

**APPENDIX G**  
*Traffic Study*





November 13, 2015

# Lincoln SUD-B Northeast Quadrant Traffic Impact Analysis

Prepared By





# TRANSPORTATION AND CIRCULATION

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<b>TRANSPORTATION AND CIRCULATION .....</b>	<b>1</b>
<b>INTRODUCTION .....</b>	<b>2</b>
ENVIRONMENTAL SETTING .....	2
<i>Roadway System .....</i>	<i>2</i>
<i>Traffic Volumes.....</i>	<i>4</i>
<i>Intersection Operations.....</i>	<i>7</i>
<i>Residential Roadway Operations .....</i>	<i>8</i>
<i>Freeway Operations .....</i>	<i>10</i>
<i>Transit System .....</i>	<i>11</i>
<i>Bicycle Network.....</i>	<i>11</i>
REGULATORY SETTING.....	12
<i>Federal.....</i>	<i>12</i>
<i>State .....</i>	<i>12</i>
<i>Local .....</i>	<i>13</i>
<b>IMPACTS AND MITIGATION MEASURES .....</b>	<b>14</b>
METHODS OF ANALYSIS .....	14
PROJECT TRAFFIC CHARACTERISTICS .....	15
<i>Project Land Use and Access Assumptions .....</i>	<i>15</i>
<i>Standards of Significance .....</i>	<i>17</i>
EXISTING PLUS PROJECT CONDITIONS.....	21
<i>Intersection Operations.....</i>	<i>21</i>
<i>Residential Roadway Operations .....</i>	<i>21</i>
<i>Freeway Operations .....</i>	<i>25</i>
<i>Transit .....</i>	<i>25</i>
<i>Bicycles and Pedestrians.....</i>	<i>25</i>
CUMULATIVE CONDITIONS .....	28
<i>Cumulative Intersection Operations.....</i>	<i>29</i>
<i>Cumulative Residential Roadway Operations .....</i>	<i>35</i>
<i>Cumulative Freeway Operations .....</i>	<i>35</i>
MITIGATION MEASURES .....	38
<i>Existing Plus Project Intersection Impacts.....</i>	<i>38</i>
<i>Cumulative Plus Project Intersection Impacts .....</i>	<i>38</i>
<i>Cumulative Plus Project Freeway Impacts.....</i>	<i>40</i>
<i>Transit, NEV, Bicycle, and Pedestrian Impacts .....</i>	<i>41</i>

This study analyzes the potential transportation and circulation impacts resulting from the implementation of the SUD-B Northeast Quadrant Plan. Impacts on roadway, transit, bicycle, and pedestrian systems are analyzed under existing and cumulative conditions. The EIR evaluates project impacts under the following scenarios:

- Existing Conditions
- Existing Plus Buildout of Project
- Cumulative Without Project
- Cumulative Plus Buildout of Project

The impacts are analyzed within the City of Lincoln and other jurisdictions, including Placer County, and Caltrans.

This section uses information and data collected from numerous sources, including the following:

- Lincoln Village 5 Specific Plan
- City of Lincoln 2050 General Plan
- Lincoln Village 7 Specific Plan EIR
- Placer County General Plan
- Caltrans Corridor System Management Plan (CSMP) for SR 65

## ENVIRONMENTAL SETTING

This section describes the existing transportation network in the vicinity of the project site including the roadway, transit, pedestrian, and bicycle systems. The environmental setting represents approximate 2014-2015 conditions, corresponding to the timeframe in which the NOP was released. CEQA statutes define the NOP release date as the baseline from which project-specific impacts should be judged. The majority of the traffic volume counts were conducted during 2014 and 2015, while a few counts date back to late 2013.

### Roadway System

**Figure 1** illustrates the existing roadway system in the project vicinity. Key roadways are described below.

#### State Route 65:

SR 65 is a California state highway that begins in Roseville (at Interstate 80) and continues through the City of Lincoln to Sheridan, Wheatland, and Yuba City to the north. SR 65 used to travel directly through downtown Lincoln as F Street but has recently been rebuilt as the Lincoln Bypass. South and east of the Proposed

Project, SR 65 is a four lane freeway with interchanges at Ferrari Ranch Road, Lincoln Boulevard, and Twelve Bridges Drive in the City of Lincoln, Sunset Boulevard in the City of Rocklin, and three additional interchanges in the City of Roseville (Blue Oaks Boulevard, Pleasant Grove Boulevard, and Galleria Boulevard/ Stanford Ranch Road). To the west and north of the Proposed Project, SR 65 is a two lane roadway with at grade intersections at Nelson Lane and Nicolaus Road.

Nelson Lane:

Nelson Lane is a north-south roadway to the west of the current boundary of the City of Lincoln. Nelson Lane was recently widened from a two lane roadway to a four lane roadway between Nicolaus Road and SR 65. South of SR 65, it is a two lane rural roadway that terminates at Moore Road. Nelson Lane would provide primary access to the western commercial portions of SUD-B Northeast Quadrant. North of Nicolaus Road, Nelson Lane becomes Aviation Boulevard and provides access to Lincoln Airport and the Lincoln Air Center.

Nicolaus Road:

Nicolaus Road is an east-west roadway to the north of the Proposed Project. Nicolaus Road is currently two lanes to the west of Nelson Lane, four lanes between Nelson Lane and Joiner Parkway, and two lanes to its terminus with 9<sup>th</sup> Street near Lincoln Boulevard.

First Street:

First Street is an east-west roadway providing access from the project site to the southern portion of downtown Lincoln. First Street is a two lane local residential roadway between its current western dead end and Lincoln Boulevard and continues into the eastern portion of downtown Lincoln.

Third Street:

Third Street is an east-west roadway providing access from the project site to the central portion of downtown Lincoln. Third Street is a two lane local residential roadway between its current western dead end and Lincoln Boulevard and continues into the eastern portion of downtown Lincoln.

Joiner Parkway:

Joiner Parkway is a north-south roadway that begins in the western portion of downtown Lincoln and continues eastward where it connects Lincoln to northwestern Rocklin. Joiner Parkway is a four lane arterial in the vicinity of the Proposed Project.

Lincoln Boulevard:

Lincoln Boulevard (formerly F Street and SR 65) is a two lane roadway through downtown Lincoln and serves as the “main street” of downtown Lincoln. North of downtown Lincoln, it continues as a rural highway toward Sheridan and Wheatland. South of downtown Lincoln, it is a 4 lane arterial providing access to the recently realigned SR 65. It becomes Industrial Boulevard south of its interchange with SR 65.

## **Traffic Volumes**

A study area was selected for analysis, given the project's size, traffic generation characteristics, and existing/projected traffic conditions in the area. **Figure 1** shows the locations of existing study area intersections. The study intersections that were selected for analysis are listed below:

1. Nelson Lane and Nicolaus Road
2. Waverly Drive and Nicolaus Rad
3. Lakeside Drive and Nicolaus Road
4. Joiner Parkway and Nicolaus Road
6. Joiner Parkway and Third Street
7. Joiner Parkway and First Street
8. Joiner Parkway & Ferrari Ranch Road
10. Nelson Lane and SR 65
11. Nelson Lane and Moore Road
12. SR 65 Southbound and Ferrari Ranch Road
13. SR 65 Northbound and Ferrari Ranch Road
14. Lincoln Boulevard and SR 65 Southbound
15. Lincoln Boulevard and SR 65 Northbound
16. Lincoln Boulevard and First Street
17. Lincoln Boulevard and Ferrari Ranch Road

Figure 1: Study Area Roadways

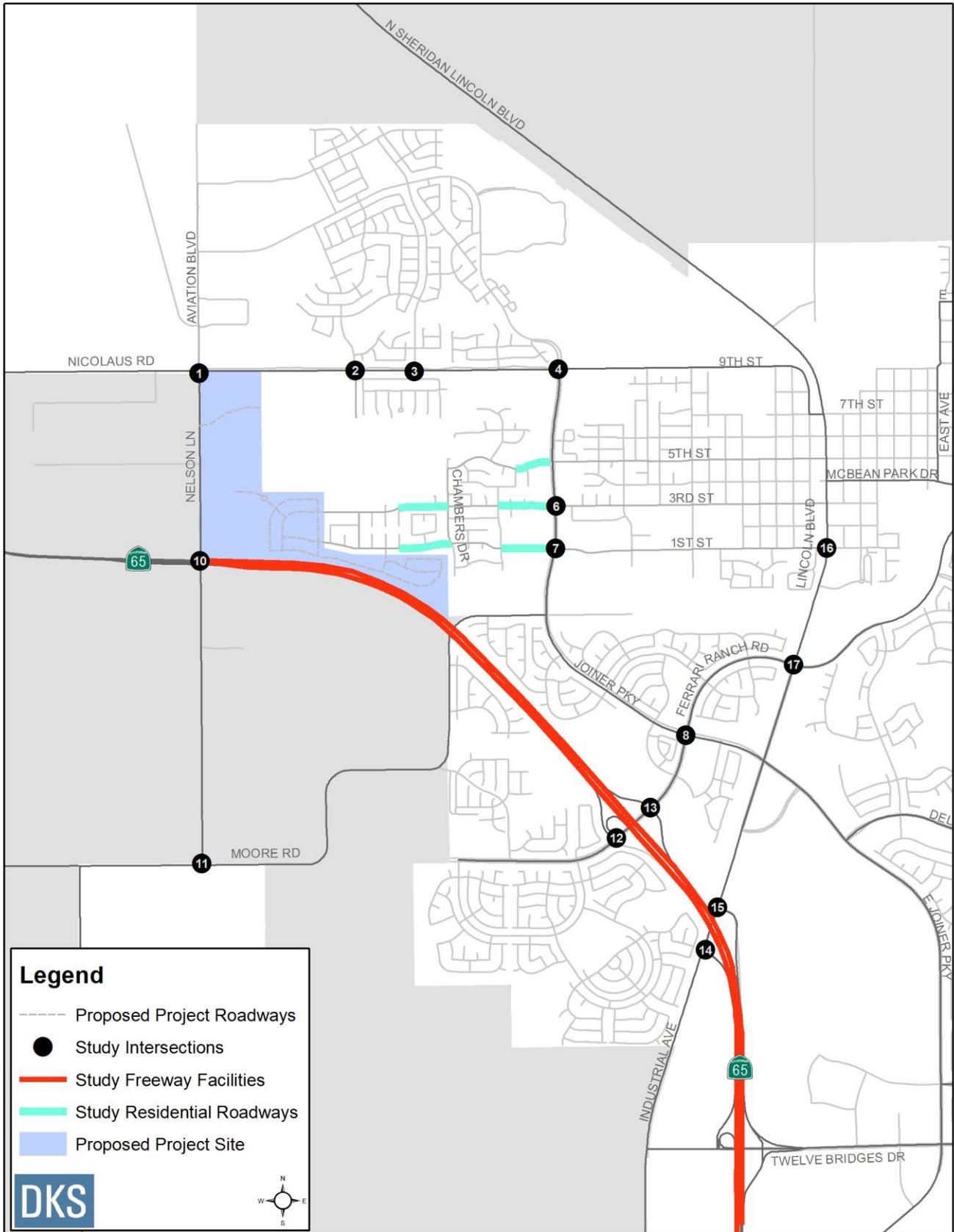


Figure 2: Existing Intersection Peak Hour Traffic Volumes and Intersection Geometrics

<p>2010 HCM AWSC</p> <table border="1"> <tr> <td>20 (10) 165 (139) 36 (67)</td> <td>24 (8) 100 (77) 266 (153)</td> </tr> <tr> <td>20 (17) 64 (133) 42 (52)</td> <td>26 (80) 128 (122) 96 (242)</td> </tr> </table> <p>N/S Stop Sign      LOS: C (D) E/W Stop Sign      Del: 19.1 (30.8)</p>	20 (10) 165 (139) 36 (67)	24 (8) 100 (77) 266 (153)	20 (17) 64 (133) 42 (52)	26 (80) 128 (122) 96 (242)	<p>2010 HCM AWSC</p> <table border="1"> <tr> <td>83 (40) 0 (2) 64 (51)</td> <td>65 (64) 291 (169) 17 (8)</td> </tr> <tr> <td>39 (91) 160 (316) 14 (34)</td> <td>43 (22) 4 (0) 12 (14)</td> </tr> </table> <p>N/S Stop Sign      LOS: B (B) E/W Stop Sign      Del: 10.9 (10.1)</p>	83 (40) 0 (2) 64 (51)	65 (64) 291 (169) 17 (8)	39 (91) 160 (316) 14 (34)	43 (22) 4 (0) 12 (14)	<p>2010 HCM AWSC</p> <table border="1"> <tr> <td>106 (51) 17 (10) 164 (79)</td> <td>67 (105) 260 (184) 30 (43)</td> </tr> <tr> <td>46 (88) 187 (278) 2 (15)</td> <td>8 (7) 27 (10) 51 (29)</td> </tr> </table> <p>N/S Stop Sign      LOS: B (B) E/W Stop Sign      Del: 14.8 (10.7)</p>	106 (51) 17 (10) 164 (79)	67 (105) 260 (184) 30 (43)	46 (88) 187 (278) 2 (15)	8 (7) 27 (10) 51 (29)	<p>2010 HCM Signalized</p> <table border="1"> <tr> <td>27 (10) 123 (84) 122 (47)</td> <td>132 (80) 195 (200) 57 (34)</td> </tr> <tr> <td>16 (8) 271 (176) 160 (198)</td> <td>136 (164) 66 (119) 122 (49)</td> </tr> </table> <p>N/S Signalized      LOS: C (B) E/W Signalized      Del: 20.2 (15.4)</p>	27 (10) 123 (84) 122 (47)	132 (80) 195 (200) 57 (34)	16 (8) 271 (176) 160 (198)	136 (164) 66 (119) 122 (49)
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<p><b>1 Nelson Ln/Aviation Blvd &amp; Nicolaus Rd</b></p>	<p><b>2 Waverly Dr/Teal Hollow Dr &amp; Nicolaus Rd</b></p>	<p><b>3 Lakeside Dr &amp; Nicolaus Rd</b></p>	<p><b>4 Joiner Pkwy &amp; Nicolaus Rd</b></p>																
<p>2010 HCM Signalized</p> <table border="1"> <tr> <td>31 (35) 464 (287) 67 (23)</td> <td>45 (41) 19 (29) 76 (53)</td> </tr> <tr> <td>56 (21) 65 (24) 54 (28)</td> <td>21 (46) 308 (432) 35 (74)</td> </tr> </table> <p>N/S Signalized      LOS: B (B) E/W Signalized      Del: 15.2 (13.7)</p>	31 (35) 464 (287) 67 (23)	45 (41) 19 (29) 76 (53)	56 (21) 65 (24) 54 (28)	21 (46) 308 (432) 35 (74)	<p>2010 HCM Signalized</p> <table border="1"> <tr> <td>125 (37) 377 (312) 36 (39)</td> <td>34 (39) 113 (42) 148 (107)</td> </tr> <tr> <td>69 (34) 63 (26) 232 (90)</td> <td>128 (131) 304 (494) 99 (96)</td> </tr> </table> <p>N/S Signalized      LOS: C (B) E/W Signalized      Del: 31.8 (17)</p>	125 (37) 377 (312) 36 (39)	34 (39) 113 (42) 148 (107)	69 (34) 63 (26) 232 (90)	128 (131) 304 (494) 99 (96)	<p>2010 HCM Signalized</p> <table border="1"> <tr> <td>18 (81) 189 (251) 53 (43)</td> <td>16 (20) 129 (172) 34 (87)</td> </tr> <tr> <td>39 (31) 255 (181) 61 (62)</td> <td>222 (264) 208 (264) 71 (112)</td> </tr> </table> <p>N/S Signalized      LOS: B (B) E/W Signalized      Del: 16.4 (16.1)</p>	18 (81) 189 (251) 53 (43)	16 (20) 129 (172) 34 (87)	39 (31) 255 (181) 61 (62)	222 (264) 208 (264) 71 (112)	<p>2010 HCM Signalized</p> <table border="1"> <tr> <td>43 (24) 35 (25) 333 (223)</td> <td>134 (303) 691 (581) 9 (4)</td> </tr> <tr> <td>26 (44) 535 (782) 18 (29)</td> <td>29 (11) 29 (42) 2 (9)</td> </tr> </table> <p>N/S Signalized      LOS: C (C) E/W Signalized      Del: 22.2 (21.2)</p>	43 (24) 35 (25) 333 (223)	134 (303) 691 (581) 9 (4)	26 (44) 535 (782) 18 (29)	29 (11) 29 (42) 2 (9)
31 (35) 464 (287) 67 (23)	45 (41) 19 (29) 76 (53)																		
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<p><b>6 Joiner Pkwy &amp; 3rd St</b></p>	<p><b>7 Joiner Pkwy &amp; 1st St</b></p>	<p><b>8 Joiner Pkwy &amp; Ferrari Ranch Rd</b></p>	<p><b>10 Nelson Ln &amp; SR 65</b></p>																
<p>2010 HCM TWSC</p> <table border="1"> <tr> <td>54 (45) 0 (0) 7 (5)</td> <td>10 (5) 53 (35) 0 (0)</td> </tr> <tr> <td>47 (56) 20 (72) 0 (0)</td> <td></td> </tr> </table> <p>N/S Stop      LOS: A (A) E/W Free      Del: 4.7 (3.9)</p>	54 (45) 0 (0) 7 (5)	10 (5) 53 (35) 0 (0)	47 (56) 20 (72) 0 (0)		<p>2000 HCM Signalized</p> <table border="1"> <tr> <td>30 (47) 0 (0) 52 (97)</td> <td>706 (250) 483 (782) 0 (0)</td> </tr> <tr> <td>0 (0) 590 (369) 544 (164)</td> <td></td> </tr> </table> <p>N/S Signalized      LOS: A (A) E/W Signalized      Del: 3.6 (4.3)</p>	30 (47) 0 (0) 52 (97)	706 (250) 483 (782) 0 (0)	0 (0) 590 (369) 544 (164)		<p>2000 HCM Signalized</p> <table border="1"> <tr> <td>60 (76) 1019 (635) 0 (0)</td> <td></td> </tr> <tr> <td>55 (10) 587 (456) 0 (0)</td> <td>170 (395) 0 (0) 242 (670)</td> </tr> </table> <p>N/S Signalized      LOS: B (B) E/W Signalized      Del: 10.7 (10.5)</p>	60 (76) 1019 (635) 0 (0)		55 (10) 587 (456) 0 (0)	170 (395) 0 (0) 242 (670)	<p>2000 HCM Signalized</p> <table border="1"> <tr> <td>0 (0) 177 (210) 880 (696)</td> <td></td> </tr> <tr> <td>0 (0) 77 (193) 0 (5)</td> <td></td> </tr> </table> <p>N/S Signalized      LOS: A (A) E/W Signalized      Del: 4.7 (6.6)</p>	0 (0) 177 (210) 880 (696)		0 (0) 77 (193) 0 (5)	
54 (45) 0 (0) 7 (5)	10 (5) 53 (35) 0 (0)																		
47 (56) 20 (72) 0 (0)																			
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0 (0) 77 (193) 0 (5)																			
<p><b>11 Moore Rd &amp; Nelson Ln</b></p>	<p><b>12 SR 65 SB Ramps &amp; Ferrari Ranch Rd</b></p>	<p><b>13 SR 65 NB Ramps &amp; Ferrari Ranch Rd</b></p>	<p><b>14 Lincoln Blvd &amp; SR 65 SB On-Ramp</b></p>																
<p>2000 HCM Signalized</p> <table border="1"> <tr> <td>0 (0) 1046 (904) 0 (0)</td> <td>616 (967) 0 (0) 11 (2)</td> </tr> <tr> <td>0 (0) 77 (193) 0 (0)</td> <td></td> </tr> </table> <p>N/S Signalized      LOS: A (A) E/W Signalized      Del: 1.6 (1.3)</p>	0 (0) 1046 (904) 0 (0)	616 (967) 0 (0) 11 (2)	0 (0) 77 (193) 0 (0)		<p>2010 HCM Signalized</p> <table border="1"> <tr> <td>37 (63) 485 (407) 7 (7)</td> <td>6 (142) 57 (76) 30 (51)</td> </tr> <tr> <td>49 (49) 53 (59) 200 (5)</td> <td>154 (143) 443 (622) 44 (115)</td> </tr> </table> <p>N/S Signalized      LOS: D (C) E/W Signalized      Del: 37 (30.5)</p>	37 (63) 485 (407) 7 (7)	6 (142) 57 (76) 30 (51)	49 (49) 53 (59) 200 (5)	154 (143) 443 (622) 44 (115)	<p>2010 HCM Signalized</p> <table border="1"> <tr> <td>55 (126) 479 (491) 77 (111)</td> <td>32 (56) 43 (120) 237 (150)</td> </tr> <tr> <td>54 (138) 107 (173) 52 (45)</td> <td>45 (177) 429 (836) 94 (303)</td> </tr> </table> <p>N/S Signalized      LOS: B (B) E/W Signalized      Del: 13.6 (18.1)</p>	55 (126) 479 (491) 77 (111)	32 (56) 43 (120) 237 (150)	54 (138) 107 (173) 52 (45)	45 (177) 429 (836) 94 (303)					
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<p><b>15 Lincoln Blvd &amp; SR 65 NB Off-Ramp</b></p>	<p><b>16 Lincoln Blvd &amp; 1st St</b></p>	<p><b>17 Lincoln Blvd &amp; Ferrari Ranch Rd</b></p>																	
<p align="center"><b>A.M. Peak Hour (P.M. Peak Hour) - Existing Conditions</b></p>																			

**Figure 2** displays the existing a.m. and p.m. peak hour traffic volumes at study intersections. The a.m. peak hour is defined as the consecutive 60-minute period within the peak period (7-9 p.m.) that has the highest traffic volume. The p.m. peak hour is defined as the consecutive 60-minute period within the peak period (4-6 p.m.) that has the highest traffic volume.

**Intersection Operations**

Operations at intersections are typically described in terms of level of service (LOS). LOS is a qualitative measure of operations with LOS A representing free-flow conditions and LOS F representing gridlock conditions. While previous analyses within the City of Lincoln such as the Lincoln 2050 General Plan Update have utilized the Circular 212 (Transportation Research Board, 1980) this analysis is based on the more up to date Highway Capacity Manual (HCM) 2010 operations methodology in order to be consistent with the analysis concurrently being completed for the adjacent Village 5 project.

**Table 1** shows the v/c ratio and average delay ranges associated with each LOS category for signalized and unsignalized intersections.

<b>TABLE 1</b>			
<b>LEVEL OF SERVICE DEFINITIONS AT STUDY INTERSECTIONS</b>			
Level of Service (LOS)	Description	Signalized Intersections Avg. Delay	Unsignalized Intersections
A	Free Flow/Insignificant Delays: No approach phase is fully utilized by traffic and no vehicle waits longer than one red signal indication.	≤ 10.0 sec/ veh	≤ 10.0 sec/ veh
B	Stable Operation/Minimal Delays: An occasional approach phase is fully utilized. Many drivers begin to feel somewhat restricted within platoons of vehicles.	10.1 to 20.0 sec/ veh	10.1 to 15.0 sec/ veh
C	Stable Operation/Acceptable Delays: Major approach phases fully utilized. Most drivers feel somewhat restricted.	20.1 to 35.0 sec/ veh	15.1 to 25.0 sec/ veh
D	Approaching Unstable/Tolerable Delays: Drivers may have to wait through more than one red signal indication. Queues may develop but dissipate rapidly, without excessive delays.	35.1 to 55.0 sec/ veh	25.1 to 35.0 sec/ veh
E	Unstable Operation/Significant Delays: Volumes at or near capacity. Vehicles may wait through several signal cycles. Long queues form upstream from intersection.	55.1 to 80.0 sec/ veh	35.1 to 50.0 sec/ veh
F	Forced Flow/Excessive Delays: Represents jammed conditions. Intersection operates below capacity with low volumes. Queues may block upstream intersections.	>80.0 sec/ veh	>50.0 sec/ veh

SOURCE: Transportation Research Board, 2010

**Figure 2** shows the existing lane geometries, traffic control devices, volumes, and LOS at all existing study intersections, as well as results of the existing LOS analysis at all existing intersections. **Table 2** shows the existing a.m. and p.m. peak hour level of service (LOS) at all study intersections. The table shows that all study intersections currently operate at acceptable levels of service during the a.m. and p.m. peak hours, with the exception of the intersection of Nicolaus Road and Nelson Lane/ Aviation Boulevard, which operates at LOS D during the p.m. peak hour. It should be noted that the intersection of Lincoln Boulevard and First

Street operates at LOS D during the a.m. peak hour, but this intersection (along with other intersections along Lincoln Boulevard) is excluded from the City's LOS C policy.

Intersection	Control	Jurisdiction/ LOS Standard	AM Peak Hour		PM Peak Hour	
			Int LOS	Avg Delay	Int LOS	Avg Delay
1 Nelson Ln/Aviation Blvd & Nicolaus Rd	AWSC	Lincoln C	C	19.1	<b>D</b>	<b>30.8</b>
2 Waverly Dr/Teal Hollow Dr & Nicolaus Rd	AWSC	Lincoln C	B	10.9	B	10.1
3 Lakeside Dr & Nicolaus Rd	AWSC	Lincoln C	B	14.8	B	10.7
4 Joiner Pkwy & Nicolaus Rd	Signal	Lincoln C	C	20.2	B	15.4
6 Joiner Pkwy & Third St	Signal	Lincoln C	B	15.2	B	13.7
7 Joiner Pkwy & First St	Signal	Lincoln C	C	31.8	B	17.0
8 Joiner Pkwy & Ferrari Ranch Rd	Signal	Lincoln C	B	16.4	B	16.1
10 Nelson Ln & SR 65	Signal	Caltrans D?	C	22.2	C	21.2
11 Moore Rd & Nelson Ln	TWSC	Placer County C	A	4.7	A	3.9
12 SR 65 SB Ramps & Ferrari Ranch Rd	Signal	Caltrans D	A	3.6	A	4.3
13 SR 65 NB Ramps & Ferrari Ranch Rd	Signal	Caltrans D	B	10.7	B	10.5
14 Lincoln Blvd & SR 65 SB On-Ramp	Signal	Caltrans D	A	4.7	A	6.6
15 Lincoln Blvd & SR 65 NB Off-Ramp	Signal	Caltrans D	A	1.6	A	1.3
16 Lincoln Blvd & First St	Signal	Lincoln C	D	37.0	C	30.5
17 Lincoln Blvd & Ferrari Ranch Rd	Signal	Lincoln C	B	13.6	B	18.1

Note: **Bold** Intersections do not meet current LOS Policy.  
The intersection of Lincoln Blvd/ First Street is exempt from the City's LOS C standard

### **Residential Roadway Operations**

The City of Lincoln bases its Level of Service (LOS) analysis on peak hour intersection operations, not daily segment operations, however since the proposed project would be located along the extension of existing residential streets, it is appropriate to document daily volume increases that would take place on these local residential roadways. The existing roadway segments that are analyzed include the following:

- First Street
  - west of Joiner Parkway
  - west of Chambers Drive
- Third Street
  - west of Joiner Parkway
  - west of Chambers Drive
- Fifth Street
  - west of Joiner Parkway

**Table 3** shows the volume ranges associated with each LOS category for residential streets. Since the City of Lincoln does not have a LOS policy for roadway segments, the volume ranges listed here are based on another jurisdiction’s traffic impact guidelines. In this case, Sacramento County’s Traffic Impact Guidelines have been cited, due to the fact that the City of Lincoln and Placer County do not have standards for LOS on local residential roadways.

**Table 4** shows the existing volumes and resultant LOS for each of the five study area residential roadways that will provide primary access to the project site. The table shows that First Street and Third Street west of Joiner Parkway both currently carry enough local traffic to result in LOS D or worse.

TABLE 3					
LEVEL OF SERVICE DEFINITIONS ON RESIDENTIAL ROADWAY SEGMENTS					
Facility Type	Average Daily Traffic Volume Threshold				
	LOS A	LOS B	LOS C	LOS D	LOS E
Two-Lane Local	600	1,200	2,000	3,000	4,500
Two-Lane Collector With Frontage	1,600	3,200	4,800	6,400	8,000
Two-Lane Collector Without Frontage	6,000	7,000	8,000	9,000	10,000

Source: Placer County General Plan, Sacramento County Impact Guidelines

TABLE 4				
DAILY ROADWAY VOLUMES AND LEVEL OF SERVICE EXISTING CONDITIONS				
Roadway	Segment	Roadway Type	Existing Conditions	
			ADT	LOS
<b>Existing Roadways</b>				
First Street	West of Chambers	Two-Lane Local Res	1,500	C
	West of Joiner	Two-Lane Local Res	4,300	E
Third Street	West of Chambers	Two-Lane Local Res	800	B
	West of Joiner	Two-Lane Local Res	2,000	D
Fifth Street	West of Joiner	Two-Lane Local Res	1,600	C

Note: The City of Lincoln does not have a daily segment LOS policy. For informational purposes.

## Freeway Operations

**Table 5** shows the density ranges associated with each LOS category for freeway mainlines during the peak periods. **Table 6** shows the a.m. and p.m. peak hour volumes and mainline freeway LOS on SR 65 between Twelve Bridges Drive and Nelson Lane. The table shows that all study freeway locations operate at LOS D or better during the a.m. and p.m. peak hours.

Level of Service	Maximum Density (Passenger Vehicles Per Mile Per Lane)
A	11
B	18
C	26
D	35
E	45

Source: Transportation Research Board, 2010.

Segment		Type	AM Peak		PM Peak	
			Density	LOS	Density	LOS
Northbound	Sunset On to Twelve Bridges Off-Ramp	Segment	15.7	B	25.3	C
	Twelve Bridges Off-Ramp	Off-Ramp	20.2	C	30.7	D
	Twelve Bridges Off to On-Ramp	Segment	12.4	B	20.7	C
	Twelve Bridges On to Lincoln Off-Ramp	Weave	12.4	B	20.4	C
	Lincoln to Ferrari Ranch Off-Ramp	Segment	7	A	10.3	A
	Ferrari Ranch Off-Ramp	Off-Ramp	4.8	A	10.9	B
	Ferrari Ranch Off to On-Ramp	Segment	6.6	A	6.6	A
	Ferrari Ranch On-Ramp	On-Ramp	9.4	A	9.2	A
Ferrari Ranch On to Nelson	Segment	7.7	A	7.3	A	
Southbound	Sunset On to Twelve Bridges Off-Ramp	Segment	7.5	A	8.8	A
	Twelve Bridges Off-Ramp	Off-Ramp	11.3	B	12.7	B
	Twelve Bridges Off to On-Ramp	Segment	6.8	A	7.5	A
	Twelve Bridges On to Lincoln Off-Ramp	Weave	9.3	A	5.9	A
	Lincoln to Ferrari Ranch Off-Ramp	Segment	14	B	7.7	A
	Ferrari Ranch Off-Ramp	Off-Ramp	17.6	B	11.1	B
	Ferrari Ranch Off to On-Ramp	Segment	21.7	C	13.7	B
	Ferrari Ranch On-Ramp	On-Ramp	20.8	C	14.7	B
Ferrari Ranch On to Nelson	Segment	29.7	D	21.1	C	

Note: Calculated using HCS 2010 (McTrans/ University of Florida)

## **Transit System**

Lincoln Transit has consolidated its routes and partnered with Placer County Transit. Lincoln's previous two routes have been replaced with one central route, called the Lincoln Circulator. This route operates hourly between 6:40 A.M. and 6:35 P.M. during weekdays and 8:20 A.M. and 4:15 P.M. on Saturdays. The closest stop to the proposed project is at R Street and Shamrock Court, approximately 1.4 miles away. An additional route called the Lincoln School Tripper Route has recently begun service as well. This route operates once in the morning and once in the afternoon on weekdays and is open to the public. The route's closest stops to the proposed project are at Glen Edwards Middle School (First Street and O Street) and Lincoln High School (Seventh Street and J Street). These stops are approximately 1.5 and 2.3 miles from the proposed project site, respectively.

Placer County Transit also operates the Lincoln-Rocklin-Sierra College bus route on weekdays and Saturdays. The route begins in downtown Lincoln, makes a stop at the Thunder Valley Casino on Athens Avenue, and continues through Roseville and Rocklin before reaching its destination at Sierra College. Headways are one hour.

No transit stops are currently located within one mile of the proposed project site.

Dial-a-ride service is also provided Monday through Friday from 8:00 a.m. to 5:00 p.m.

## **Bicycle Network**

Bicycle facilities are grouped into the following three classifications:

- Class I (Multi-Use Paths) are paved trails that are separated from roadways and allow for shared use by both cyclists and pedestrians;
- Class II (On-Street Bike Lanes) are designated for use by bicycles using striping, pavement legends, and signs;
- Class III (On-Street Bike Routes) are designated by signage for shared bicycle use with vehicles but do not necessarily include any additional pavement width.

In the vicinity of the proposed project, Class I multi use paths currently exist along Nicolaus Road and along natural waterways, such as Auburn Ravine, North Ingram Slough, and South Ingram Slough. Class II bike lanes exist on a couple of roadways adjacent to the study area, including Joiner Parkway, Ferrari Ranch Road, and Aviation Boulevard.

## REGULATORY SETTING

### Federal

There are no federal policies relating to transportation that are directly applicable to the project, however, federal regulations relating to the Americans with Disabilities Act (ADA), Title VI, and Environmental Justice relate to transit service.

### State

Policies of the California Department of Transportation (Caltrans) are applicable to the project, and to the extent relevant, are incorporated into the standards of significance to be used to evaluate the significance of project impacts.

### **State Route 65 Corridor System Management Plan**

In June 2009, Caltrans approved a Corridor System Management Plan (CSMP) for State Route 65 from Interstate 80 in Roseville to State Route 70 in Yuba County, south of Marysville. The CSMP replaces the previous Transportation Concept Report (TCR) and is a long-range comprehensive transportation planning document for SR 65 that includes system management strategies and performance evaluation measures to track the effectiveness of strategies and projects.

The CSMP documents the current LOS on SR 65 and the future LOS when considering feasible long-term projects. The CSMP also identifies a concept LOS, or the minimum level or quality of operations acceptable, for SR 65 within the 20-year planning period. A deficiency or need for improvement is triggered when the actual LOS falls below the concept LOS. Within the study area, the SR 65 CSMP identifies the 20-year concept LOS as:

- LOS E from Blue Oaks Boulevard to Gladding Road
- LOS D from Gladding Road to Riosa Road
- LOS E from Riosa Road to the Yuba County Line

At the time of the preparation of the SR 65 CSMP, the SR 65 Lincoln Bypass through the study area was not yet open to traffic. The SR 65 Lincoln Bypass opened to traffic in 2012, and SR 65 no longer travels through Downtown Lincoln. The segment from Gladding Road to Riosa Road now exists as part of the Lincoln Bypass, roughly corresponding with Wise Road to Riosa Road. Therefore, this study applies the Concept LOS D identified for Gladding Road to Riosa Road in the CSMP to the Wise Road to Riosa Road segment of SR 65 (a.k.a. the Lincoln Bypass). Since SR 65 is a Caltrans facility, this study applies the CSMP concept LOS to study highway and freeway segments, ramps, and intersections along SR 65. At ramp terminal intersections within at City of Lincoln roadways applies the City of Lincoln's LOS policy for Caltrans facilities, as described in the Local regulatory setting section.

## Local

### **City of Lincoln General Plan Policies**

The traffic impact analysis and the proposed mitigation measures presented in this study are developed in the context of policies T-2.2, T-2.3, T-2.4, T-2.5, T-2.9, T-2.19, and T-2.20 of the City of Lincoln General Plan, last updated in March, 2008. The proposed project's circulation plan identifies the locations of collector and arterial roadways that would be constructed in the proposed project. It is assumed that all roadways consist of at least two lanes, consistent with policy T-2.14.

Policy T-2.3 establishes the City of Lincoln's level of service C policy for signalized intersections during the p.m. peak hour. Since the City does not have any similar level of service policy for unsignalized intersections or other time periods (i.e., a.m. peak hour), this study applies this LOS C standard to all City of Lincoln intersections during both the a.m. and p.m. peak hour, consistent with previous traffic analyses prepared for the City of Lincoln. Policy T-2.3 also states that intersections along Lincoln Boulevard between First Street and Seventh Street are excluded from the LOS C standard.

The City of Lincoln General Plan policy T-2.4 also states that the City shall coordinate with Caltrans to strive to maintain a minimum of LOS D conditions for SR 65. This policy is applied to Caltrans ramp intersections where they intersect City of Lincoln roadways; however, Caltrans CSMP concept LOS is applied to the SR 65 freeway and highway segments within the City of Lincoln since they are under Caltrans jurisdiction and control.

### **City of Lincoln Public Facilities Impact Fee Program**

The City of Lincoln has adopted a Public Facilities Impact Fee Program (PFFP) which was established to provide a nexus between the projected new development in the City and the new capital facilities required to serve new development through build-out of the City General Plan. The program serves as a basis for requiring development impact fees in accordance with the provisions of Government Code Section 66000 et seq. The City of Lincoln being a full service city has established the PFFP to address the capital facilities required in a wide range of service areas, wastewater, drainage, water, reclaimed water, transportation, police, fire, library, administration, solid waste as well as parks and recreational facilities. As part of the program the City maintains a master list of capital improvements in each category that are needed to service new development. The cost of improvements are funded by the collection of fees from new development based upon an equivalent dwelling units basis which represents each projects share in the capital facilities needed to serve development. In some instances projects may be required to build one of the improvements from the Master Improvement List in which case they are able to receive credits against the fee they would have otherwise been required to pay. The City's Public Facilities Element (PFE) contains the list of specific projects to be paid for by the fee program.

### METHODS OF ANALYSIS

Transportation system impacts are based on the Placer County Travel Demand Model, which was originally developed by DKS Associates in 1993 and has been updated and revalidated several times. The most recent update of the model took place in 2008.

The model translates land uses into roadway volume projections. Its inputs are estimates of development (i.e., the number of single-family and multi-family dwelling units, and the amount of square footage of various categories of non-residential uses) and a detailed description of the roadway system. The model covers the portions of Placer County west of Colfax, as well as the entire Sacramento region, including Sacramento, Yolo and south Sutter counties. For areas outside Placer County, the model uses the trip generation estimates from the regional model maintained by the Sacramento Area Council of Governments (SACOG). The Placer County model also maintains a general consistency with the trip distribution and mode choice estimates from SACOG's regional model for the entire region.

To evaluate buildout of the proposed project, an intersection level of service analysis was performed for a.m. and p.m. peak hour traffic conditions. This analysis addressed the major intersections in the study area. The City of Lincoln and other jurisdictions in Placer County typically assess traffic impacts based on p.m. peak hour conditions as the p.m. peak hour is typically the worst one-hour period during a day. Caltrans bases freeway impact analysis on both a.m. and p.m. peak hour freeway operations.

For the purposes of determining impacts associated with the proposed project, the following scenarios have been analyzed:

- Existing Conditions (2015)
  - Without Project
  - With Project
- Cumulative Conditions
  - Without Project
  - With Project

This section begins with a discussion of the expected traffic generation of the proposed project followed by an assessment of the likely routes to be taken by project trips. Traffic conditions are then evaluated for “existing plus project” conditions. This subsection also includes an analysis of the project's effects on cumulative conditions in Lincoln, Placer County, and on State facilities.

The specific methods and assumptions used in the analysis are described below.

## PROJECT TRAFFIC CHARACTERISTICS

### Project Land Use and Access Assumptions

The proposed project is assumed to consist of the following land uses for analysis purposes:

- Approximately 84 acres of residential
  - 419 single-family low density detached dwelling units
- Approximately 74 acres of general commercial, consisting of:
  - Approximately 971,000 square feet of general commercial
    - 522,600 square feet commercial
    - 348,400 square feet office
    - 100,000 square feet industrial (self-storage)
    - 100 room hotel
- Approximately 3 acres of neighborhood park
- Approximately 20 acres of open space

The proposed project is generally bounded by Nicolaus Road to the north, the existing City of Lincoln city limits to the east, Nelson Lane to the west, and the SR 65 Bypass to the south. The project boundaries are shown in **Figure 1**. The proposed project would primarily utilize three major roadways for access to the City of Lincoln and the rest of the region. Nelson Lane currently exists and would provide primary north/south access to the project site.

The proposed project includes two roadway extensions that would provide additional access to the project land uses. First Street and Third Street currently provide residential access to the western most neighborhoods of downtown Lincoln. The proposed project would extend both of these residential roadways and provide a new connection between downtown Lincoln and Nelson Lane to the west.

### **Project Trip Generation**

Trip generation for the proposed project has been calculated based on the trip generation rates included in the Placer County travel demand model. Model trip rates are based on ITE rates, but have been adjusted during the model validation and calibration process. **Table 7** shows the estimated trip generation for buildout of the proposed project. The table shows that the proposed project would generate approximately 30,000 daily trip ends. It should be noted that these numbers represent one trip end for each direction of a two-way trip. It should also be noted that a portion of the generated trips (approximately 13.5% based on model results) would remain within the boundaries of the project site. Because the project consists of residential neighborhoods to the east and commercial developments to the west, it is anticipated that there would be vehicle trips that travel back and forth between the residential and commercial portions of the site.

<b>TABLE 7</b>			
<b>PROPOSED LAND USE AND TRIP GENERATION SUD-B NORTHEAST QUADRANT</b>			
<b>Land Use</b>	<b>Daily Trip Ends Per Unit</b>	<b>Proposed Units Project Buildout</b>	<b>Proposed Trip Generation Project Buildout</b>
Single Family	9 per DU	419	3,771
Commercial	35 Per KSF	522.6	18,291
Office	17.7 Per KSF	348.4	6,667
Industrial (self-storage)	7.6 Per KSF	100.0	760
Hotel	5.6 per Room	100	560
<b>Total Daily Project Trip Ends</b>			<b>29,549</b>
Approximate Percentage Internal Trips			13.5%
<b>Approximate Resultant Internal-External Trips</b>			<b>25,565</b>
Note: Based on 60% Commercial and 40% Office, 0.35 FAR for Commercial and Office. Source: DKS Associates, 2015.			

### Project Trip Distribution

Trip distribution of the proposed project and Phase 1 has been estimated by running a “select zone” analysis for each scenario that includes the proposed project. Select zone analysis isolates all trips entering or exiting the selected set of traffic analysis zones and traces those trips on the travel demand model roadway network. The select zone analysis shows that project trips would be distributed approximately as follows:

- Nicolaus Road west: 10%
- SR 65 west and north: 6%
- Nelson Lane s/o SR 65: 19%
- SR 65 east and south: 19%
- First Street east: 5%
- Third Street east: 4%
- Nicolaus Road east: 10%
- Joiner Parkway north: 1%
- Lakeside Drive north: 1%
- Teal Hollow Drive north: 1%
- Aviation Boulevard north: 5%

## **Project Site Circulation**

**Figure 3** shows the proposed roadway layout of the proposed project and projected daily traffic volumes on project roadways. The proposed project site consists primarily of two parts: a residential portion to the east and a commercial portion to the west. The residential portions of the project would consist primarily of local residential streets with homes fronting one or both sides of the street. These roadways would be fed by existing residential roadways to the east and by a new collector roadway to the west. This collector roadway would provide primary access between the residential portion of the project and the commercial portion of the project. It would not have any homes fronting on it. Although not a formal standard of significance, it is typically undesirable to have daily traffic volumes of over 5,000 daily vehicles on residential roadways with homes fronting on one or both sides of the street. The roadway and lot layout of the proposed project have been modified a number of times to help eliminate a disproportionate number of vehicles traveling on one residential street versus another. Based on detailed travel demand model results, the resultant project layout results in fairly balanced volumes on the two key roadways providing access to the project. The residential extensions of First Street and Third Street are both projected to carry approximately half of the estimated 6,000 daily vehicles traveling between the western portions of the site and the eastern portion of the site under cumulative plus project conditions. All other residential roadways within the proposed project are projected to carry 1,000 daily vehicles or less. The roundabout providing linkage between the proposed project and Independence to the north can easily accommodate the projected traffic volumes as a single lane roundabout.

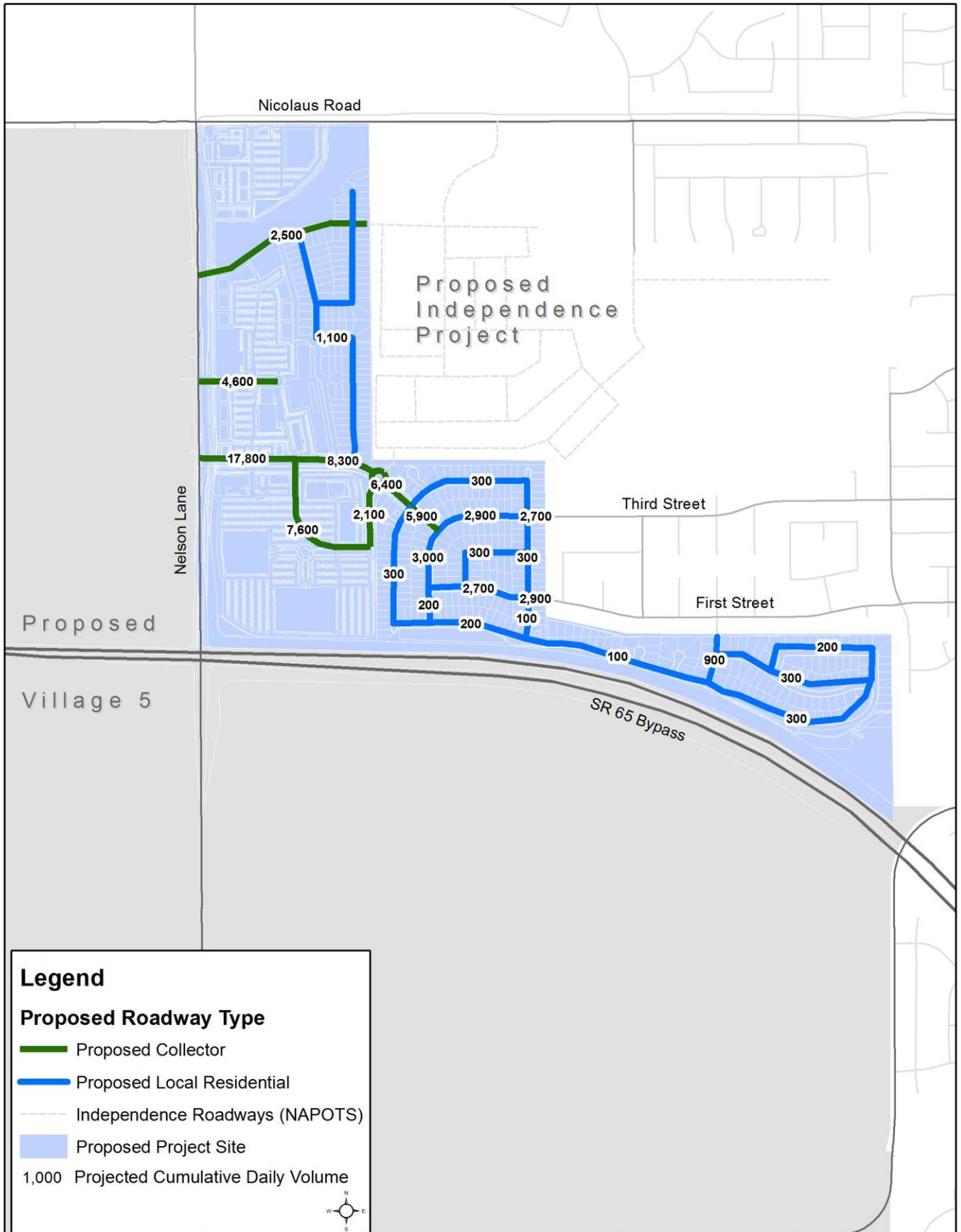
The collector roadway providing access between the two sides of the site is projected to carry less than 10,000 daily vehicles, which is well within acceptable volume ranges for a collector roadway. The model results predict that a high percentage of traffic entering the site from Nelson Lane would use the south most entrance. The estimated volume of 17,800 is on the high end of what a two lane collector can accommodate, and four lanes would be advisable for the western portion of this roadway. The volumes on this roadway versus other entrances along Nelson Lane depend upon how the commercial portions of the project eventually build out.

### **Standards of Significance**

Transportation and circulation impacts were evaluated within a study area that represents a likely traffic shed for the proposed project. This study area includes the western portion of downtown Lincoln, roughly bounded by Nelson Lane to the west, Nicolaus Road to the north, Lincoln Boulevard to the east, and the SR 65 Bypass to the south. Since it is anticipated that a large percentage of project trips would utilize SR 65 toward Rocklin and Roseville, it has been included in the study area, from Nelson Lane to Twelve Bridges Drive.

The significance criteria for this analysis were developed from criteria presented in Appendix G of the CEQA Guidelines and based on the professional judgment of the City of Lincoln and its consultants. The proposed project would result in a significant impact based on the following criteria.

**Figure 3: Proposed Project Circulation**



## Intersections

Impacts to traffic conditions at intersections are considered significant if the proposed project would:

- Cause an intersection operating at an acceptable LOS (without the project) to operate at an unacceptable LOS (with the project);
- Increase the average vehicle delay for a City of Lincoln or County of Placer study intersection by five seconds or more that is already (or projected to be) operating at an unacceptable LOS (without project);
- Increase the average vehicle delay for a Caltrans study intersection by one second or more that is already (or projected to be) operating at an unacceptable LOS (without project).

For City of Lincoln intersections, LOS A-C is considered acceptable, while LOS D-F is considered unacceptable per Lincoln General Plan policy T-2.3. This policy also states that intersections along Lincoln Boulevard between First Street and Seventh Street are excluded from the LOS C standard.

As stated previously, this study applies this policy to all intersections during both the a.m. and p.m. peak hour, consistent with previous traffic analyses prepared for the City of Lincoln.

Therefore, this study treats LOS A-C as acceptable and LOS D-F as unacceptable at all City of Lincoln intersections during both the a.m. and p.m. peak hours, with the exception of the intersections along Lincoln Boulevard between First Street and Seventh Street, which are excluded.

For County of Placer intersections, LOS A-C is considered acceptable, while LOS D-F is considered unacceptable per Placer County General Plan policy 3.A.7.

At Caltrans intersections, the SR 65 CSMP establishes a concept LOS E for SR 65 through most of the study area, with the exception of between Wise Road and Riosa Road, which has a concept LOS D. The City of Lincoln General Plan policy T-2.4 states that the City shall coordinate with Caltrans to strive to maintain a minimum of LOS D conditions for SR 65.

Based on these policies, LOS A-D is considered acceptable at the ramp intersections at City of Lincoln roadways, while LOS E and F is considered unacceptable consistent with the Lincoln General Plan policy. At intersections along SR 65 in unincorporated Placer County, LOS A-E is considered acceptable, while LOS F is considered unacceptable per the SR 65 CSMP.

It should be noted that the “five second” threshold is a standard utilized by numerous jurisdictions in the region. This standard is being used in place of the increase in volume-to-capacity ratio of 0.05 or more identified in the Lincoln General Plan. The Lincoln General Plan LOS analysis was based on the Circular 212 methodology, which was based on volume-to-capacity ratio of critical movements. Like most other jurisdictions in the region, the City of Lincoln is now employing the HCM 2010 methodology, which is based on intersection delay in seconds. Therefore, impacts at intersections already not meeting the LOS standard are based on an increase of five seconds or more.

## Highway & Freeway Facilities

Impacts to traffic conditions on highway and freeway facilities are considered significant if the proposed project would:

- Cause a highway or freeway facility operating at an acceptable LOS (without the project) to operate at an unacceptable LOS (with the project); or
- Increase the traffic volume on a highway or freeway facility that is already (or projected to be) operating at an unacceptable LOS (without project)

As described previously, LOS E or better is considered acceptable on SR 65 from Blue Oaks Boulevard to Wise Road and from Riosa Road to the Yuba County line, while LOS F is unacceptable. On SR 65 between Wise Road and Riosa Road, LOS D or better is considered acceptable while LOS E or F is considered unacceptable.

Since SR 65 is a Caltrans facility, this study applies the CSMP concept LOS to study highway and freeway segments along SR 65 instead of local LOS policies.

The SR 65 CSMP also notes that “no further degradation of service from existing “F” is acceptable, as indicated by delay performance measurement.” For freeway facilities, the applicable performance standard is density, which is expressed in passenger cars per hour per mile per lane.

## Bicycle and Pedestrian Facilities

The following significance criteria related to bicycle and pedestrian facilities reflect whether the project would conflict with adopted plans, policies, or programs regarding bicycle and pedestrian facilities.

Impacts to bicycle and pedestrian facilities are considered significant if the proposed project would:

- Disrupt or interfere with existing or planned bicycle and pedestrian facilities
- Create inconsistencies with adopted pedestrian or bicycle system plans, guidelines, policies, or standards.

## Transit Facilities

The following significance criteria related to transit facilities reflect whether the project would conflict with adopted plans, policies, or programs regarding transit facilities.

Impacts to the transit system are considered significant if the proposed project would:

- Create a demand for mass transit services above the capacity which is provided or planned.

- Interfere with existing or planned transit facilities.

## EXISTING PLUS PROJECT CONDITIONS

The California Environmental Quality Act (CEQA) requires that environmental analyses of development projects analyze an Existing Plus Project scenario, which represents superimposing the proposed project (land use and roadway improvements) on top of existing conditions. While it is unlikely that a project of this magnitude would be fully developed instantaneously, this scenario assumes that the entire project is developed while no other development or roadway improvements take place. In order to achieve this, the entire project land use and roadways are inserted into an existing travel demand model, and the model “deltas” (plus project volumes minus no project volumes) are added to existing traffic volumes (derived from recent counts).

### Intersection Operations

**Figure 3** and **Figure 4** show Existing Plus Project (and existing, for comparison) peak hour traffic volumes at study intersections during the a.m. and p.m. peak hour, respectively. **Table 8** shows the resultant level of service at study intersections when the proposed project is added under existing conditions. For the purposes of this analysis, it is assumed that all existing study intersections have existing geometrics, traffic control, and signal timing, where applicable. No signalization of existing intersections is assumed. The table shows that one intersection is significantly impacted during both the a.m. and p.m. peak hours.

- Nicolaus Road and Nelson Lane/ Aviation Boulevard
  - A.M. Peak Hour: degrades from LOS C to LOS D
  - P.M. Peak Hour: degrades from LOS D to LOS E

### Residential Roadway Operations

**Table 9** shows the change in daily traffic volume on residential roadways adjacent to the proposed project and within the proposed project itself. Although the City of Lincoln does not consider daily segment volume or LOS in its general plan policies, this study presents volumes and LOS on a limited number of roadways due to the location of the proposed project and its access using existing local residential streets. The table shows that two local residential roadways currently carry volumes exceeding LOS C and would experience an increase in volume with the addition of the proposed project, while one additional roadway is currently LOS C and would degrade to LOS D with the addition of the proposed project.

- First Street west of Joiner: existing LOS E and increases by 100 daily vehicles
- Third Street west of Joiner: existing LOS D and increases by 100 daily vehicles
- First Street west of Chambers: existing LOS C and degrades to LOS D with increase of 600 daily vehicles.

Figure 4: Existing Plus Project A.M. Peak Hour Volumes

<p>2010 HCM AWSC</p> <p>N/S Stop Sign LOS: C (E) E/W Stop Sign Del: 19.1 (43.9)</p>	<p>2010 HCM AWSC</p> <p>N/S Stop Sign LOS: B (B) E/W Stop Sign Del: 10.9 (13.0)</p>	<p>2010 HCM AWSC</p> <p>N/S Stop Sign LOS: B (C) E/W Stop Sign Del: 14.8 (16.5)</p>	<p>2010 HCM Signalized</p> <p>N/S Signalized LOS: C (B) E/W Signalized Del: 20.2 (19.5)</p>
<p><b>1 Nelson Ln/Aviation Blvd &amp; Nicolaus Rd</b></p>	<p><b>2 Waverly Dr/Teal Hollow Dr &amp; Nicolaus Rd</b></p>	<p><b>3 Lakeside Dr &amp; Nicolaus Rd</b></p>	<p><b>4 Joiner Pkwy &amp; Nicolaus Rd</b></p>
<p>2010 HCM Signalized</p> <p>N/S Signalized LOS: B (B) E/W Signalized Del: 15.2 (14.8)</p>	<p>2010 HCM Signalized</p> <p>N/S Signalized LOS: C (C) E/W Signalized Del: 31.8 (28.8)</p>	<p>2010 HCM Signalized</p> <p>N/S Signalized LOS: B (B) E/W Signalized Del: 16.4 (16.8)</p>	<p>2010 HCM Signalized</p> <p>N/S Signalized LOS: C (C) E/W Signalized Del: 22.2 (27.6)</p>
<p><b>6 Joiner Pkwy &amp; 3rd St</b></p>	<p><b>7 Joiner Pkwy &amp; 1st St</b></p>	<p><b>8 Joiner Pkwy &amp; Ferrari Ranch Rd</b></p>	<p><b>10 Nelson Ln &amp; SR 65</b></p>
<p>2010 HCM TWSC</p> <p>N/S Stop LOS: A (A) E/W Free Del: 4.7 (0.9)</p>	<p>2000 HCM Signalized</p> <p>N/S Signalized LOS: A (A) E/W Signalized Del: 3.6 (4.1)</p>	<p>2000 HCM Signalized</p> <p>N/S Signalized LOS: B (B) E/W Signalized Del: 10.7 (11.3)</p>	<p>2000 HCM Signalized</p> <p>N/S Signalized LOS: A (A) E/W Signalized Del: 4.7 (4.8)</p>
<p><b>11 Moore Rd &amp; Nelson Ln</b></p>	<p><b>12 SR 65 SB Ramps &amp; Ferrari Ranch Rd</b></p>	<p><b>13 SR 65 NB Ramps &amp; Ferrari Ranch Rd</b></p>	<p><b>14 Lincoln Blvd &amp; SR 65 SB On-Ramp</b></p>
<p>2000 HCM Signalized</p> <p>N/S Signalized LOS: A (A) E/W Signalized Del: 1.6 (1.6)</p>	<p>2010 HCM Signalized</p> <p>N/S Signalized LOS: D (D) E/W Signalized Del: 37 (37)</p>	<p>2010 HCM Signalized</p> <p>N/S Signalized LOS: B (B) E/W Signalized Del: 13.6 (13.6)</p>	<p>2010 HCM Roundabout</p> <p>N/S Roundabout LOS: n/a (A) E/W Roundabout Del: n/a (4.7)</p>
<p><b>15 Lincoln Blvd &amp; SR 65 NB Off-Ramp</b></p>	<p><b>16 Lincoln Blvd &amp; 1st St</b></p>	<p><b>17 Lincoln Blvd &amp; Ferrari Ranch Rd</b></p>	<p><b>18 Project Roundabout</b></p>
<p><b>Existing (Existing Plus Project) AM Peak Hour</b></p>			

Figure 5: Existing Plus Project P.M. Peak Hour Volumes

<p>2010 HCM AWSC</p> <p>N/S Stop Sign LOS: D (E) E/W Stop Sign Del: 30.8 (39.1)</p>	<p>2010 HCM AWSC</p> <p>N/S Stop Sign LOS: B (B) E/W Stop Sign Del: 10.1 (12.7)</p>	<p>2010 HCM AWSC</p> <p>N/S Stop Sign LOS: B (B) E/W Stop Sign Del: 10.7 (12.2)</p>	<p>2010 HCM Signalized</p> <p>N/S Signalized LOS: B (B) E/W Signalized Del: 15.4 (15.5)</p>
<p><b>1 Nelson Ln/Aviation Blvd &amp; Nicolaus Rd</b></p>	<p><b>2 Waverly Dr/Teal Hollow Dr &amp; Nicolaus Rd</b></p>	<p><b>3 Lakeside Dr &amp; Nicolaus Rd</b></p>	<p><b>4 Joiner Pkwy &amp; Nicolaus Rd</b></p>
<p>2010 HCM Signalized</p> <p>N/S Signalized LOS: B (B) E/W Signalized Del: 13.7 (13.5)</p>	<p>2010 HCM Signalized</p> <p>N/S Signalized LOS: B (B) E/W Signalized Del: 17 (16.7)</p>	<p>2010 HCM Signalized</p> <p>N/S Signalized LOS: B (B) E/W Signalized Del: 16.1 (17)</p>	<p>2010 HCM Signalized</p> <p>N/S Signalized LOS: C (C) E/W Signalized Del: 21.2 (21.2)</p>
<p><b>6 Joiner Pkwy &amp; 3rd St</b></p>	<p><b>7 Joiner Pkwy &amp; 1st St</b></p>	<p><b>8 Joiner Pkwy &amp; Ferrari Ranch Rd</b></p>	<p><b>10 Nelson Ln &amp; SR 65</b></p>
<p>2010 HCM TWSC</p> <p>N/S Stop LOS: A (A) E/W Free Del: 3.9 (0.4)</p>	<p>2000 HCM Signalized</p> <p>N/S Signalized LOS: A (A) E/W Signalized Del: 4.3 (6.9)</p>	<p>2000 HCM Signalized</p> <p>N/S Signalized LOS: B (B) E/W Signalized Del: 10.5 (10.8)</p>	<p>2000 HCM Signalized</p> <p>N/S Signalized LOS: A (A) E/W Signalized Del: 6.6 (6.4)</p>
<p><b>11 Moore Rd &amp; Nelson Ln</b></p>	<p><b>12 SR 65 SB Ramps &amp; Ferrari Ranch Rd</b></p>	<p><b>13 SR 65 NB Ramps &amp; Ferrari Ranch Rd</b></p>	<p><b>14 Lincoln Blvd &amp; SR 65 SB On-Ramp</b></p>
<p>2000 HCM Signalized</p> <p>N/S Signalized LOS: A (A) E/W Signalized Del: 1.3 (1.3)</p>	<p>2010 HCM Signalized</p> <p>N/S Signalized LOS: C (C) E/W Signalized Del: 30.5 (30.5)</p>	<p>2010 HCM Signalized</p> <p>N/S Signalized LOS: B (B) E/W Signalized Del: 18.1 (19.6)</p>	<p>2010 HCM Roundabout</p> <p>N/S Roundabout LOS: n/a (A) E/W Roundabout Del: n/a (4.5)</p>
<p><b>15 Lincoln Blvd &amp; SR 65 NB Off-Ramp</b></p>	<p><b>16 Lincoln Blvd &amp; 1st St</b></p>	<p><b>17 Lincoln Blvd &amp; Ferrari Ranch Rd</b></p>	<p><b>18 Project Roundabout</b></p>
<p><b>Existing (Existing Plus Project) PM Peak Hour</b></p>			

**TABLE 8**

**PEAK HOUR INTERSECTION LEVELS OF SERVICE  
EXISTING PLUS PROJECT CONDITIONS**

Intersection	Control	Jurisdiction (LOS Standard)	Existing Conditions		Existing Plus Project	
			Int LOS	Avg Delay	Int LOS	Avg Delay
<b>AM Peak Hour</b>						
1 Nelson Ln/Aviation Blvd & Nicolaus Rd	AWSC	Lincoln (C)	C	19.1	<b>E</b>	<b>43.9</b>
2 Waverly Dr/Teal Hollow Dr & Nicolaus Rd	AWSC	Lincoln (C)	B	10.9	B	13.0
3 Lakeside Dr & Nicolaus Rd	AWSC	Lincoln (C)	B	14.8	C	16.5
4 Joiner Pkwy & Nicolaus Rd	Signal	Lincoln (C)	C	20.2	B	19.5
6 Joiner Pkwy & Third St	Signal	Lincoln (C)	B	15.2	B	14.8
7 Joiner Pkwy & First St	Signal	Lincoln (C)	C	31.8	C	28.8
8 Joiner Pkwy & Ferrari Ranch Rd	Signal	Lincoln (C)	B	16.4	B	16.8
10 Nelson Ln & SR 65	Signal	Caltrans (D)	C	22.2	C	27.6
11 Moore Rd & Nelson Ln	TWSC	Placer Co (C)	A	4.7	A	0.9
12 SR 65 SB Ramps & Ferrari Ranch Rd	Signal	Caltrans (D)	A	3.6	A	4.1
13 SR 65 NB Ramps & Ferrari Ranch Rd	Signal	Caltrans (D)	B	10.7	B	11.3
14 Lincoln Blvd & SR 65 SB On-Ramp	Signal	Caltrans (D)	A	4.7	A	4.8
15 Lincoln Blvd & SR 65 NB Off-Ramp	Signal	Caltrans (D)	A	1.6	A	1.6
16 Lincoln Blvd & First St	Signal	Lincoln (n/a)	D	37.0	D	37.0
17 Lincoln Blvd & Ferrari Ranch Rd	Signal	Lincoln (C)	B	13.6	B	13.6
18 Project Roundabout	Roundabout	Lincoln (C)	n/a		A	4.7
<b>PM Peak Hour</b>						
1 Nelson Ln/Aviation Blvd & Nicolaus Rd	AWSC	Lincoln (C)	<b>D</b>	<b>30.8</b>	<b>E</b>	<b>39.1</b>
2 Waverly Dr/Teal Hollow Dr & Nicolaus Rd	AWSC	Lincoln (C)	B	10.1	B	12.7
3 Lakeside Dr & Nicolaus Rd	AWSC	Lincoln (C)	B	10.7	B	12.2
4 Joiner Pkwy & Nicolaus Rd	Signal	Lincoln (C)	B	15.4	B	15.5
6 Joiner Pkwy & Third St	Signal	Lincoln (C)	B	13.7	B	13.5
7 Joiner Pkwy & First St	Signal	Lincoln (C)	B	17.0	B	16.7
8 Joiner Pkwy & Ferrari Ranch Rd	Signal	Lincoln (C)	B	16.1	B	17.0
10 Nelson Ln & SR 65	Signal	Caltrans (D)	C	21.2	C	21.2
11 Moore Rd & Nelson Ln	TWSC	Placer Co (C)	A	3.9	A	0.4
12 SR 65 SB Ramps & Ferrari Ranch Rd	Signal	Caltrans (D)	A	4.3	A	6.9
13 SR 65 NB Ramps & Ferrari Ranch Rd	Signal	Caltrans (D)	B	10.5	B	10.8
14 Lincoln Blvd & SR 65 SB On-Ramp	Signal	Caltrans (D)	A	6.6	A	6.4
15 Lincoln Blvd & SR 65 NB Off-Ramp	Signal	Caltrans (D)	A	1.3	A	1.3
16 Lincoln Blvd & First St	Signal	Lincoln (C)	C	30.5	C	30.5
17 Lincoln Blvd & Ferrari Ranch Rd	Signal	Lincoln (C)	B	18.1	B	19.6
18 Project Roundabout	Roundabout	Lincoln (C)	n/a		A	4.5
Note: <b>Bold</b> Intersections do not meet current LOS Policy. <b>Shaded</b> intersections represent significant impacts based on appropriate standard of significance						

**Freeway Operations**

**Table 10** and **Table 11** show the existing and existing plus project traffic densities and resultant LOS for the a.m. and p.m. peak hour respectively. The tables show that there are no significant impacts based on changes in traffic density or LOS on SR 65 in the study area.

TABLE 9						
DAILY ROADWAY VOLUMES AND LEVEL OF SERVICE EXISTING PLUS PROJECT CONDITIONS						
Roadway	Segment	Roadway Type	Existing Conditions		Existing Plus Project	
			ADT	LOS	ADT	LOS
<b>Existing Roadways</b>						
First Street	West of Chambers	Two-Lane Local Res	1,500	C	2,100	D
	West of Joiner	Two-Lane Local Res	4,300	E	4,400	E
Third Street	West of Chambers	Two-Lane Local Res	800	B	1,600	C
	West of Joiner	Two-Lane Local Res	2,000	D	2,100	D
Fifth Street	West of Joiner	Two-Lane Local Res	1,600	C	1,600	C
Nicolaus	West of Joiner	Four-Lane Arterial	8,700	A	9,300	A
	West of Waverly	Four-Lane Arterial	7,300	A	11,700	A
<b>Roadways Added With Proposed Project</b>						
Third Street	West of Current City Limit	Two-Lane Local Res	n/a		1,600	C
First Street	West of Current City Limit	Two-Lane Local Res	n/a		1,300	C
Note: The City of Lincoln does not have a daily segment LOS policy. For informational purposes.						

**Transit**

As stated previously, aside from dial-a-ride services, the proposed project site is not directly served by any fixed transit lines. The closest transit stops are over one mile east of the proposed project. The City of Lincoln and Placer Transit have not identified any future transit lines to provide direct access to the proposed project. In accordance with City of Lincoln design standards, project roadways will be designed to accommodate potential future transit lines connecting downtown Lincoln with Nelson Lane to the west.

**Bicycles and Pedestrians**

There are currently no existing bicycle facilities within the project boundary or directly adjacent to the project site. The City of Lincoln *2012 Bicycle Transportation Plan* does, however, indicate that there will be future bicycle facilities on roadways providing access to the proposed project. The plan indicates the following future bicycle facilities in its map of existing and future bicycle facilities:

- Class II bike lane along Nelson Lane entire western boundary of project

- Class II bike lanes along First Street and Third Street from downtown Lincoln to their current termini at the project
- Class I bike path along the far eastern boundary of the project

In accordance with City of Lincoln design standards, the proposed project roadways will be designed to accommodate bicycle traffic and extend the planned bike lanes from the current termini at the end of First Street and Third Street through project roadways with a connection to the planned bike lanes of Nelson Lane. The project proposed project will also be designed so as not to impede the development of bike lanes along Nelson Lane.

TABLE 10						
SR 65 FREEWAY A.M. PEAK HOUR LEVEL OF SERVICE						
EXISTING PLUS PROJECT CONDITIONS						
Segment		Type	Existing		Existing Plus Project	
			Density	LOS	Density	LOS
Northbound	Sunset On to Twelve Bridges Off-Ramp	Segment	15.7	B	17.4	B
	Twelve Bridges Off-Ramp	Off-Ramp	20.2	C	22.1	C
	Twelve Bridges Off to On-Ramp	Segment	12.4	B	14.2	B
	Twelve Bridges On to Lincoln Off-Ramp	Weave	12.4	B	14.1	B
	Lincoln to Ferrari Ranch Off-Ramp	Segment	7	A	8.4	A
	Ferrari Ranch Off-Ramp	Off-Ramp	4.8	A	5.8	A
	Ferrari Ranch Off to On-Ramp	Segment	6.6	A	8.9	A
	Ferrari Ranch On-Ramp	On-Ramp	9.4	A	12.7	B
	Ferrari Ranch On to Nelson	Segment	7.7	A	11.1	B
Southbound	Sunset On to Twelve Bridges Off-Ramp	Segment	7.5	A	8.0	A
	Twelve Bridges Off-Ramp	Off-Ramp	11.3	B	12.5	B
	Twelve Bridges Off to On-Ramp	Segment	6.8	A	7.0	A
	Twelve Bridges On to Lincoln Off-Ramp	Weave	9.3	A	9.1	A
	Lincoln to Ferrari Ranch Off-Ramp	Segment	14	B	13.4	B
	Ferrari Ranch Off-Ramp	Off-Ramp	17.6	B	17.0	B
	Ferrari Ranch Off to On-Ramp	Segment	21.7	C	21.6	C
	Ferrari Ranch On-Ramp	On-Ramp	20.8	C	20.4	C
Ferrari Ranch On to Nelson	Segment	29.7	D	29.6	D	
Notes:						
Based on Freeway Performance Measurement System data.						
Density given as passenger cars per mile per lane.						
<b>Bold</b> locations do not meet current LOS Policy, <b>Shaded</b> indicates LOS Impact						

**TABLE 11**

**SR 65 FREEWAY P.M. PEAK HOUR LEVEL OF SERVICE  
EXISTING PLUS PROJECT CONDITIONS**

Segment	Type	Existing		Existing Plus Project	
		Density	LOS	Density	LOS
Northbound	Sunset On to Twelve Bridges Off-Ramp	25.3	C	25.1	C
	Twelve Bridges Off-Ramp	30.7	D	30.4	D
	Twelve Bridges Off to On-Ramp	20.7	C	20.6	C
	Twelve Bridges On to Lincoln Off-Ramp	20.4	C	20.0	C
	Lincoln to Ferrari Ranch Off-Ramp	10.3	A	10.3	A
	Ferrari Ranch Off-Ramp	10.9	B	10.8	B
	Ferrari Ranch Off to On-Ramp	6.6	A	6.9	A
	Ferrari Ranch On-Ramp	9.2	A	10.2	B
	Ferrari Ranch On to Nelson	7.3	A	8.3	A
Southbound	Sunset On to Twelve Bridges Off-Ramp	8.8	A	12.2	B
	Twelve Bridges Off-Ramp	12.7	B	16.5	B
	Twelve Bridges Off to On-Ramp	7.5	A	9.1	A
	Twelve Bridges On to Lincoln Off-Ramp	5.9	A	6.4	A
	Lincoln to Ferrari Ranch Off-Ramp	7.7	A	8.3	A
	Ferrari Ranch Off-Ramp	11.1	B	12.6	B
	Ferrari Ranch Off to On-Ramp	13.7	B	14.8	B
	Ferrari Ranch On-Ramp	14.7	B	20.6	C
	Ferrari Ranch On to Nelson	21.1	C	21.9	C

Notes:  
Based on Freeway Performance Measurement System data.  
Density given as passenger cars per mile per lane.  
**Bold** locations do not meet current LOS Policy, **Shaded** indicates LOS Impact

## CUMULATIVE CONDITIONS

The following section describes the projected travel conditions under cumulative conditions for the roadway, transit, and bicycle/ pedestrians. As with the existing plus project analysis, the South Placer County Travel Demand Model has been used to forecast cumulative traffic volumes within the study area.

To identify the proposed project's cumulative impacts, the cumulative conditions analysis includes the following two scenarios:

- Cumulative No Project Conditions
- Cumulative Plus Project Conditions.

Cumulative No Project conditions are based on the transportation analysis recently completed for the Village 5 plan, just to the west and south of the proposed project. While Village 5 is still under review and has not yet been approved or certified, the City of Lincoln has agreed that the "Cumulative Plus Project" scenario from the Village 5 analysis serve as the Cumulative No Project scenario for SUD-B Northeast Quadrant. The transportation analysis for Village 5 contains the following definition of Cumulative conditions.

*The cumulative version of the 2008 Placer County TDF model has a horizon year of 2025. Since the recent economic recession slowed the pace of land development in Placer County seen prior to 2008, it is unlikely that the land use development assumed in the 2025 Placer County TDF model is likely to occur within the next ten years. For example, the Sacramento Area Council of Governments' (SACOG) 2035 Metropolitan Transportation Plan and Sustainable Communities Strategy (MTP/SCS) forecasts a dramatically reduced amount of growth in South Placer County. In fact, the growth anticipated for the City of Lincoln by 2035 in the SACOG MTP/SCS is only about one-third of the growth included in the 2025 Placer County TDF model.*

*To account for this reduced amount of growth while also including all reasonably foreseeable land development projects in the study area, this study makes the following adjustments to the 2025 Placer County TDF model land use inputs.*

- *Updated the land use inputs to ensure that the full build out of the Lincoln Village 1 and Lincoln Village 7 Specific Plans, which have been adopted by the City of Lincoln.*
- *Removed all projected development in Lincoln Villages 2, 3, 4, and 6, as well as SUD-C, which have limited or no growth in the SACOG MTP/SCS, and do not have approved specific plans.*
- *Updated the land use inputs to include full build out of both Amoruso Ranch Specific Plan and Placer Ranch Specific Plan. The City of Roseville has issued a notice of preparation of a Draft EIR for both of these specific plans, which indicates that they are reasonably foreseeable to occur.*
- *Used the land use inputs in the 2025 Placer County TDF model to reflect additional development within the City of Lincoln City Limits.*

*In addition to these land development adjustments, several adjustments were made to the roadway network in the 2025 Placer County TDF model. This study verified that the internal circulation improvements associated with the land developments listed above were included in the cumulative*

model. This analysis also cross-references the SACOG MTP/SCS financially constrained transportation project list to verify that the reasonably foreseeable funded transportation infrastructure improvements are included. This includes the following transportation improvements in the study area.

- *Widen Nicolaus Road from 2 to 4 lanes from Airport Road to Aviation Boulevard*
- *Widen East Joiner Parkway from 4 to 6 lanes from Ferrari Ranch Road to Sterling Parkway*
- *Extend Ferrari Ranch Road from existing City Limit to Moore Road*
- *Widen Twelve Bridges Drive from 2 to 4 lanes from Industrial Boulevard to SR 65; includes interchange improvements at SR 65*
- *Widen Industrial Boulevard from 2 to 4 lanes from Athens Avenue to SR 65*
- *Widen Fiddymont Road from 2 lanes to 4 lanes from Roseville City Limits to Athens Road*
- *Replace 2 lane bridge with a 4 lane bridge on Nelson Lane over Markham Ravine*
- *Placer Parkway Phase I – construct a new 4-lane divided facility with an interchange at SR 65 at Whitney Ranch Parkway alignment. Includes at grade intersection at Foothills Boulevard.*
- *Whitney Ranch Parkway – construct a new 6-lane facility from SR 65 to Wildcat Boulevard*

In addition to the land use and roadway assumptions included in the Village 5 transportation analysis, this analysis assumes full development of the Independence at Lincoln project, just to the north of the proposed project. This assumption includes a direct connection between SUD-B Northeast Quadrant and Independence via a new collector roadway with access via the project roundabout within SUD-B.

Other roadway improvements in addition to the improvements identified for the Village 5 analysis include signalization of the following two intersections based on the City's Public Facilities Element:

- Nicolaus Road and Nelson Lane
- Nicolaus Road and Lakeside Drive

### **Cumulative Intersection Operations**

Based on the assumptions described above, Cumulative No Project a.m. and p.m. peak hour intersection turning movement volumes are displayed in **Figure 5**. Cumulative Plus Project a.m. and p.m. peak hour turning movement volumes are displayed in **Figure 6** and **Figure 7**, respectively. Cumulative No Project and Plus Project LOS results for study area intersections are displayed in **Table 12**.

Figure 6: Cumulative No Project Peak Hour Volumes and Intersection Geometrics

<p>2010 HCM Signalized</p> <p>Nelson Ln/Aviation Blvd Nicolaus Rd</p> <p>142 (369) 394 (497) 54 (317)</p> <p>209 (51) 719 (431) 504 (281)</p> <p>375 (214) 324 (922) 226 (530)</p> <p>N/S Signalized LOS: E (F) E/W Signalized Del: 74.1 (119.9)</p>	<p>2010 HCM AWS C</p> <p>Waverly Dr/Teal Hollow Dr Nicolaus Rd</p> <p>78 (75) 1 (4) 117 (122)</p> <p>92 (122) 1145 (622) 28 (40)</p> <p>84 (116) 486 (1396) 41 (103)</p> <p>N/S Stop Sign LOS: E (F) E/W Stop Sign Del: 48.6 (54.3)</p>	<p>2010 HCM Signalized</p> <p>Lakeside Dr Nicolaus Rd</p> <p>148 (77) 18 (11) 123 (78)</p> <p>109 (59) 1109 (700) 59 (44)</p> <p>59 (131) 588 (1397) 2 (15)</p> <p>N/S Signalized LOS: A (A) E/W Signalized Del: 7.7 (6.1)</p>	<p>2010 HCM Signalized</p> <p>Joiner Pkwy Nicolaus Rd</p> <p>51 (29) 196 (428) 175 (128)</p> <p>216 (147) 663 (496) 63 (52)</p> <p>30 (30) 481 (668) 296 (811)</p> <p>N/S Signalized LOS: C (F) E/W Signalized Del: 26.1 (98.3)</p>
<p><b>1 Nelson Ln/Aviation Blvd &amp; Nicolaus Rd</b></p>	<p><b>2 Waverly Dr/Teal Hollow Dr &amp; Nicolaus Rd</b></p>	<p><b>3 Lakeside Dr &amp; Nicolaus Rd</b></p>	<p><b>4 Joiner Pkwy &amp; Nicolaus Rd</b></p>
<p>2010 HCM Signalized</p> <p>Joiner Pkwy 3rd St</p> <p>35 (62) 680 (1057) 77 (64)</p> <p>81 (56) 24 (34) 78 (70)</p> <p>84 (30) 68 (35) 78 (52)</p> <p>N/S Signalized LOS: B (B) E/W Signalized Del: 17.6 (16.6)</p>	<p>2010 HCM Signalized</p> <p>Joiner Pkwy 1st St</p> <p>132 (68) 601 (1045) 48 (86)</p> <p>79 (65) 109 (44) 161 (140)</p> <p>103 (47) 63 (26) 282 (105)</p> <p>N/S Signalized LOS: C (C) E/W Signalized Del: 34.3 (30)</p>	<p>2010 HCM Signalized</p> <p>Joiner Pkwy Ferrari Ranch Rd</p> <p>15 (367) 569 (706) 24 (5)</p> <p>7 (4) 456 (610) 104 (63)</p> <p>438 (112) 588 (627) 342 (356)</p> <p>N/S Signalized LOS: D (F) E/W Signalized Del: 37.8 (134.4)</p>	<p>2010 HCM Signalized</p> <p>Nelson Ln SR 65</p> <p>83 (84) 468 (903) 608 (757)</p> <p>826 (721) 998 (866) 947 (1029)</p> <p>0 (105) 795 (1093) 94 (177)</p> <p>N/S Signalized LOS: F (F) E/W Signalized Del: 222.8 (288.6)</p>
<p><b>6 Joiner Pkwy &amp; 3rd St</b></p>	<p><b>7 Joiner Pkwy &amp; 1st St</b></p>	<p><b>8 Joiner Pkwy &amp; Ferrari Ranch Rd</b></p>	<p><b>10 Nelson Ln &amp; SR 65</b></p>
<p>2010 HCM TWSC</p> <p>Moore Rd Old Nelson Ln</p> <p>16 (11) 0 (0) 52 (187)</p> <p>155 (112) 246 (393) 0 (0)</p> <p>16 (5) 202 (404) 0 (0)</p> <p>N/S Stop LOS: A (A) E/W Free Del: 1.5 (7.6)</p>	<p>2000 HCM Signalized</p> <p>SR 65 SB Ramps Ferrari Ranch Rd</p> <p>65 (223) 0 (0) 337 (612)</p> <p>706 (250) 957 (2521) 0 (0)</p> <p>0 (0) 1345 (867) 1557 (537)</p> <p>N/S Signalized LOS: F (E) E/W Signalized Del: 87.2 (59.6)</p>	<p>2000 HCM Signalized</p> <p>SR 65 NB Ramps Ferrari Ranch Rd</p> <p>410 (668) 1020 (1688) 0 (0)</p> <p>220 (69) 1462 (1411) 0 (0)</p> <p>N/S Signalized LOS: C (E) E/W Signalized Del: 23.9 (70.2)</p>	<p>2000 HCM Signalized</p> <p>Lincoln Blvd SR 65 SB On-Ramp</p> <p>0 (0) 1038 (474) 972 (887)</p> <p>0 (0) 11 (0) 0 (678)</p> <p>N/S Signalized LOS: A (A) E/W Signalized Del: 4.6 (8.7)</p>
<p><b>11 Moore Rd &amp; Old Nelson Ln</b></p>	<p><b>12 SR 65 SB Ramps &amp; Ferrari Ranch Rd</b></p>	<p><b>13 SR 65 NB Ramps &amp; Ferrari Ranch Rd</b></p>	<p><b>14 Lincoln Blvd &amp; SR 65 SB On-Ramp</b></p>
<p>2000 HCM Signalized</p> <p>Lincoln Blvd SR 65 NB Off-Ramp</p> <p>0 (0) 2000 (136) 0 (0)</p> <p>53 (235) 0 (0) 11 (2)</p> <p>0 (0) 11 (0) 0 (0)</p> <p>N/S Signalized LOS: A (A) E/W Signalized Del: 2.9 (2)</p>	<p>2010 HCM Signalized</p> <p>Lincoln Blvd 1st St</p> <p>51 (79) 485 (407) 7 (7)</p> <p>6 (142) 77 (93) 30 (51)</p> <p>64 (62) 64 (93) 200 (5)</p> <p>N/S Signalized LOS: C (C) E/W Signalized Del: 29.8 (21.6)</p>	<p>2010 HCM Signalized</p> <p>Lincoln Blvd Ferrari Ranch Rd</p> <p>146 (212) 778 (700) 60 (101)</p> <p>5 (46) 320 (402) 652 (346)</p> <p>137 (223) 293 (515) 73 (61)</p> <p>N/S Signalized LOS: C (E) E/W Signalized Del: 22.4 (62.1)</p>	
<p><b>15 Lincoln Blvd &amp; SR 65 NB Off-Ramp</b></p>	<p><b>16 Lincoln Blvd &amp; 1st St</b></p>	<p><b>17 Lincoln Blvd &amp; Ferrari Ranch Rd</b></p>	
<p><b>A.M. Peak Hour (P.M. Peak Hour) - Cumulative No Project Conditions</b></p>			

Figure 7: Cumulative Plus Project A.M. Peak Hour Volumes

<p>2010 HCM Signalized</p> <p>N/S Signalized LOS: E (E) E/W Signalized Del: 74.1 (73.6)</p>	<p>2010 HCM AWSC</p> <p>N/S Stop Sign LOS: E (E) E/W Stop Sign Del: 48.6 (47.7)</p>	<p>2010 HCM Signalized</p> <p>N/S Signalized LOS: A (A) E/W Signalized Del: 7.7 (8.1)</p>	<p>2010 HCM Signalized</p> <p>N/S Signalized LOS: C (C) E/W Signalized Del: 26.1 (26.5)</p>
<p><b>1 Nelson Ln/Aviation Blvd &amp; Nicolaus Rd</b></p>	<p><b>2 Waverly Dr/Teal Hollow Dr &amp; Nicolaus Rd</b></p>	<p><b>3 Lakeside Dr &amp; Nicolaus Rd</b></p>	<p><b>4 Joiner Pkwy &amp; Nicolaus Rd</b></p>
<p>2010 HCM Signalized</p> <p>N/S Signalized LOS: B (B) E/W Signalized Del: 17.6 (17.2)</p>	<p>2010 HCM Signalized</p> <p>N/S Signalized LOS: C (C) E/W Signalized Del: 34.3 (34.8)</p>	<p>2010 HCM Signalized</p> <p>N/S Signalized LOS: D (D) E/W Signalized Del: 37.8 (39.9)</p>	<p>2010 HCM Signalized</p> <p>N/S Signalized LOS: F (F) E/W Signalized Del: 222.8 (252)</p>
<p><b>6 Joiner Pkwy &amp; 3rd St</b></p>	<p><b>7 Joiner Pkwy &amp; 1st St</b></p>	<p><b>8 Joiner Pkwy &amp; Ferrari Ranch Rd</b></p>	<p><b>10 Nelson Ln &amp; SR 65</b></p>
<p>2010 HCM TWSC</p> <p>N/S Stop LOS: A (A) E/W Free Del: 1.5 (1.5)</p>	<p>2000 HCM Signalized</p> <p>N/S Signalized LOS: F (F) E/W Signalized Del: 87.2 (93.2)</p>	<p>2000 HCM Signalized</p> <p>N/S Signalized LOS: C (C) E/W Signalized Del: 23.9 (25.2)</p>	<p>2000 HCM Signalized</p> <p>N/S Signalized LOS: A (A) E/W Signalized Del: 4.6 (4.7)</p>
<p><b>11 Moore Rd &amp; Old Nelson Ln</b></p>	<p><b>12 SR 65 SB Ramps &amp; Ferrari Ranch Rd</b></p>	<p><b>13 SR 65 NB Ramps &amp; Ferrari Ranch Rd</b></p>	<p><b>14 Lincoln Blvd &amp; SR 65 SB On-Ramp</b></p>
<p>2000 HCM Signalized</p> <p>N/S Signalized LOS: A (A) E/W Signalized Del: 2.9 (2.9)</p>	<p>2010 HCM Signalized</p> <p>N/S Signalized LOS: C (C) E/W Signalized Del: 29.8 (29.6)</p>	<p>2010 HCM Signalized</p> <p>N/S Signalized LOS: C (C) E/W Signalized Del: 22.4 (22.6)</p>	<p>2010 HCM Roundabout</p> <p>N/S Roundabout LOS: n/a (A) E/W Roundabout Del: n/a (7.0)</p>
<p><b>15 Lincoln Blvd &amp; SR 65 NB Off-Ramp</b></p>	<p><b>16 Lincoln Blvd &amp; 1st St</b></p>	<p><b>17 Lincoln Blvd &amp; Ferrari Ranch Rd</b></p>	<p><b>18 Project Roundabout</b></p>
<p align="center"><b>Cumulative (Cumulative Plus Project) AM Peak Hour</b></p>			

Figure 8: Cumulative Plus Project P.M. Peak Hour Volumes

<p>2010 HCM Signalized</p> <p>N/S Signalized LOS: F (F) E/W Signalized Del: 119.9 (108.2)</p>	<p>2010 HCM AWS C</p> <p>N/S Stop Sign LOS: F (F) E/W Stop Sign Del: 54.3 (56.1)</p>	<p>2010 HCM Signalized</p> <p>N/S Signalized LOS: A (A) E/W Signalized Del: 6.1 (6.4)</p>	<p>2010 HCM Signalized</p> <p>N/S Signalized LOS: F (F) E/W Signalized Del: 98.3 (113.6)</p>
<p><b>1 Nelson Ln/Aviation Blvd &amp; Nicolaus Rd</b></p>	<p><b>2 Waverly Dr/Teal Hollow Dr &amp; Nicolaus Rd</b></p>	<p><b>3 Lakeside Dr &amp; Nicolaus Rd</b></p>	<p><b>4 Joiner Pkwy &amp; Nicolaus Rd</b></p>
<p>2010 HCM Signalized</p> <p>N/S Signalized LOS: B (C) E/W Signalized Del: 16.6 (20.5)</p>	<p>2010 HCM Signalized</p> <p>N/S Signalized LOS: C (D) E/W Signalized Del: 30 (38.4)</p>	<p>2010 HCM Signalized</p> <p>N/S Signalized LOS: F (F) E/W Signalized Del: 134.4 (129.8)</p>	<p>2010 HCM Signalized</p> <p>N/S Signalized LOS: F (F) E/W Signalized Del: 288.6 (297.7)</p>
<p><b>6 Joiner Pkwy &amp; 3rd St</b></p>	<p><b>7 Joiner Pkwy &amp; 1st St</b></p>	<p><b>8 Joiner Pkwy &amp; Ferrari Ranch Rd</b></p>	<p><b>10 Nelson Ln &amp; SR 65</b></p>
<p>2010 HCM TWSC</p> <p>N/S Stop LOS: A (B) E/W Free Del: 7.6 (10.1)</p>	<p>2000 HCM Signalized</p> <p>N/S Signalized LOS: E (D) E/W Signalized Del: 59.6 (43.3)</p>	<p>2000 HCM Signalized</p> <p>N/S Signalized LOS: E (E) E/W Signalized Del: 70.2 (73.3)</p>	<p>2000 HCM Signalized</p> <p>N/S Signalized LOS: A (A) E/W Signalized Del: 8.7 (8.1)</p>
<p><b>11 Moore Rd &amp; Old Nelson Ln</b></p>	<p><b>12 SR 65 SB Ramps &amp; Ferrari Ranch Rd</b></p>	<p><b>13 SR 65 NB Ramps &amp; Ferrari Ranch Rd</b></p>	<p><b>14 Lincoln Blvd &amp; SR 65 SB On-Ramp</b></p>
<p>2000 HCM Signalized</p> <p>N/S Signalized LOS: A (A) E/W Signalized Del: 2 (2)</p>	<p>2010 HCM Signalized</p> <p>N/S Signalized LOS: C (C) E/W Signalized Del: 21.6 (21.6)</p>	<p>2010 HCM Signalized</p> <p>N/S Signalized LOS: E (E) E/W Signalized Del: 62.1 (60.6)</p>	<p>2010 HCM Roundabout</p> <p>N/S Roundabout LOS: n/a (A) E/W Roundabout Del: n/a (9.2)</p>
<p><b>15 Lincoln Blvd &amp; SR 65 NB Off-Ramp</b></p>	<p><b>16 Lincoln Blvd &amp; 1st St</b></p>	<p><b>17 Lincoln Blvd &amp; Ferrari Ranch Rd</b></p>	<p><b>18 Project Roundabout</b></p>
<p align="center"><b>Cumulative (Cumulative Plus Project) PM Peak Hour</b></p>			

**TABLE 12**

**PEAK HOUR INTERSECTION LEVELS OF SERVICE  
CUMULATIVE AND CUMULATIVE PLUS PROJECT CONDITIONS**

Intersection	Control	Jurisdiction (LOS Standard)	Cumulative Conditions		Cumulative Plus Project	
			Int LOS	Avg Delay	Int LOS	Avg Delay
<b>AM Peak Hour</b>						
1 Nelson Ln/Aviation Blvd & Nicolaus Rd	Signal	Lincoln (C)	<b>E</b>	<b>74.1</b>	<b>E</b>	<b>73.6</b>
2 Waverly Dr/Teal Hollow Dr & Nicolaus Rd	AWSC	Lincoln (C)	<b>E</b>	<b>48.6</b>	<b>E</b>	<b>47.7</b>
3 Lakeside Dr & Nicolaus Rd	Signal	Lincoln (C)	A	7.7	A	8.1
4 Joiner Pkwy & Nicolaus Rd	Signal	Lincoln (C)	C	26.1	C	26.5
6 Joiner Pkwy & 3rd St	Signal	Lincoln (C)	B	17.6	B	17.2
7 Joiner Pkwy & First St	Signal	Lincoln (C)	C	34.3	C	34.8
8 Joiner Pkwy & Ferrari Ranch Rd	Signal	Lincoln (C)	<b>D</b>	<b>37.8</b>	<b>D</b>	<b>39.9</b>
10 Nelson Ln & SR 65	Signal	Caltrans (D)	<b>F</b>	<b>222.8</b>	<b>F</b>	<b>252.0</b>
11 Moore Rd & Nelson Ln	TWSC	Placer Co (C)	A	1.5	A	1.5
12 SR 65 SB Ramps & Ferrari Ranch Rd	Signal	Caltrans (D)	<b>F</b>	<b>87.2</b>	<b>F</b>	<b>93.2</b>
13 SR 65 NB Ramps & Ferrari Ranch Rd	Signal	Caltrans (D)	C	23.9	C	25.2
14 Lincoln Blvd & SR 65 SB On-Ramp	Signal	Caltrans (D)	A	4.6	A	4.7
15 Lincoln Blvd & SR 65 NB Off-Ramp	Signal	Caltrans (D)	A	2.9	A	2.9
16 Lincoln Blvd & First St	Signal	Lincoln (n/a)	C	29.8	C	29.6
17 Lincoln Blvd & Ferrari Ranch Rd	Signal	Lincoln (C)	C	22.4	C	22.6
18 Project Roundabout	Roundabout	Lincoln (C)	n/a		A	7.0
<b>PM Peak Hour</b>						
1 Nelson Ln/Aviation Blvd & Nicolaus Rd	Signal	Lincoln (C)	<b>F</b>	<b>119.9</b>	<b>F</b>	<b>108.2</b>
2 Waverly Dr/Teal Hollow Dr & Nicolaus Rd	AWSC	Lincoln (C)	<b>F</b>	<b>54.3</b>	<b>F</b>	<b>56.1</b>
3 Lakeside Dr & Nicolaus Rd	Signal	Lincoln (C)	A	6.1	F	6.4
4 Joiner Pkwy & Nicolaus Rd	Signal	Lincoln (C)	<b>F</b>	<b>98.3</b>	<b>F</b>	<b>113.6</b>
6 Joiner Pkwy & 3rd St	Signal	Lincoln (C)	B	16.6	C	20.5
7 Joiner Pkwy & First St	Signal	Lincoln (C)	C	30.0	<b>D</b>	<b>38.4</b>
8 Joiner Pkwy & Ferrari Ranch Rd	Signal	Lincoln (C)	<b>F</b>	<b>134.4</b>	<b>F</b>	<b>129.8</b>
10 Nelson Ln & SR 65	Signal	Caltrans (D)	<b>F</b>	<b>288.6</b>	<b>F</b>	<b>297.7</b>
11 Moore Rd & Nelson Ln	TWSC	Placer Co (C)	A	7.6	B	10.1
12 SR 65 SB Ramps & Ferrari Ranch Rd	Signal	Caltrans (D)	<b>E</b>	<b>59.6</b>	D	43.3
13 SR 65 NB Ramps & Ferrari Ranch Rd	Signal	Caltrans (D)	<b>E</b>	<b>70.2</b>	<b>E</b>	<b>73.3</b>
14 Lincoln Blvd & SR 65 SB On-Ramp	Signal	Caltrans (D)	A	8.7	A	8.1
15 Lincoln Blvd & SR 65 NB Off-Ramp	Signal	Caltrans (D)	A	2.0	A	2.0
16 Lincoln Blvd & First St	Signal	Lincoln (n/a)	C	21.6	C	21.6
17 Lincoln Blvd & Ferrari Ranch Rd	Signal	Lincoln (C)	<b>E</b>	<b>62.1</b>	<b>E</b>	<b>60.6</b>
18 Project Roundabout	Roundabout	Lincoln (C)	n/a		A	9.2
Note: <b>Bold</b> Intersections do not meet current LOS Policy. <b>Shaded</b> indicates LOS Impact (either LOS impact or greater than 5 seconds increase in delay)						

**Table 12** shows that a number of study intersections are projected to operate at LOS D or worse under Cumulative No Project conditions. These include the following:

- Nicolaus Road & Nelson Lane/ Aviation Boulevard
  - LOS E during a.m. peak hour
  - LOS F during p.m. peak hour
- Nicolaus Road & Waverly Drive/ Teal Hollow Drive
  - LOSE during a.m. peak hour and LOS F during p.m. peak hour
- Nicolaus Road & Joiner Parkway
  - LOS F during p.m. peak hour only
- Joiner Parkway & Ferrari Ranch Road
  - LOS D during a.m. peak hour and LOS F during p.m. peak hour
- Nelson Lane & SR 65
  - LOS F (delay >200 seconds) during both a.m. and p.m. peak hours
- SR 65 Southbound Ramps & Ferrari Ranch Road
  - LOS F during a.m. peak hour and LOS E during p.m. peak hour
- SR 65 Northbound Ramps & Ferrari Ranch Road
  - LOS E during p.m. peak hour only
- Lincoln Boulevard & Ferrari Ranch Road
  - LOS F during p.m. peak hour only

It should be noted that the LOS results discussed above are based on traffic volumes that include the traffic associated with Village 5, however the results do not assume any mitigation measures identified in the Village 5 traffic impact analysis, as those mitigation measures have not yet been adopted by the City of Lincoln or incorporated into their Public Facilities Element. Where applicable, mitigation measures identified in this analysis will be consistent with mitigation measures identified in the Village 5 analysis.

**Table 12** shows the Cumulative Plus Project LOS results and highlights locations that do not meet the applicable level of service standard, as well as the locations that are significantly impacted based on the applicable standards of significance. The table shows level of service impacts at the following locations:

- Joiner Parkway & Nicolaus Road
  - Remains LOS F with increase in delay greater than 5 seconds during p.m. peak hour only
- Joiner Parkway & First Street
  - Degrades from LOS C to LOS D during the p.m. peak hour
- Nelson Lane & SR 65
  - Remains LOS F with increase in delay greater than 5 seconds during both a.m. and p.m. peak hour
- SR 65 Southbound Ramps & Ferrari Ranch Road
  - Remains LOS F with increase in delay greater than 5 seconds during a.m. peak hour only

### Cumulative Residential Roadway Operations

**Table 13** shows Cumulative No Project and Cumulative Plus Project daily volumes and resultant LOS on local residential roadways providing access to the proposed project. The table also shows projected daily volumes on two of the main residential roadways within the proposed project. Projected daily volumes on most of the local residential streets adjacent to the proposed project are high enough to result in LOS D-F conditions, and the addition of the proposed project would increase volumes on these roadways. Since roadway segment LOS is not a determinant of significant impacts based on the City of Lincoln’s General Plan, these numbers are presented for informational purposes only, not for impact analysis purposes. The table also shows that volumes are projected to be spread fairly evenly between the two main residential roadways within the eastern portion of the project.

<b>TABLE 13</b>						
<b>DAILY ROADWAY VOLUMES AND LEVEL OF SERVICE CUMULATIVE AND CUMULATIVE PLUS PROJECT CONDITIONS</b>						
<b>Roadway</b>	<b>Segment</b>	<b>Roadway Type</b>	<b>Cumulative Conditions</b>		<b>Cumulative Plus Project</b>	
			<b>ADT</b>	<b>LOS</b>	<b>ADT</b>	<b>LOS</b>
<b>Existing Roadways</b>						
First Street	West of Chambers	Two-Lane Local Res	<b>2,800</b>	<b>D</b>	<b>3,300</b>	<b>E</b>
	West of Joiner	Two-Lane Local Res	<b>5,700</b>	<b>F</b>	<b>5,800</b>	<b>F</b>
Third Street	West of Chambers	Two-Lane Local Res	1,500	C	<b>2,700</b>	<b>D</b>
	West of Joiner	Two-Lane Local Res	<b>3,400</b>	<b>E</b>	<b>3,700</b>	<b>E</b>
Fifth Street	West of Joiner	Two-Lane Local Res	<b>2,800</b>	<b>D</b>	<b>2,400</b>	<b>D</b>
<b>Roadways Added With Proposed Project</b>						
Third Street	West of Current City Limit	Two-Lane Local Res	n/a		<b>2,800</b>	<b>D</b>
First Street	West of Current City Limit	Two-Lane Local Res	n/a		<b>2,700</b>	<b>D</b>
Note: <b>Bold</b> Locations exceed LOS C						

### Cumulative Freeway Operations

Because of its large employment potential, the proposed project would likely cause a shift in travel patterns between the City of Lincoln and communities to the south. Additional employment in Lincoln would allow Lincoln residents (both within and outside the proposed project) more opportunities for working close to home. Thus, the addition of the proposed project would both potentially add traffic to State Route 65 (based on new land uses) and also take traffic away from State Route 65, based on revised travel patterns and distribution. The travel demand model results show that, in general, volumes along State Route 65 increase northbound and decrease southbound during the a.m. peak hour and increase southbound and increase northbound during the p.m. peak hour. These trends are both due to the large increase in employment compared to housing in Lincoln.

**Table 14** and **Table 15** show the cumulative changes in traffic density and resultant level of service along State Route 65 with the addition of the proposed project. The tables show that a number of locations along SR 65 are projected to operate at LOS F conditions under both cumulative no project and cumulative plus

project conditions. Slight decreases in volume associated with redistribution of travel results in some locations having a slight decrease in density. Increases in density at locations already projected to operate at LOS F include the following two locations:

- Twelve Bridges Northbound Off-Ramp (a.m. peak hour)
- Nelson Lane to Ferrari Ranch Road (p.m. peak hour)

TABLE 14						
SR 65 FREEWAY LEVEL OF SERVICE						
CUMULATIVE AND CUMULATIVE PLUS PROJECT CONDITIONS						
A.M. PEAK HOUR						
Segment		Type	Cumulative		Cumulative Plus Project	
			Density <sup>2</sup>	LOS <sup>3</sup>	Density <sup>2</sup>	LOS <sup>3</sup>
Northbound	Sunset On to Twelve Bridges Off-Ramp	Segment	<b>57.7</b>	<b>F</b>	<b>62.3</b>	<b>F</b>
	Twelve Bridges Off-Ramp	Off-Ramp	<b>47.3</b>	<b>F</b>	<b>48.4</b>	<b>F</b>
	Twelve Bridges Off to On-Ramp	Segment	32.7	D	34.8	D
	Twelve Bridges On to Lincoln Off-Ramp	Weave	33.2	D	34.5	D
	Lincoln to Ferrari Ranch Off-Ramp	Segment	19.5	C	20.4	C
	Ferrari Ranch Off-Ramp	Off-Ramp	17.7	B	18.4	B
	Ferrari Ranch Off to On-Ramp	Segment	19.7	C	20.9	C
	Ferrari Ranch On-Ramp	On-Ramp	27	C	28.1	D
	Ferrari Ranch On to Nelson	Segment	25.9	C	27.3	D
Southbound	Sunset On to Twelve Bridges Off-Ramp	Segment	20.6	C	21.2	C
	Twelve Bridges Off-Ramp	Off-Ramp	26	C	26.5	C
	Twelve Bridges Off to On-Ramp	Segment	18.8	C	19.1	C
	Twelve Bridges On to Lincoln Off-Ramp	Weave	15.7	B	15.5	B
	Lincoln to Ferrari Ranch Off-Ramp	Segment	27.4	C	27.2	C
	Ferrari Ranch Off-Ramp	Off-Ramp	41.1	E	40.6	E
	Ferrari Ranch Off to On-Ramp	Segment	42.1	E	42	E
	Ferrari Ranch On-Ramp	On-Ramp	<b>47.3</b>	<b>F</b>	<b>46.9</b>	<b>F</b>
	Ferrari Ranch On to Nelson	Segment	<b>50.7</b>	<b>F</b>	<b>50.3</b>	<b>F</b>
Notes:						
Based on Freeway Performance Measurement System data.						
Density given as passenger cars per mile per lane.						
<b>Bold</b> locations do not meet current LOS Policy, <b>Shaded</b> indicates LOS Impact						

**TABLE 15**

**SR 65 FREEWAY LEVEL OF SERVICE  
CUMULATIVE AND CUMULATIVE PLUS PROJECT CONDITIONS  
P.M. PEAK HOUR**

Segment	Type	Cumulative		Cumulative Plus Project		
		Density <sup>2</sup>	LOS <sup>3</sup>	Density <sup>2</sup>	LOS <sup>3</sup>	
Northbound	Sunset On to Twelve Bridges Off-Ramp	Segment	<b>130</b>	<b>F</b>	<b>125</b>	<b>F</b>
	Twelve Bridges Off-Ramp	Off-Ramp	<b>56.1</b>	<b>F</b>	<b>55.8</b>	<b>F</b>
	Twelve Bridges Off to On-Ramp	Segment	<b>49</b>	<b>F</b>	<b>48.6</b>	<b>F</b>
	Twelve Bridges On to Lincoln Off-Ramp	Weave	<b>v/c&gt;1</b>	<b>F</b>	<b>v/c&gt;1</b>	<b>F</b>
	Lincoln to Ferrari Ranch Off-Ramp	Segment	20.9	C	20.8	C
	Ferrari Ranch Off-Ramp	Off-Ramp	23.7	C	23.5	C
	Ferrari Ranch Off to On-Ramp	Segment	15.5	B	15.5	B
	Ferrari Ranch On-Ramp	On-Ramp	23.8	C	24.2	C
	Ferrari Ranch On to Nelson	Segment	21.6	C	12.9	B
Southbound	Sunset On to Twelve Bridges Off-Ramp	Segment	26.1	D	26.3	D
	Twelve Bridges Off-Ramp	Off-Ramp	31.7	D	56.4	D
	Twelve Bridges Off to On-Ramp	Segment	18.6	C	19.2	C
	Twelve Bridges On to Lincoln Off-Ramp	Weave	14.4	B	15	B
	Lincoln to Ferrari Ranch Off-Ramp	Segment	18.7	B	19.1	B
	Ferrari Ranch Off-Ramp	Off-Ramp	27.9	D	28.8	D
	Ferrari Ranch Off to On-Ramp	Segment	39.3	E	39.5	E
	Ferrari Ranch On-Ramp	On-Ramp	42.7	E	43.9	E
	Ferrari Ranch On to Nelson	Segment	<b>44.3</b>	<b>F</b>	<b>44.9</b>	<b>F</b>

Notes:  
 Based on Freeway Performance Measurement System data.  
 Density given as passenger cars per mile per lane.  
**Bold** locations do not meet current LOS Policy, **Shaded** indicates LOS Impact

## MITIGATION MEASURES

### Existing Plus Project Intersection Impacts

Impact:

Under existing conditions, the proposed project would degrade level of service from acceptable to unacceptable at the following intersection:

- Nicolaus Road & Nelson Lane/ Aviation Boulevard (a.m. and p.m. peak hours)

Impact Significance before Mitigation: **Significant**

*Mitigation Measure:*

*Project applicant shall contribute (via the City's PFE) toward the installation of a traffic signal at the intersection of **Nicolaus Road and Nelson Lane/ Aviation Boulevard.***

Impact Significance after Mitigation: **Less than Significant**

Contribution shall be made via payment of fees toward the City of Lincoln's Public Facilities Element. The installation of a traffic signal at this location would mitigate the a.m. and p.m. peak hour project impacts at this location under both the a.m. and p.m. peak hours. It should be noted that based on Existing Plus Project traffic volumes, no additional lanes would be required and the installation of a traffic signal at this location would improve level of service to LOS B during both the a.m. and p.m. peak hours. The assumption of installing a new traffic signal without any added lanes or other lane reconfigurations would not necessarily result in acceptable LOS under Cumulative conditions.

Impact:

Under existing conditions, the proposed project would increase volumes on State Route 65 and its ramps within and adjacent to the City of Lincoln

Impact Significance before Mitigation: **Less than Significant**

*Mitigation Measure:*

*None Required*

While the proposed project would increase volumes on SR 65 and its associated ramps, all study area freeway facilities currently operate at acceptable levels of service and the projected added volume would not increase peak hour density enough to trigger a significant level of service degradation.

### Cumulative Plus Project Intersection Impacts

Impact:

Under cumulative conditions, the proposed project would degrade level of service from acceptable to unacceptable at the following intersection:

- Joiner Parkway and First Street (p.m. peak hour)

Impact Significance before Mitigation: **Significant**

*Mitigation Measure:*

*Project applicant shall contribute (via the City's PFE) toward the provision of separate northbound and southbound right turn lanes at the intersection of Joiner Parkway and First Street.*

The intersection of Joiner Parkway and First Street would degrade from LOS C to LOS D during the p.m. peak hour under cumulative plus project conditions. Mitigation would include maintaining the current NEV/ bike lanes and widening the roadway to include additional right turn lanes. These improvements would reduce the impact at this intersection to **less than significant**.

*Impact:*

Under cumulative conditions, the proposed project would further degrade level of service at intersections already projected to operate at unacceptable LOS by more than 5 seconds of delay:

- Joiner Parkway and Nicolaus Road (p.m. peak hour)
- Nelson Lane and State Route 65 (a.m. and p.m. peak hours)
- State Route 65 southbound ramps and Ferrari Ranch Road (a.m. peak hour)

Impact Significance before Mitigations: **Significant**

*Mitigation Measure:*

*Project applicant shall contribute (via the City's PFE) toward the provision of a protected eastbound right turn movement at the intersection of Joiner Parkway and Nicolaus Road.*

The intersection of Joiner Parkway and Nicolaus Road is projected to operate at LOS F during the p.m. peak hour with an average intersection delay of 98.3 seconds. The addition of the proposed project would increase the delay to 113.6 seconds, an increase of more than 5 seconds. Provision of a protected eastbound right turn (overlapping with northbound left turns and requiring the prohibition of northbound U-turns) would improve the LOS at this intersection to LOS E. While LOS E does not meet the City's LOS C policy, it does improve the intersection to better than No Project conditions. These improvements would reduce the impact at this intersection to **less than significant**.

*Mitigation Measure:*

*Project applicant shall contribute toward the construction of a grade-separated interchange to replace the current intersection of Nelson Lane and State Route 65.*

The State Route 65 Bypass has been built as a freeway with interchanges at Lincoln Boulevard and Ferrari Ranch road, and it currently transitions to a conventional highway between Ferrari Ranch Road and Nelson Lane, with a signalized intersection at Nelson Lane. The Bypass was designed to operate this way temporarily and then eventually be improved to a full grade-separated freeway all the way north to Wheatland with an interchange at Nelson Lane. The improvement of the Bypass to full freeway standards has not yet been funded. If and when a funding mechanism is developed for these improvements, the proposed project would be required to pay a fair share contribution toward this

improvement. Typical interchange geometrics would result in LOS C or better at both of the new intersections (northbound and southbound ramps). Because the funding for this improvement is outside the control of the City of Lincoln, this impact is considered **significant and unavoidable**.

*Mitigation Measure:*

*Project applicant shall contribute (via the City's PFE) toward the provision of a channelized protected eastbound right turn movement at the intersection of State Route 65 southbound ramps and Ferrari Ranch Road.*

The intersection of State Route 65 southbound ramps and Ferrari Ranch Road is projected to operate at LOS F with average intersection delay of 87.2 seconds under cumulative conditions during the a.m. peak hour. The addition of the proposed project would increase delay to 93.2 seconds, an increase of more than 5 seconds. Provision of a channelized (and protected) eastbound right turn lane on Ferrari Ranch Road would improve this location to LOS D with a delay of 49.2 seconds during the a.m. peak hour. Because the LOS standard for this interchange is LOS D, this improvement would reduce the impact at this intersection to **less than significant**.

### **Cumulative Plus Project Freeway Impacts**

Impact:

Under cumulative conditions, the proposed project would further degrade Caltrans freeway locations that are already projected to operate at LOS F. Locations along State Route 65 projected to operate at LOS and experience an increase in traffic density due to the proposed project include the following:

- Twelve Bridges northbound off-ramp (a.m. peak hour)

Impact Significance before Mitigation: **Significant**

*Mitigation Measure:*

*Project applicant shall contribute toward improvements along State Route 65. These improvements could include additional mainlines, auxiliary lanes, or off-ramp lanes.*

The applicant shall pay SPRTA Fees to help fund improvements along SR 65. The two locations listed above could be improved to better than no project conditions with any of the three options mentioned (additional mainlines, auxiliary lanes, or ramp lanes), however the City of Lincoln does not have jurisdiction over improvements to the State Highway system. If and when improvements such as these are proposed and funded for State Route 65 under the SPRTA Fee program, the applicant would pay its fair share for the desired improvements. However, since the City of Lincoln cannot compel Caltrans to adopt and fund improvements on the State Route 65, this impact remains **significant and unavoidable**.

## Transit, NEV, Bicycle, and Pedestrian Impacts

Impact: The proposed project would increase demand for transit services within the City of Lincoln.

Impact Significance before Mitigation: **Significant**

*Mitigation Measure:* Provide adequate facilities for transit (bus turnouts, etc.) on project roadways.

With its increase in households and employment west of downtown Lincoln, the proposed project would increase the demand for transit services by residents and employees within the City. While it is unlikely that the proposed project will have the ability to compel transit providers to provide new routes serving the proposed project (currently the closest fixed transit stop is over a mile from the proposed project site), the project applicant should provide facilities on its roadways that would not inhibit future transit services on project roadways. Provision of adequate facilities within the project's Specific Plan would reduce this impact to **Less than Significant**.

Impact: The proposed project would increase demand for NEVs (neighborhood electric vehicles) within the City of Lincoln.

Impact Significance before Mitigation: **Significant**

*Mitigation Measure:* Provide adequate facilities for NEVs on project roadways that connect to the City's existing and envisioned network.

With its increase in households and employment west of downtown Lincoln, the proposed project would increase the demand for NEVs by residents within the City. Provision of adequate NEV facilities within the project's Specific Plan to connect with the City's existing and envisioned future network would reduce this impact to **Less than Significant**.

Impact: The proposed project would increase demand for bicycle facilities within the City of Lincoln.

Impact Significance before Mitigation: **Significant**

*Mitigation Measure:* Provide adequate facilities for bicycle facilities on project roadways that connect to the City's existing and envisioned network.

With its increase in households and employment west of downtown Lincoln, the proposed project would increase the demand for NEVs by residents within the City. Provision of adequate pedestrian facilities within the project's Specific Plan to connect with the City's existing and envisioned future network would reduce this impact to **Less than Significant**.

Impact:

The proposed project would increase demand for pedestrian facilities within the City of Lincoln.

Impact Significance before Mitigation: **Significant**

*Mitigation Measure:*

*Provide adequate facilities for pedestrian facilities on project roadways that connect to the City's existing and envisioned network.*

With its increase in households and employment west of downtown Lincoln, the proposed project would increase the demand for pedestrians by residents within the City. Provision of adequate pedestrian facilities within the project's Specific Plan to connect with the City's existing and envisioned future network would reduce this impact to **Less than Significant**.