportation VMT analysis and no VMT mitigation measures are required.

#### 12.2 Local Mobility Analysis Summary

#### 12.2.1 Active Transportation Recommendations

The Project should construct sidewalks to close sidewalk gaps on the site frontage on York Drive and provide sidewalks from the site building to the street (via the driveway) as described in Section 11.4.

#### 12.2.2 Site Access Recommendations

The Project will address the existing sight distance deficiency at the York Drive / Montgomery Drive / Project Driveway intersection by providing all-way stop control. At the stop lines, clear line of sight between all vehicles will be provided.

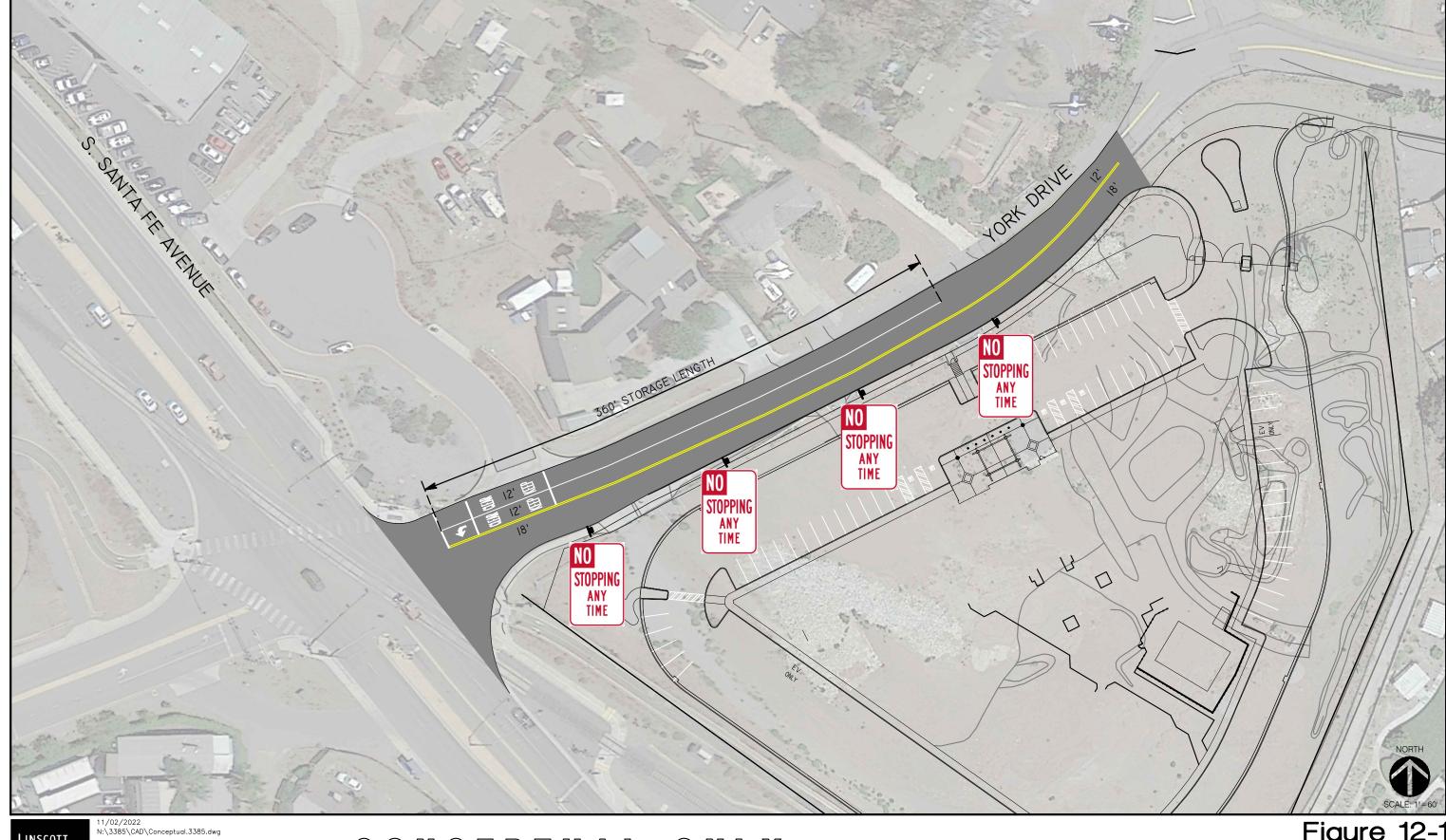
#### 12.2.3 Roadway Improvement Recommendations

Per the thresholds and analysis methodologies presented in this report, all study area intersections are calculated to operate at an acceptable LOS with the addition of Project-related and cumulative traffic. However, improvements are triggered and/or recommended based on 95<sup>th</sup> percentile queueing and/or peak hour vehicle volumes in specific turning movements.

1. **Intersection #2. S. Santa Fe Avenue / York Drive** – The 95<sup>th</sup> percentile queue exceeds the available storage for the westbound left turn (York Drive) during the AM peak hour. The available storage is calculated to be exceeded under existing conditions and is exacerbated with the addition of Project-related and cumulative traffic.

As part of the Project, an additional 10 feet of right-of-way will be provided on York Drive, providing a curb-to-curb width of 40 feet. The westbound left pocket on York Drive to S. Santa Fe Avenue should be restriped within the 40-foot width to provide the maximum storage practical.

*Figure 12–1* illustrates the conceptual signing and striping on York Drive to extend this left-turn pocket to accommodate existing and future traffic volumes.



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Figure 12-1
YORK DRIVE CONCEPTUAL PLAN