ASSOCIATED TRANSPORTATION ENGINEERS

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May 28, 2020 18031.01L01

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PROJECT BRUIN TRAFFIC AND SITE ACCESS STUDY - CITY OF OXNARD

The following traffic and site access study contains an analysis of the potential traffic and circulation impacts associated with the Project Bruin Distribution Center, located in the Sakioka Farms Business Park Specific Plan area the northeastern portion of the City of Oxnard. The study provides information relative to Existing + Project conditions. A discussion of the Project Bruin trip reduction program is also provided.

PROJECT DESCRIPTION

The approximately 64.65-acre Project site is predominately farmland located within the 430-acre Sakioka Farms Business Park Specific Plan Area in the City of Oxnard, in Ventura County, California. The 430-acre business park is adjacent to and south of U.S. Highway 101, at the Rice Avenue off-ramp. The Project site is specifically located south of U.S. Highway 101, north of State Route 34, east of Rice Avenue, and adjacent to and west of Del Norte Boulevard. Figure 1 illustrates the Project location.

The Facility would be used as an e-commerce fulfillment center for general consumer products. The Facility would be constructed as a two-story, non-combustible Type II-B structure that would utilize a complex proprietary inventory management system that would store products on a portion of the ground floor, ground floor mezzanine, a portion of the second floor, and second floor mezzanine. A proprietary material handling system installed in the process areas on the ground floor and second floor would allow employees to organize, package, and ship customer orders quickly and efficiently. The facility has a ground floor footprint of 857,173 gross square feet which would facilitate a portion of storage and material handling equipment. The ground floor mezzanine, second floor, (known as the Robotic Storage Platform, and second floor mezzanine would house a large automated storage and retrieval system with shelf-like storage units (pods) that would be moved by low-profile robots. The remaining portion of the second

floor would be used for material handling equipment (process level). Total building space for the Project is 2,315,005 gross square feet with 1,777 parking spaces, 259 trailer spaces, and approximately 62 dock doors. The Project site plan is illustrated on Figure 2.

Regional access will be via the U.S. Highway 101/Rice Avenue and U.S. Highway 101/Del Norte Boulevard interchanges. Direct access to the Project site will be provided via a new internal roadway circulation system planned as part of the Sakioka Farms Business Park Specific Plan. The Sakioka Farms Business Park Specific Plan area is illustrated on Figure 3. The existing traffic volumes in the study-area are illustrated on Figure 4.

PROJECT TRIP GENERATION

The following is an evaluation of the weekday, AM and PM peak hour traffic volumes that will be generated by the Project Bruin. For the purpose of estimating the number of trips that would be generated by the "Project", ATE used operational data supplied by the applicant and reviewed by City staff.

The distribution facility will operate 24-hours a day Monday through Friday with an estimated 2,172 employees daily. The operation level assumed for this "Project" is based upon the following criteria. During the day, there could be up to 119 delivery trucks trips to/from the facility. Truck trips are expected to occur during the typical peak one-hour commute periods between 7:00 AM - 9:00 AM and 4:00 PM - 6:00 PM. The following represents the expected average daily operations that potentially could occur.

Some product delivery truck trips and employee trips are expected to occur during the typical peak one-hour commute period between 7:00 - 9:00 AM and 4:00 - 6:00 PM peak hour periods. The distribution facility estimated trip generation is presented in Table 1.

Table 1
Project Trip Generation

Land Use	# of Employees	Daily Trips	Weekday Peak Hour Trips	
			AM Peak Hour	PM Peak Hour
Distribution Facility	2,172 employees	4,756	1,325 (755 In/570 Out)	1,325 (649 In/676 Out)

As shown in Table 1 the Project would generate an estimated 4,756 average daily trips, 1,325 AM peak hour trips and 1,325 PM peak hour trips. The Project Bruin development area was entitled with 9,927 average daily trips, 1,161 AM peak hour trips and 1,298 PM peak hour trips. Project Bruin would generate 5,171 fewer average daily trips, 164 more AM peak hour trips and 27 more PM peak hour trip than what was entitled for Project area.

Project Trip Distribution and Assignment

The project-generated employee AM and PM peak hour traffic volumes were distributed and assigned to the study-area intersections based on trip distribution pattern developed for the Sakioka Farms Business Park. Trucks trips were distributed 50 percent from the north and 50 percent from the south. Figure 5 illustrates the Project trip distribution and assignment assuming delivery trucks use both the Rice Avenue and Del Norte Boulevard interchanges. Figure 6 illustrates the Project trip distribution and assignment assuming delivery trucks use only the Rice Avenue interchange. Figure 7 illustrates the Existing + Project trip assignment assuming delivery trucks use both the Rice Avenue and Del Norte Boulevard interchanges. Figure 8 illustrates the Existing + Project trip assignment assuming delivery trucks use only the Rice Avenue interchange. This would be an interim scenario until the Del Norte Boulevard interchange is fully improved.

PLANNED ROADWAY AND INTERSECTION IMPROVEMENTS

The following roadway and intersections improvements were identified in the EIR prepared for the Sakioka Farms Business Park Specific Plan. These improvements are assumed to be in place as conditioned by the City for Phase I of the Specific Plan Area (Project Bruin).

1. Road "A": Construct a new secondary 4-lane arterial from Rice Avenue to Del Norte Boulevard. Signalize the new intersections at Rice Avenue and Del Norte Boulevard.

2. Road "B": Construct a new internal 2-lane roadway from the planned Gonzales Road extension to the new secondary Road "A".

3. Road "C": Construct a new internal 2-lane roadway from the planned Gonzales Road extension to the new secondary Road "A".

4. U.S. Highway 101 Northbound Ramps/Del Norte Boulevard: Install traffic signals.

5. U.S. Highway 101 Southbound Ramps/Del Norte Boulevard: Install traffic signals.

Linscott, Law & Greenspan prepared a focused traffic assessment for Phase I if the Sakioka Farms Business Park Specific Plan. The traffic assessment determined that with the planned improvements in place the following nine study-area intersections would operate at LOS "C" or better.

U.S. Highway 101NB Ramps/Rice Ave.
U.S. Highway 101 NB Ramps/Del Norte Blvd.
Rice Ave./Gonzales Rd.
Rice Ave/"A" St.
Rose Ave./Camino Del Sol
U.S. Highway 101 SB Ramps/Rice Ave.
U.S. Highway 101SB Ramps /Del Norte Blvd.
Rose Ave./Gonzales Rd.
Del Norte Blvd./"A" St.

Based on the Linscott, Law & Greenspan traffic assessment Project Bruin would not have a significant impact based on City of Oxnard impact thresholds to the off-site intersections in the immediate vicinity.

SITE ACCESS ANALYSIS

As shown on Figure 2, access to Project Bruin will be provided by an internal street system planned as part of the Sakioka Farms Business Park Specific Plan. As part of Phase I (Project Bruin) a new east-west arterial road (Street "A") will be constructed from Rice Avenue to Del Norte Boulevard. Street "A" will be improved and dedicated as a public street with a 102-foot right-of-way from Rice Avenue to Del Norte Boulevard. Street "B" will be improved and dedicated as a public street with a 72-foot right-of-way from the planned Gonzales Road extension to Street "A". Street "C" will be improved and dedicated as a public street with a 72-foot right-of-way from planned Gonzales Road to Street "A". The new Rice Avenue/Street "A" and Del Norte Boulevard/Street "A" intersections will be signalized.

Delivery trucks will be routed from U.S. Highway 101 via the Rice Avenue and Del Norte Boulevard interchanges. Amazon will utilize five axle (WB-67) delivery trucks. All delivery trucks will access the Project site via a connection to the "B" Street extension from "A" Street.
As illustrated on the Project site plan delivery trucks access and on-site circulation is accommodated adequately. The "B" Street connection to "A" Street will be STOP-Sign controlled.

Employees will access the site via driveway connections to "A" Street and Del Norte Boulevard. The Project driveway connection opposite the "C" Street alignment and the remaining driveway connections will be STOP-Sign controlled.

ATE evaluated the operation of the adjacent major street intersections with traffic signals installed and site access. Project trips were distributed through the "A" Street corridor assuming full access at the Project driveways. ATE also evaluated the site access assuming two truck route scenarios.

Scenario 1. Trucks use both the Rice Avenue and Del Norte Boulevard interchanges.
Scenario 2. Trucks use only the Rice Avenue interchange.

The "Synchro" traffic analysis software program was used to review operations of the "A" Street corridor from Rice Avenue to Del Norte Boulevard. "Synchro" is a complete software package for modeling and optimizing traffic signal timings and is the only interactive software package to model actuated signals. "Synchro" implements the operations methods of the Highway Capacity Manual for signalized intersections, performing the industry standard evaluation of intersection performance based on Webster delays. In addition to calculating capacity, "Synchro" also optimizes cycle lengths, splits and offsets (similar to TRANSYT). The "Sychro" analysis accounts for "Heavy Vehicles". Example, the 100 percent of the vehicles turning in and out of the "B" Street extension were assumed to be "Heavy Vehicles". Truck turning movements at the Rice Avenue/"A" Street and Del Norte Boulevard intersections are also accounted in the "Synchro" analysis.

Scenario 1: Truck Route via the Rice Avenue and Del Norte Boulevard Interchanges

Table 2 shows the levels of service for the signalized Rice Avenue/"A" Street, Del Norte Boulevard/"A" Street intersections and the STOP-Sign controlled "A" Street intersections. As shown, the signalized and STOP-Sign controlled intersections would operate at LOS "B" or better (LOS Worksheets are attached).

Table 2
"A" Street Corridor Intersection LOS

Intersection	Traffic Control	AM Peak Hour	PM Peak Hour
Rice Avenue/"A" Street	Signal	10.5 sec./LOS B	13.0 sec./LOS B
"A" Street/"B" Street	STOP-Sign	1.0 sec./LOS A	1.0 sec./LOS A
"A" Street/"C" Street	STOP-Sign	3.3 sec./LOS A	3.5 sec./LOS A
Del Norte Boulevard/"A" Street	Signal	9.9 sec./LOS A	7.8 sec./LOS A

The results indicate that the major intersections would operate with acceptably vehicle delays. The "Synchro" and the companion "SimTraffic" files are available for review upon request. The Project driveway connections to "A" Street and Del Norte Boulevard would operate at LOS "A" (LOS Worksheets are attached).

ATE also utilized the "Synchro" software to evaluate the queues at the study-area intersections and Project driveways. Table 3 shows the 95th percentile queue lengths for the turn movements at the Rice Avenue/"A" Street intersection with the weekday AM and PM peak hour volumes. The 95th percentile queue length is the queue that is exceeded 5% of the time during the peak hour. For example, the Rice Avenue/"A" Street intersection runs at a 60-second cycle length, or 60 cycles per hour. The 95th percentile queue length would occur 3 times during the peak hour (60 cycles x 5% = 3 cycles) at this location.

Table 3
Storage Requirements at the Rice Avenue/"A" Street Intersection

Movement	Storage	95% Queue Length	
		AM Peak Hour	PM Peak Hour
Southbound Left-Turn	380 feet	91 feet	106 feet
Northbound Right-Turn	400 feet	32 feet	27 feet
Westbound Left-Turn	300 feet	46 feet	53 feet
Westbound Right-Turn	* feet	56 feet	74 feet

*** Westbound curb lane also right-turn lane**

The queuing analysis found that there is sufficient storage provided for left-turn and right-turn movements of all vehicles at the Rice Avenue/"A" Street.

Table 4 shows the 95th percentile queue lengths for the southbound, northbound and eastbound approach movements at the Del Norte Boulevard/"A" Street intersection with the weekday AM and PM peak hour volumes.

Table 4
Storage Requirements at the Del Norte Boulevard/"A" Street Intersection

Movement	Storage	95% Queue Length	
		AM Peak Hour	PM Peak Hour
Northbound Left-Turn	200 feet	77 feet	66 feet
Southbound Right-Turn	150 feet	15 feet	16 feet
Eastbound Left-Turn	300 feet	40 feet	42 feet
Eastbound Right-Turn	* feet	17 feet	16 feet

*** Eastbound curb lane also right-turn lane**

The queuing analysis found that there is sufficient storage provided for left-turn and right-turn movements of all vehicles at the Del Norte Boulevard/"A" Street.

Table 5 shows the 95th percentile queue lengths for the southbound left-turn, through and right-turn movements at the "A" Street/"C" Street intersection with the weekday AM and PM peak hour volumes.

Table 5
Storage Requirements at the "A" Street/"C" Street Intersection

Movement	Storage	95% Queue Length	
		AM Peak Hour	PM Peak Hour
Northbound Left-Turn	100 feet	25 feet	25 feet
Westbound Left-Turn	150 feet	25 feet	25 feet

The queuing analysis found that there is sufficient storage provided for left-turn and right-turn movements of all vehicles at the "A" Street/"C" Street intersection.

Table 6 shows the 95th percentile queue lengths for the southbound left-turn, through and right-turn movements at the "A" Street/"B" Street intersection with the weekday AM and PM peak hour volumes.

Table 6
Storage Requirements at the "A" Street/"B" Street Intersection

Movement	Storage	95% Queue Length	
		AM Peak Hour	PM Peak Hour
Northbound Left-Turn	150 feet	25 feet	25 feet
Westbound Left-Turn	150 feet	25 feet	25 feet

The queuing analysis found that there is sufficient storage provided for left-turn and right-turn movements of all vehicles at the "A" Street/"B" Street intersection.

Scenario 2: Truck Route via the Rice Avenue Interchange Only

Table 7 shows the levels of service for the signalized Rice Avenue/"A" Street, Del Norte Boulevard/"A" Street intersections and the STOP-Sign controlled "A" Street intersections. As shown, the signalized and STOP-Sign controlled intersections would operate at LOS "B" or better (LOS Worksheets are attached).

Table 7
"A" Street Corridor Intersection LOS

Intersection	Traffic Control	AM Peak Hour	PM Peak Hour
Rice Avenue/"A" Street	Signals	10.6 sec./LOS B	13.1 sec./LOS B
"A" Street/"B" Street	STOP-Sign	1.0 sec./LOS A	1.0 sec./LOS A
"A" Street/"C" Street	STOP-Sign	3.4 sec./LOS A	3.6 sec./LOS A
Del Norte Boulevard/"A" Street	Signals	7.8 sec./LOS A	9.8 sec./LOS A

The results indicate that the major intersections would operate with acceptably vehicle delays. The "Synchro" and the companion "SimTraffic" files are available for review upon request. The Project driveway connections to "A" Street and Del Norte Boulevard would operate at LOS "A" (LOS Worksheets are attached).

ATE also utilized the "Synchro" software to evaluate the queues at the study-area intersections. Table 8 shows the 95th percentile queue lengths for the turn movements at the Rice Avenue/"A" Street intersection with the weekday AM and PM peak hour volumes.

Table 8
Storage Requirements at the Rice Avenue/"A" Street Intersection

Movement	Storage	95% Queue Length	
		AM Peak Hour	PM Peak Hour
Southbound Left-Turn	380 feet	92 feet	109 feet
Northbound Right-Turn	400 feet	32 feet	232 feet
Westbound Left-Turn	300 feet	46 feet	53 feet
Westbound Right-Turn	* feet	57 feet	75 feet

*** Westbound curb lane also right-turn lane**

The queuing analysis found that there is sufficient storage provided for left-turn and right-turn movements of all vehicles at the Rice Avenue/"A" Street.

Table 9 shows the 95th percentile queue lengths for the southbound, northbound and eastbound approach movements at the Del Norte Boulevard/"A" Street intersection with the weekday AM and PM peak hour volumes.

Table 9
Storage Requirements at the Del Norte Boulevard/"A" Street Intersection

Movement	Storage	95% Queue Length	
		AM Peak Hour	PM Peak Hour
Northbound Left-Turn	200 feet	77 feet	66 feet
Southbound Right-Turn	150 feet	15 feet	15 feet
Eastbound Left-Turn	300 feet	38 feet	41 feet
Eastbound Right-Turn	* feet	17 feet	16 feet

*** Eastbound curb lane also right-turn lane**

The queuing analysis found that there is sufficient storage provided for left-turn and right-turn movements of all vehicles at the Rice Avenue/"A" Street.

Table 10 shows the 95th percentile queue lengths for the southbound left-turn, through and right-turn movements at the "A" Street/"C" Street intersection with the weekday AM and PM peak hour volumes.

Table 10
Storage Requirements at the "A" Street/"C" Street Intersection

Movement	Storage	95% Queue Length	
		AM Peak Hour	PM Peak Hour
Northbound Left-Turn	100 feet	25 feet	25 feet
Westbound Left-Turn	150 feet	25 feet	25 feet

The queuing analysis found that there is sufficient storage provided for left-turn and right-turn movements of all vehicles at the "A" Street/"C" Street intersection.

Table 11 shows the 95th percentile queue lengths for the southbound left-turn, through and right-turn movements at the "A" Street/"B" Street intersection with the weekday AM and PM peak hour volumes.

Table 11
Storage Requirements at the "A" Street/"B" Street Intersection

Movement	Storage	95% Queue Length	
		AM Peak Hour	PM Peak Hour
Northbound Left-Turn	150 feet	25 feet	25 feet
Westbound Left-Turn	150 feet	25 feet	25 feet

The queuing analysis found that there is sufficient storage provided for left-turn and right-turn movements of all vehicles at the "A" Street/"B" Street intersection.

TRANSPORTATION DEMAND MANAGEMENT

Project Bruin has developed a Transportation Management Statement (Attached). Trip reduction measures which have been utilized successfully by others in California have been incorporated in the statement. The Transportation Management Statement has been developed to reduce the number of Single Occupant commuter trips by the employees who work at the site and to help reduce congestion during the peak hour periods of the adjacent streets. The following summarizes the trip reduction measures for the Project.

Transportation Coordinator: Project Bruin will designate a transportation coordinator to be in charge of the in-house commuter program.

Information Center: Project Bruin will provide employees with information regarding carpooling, van pooling, ridesharing and other alternative modes of transportation. New employee orientation will include information on alternative modes of transportation, on-site amenities and encourage participation in the trip reduction program.

Bicycle Facilities: On-site bike racks, lockers and shower facilities will be provided for employees.

Public Transit: Project Bruin will coordinate with Gold Coast transit to provide transit facilities to serve the Facility.

Preferential Parking: Preferential parking will be provided for employee carpools, van pools, and flexible/clean fuel vehicles.

Passenger Loading/Unloading: The site design will incorporate passenger loading/unloading areas.

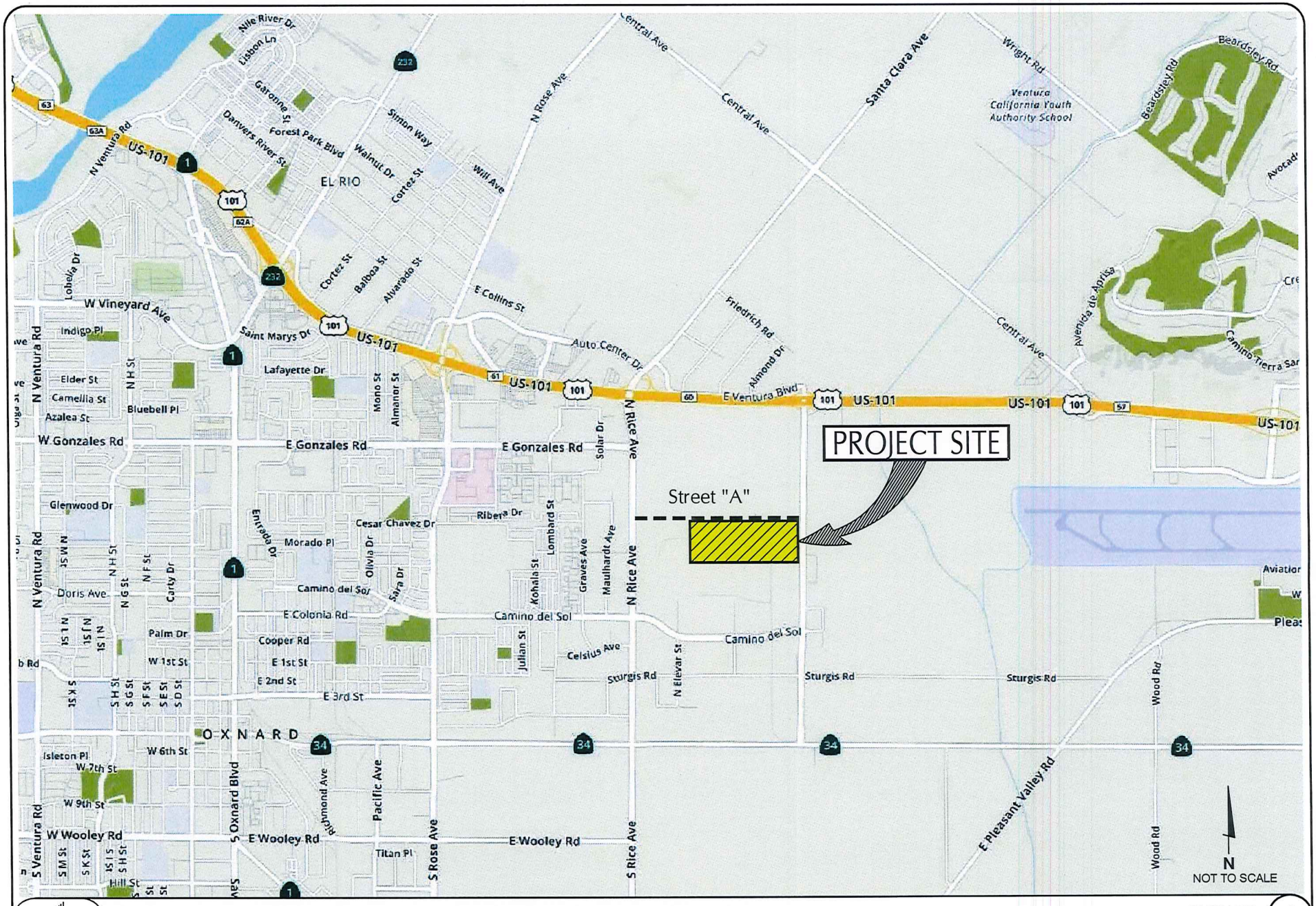
Pedestrian Facilities: The site design will incorporate on-site pedestrian facilities that connect to the pedestrian and bicycle facilities planned for the Sakioka Farms Business Pak Specific Plan.

Work Shift Hours: The Project will operate with a day shift (7:00 AM to 6:00 PM) and a night shift (6:00 PM to 5:00 AM). The hours of operation shift employee commute trips outside the traditional 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM peak hour commune periods.

CONCLUSION

The Project would generate an estimated 4,756 average daily trips, 1,325 AM peak hour trips and 1,325 PM peak hour trips. The Project area was entitled with 9,927 average daily trips, 1,161 AM peak hour trips and 1,298 PM peak hour trips. Project Bruin would generate 5,171 fewer average daily trips, 164 more AM peak hour trips and 27 more PM peak hour trip than what was entitled for Project area.

With the planned roadway and intersection improvements in place, the levels of service for the signalized Rice Avenue/"A" Street and Del Norte Boulevard/"A" Street intersections would be LOS "B" or better. The major intersections would operate with acceptably vehicle delays. Based on the Linscott, Law & Greenspan traffic assessment, Project Bruin would not have a significant impact based on City of Oxnard impact thresholds to the off-site intersections in the immediate vicinity with planned Phase I improvement in place.



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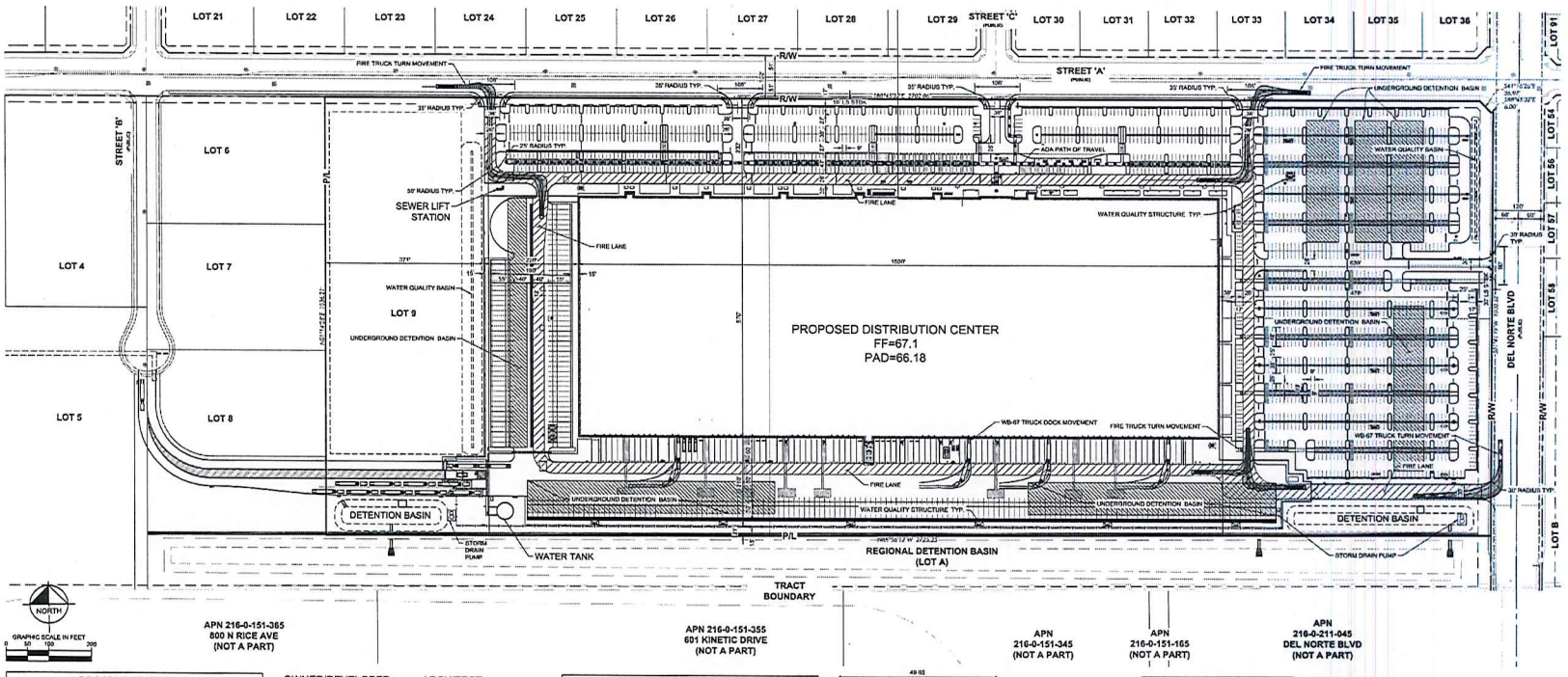
TRANSPORTATION
ENGINEERS

PROJECT SITE LOCATION

FIGURE 1

JH - ATE#18031.01



PROJECT STATISTICS	
LOT SIZE (ACRES)	64.65
GROSS (SF)	2,816,250
NET (SF)	2,816,250
LAND USE	INDUSTRIAL
EXISTING ZONING	M-1
SPECIFIC PLAN	SAKIOKA FARMS

PROJECT AREA	SF	%
BUILDING AREA	857,173	30.44%
LANDSCAPE	596,528	23.30%
PAVED AREA	1,362,207	46.24%
TOTAL AREA	2,816,208	100%

LEGAL DESCRIPTION:

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF OXNARD, IN THE COUNTY OF VENTURA, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS: LOTS 6 THROUGH 12, INCLUSIVE, OF TRACT NO. 5994-1, BEING A PORTION OF PARCEL "C" IN THE CITY OF OXNARD, COUNTY OF VENTURA, STATE OF CALIFORNIA, AS PER MAP FILED IN BOOK 2, PAGE 43 OF RECORDS OF SURVEY, IN THE OFFICE OF THE COUNTY RECORDER OF VENTURA COUNTY, DESCRIBED AS A WHOLE AS FOLLOWS:

COMMENCING AT THE INTERSECTION OF THE CENTERLINE OF DEL NORTE BOULEVARD, 76.00 FEET WIDE, AS SHOWN ON THE RECORD OF SURVEY FILED IN BOOK 53, PAGES 64 THROUGH 66 INCLUSIVE OF RECORDS OF SURVEY, IN THE OFFICE OF SAID COUNTY RECORDER, WITH A LINE PARALLEL WITH AND 120.00 FEET NORTHERLY OF, MEASURED AT RIGHT ANGLES, THE SOUTHERLY LINE OF SAID PARCEL C;

THENCE ALONG SAID PARALLEL LINE SOUTH 89°47'40" WEST 60.00 FEET TO THE TRUE POINT OF BEGINNING;

THENCE CONTINUING SOUTH 89°47'40" WEST 2,725.30 FEET;

THENCE NORTH 00°01'40" WEST 1,030.26 FEET;

THENCE NORTH 89°58'20" EAST 2,706.12 FEET;

THENCE SOUTH 44°41'18" EAST 39.49 FEET;

THENCE SOUTH 89°34'49" EAST 8.60 FEET TO A LINE PARALLEL WITH AND 36.00 FEET WESTERLY OF THE CENTERLINE OF SAID DEL NORTE BOULEVARD;

THENCE ALONG SAID PARALLEL LINE, SOUTH 00°25'11" WEST 1,002.62 FEET TO THE TRUE POINT OF BEGINNING.

ABBREVIATIONS:

(X.XX)	EXISTING ELEVATION	POC	POINT OF CONNECTION
BLDG	BUILDING	PR	PROPOSED
BMP	BEST MANAGEMENT PRACTICES	RCP	REINFORCED CONCRETE PIPE
BW	BACK OF WALL	RET.	RETAINING
CL	CENTERLINE	RL	RIDGE LINE
EG	EXISTING GRADE	RW	RIGHT OF WAY
EP	EDGE OF PAVEMENT	SD	STORM DRAIN
EX	EXISTING	SF	SQUARE FEET
FF	FINISHED FLOOR	SDWK	SIDEWALK
	ELEVATION	STBK	SETBACK
FG	FINISHED GRADE	STR	STRUCTURE
FH	FIRE HYDRANT	SS	SANITARY SEWER
FL	FLOW LINE	TC	TOP OF CURB
FS	FINISHED SURFACE	TG	TOP OF GRATE
FW	FIRE WATER	TP	TOP OF PAVEMENT
GB	GRADE BREAK	TW	TOP OF WALL
IE	INVERT ELEVATION	TYP	TYPICAL
LP	LOW POINT	WQ	WATER QUALITY
LS	LANDSCAPE		
MH	MANHOLE		
PL	PROPERTY LINE		

OWNER/DEVELOPER:
SEEFRIED INDUSTRIAL PROPERTIES
C/O SAKIOKA FARMS
2301 ROSECRANS AVENUE, SUITE 3155
EL SEGUNDO, CA 90250
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CONTACT: DAVID COWAN, P.E.

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CONTACT: DAVID COWAN, P.E.

TOPOGRAPHY SOURCE
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DELANE ENGINEERING
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CAMARILLO, CA 93010
CONTACT: SCOTT UHLES

GEOTECHNICAL
TERRACON CONSULTANTS, INC.
1421 EDINGER AVENUE, SUITE C
TUSTIN, CA 92780
PROJECT NO. 60185017

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CABLE: SPECTRUM
721 MULHARDT AVE,
OXNARD, CA 9303
PH: 805-4655-3868

WATER: CITY OF OXNARD
251 S. HAYES AVENUE
OXNARD, CA 93030
PH: 805-385.8154

WATER: CALLEGUAS MUNICIPAL WATER DISTRICT
2100 OLSEN ROAD
THOUSAND OAKS, CA 91360
PH: 805.526.9323

SEWER: CITY OF OXNARD
800 S. RICE/NO ROAD
OXNARD, CA 93030
PH: 805.488.3517

TELEPHONE: FRONTIER
201 FLYNN ROAD
CAMARILLO, CA 93012
PH: 805.445.9116
CONTACT: TOM PEARSO

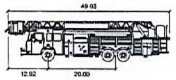
ELECTRIC: SOUTHERN CALIFORNIA EDISON
10160 TELEGRAPH ROAD
VENTURA, CA 93004
PH: 805.804.7437
CONTACT: ALISON PANCHE

GAS: SOUTHERN CALIFORNIA GAS CO.
9400 OAKDALE AVENUE
CHATSWORTH, CA 91313
PH. 805.701.3228
CONTACT: JACK RUSS

EARTHWORK	
LOT SIZE (ACRES)	64.65
RAW CAD EARTHWORK	
CUT (CU. YD.)	84,106
FILL (CU. YD.)	180,526
CUT FACTOR	1
FILL FACTOR	1
NET (CU. YD.)	(93,422.6)

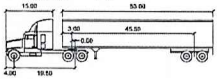
ADDITIONAL EARTHWORK			
ITEM	QUANTITY	UNIT	CU. YD.
BUILDING AREA	89/173	SF	18,519
BUILDING SLAB DEPTH	7.0	IN	
BUILDING SLAB SUB-BASE	857,173	SF	10,952
Building Slab Compaction = 95%	4.0	IN	
Standard Duty Asphalt (TI=5.0, AC =3.0, AB = 6)	670,252.0	SF	19,202
Section	9.0	IN	
Heavy Duty Asphalt (TI=10, AC = 0, AB=11)	302,717.0	SF	17,318
Section	16.0	IN	
Heavy Duty Concrete (TI=10, PCC = 8"/10", AB = 4	236,138.5	SF	10,294
Section	14.0	IN	
Fire Lane (PCC = 7", AB =4")	2,550.0	SF	85
Section	11.0	IN	
Sidewalk (PCC = 4", AB =4")	137,717.0	SF	3,400
Section	9.0	IN	
Utility Spoils (TW, SS, & W)	273.1	CY	273
Storm System and Underground Detention Basins	476,466.0	CF	17,948
ADDITIONAL CUT SUM (CU. YD.)			99,233
CUT FACTOR (SHRINKAGE)			1.0
NFT CUT (CU. YD.)			98,233

ESTIMATED EARTHWORK RESULTS	
LOT SIZE (ACRES)	64.65
CUT (CU. YD.)	190,629
FILL (CU. YD.)	191,029
NET CUT (CU. YD.)	600



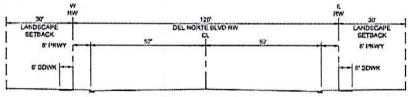
Small Platform RM 100ft

feet	
Width	: 8.33
Track	: 7.83
Lock to Lock Time	: 6.0
Steering Angle	: 40.0

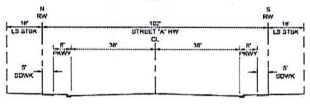


WB-67

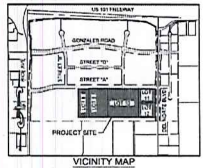
feet			
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.00		



DEL NORTE BLVD
NTS



STREET "A"
NTS



VICINITY MAP
THOMAS GUIDE: MAP PG 623-B5-D3
NOT TO SCALE

SHEET INDEX	
Sheet Number	Sheet Title
1	ENGINEERING SITE PLAN
2	GRADING PLAN - 1
3	GRADING PLAN - 2
4	GRADING PLAN - 3
5	GRADING PLAN - 4
6	STORMWATER QUALITY MAP
7	UTILITY PLAN - 1
8	UTILITY PLAN - 2

LEGEND
PROPERTY BOUNDARY
PROPERTY LINE / RIGHT-OF-WAY
CENTERLINE
SETBACK
EASEMENT
FENCE CHAINLINK
ADA PATH OF TRAVEL
FIRE LANE
BUILDING OUTLINE
RETAINING WALL
STORM DRAIN MANHOLE
SEWER MANHOLE
STORM DRAIN CURB INLET
STORM DRAIN CLEAN OUT
GRATE INLET
STORM WATER QUALITY BMP
FIRE HYDRANT
FIRE DEPARTMENT CONNECTION

REVISIONS			
No.	DATE	REVISIONS	BY

Kimley»Horn
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PRELIMINARY
Kimley»Horn
REGISTERED PROFESSIONAL ENGINEER
DAVID COWAN
No. 30000
STATE OF CALIFORNIA

CONTRACT NUMBER	
STATUS	
DATE	8/2/2021
SCALE	AS SHOWN
DESIGN BY	AUTHOR
DRAWN BY	AUTHOR
CHECKED BY	DC

ENGINEERING SITE PLAN

PROJECT BRUIN
PREPARED FOR
SEEFRIED INDUSTRIAL PROPERTIES, INC.
CITY OF OXNARD, CA

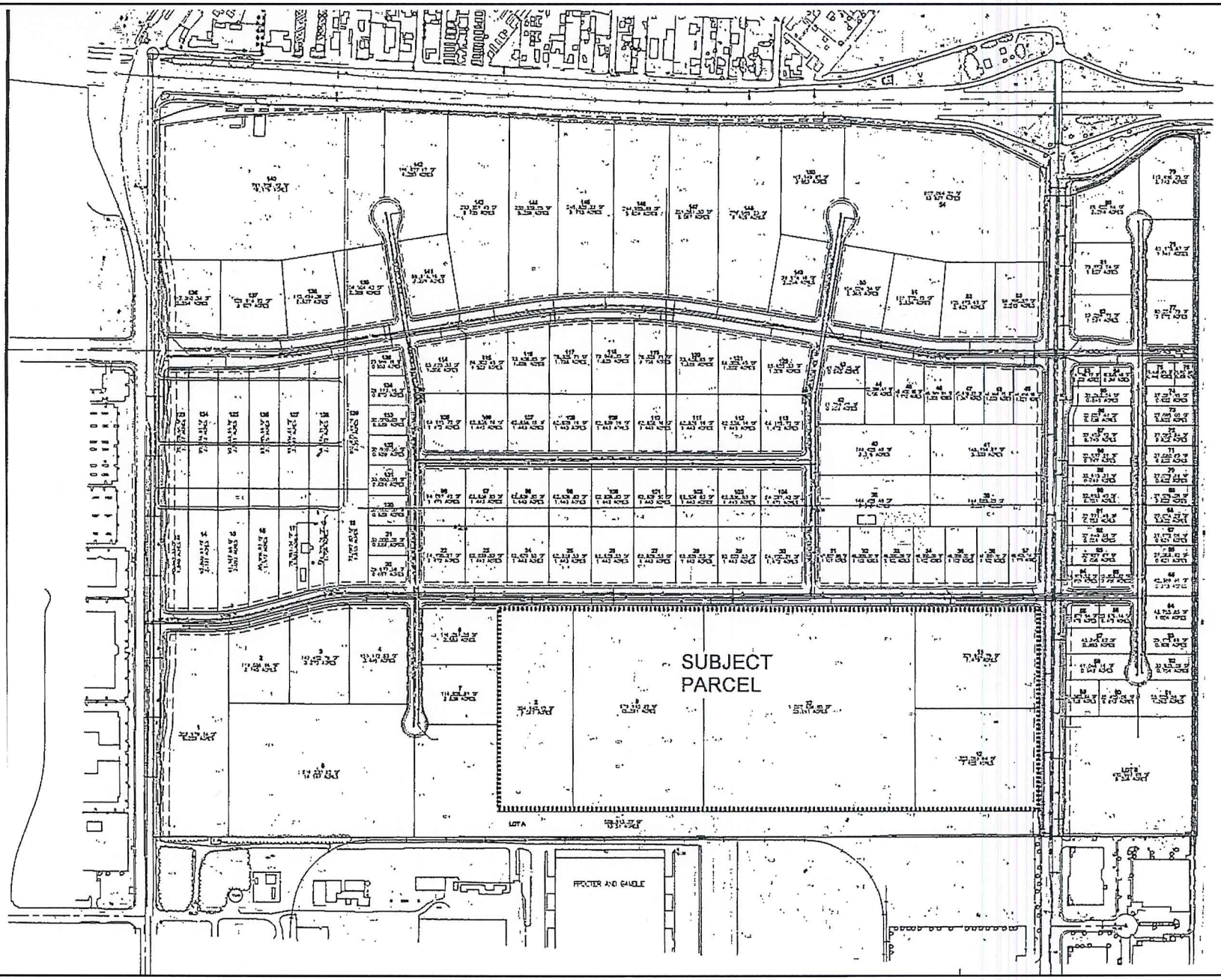
SHEET NUMBER
1 OF 8

ASSOCIATED
TRANSPORTATION
ENGINEERS

PROJECT SITE PLAN

FIGURE 2

JH - ATE#18031.01



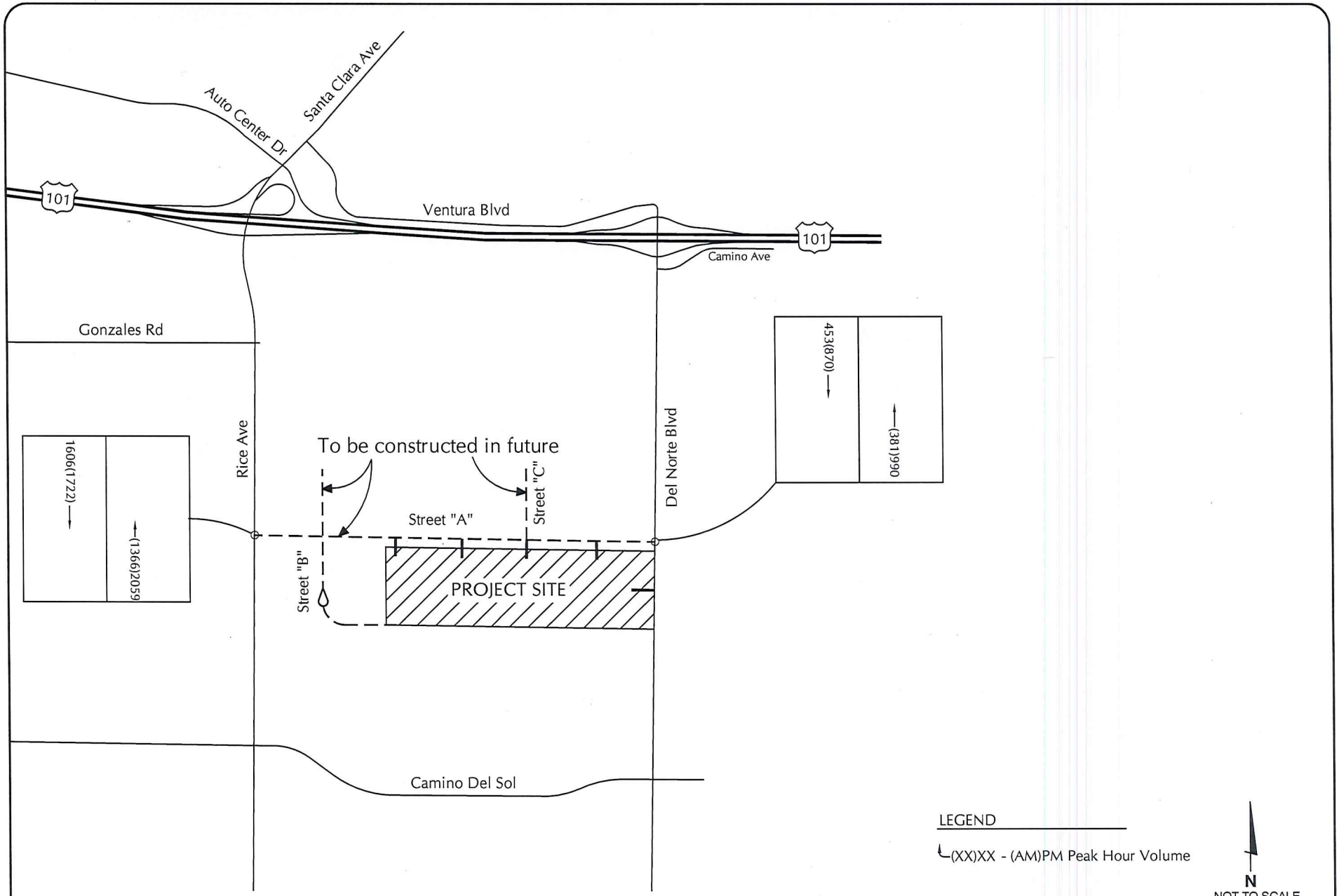
N
NOT TO SCALE

ASSOCIATED
TRANSPORTATION
ENGINEERS

SAKIOKA FARMS BUSINESS PARK SPECIFIC PLAN AREA

FIGURE 3

JH - ATE#18031.01

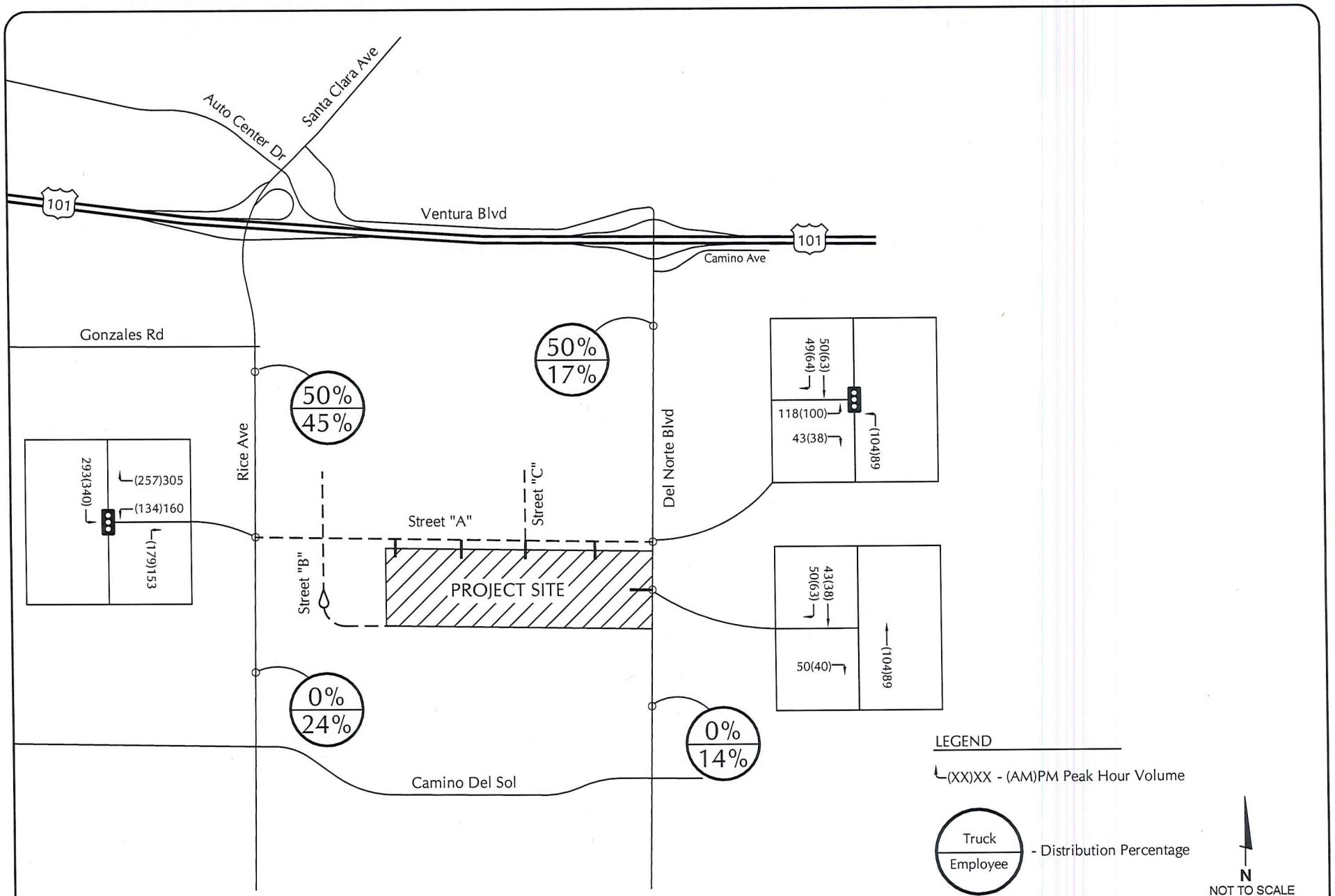


ASSOCIATED
TRANSPORTATION
ENGINEERS

EXISTING TRAFFIC VOLUMES

FIGURE 4

JH - ATE#18031.01

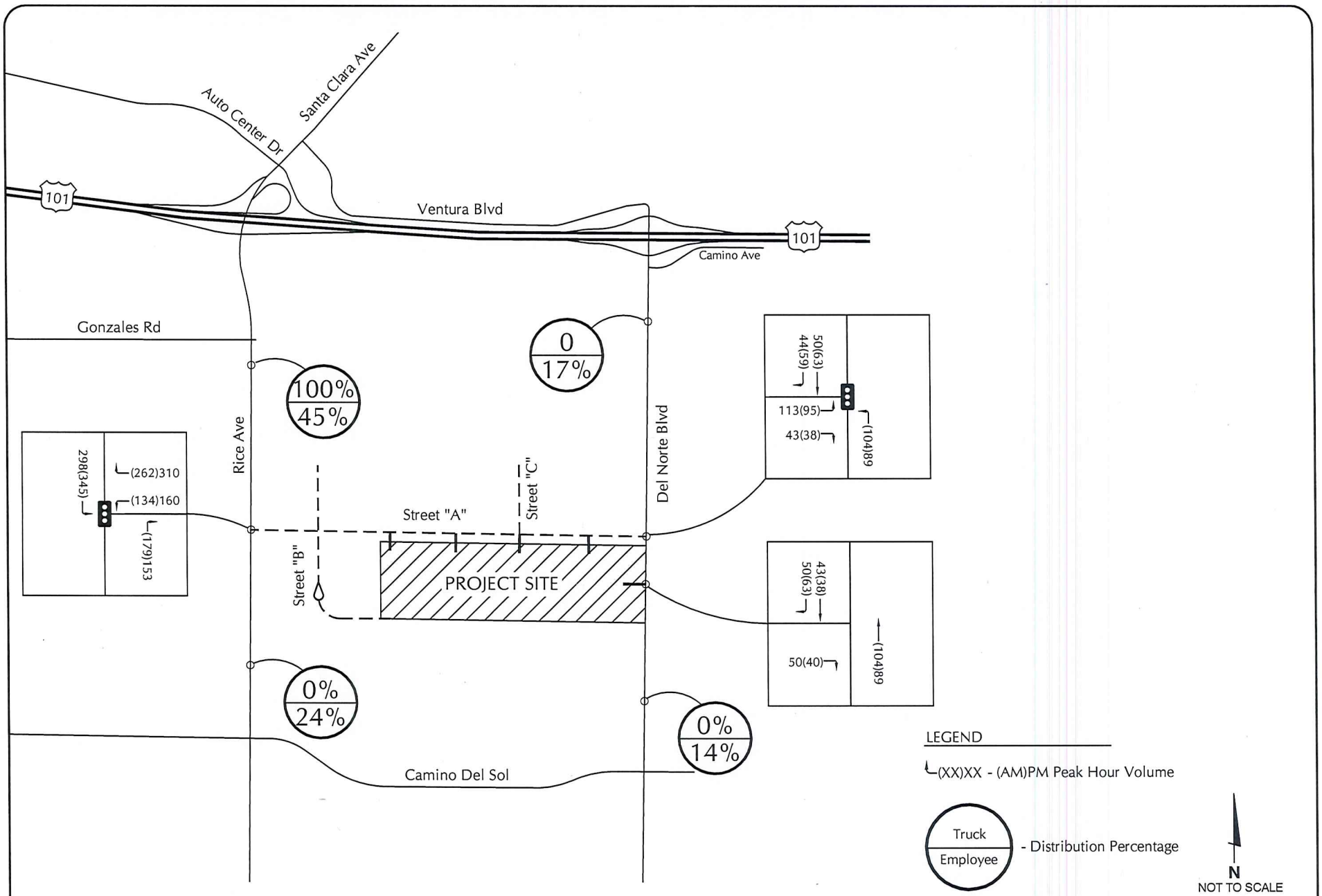


ASSOCIATED TRANSPORTATION ENGINEERS

PROJECT TRIP DISTRIBUTION AND ASSIGNMENT
TRUCKS USE RICE AVE AND DEL NORTE BLVD INTERCHANGES

FIGURE 5

JH - ATE#18031.01

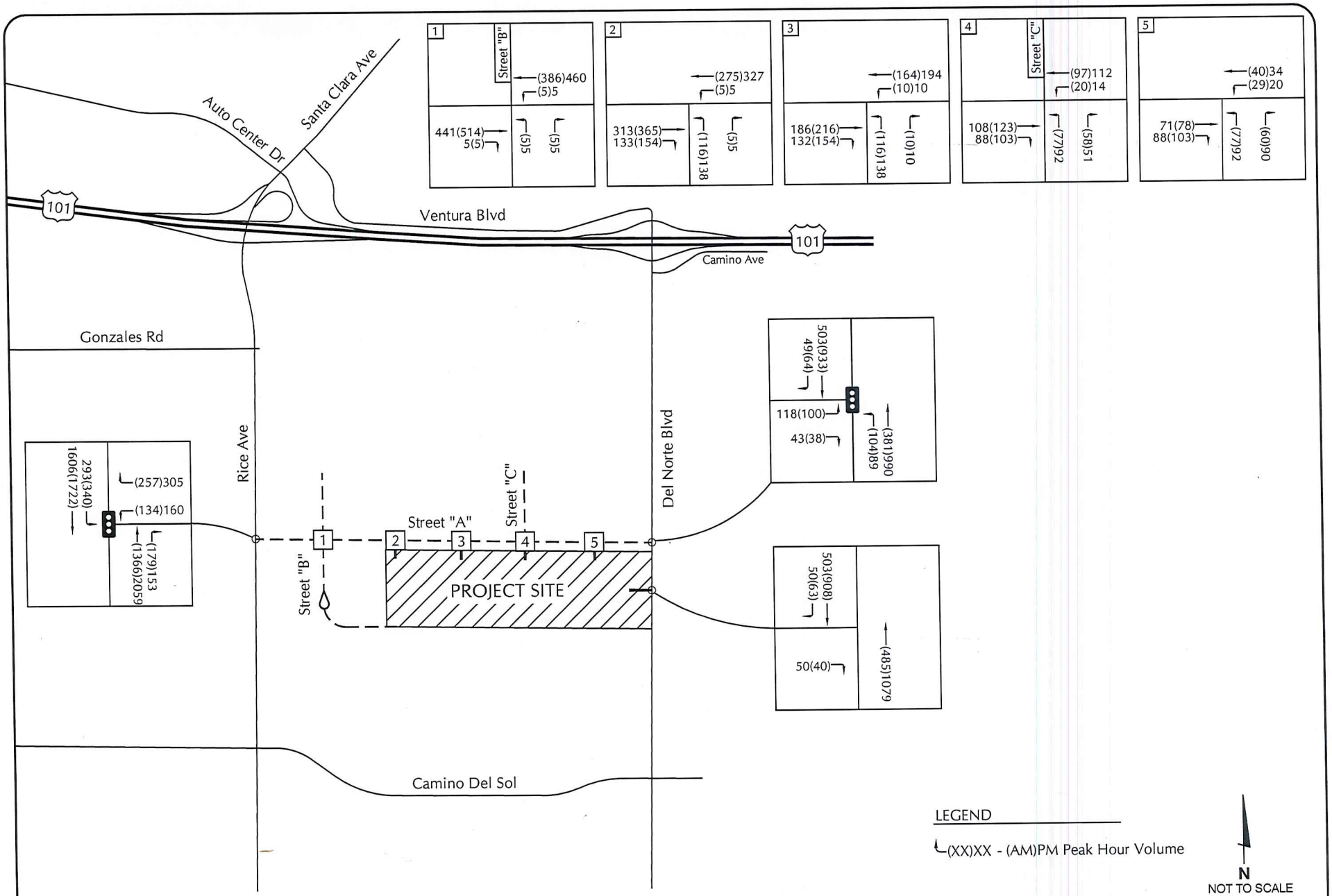


ASSOCIATED TRANSPORTATION ENGINEERS

PROJECT TRIP DISTRIBUTION AND ASSIGNMENT
ALL TRUCKS USE RICE AVE INTERCHANGE

FIGURE 6

JH - ATE#18031.01

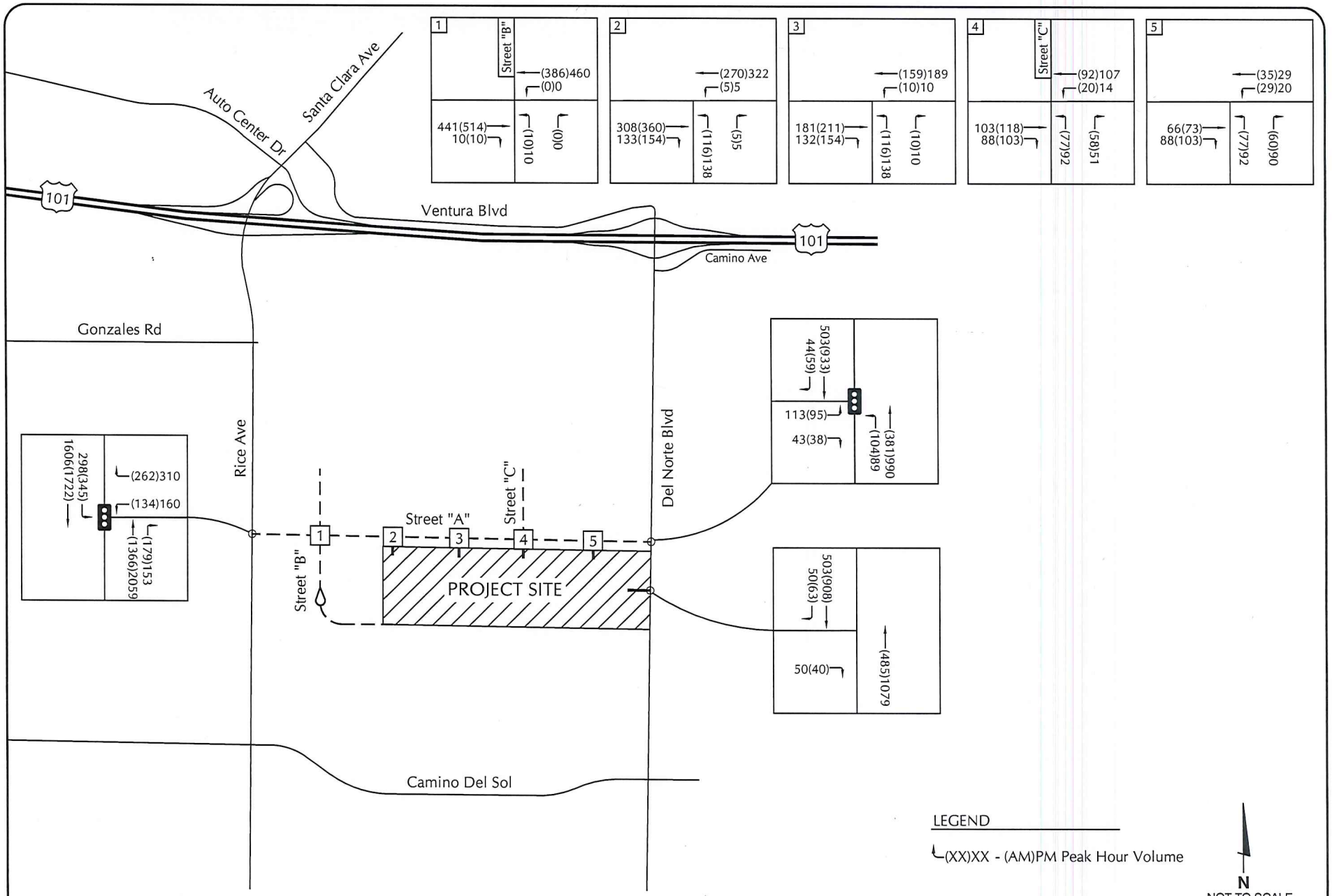


ASSOCIATED TRANSPORTATION ENGINEERS

EXISTING + PROJECT TRAFFIC VOLUMES
TRUCKS USE RICE AVE AND DEL NORTE BLVD INTERCHANGES

FIGURE 7

JH - ATE#18031.01



ASSOCIATED TRANSPORTATION ENGINEERS

EXISTING + PROJECT TRAFFIC VOLUMES
ALL TRUCKS USE RICE AVE INTERCHANGE

FIGURE 8

JH - ATE#18031.01

The Project driveway connections to "A" Street and Del Norte Boulevard would operate at LOS "A" with acceptably vehicle delays. The queuing analysis found that there is sufficient storage provided for all vehicle turning movements at the study-area intersections. As illustrated on the Project site plan, delivery truck access and on-site circulation can be accommodated adequately.

Associated Transportation Engineers

By: Richard L. Pool, P.E.
President

RLP/DFN

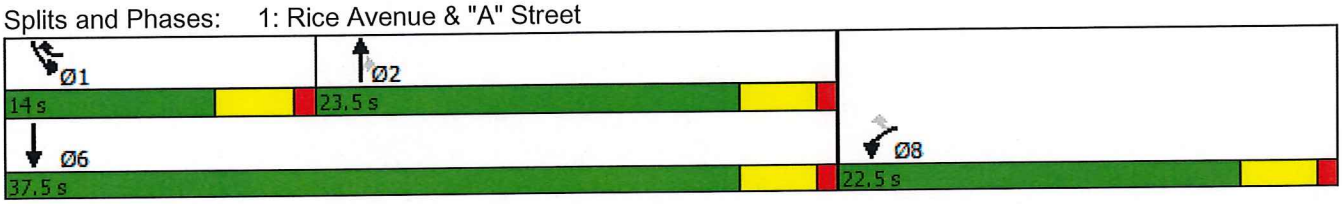
Attachments: Figure 1 - Project Site Plan
Figure 2 - Project Site Location
Figure 3 - Sakioka Farms Business Park Specific Plan Area
Figure 4 - Existing Traffic Volumes
Figure 5 - Project Trip Distribution and Assignment
Figure 6 - Project Trip Distribution and Assignment
Figure 7 - Existing + Project Traffic Volumes
Figure 8 - Existing + Project Traffic Volumes
Synchro LOS Worksheets
Project Bruin Transportation Management Statement
Supplemental Traffic Count Data from Similar Facilities (Via Electronic File)

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	134	257	1366	179	340	1722
Future Volume (vph)	134	257	1366	179	340	1722
Satd. Flow (prot)	3173	1400	6225	1538	3335	4940
Flt Permitted	0.975				0.950	
Satd. Flow (perm)	3173	1400	6225	1538	3335	4940
Satd. Flow (RTOR)	140	1		195		
Lane Group Flow (vph)	286	139	1485	195	370	1872
Turn Type	Prot	pm+ov	NA	Perm	Prot	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8		2		
Total Split (s)	22.5	14.0	23.5	23.5	14.0	37.5
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Act Effct Green (s)	7.8	21.5	19.3	19.3	9.2	33.0
Actuated g/C Ratio	0.16	0.43	0.39	0.39	0.18	0.66
v/c Ratio	0.47	0.23	0.61	0.27	0.60	0.57
Control Delay	12.6	9.8	14.0	3.5	23.6	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.6	9.8	14.0	3.5	23.6	5.7
LOS	B	A	B	A	C	A
Approach Delay	11.7		12.8			8.6
Approach LOS	B		B			A
Queue Length 50th (ft)	19	25	97	0	51	82
Queue Length 95th (ft)	46	56	142	32	91	138
Internal Link Dist (ft)	1320		445			400
Turn Bay Length (ft)	300			400	380	
Base Capacity (vph)	1236	612	2415	716	636	3275
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.23	0.61	0.27	0.58	0.57

Intersection Summary

Cycle Length: 60
Actuated Cycle Length: 49.8
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 10.5 — Intersection LOS: B
Intersection Capacity Utilization 47.3% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Rice Avenue & "A" Street



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	160	305	2059	153	293	1606
Future Volume (vph)	160	305	2059	153	293	1606
Satd. Flow (prot)	3173	1400	6225	1538	3335	4940
Flt Permitted	0.975				0.950	
Satd. Flow (perm)	3173	1400	6225	1538	3335	4940
Satd. Flow (RTOR)	166			166		
Lane Group Flow (vph)	340	166	2238	166	318	1746
Turn Type	Prot	pm+ov	NA	Perm	Prot	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8		2		
Total Split (s)	22.5	11.0	26.5	26.5	11.0	37.5
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Act Effct Green (s)	8.2	19.3	22.0	22.0	6.5	33.0
Actuated g/C Ratio	0.16	0.38	0.44	0.44	0.13	0.66
v/c Ratio	0.52	0.31	0.82	0.22	0.74	0.54
Control Delay	12.7	12.6	16.4	3.0	34.9	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.7	12.6	16.4	3.0	34.9	5.6
LOS	B	B	B	A	C	A
Approach Delay	12.7		15.5			10.1
Approach LOS	B		B			B
Queue Length 50th (ft)	23	36	156	0	47	77
Queue Length 95th (ft)	53	74	#231	27	#106	131
Internal Link Dist (ft)	1320		445			400
Turn Bay Length (ft)	300			400	380	
Base Capacity (vph)	1243	536	2726	767	431	3244
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.31	0.82	0.22	0.74	0.54

Intersection Summary

Cycle Length: 60
Actuated Cycle Length: 50.3
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 13.0 Intersection LOS: B
Intersection Capacity Utilization 57.2% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

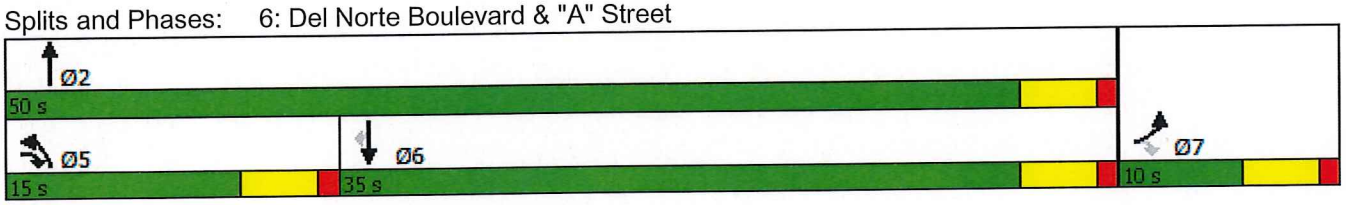
Splits and Phases: 1: Rice Avenue & "A" Street

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	100	38	104	381	933	64
Future Volume (vph)	100	38	104	381	933	64
Satd. Flow (prot)	3335	1538	1719	3438	3438	1538
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3335	1538	1719	3438	3438	1538
Satd. Flow (RTOR)		41				70
Lane Group Flow (vph)	109	41	113	414	1014	70
Turn Type	Prot	pm+ov	Prot	NA	NA	Perm
Protected Phases	7	5	5	2	6	
Permitted Phases		7				6
Total Split (s)	10.0	15.0	15.0	50.0	35.0	35.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Act Effct Green (s)	5.5	16.9	8.8	49.2	37.8	37.8
Actuated g/C Ratio	0.09	0.28	0.14	0.81	0.62	0.62
v/c Ratio	0.36	0.09	0.46	0.15	0.48	0.07
Control Delay	29.4	5.7	29.2	1.9	9.6	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.4	5.7	29.2	1.9	9.6	2.6
LOS	C	A	C	A	A	A
Approach Delay	22.9			7.8	9.1	
Approach LOS	C			A	A	
Queue Length 50th (ft)	19	0	38	14	116	0
Queue Length 95th (ft)	40	17	77	23	174	15
Internal Link Dist (ft)	520			502	454	
Turn Bay Length (ft)	300		200			150
Base Capacity (vph)	300	498	295	2773	2131	980
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.08	0.38	0.15	0.48	0.07

Intersection Summary

Cycle Length: 60
Actuated Cycle Length: 61
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.48
Intersection Signal Delay: 9.9 — Intersection LOS: A
Intersection Capacity Utilization 47.0% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 6: Del Norte Boulevard & "A" Street

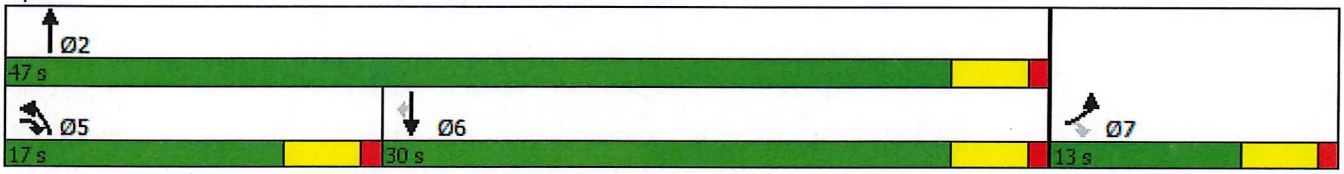


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	118	43	89	990	503	49
Future Volume (vph)	118	43	89	990	503	49
Satd. Flow (prot)	3335	1538	1719	3438	3438	1538
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3335	1538	1719	3438	3438	1538
Satd. Flow (RTOR)		47				53
Lane Group Flow (vph)	128	47	97	1076	547	53
Turn Type	Prot	pm+ov	Prot	NA	NA	Perm
Protected Phases	7	5	5	2	6	
Permitted Phases		7				6
Total Split (s)	13.0	17.0	17.0	47.0	30.0	30.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Act Effct Green (s)	7.4	18.6	8.7	46.3	35.1	35.1
Actuated g/C Ratio	0.12	0.31	0.15	0.77	0.59	0.59
v/c Ratio	0.31	0.09	0.39	0.40	0.27	0.06
Control Delay	25.5	4.5	26.9	3.6	9.3	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.5	4.5	26.9	3.6	9.3	3.6
LOS	C	A	C	A	A	A
Approach Delay	19.9			5.6	8.8	
Approach LOS	B			A	A	
Queue Length 50th (ft)	21	0	32	60	56	0
Queue Length 95th (ft)	42	16	66	93	99	16
Internal Link Dist (ft)	520			502	454	
Turn Bay Length (ft)	300		200			150
Base Capacity (vph)	473	606	359	2658	2012	922
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.08	0.27	0.40	0.27	0.06

Intersection Summary

Cycle Length: 60
Actuated Cycle Length: 59.9
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.40
Intersection Signal Delay: 7.8 — Intersection LOS: A
Intersection Capacity Utilization 39.0% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 6: Del Norte Boulevard & "A" Street



Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	123	103	20	97	0	77	0	58	0	0	0
Future Vol, veh/h	0	123	103	20	97	0	77	0	58	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	143	-	-	143	-	-	0	-	-	0	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	-	0	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	0	134	112	22	105	0	84	0	63	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	105	0	0	246	0	0	287	339	123	216	395	53
Stage 1	-	-	-	-	-	-	190	190	-	149	149	-
Stage 2	-	-	-	-	-	-	97	149	-	67	246	-
Critical Hdwy	4.2	-	-	4.2	-	-	7.6	6.6	7	7.6	6.6	7
Critical Hdwy Stg 1	-	-	-	-	-	-	6.6	5.6	-	6.6	5.6	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.6	5.6	-	6.6	5.6	-
Follow-up Hdwy	2.25	-	-	2.25	-	-	3.55	4.05	3.35	3.55	4.05	3.35
Pot Cap-1 Maneuver	1462	-	-	1295	-	-	635	574	895	714	534	993
Stage 1	-	-	-	-	-	-	785	735	-	830	766	-
Stage 2	-	-	-	-	-	-	890	766	-	927	694	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1462	-	-	1295	-	-	627	564	895	655	525	993
Mov Cap-2 Maneuver	-	-	-	-	-	-	627	564	-	655	525	-
Stage 1	-	-	-	-	-	-	785	735	-	830	753	-
Stage 2	-	-	-	-	-	-	875	753	-	862	694	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.3	10.6	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	627	895	1462	-	-	1295	-	-	-	-
HCM Lane V/C Ratio	0.133	0.07	-	-	-	0.017	-	-	-	-
HCM Control Delay (s)	11.6	9.3	0	-	-	7.8	-	-	0	0
HCM Lane LOS	B	A	A	-	-	A	-	-	A	A
HCM 95th %tile Q(veh)	0.5	0.2	0	-	-	0.1	-	-	-	-

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	108	88	14	112	0	92	0	51	0	0	0
Future Vol, veh/h	0	108	88	14	112	0	92	0	51	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	143	-	-	143	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	0	117	96	15	122	0	100	0	55	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	122	0	0	213	0	0	256	317	107	211	365	61
Stage 1	-	-	-	-	-	-	165	165	-	152	152	-
Stage 2	-	-	-	-	-	-	91	152	-	59	213	-
Critical Hdwy	4.2	-	-	4.2	-	-	7.6	6.6	7	7.6	6.6	7
Critical Hdwy Stg 1	-	-	-	-	-	-	6.6	5.6	-	6.6	5.6	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.6	5.6	-	6.6	5.6	-
Follow-up Hdwy	2.25	-	-	2.25	-	-	3.55	4.05	3.35	3.55	4.05	3.35
Pot Cap-1 Maneuver	1441	-	-	1333	-	-	668	591	917	719	555	982
Stage 1	-	-	-	-	-	-	812	753	-	826	763	-
Stage 2	-	-	-	-	-	-	897	763	-	937	718	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1441	-	-	1333	-	-	662	584	917	669	549	982
Mov Cap-2 Maneuver	-	-	-	-	-	-	662	584	-	669	549	-
Stage 1	-	-	-	-	-	-	812	753	-	826	755	-
Stage 2	-	-	-	-	-	-	887	755	-	880	718	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.9	10.6	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	662	917	1441	-	-	1333	-	-	-	-
HCM Lane V/C Ratio	0.151	0.06	-	-	-	0.011	-	-	-	-
HCM Control Delay (s)	11.4	9.2	0	-	-	7.7	-	-	0	0
HCM Lane LOS	B	A	A	-	-	A	-	-	A	A
HCM 95th %tile Q(veh)	0.5	0.2	0	-	-	0	-	-	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	514	5	5	386	5	5
Future Vol, veh/h	514	5	5	386	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	100	100	5	100	100
Mvmt Flow	559	5	5	420	5	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	564	0	782	282
Stage 1	-	-	-	-	562	-
Stage 2	-	-	-	-	220	-
Critical Hdwy	-	-	6.1	-	8.8	8.9
Critical Hdwy Stg 1	-	-	-	-	7.8	-
Critical Hdwy Stg 2	-	-	-	-	7.8	-
Follow-up Hdwy	-	-	3.2	-	4.5	4.3
Pot Cap-1 Maneuver	-	-	550	-	185	491
Stage 1	-	-	-	-	330	-
Stage 2	-	-	-	-	568	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	550	-	183	491
Mov Cap-2 Maneuver	-	-	-	-	264	-
Stage 1	-	-	-	-	330	-
Stage 2	-	-	-	-	563	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	15.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	264	491	-	-	550	-
HCM Lane V/C Ratio	0.021	0.011	-	-	0.01	-
HCM Control Delay (s)	18.9	12.4	-	-	11.6	-
HCM Lane LOS	C	B	-	-	B	-
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	441	5	5	460	5	5
Future Vol, veh/h	441	5	5	460	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	100	100	5	100	100
Mvmt Flow	479	5	5	500	5	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	484	0	742	242
Stage 1	-	-	-	-	482	-
Stage 2	-	-	-	-	260	-
Critical Hdwy	-	-	6.1	-	8.8	8.9
Critical Hdwy Stg 1	-	-	-	-	7.8	-
Critical Hdwy Stg 2	-	-	-	-	7.8	-
Follow-up Hdwy	-	-	3.2	-	4.5	4.3
Pot Cap-1 Maneuver	-	-	610	-	200	530
Stage 1	-	-	-	-	375	-
Stage 2	-	-	-	-	533	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	610	-	198	530
Mov Cap-2 Maneuver	-	-	-	-	286	-
Stage 1	-	-	-	-	375	-
Stage 2	-	-	-	-	529	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	14.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	286	530	-	-	610	-
HCM Lane V/C Ratio	0.019	0.01	-	-	0.009	-
HCM Control Delay (s)	17.8	11.9	-	-	11	-
HCM Lane LOS	C	B	-	-	B	-
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-

Intersection	
Int Delay, s/veh	2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	365	154	5	275	116	5
Future Vol, veh/h	365	154	5	275	116	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	397	167	5	299	126	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	564	0	641	282
Stage 1	-	-	-	-	481	-
Stage 2	-	-	-	-	160	-
Critical Hdwy	-	-	4.2	-	6.9	7
Critical Hdwy Stg 1	-	-	-	-	5.9	-
Critical Hdwy Stg 2	-	-	-	-	5.9	-
Follow-up Hdwy	-	-	2.25	-	3.55	3.35
Pot Cap-1 Maneuver	-	-	983	-	400	706
Stage 1	-	-	-	-	579	-
Stage 2	-	-	-	-	843	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	983	-	398	706
Mov Cap-2 Maneuver	-	-	-	-	480	-
Stage 1	-	-	-	-	579	-
Stage 2	-	-	-	-	839	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	15
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	480	706	-	-	983	-
HCM Lane V/C Ratio	0.263	0.008	-	-	0.006	-
HCM Control Delay (s)	15.2	10.1	-	-	8.7	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	1	0	-	-	0	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	313	133	5	327	138	5
Future Vol, veh/h	313	133	5	327	138	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	340	145	5	355	150	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	485	0	601	243
Stage 1	-	-	-	-	413	-
Stage 2	-	-	-	-	188	-
Critical Hdwy	-	-	4.2	-	6.9	7
Critical Hdwy Stg 1	-	-	-	-	5.9	-
Critical Hdwy Stg 2	-	-	-	-	5.9	-
Follow-up Hdwy	-	-	2.25	-	3.55	3.35
Pot Cap-1 Maneuver	-	-	1053	-	425	749
Stage 1	-	-	-	-	627	-
Stage 2	-	-	-	-	816	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1053	-	423	749
Mov Cap-2 Maneuver	-	-	-	-	508	-
Stage 1	-	-	-	-	627	-
Stage 2	-	-	-	-	812	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	14.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	508	749	-	-	1053	-
HCM Lane V/C Ratio	0.295	0.007	-	-	0.005	-
HCM Control Delay (s)	15	9.8	-	-	8.4	-
HCM Lane LOS	C	A	-	-	A	-
HCM 95th %tile Q(veh)	1.2	0	-	-	0	-

Intersection	
Int Delay, s/veh	2.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	216	154	10	164	116	10
Future Vol, veh/h	216	154	10	164	116	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized		None		None		None
Storage Length	-	-	100	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	235	167	11	178	126	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	402	0	430	201
Stage 1	-	-	-	-	319	-
Stage 2	-	-	-	-	111	-
Critical Hdwy	-	-	4.2	-	6.9	7
Critical Hdwy Stg 1	-	-	-	-	5.9	-
Critical Hdwy Stg 2	-	-	-	-	5.9	-
Follow-up Hdwy	-	-	2.25	-	3.55	3.35
Pot Cap-1 Maneuver	-	-	1132	-	546	797
Stage 1	-	-	-	-	701	-
Stage 2	-	-	-	-	893	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1132	-	541	797
Mov Cap-2 Maneuver	-	-	-	-	593	-
Stage 1	-	-	-	-	701	-
Stage 2	-	-	-	-	884	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	12.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	593	797	-	-	1132	-
HCM Lane V/C Ratio	0.213	0.014	-	-	0.01	-
HCM Control Delay (s)	12.7	9.6	-	-	8.2	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0.8	0	-	-	0	-

Intersection	
Int Delay, s/veh	2.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	186	132	10	194	138	10
Future Vol, veh/h	186	132	10	194	138	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	202	143	11	211	150	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	345	0	402	173
Stage 1	-	-	-	-	274	-
Stage 2	-	-	-	-	128	-
Critical Hdwy	-	-	4.2	-	6.9	7
Critical Hdwy Stg 1	-	-	-	-	5.9	-
Critical Hdwy Stg 2	-	-	-	-	5.9	-
Follow-up Hdwy	-	-	2.25	-	3.55	3.35
Pot Cap-1 Maneuver	-	-	1189	-	568	831
Stage 1	-	-	-	-	739	-
Stage 2	-	-	-	-	875	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1189	-	563	831
Mov Cap-2 Maneuver	-	-	-	-	616	-
Stage 1	-	-	-	-	739	-
Stage 2	-	-	-	-	867	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	12.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	616	831	-	-	1189	-
HCM Lane V/C Ratio	0.244	0.013	-	-	0.009	-
HCM Control Delay (s)	12.7	9.4	-	-	8.1	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	1	0	-	-	0	-

Intersection	
Int Delay, s/veh	4.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	78	103	29	40	77	60
Future Vol, veh/h	78	103	29	40	77	60
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	85	112	32	43	84	65

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	197	0	227	99
Stage 1	-	-	-	-	141	-
Stage 2	-	-	-	-	86	-
Critical Hdwy	-	-	4.2	-	6.9	7
Critical Hdwy Stg 1	-	-	-	-	5.9	-
Critical Hdwy Stg 2	-	-	-	-	5.9	-
Follow-up Hdwy	-	-	2.25	-	3.55	3.35
Pot Cap-1 Maneuver	-	-	1351	-	733	928
Stage 1	-	-	-	-	862	-
Stage 2	-	-	-	-	919	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1351	-	715	928
Mov Cap-2 Maneuver	-	-	-	-	727	-
Stage 1	-	-	-	-	862	-
Stage 2	-	-	-	-	897	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.2	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	727	928	-	-	1351	-
HCM Lane V/C Ratio	0.115	0.07	-	-	0.023	-
HCM Control Delay (s)	10.6	9.2	-	-	7.7	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0.4	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	4.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	71	88	20	34	92	90
Future Vol, veh/h	71	88	20	34	92	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	77	96	22	37	100	98

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	173	0	188	87
Stage 1	-	-	-	-	125	-
Stage 2	-	-	-	-	63	-
Critical Hdwy	-	-	4.2	-	6.9	7
Critical Hdwy Stg 1	-	-	-	-	5.9	-
Critical Hdwy Stg 2	-	-	-	-	5.9	-
Follow-up Hdwy	-	-	2.25	-	3.55	3.35
Pot Cap-1 Maneuver	-	-	1380	-	775	945
Stage 1	-	-	-	-	878	-
Stage 2	-	-	-	-	943	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1380	-	763	945
Mov Cap-2 Maneuver	-	-	-	-	758	-
Stage 1	-	-	-	-	878	-
Stage 2	-	-	-	-	928	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.8	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	758	945	-	-	1380	-
HCM Lane V/C Ratio	0.132	0.104	-	-	0.016	-
HCM Control Delay (s)	10.5	9.2	-	-	7.7	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0.5	0.3	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	40	0	485	908	63
Future Vol, veh/h	0	40	0	485	908	63
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized		None		None		None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	0	43	0	527	987	68

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	528	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.35	-	-	-	-
Pot Cap-1 Maneuver	0	487	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	487	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	487	-	-
HCM Lane V/C Ratio	-	0.089	-	-
HCM Control Delay (s)	-	13.1	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.3	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	50	0	1079	503	50
Future Vol, veh/h	0	50	0	1079	503	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized		None		None		None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	0	54	0	1173	547	54

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	301	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.35	-	-	-	-
Pot Cap-1 Maneuver	0	686	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	686	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.7	0	0
HCM LOS	B		

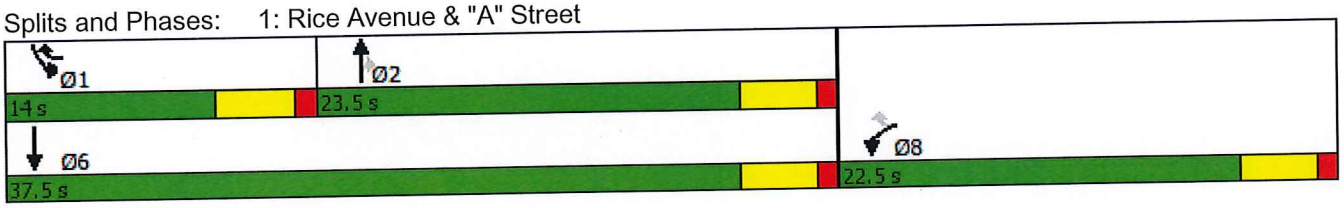
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	686	-	-
HCM Lane V/C Ratio	-	0.079	-	-
HCM Control Delay (s)	-	10.7	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.3	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	134	262	1366	179	345	1722
Future Volume (vph)	134	262	1366	179	345	1722
Satd. Flow (prot)	3169	1400	6225	1538	3335	4940
Flt Permitted	0.975				0.950	
Satd. Flow (perm)	3169	1400	6225	1538	3335	4940
Satd. Flow (RTOR)	143	1		195		
Lane Group Flow (vph)	289	142	1485	195	375	1872
Turn Type	Prot	pm+ov	NA	Perm	Prot	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8		2		
Total Split (s)	22.5	14.0	23.5	23.5	14.0	37.5
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Act Effct Green (s)	7.8	21.5	19.4	19.4	9.2	33.1
Actuated g/C Ratio	0.16	0.43	0.39	0.39	0.18	0.66
v/c Ratio	0.47	0.24	0.62	0.27	0.61	0.57
Control Delay	12.5	9.8	14.0	3.5	23.8	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.5	9.8	14.0	3.5	23.8	5.7
LOS	B	A	B	A	C	A
Approach Delay	11.6		12.8			8.7
Approach LOS	B		B			A
Queue Length 50th (ft)	19	26	97	0	51	82
Queue Length 95th (ft)	46	57	142	32	92	138
Internal Link Dist (ft)	1320		445			400
Turn Bay Length (ft)	300			400	380	
Base Capacity (vph)	1236	613	2414	716	636	3273
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.23	0.62	0.27	0.59	0.57

Intersection Summary

Cycle Length: 60
Actuated Cycle Length: 49.9
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.62
Intersection Signal Delay: 10.6 — Intersection LOS: B
Intersection Capacity Utilization 47.5% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Rice Avenue & "A" Street

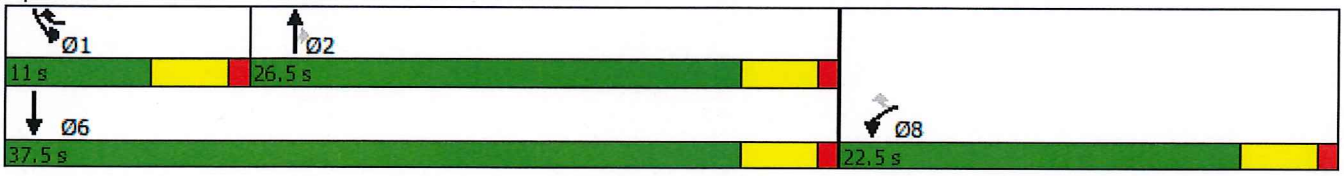


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	160	310	2059	153	298	1606
Future Volume (vph)	160	310	2059	153	298	1606
Satd. Flow (prot)	3169	1400	6225	1538	3335	4940
Flt Permitted	0.975				0.950	
Satd. Flow (perm)	3169	1400	6225	1538	3335	4940
Satd. Flow (RTOR)	169			166		
Lane Group Flow (vph)	343	168	2238	166	324	1746
Turn Type	Prot	pm+ov	NA	Perm	Prot	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8		2		
Total Split (s)	22.5	11.0	26.5	26.5	11.0	37.5
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Act Effct Green (s)	8.3	19.3	22.0	22.0	6.5	33.0
Actuated g/C Ratio	0.17	0.38	0.44	0.44	0.13	0.66
v/c Ratio	0.52	0.31	0.82	0.22	0.75	0.54
Control Delay	12.7	12.6	16.5	2.9	35.7	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.7	12.6	16.5	2.9	35.7	5.7
LOS	B	B	B	A	D	A
Approach Delay	12.7		15.5			10.4
Approach LOS	B		B			B
Queue Length 50th (ft)	23	36	156	0	48	77
Queue Length 95th (ft)	53	75	#232	27	#109	132
Internal Link Dist (ft)	1320		445			400
Turn Bay Length (ft)	300			400	380	
Base Capacity (vph)	1243	536	2725	766	431	3243
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.31	0.82	0.22	0.75	0.54

Intersection Summary

Cycle Length: 60
Actuated Cycle Length: 50.3
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 13.1 — Intersection LOS: B
Intersection Capacity Utilization 57.4% — ICU Level of Service B
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Rice Avenue & "A" Street

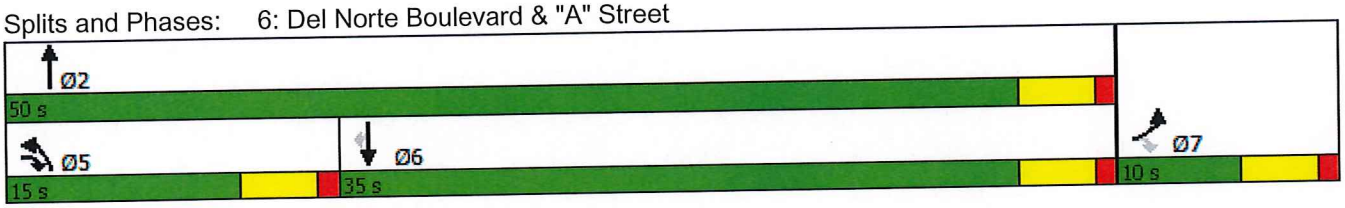


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	95	38	104	381	933	59
Future Volume (vph)	95	38	104	381	933	59
Satd. Flow (prot)	3335	1538	1719	3438	3438	1538
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3335	1538	1719	3438	3438	1538
Satd. Flow (RTOR)		41				64
Lane Group Flow (vph)	103	41	113	414	1014	64
Turn Type	Prot	pm+ov	Prot	NA	NA	Perm
Protected Phases	7	5	5	2	6	
Permitted Phases		7				6
Total Split (s)	10.0	15.0	15.0	50.0	35.0	35.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Act Effct Green (s)	5.5	16.9	8.8	49.2	37.8	37.8
Actuated g/C Ratio	0.09	0.28	0.14	0.81	0.62	0.62
v/c Ratio	0.34	0.09	0.46	0.15	0.48	0.07
Control Delay	29.0	5.7	29.2	1.9	9.6	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.0	5.7	29.2	1.9	9.6	2.7
LOS	C	A	C	A	A	A
Approach Delay	22.4			7.8	9.2	
Approach LOS	C			A	A	
Queue Length 50th (ft)	18	0	38	14	116	0
Queue Length 95th (ft)	38	17	77	23	174	15
Internal Link Dist (ft)	520			502	454	
Turn Bay Length (ft)	300		200			150
Base Capacity (vph)	300	498	295	2773	2131	978
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.08	0.38	0.15	0.48	0.07

Intersection Summary

Cycle Length: 60
Actuated Cycle Length: 61
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.48
Intersection Signal Delay: 9.8 — Intersection LOS: A
Intersection Capacity Utilization 47.0% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 6: Del Norte Boulevard & "A" Street

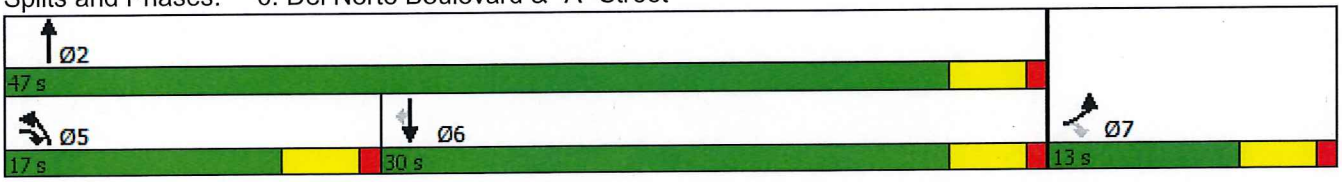


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	113	43	89	990	503	44
Future Volume (vph)	113	43	89	990	503	44
Satd. Flow (prot)	3335	1538	1719	3438	3438	1538
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3335	1538	1719	3438	3438	1538
Satd. Flow (RTOR)		47				48
Lane Group Flow (vph)	123	47	97	1076	547	48
Turn Type	Prot	pm+ov	Prot	NA	NA	Perm
Protected Phases	7	5	5	2	6	
Permitted Phases		7				6
Total Split (s)	13.0	17.0	17.0	47.0	30.0	30.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Act Effct Green (s)	7.4	18.6	8.7	46.3	35.0	35.0
Actuated g/C Ratio	0.12	0.31	0.15	0.77	0.59	0.59
v/c Ratio	0.30	0.09	0.39	0.40	0.27	0.05
Control Delay	25.4	4.5	26.9	3.6	9.3	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.4	4.5	26.9	3.6	9.3	3.7
LOS	C	A	C	A	A	A
Approach Delay	19.6			5.5	8.8	
Approach LOS	B			A	A	
Queue Length 50th (ft)	20	0	32	60	56	0
Queue Length 95th (ft)	41	16	66	93	99	15
Internal Link Dist (ft)	520			502	454	
Turn Bay Length (ft)	300		200			150
Base Capacity (vph)	474	605	359	2660	2014	920
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.08	0.27	0.40	0.27	0.05

Intersection Summary

Cycle Length: 60
Actuated Cycle Length: 59.8
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.40
Intersection Signal Delay: 7.8 — Intersection LOS: A
Intersection Capacity Utilization 39.0% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 6: Del Norte Boulevard & "A" Street



Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	118	103	20	92	0	77	0	58	0	0	0
Future Vol, veh/h	0	118	103	20	92	0	77	0	58	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	143	-	-	143	-	-	0	-	-	0	-	-
Veh in Median Storage,#	0	-	-	0	-	-	0	-	-	0	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	0	128	112	22	100	0	84	0	63	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	100	0	0	240	0	0	278	328	120	208	384	50
Stage 1	-	-	-	-	-	-	184	184	-	144	144	-
Stage 2	-	-	-	-	-	-	94	144	-	64	240	-
Critical Hdwy	4.2	-	-	4.2	-	-	7.6	6.6	7	7.6	6.6	7
Critical Hdwy Stg 1	-	-	-	-	-	-	6.6	5.6	-	6.6	5.6	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.6	5.6	-	6.6	5.6	-
Follow-up Hdwy	2.25	-	-	2.25	-	-	3.55	4.05	3.35	3.55	4.05	3.35
Pot Cap-1 Maneuver	1469	-	-	1302	-	-	645	583	899	723	541	998
Stage 1	-	-	-	-	-	-	791	739	-	835	770	-
Stage 2	-	-	-	-	-	-	894	770	-	931	698	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1469	-	-	1302	-	-	637	573	899	664	532	998
Mov Cap-2 Maneuver	-	-	-	-	-	-	637	573	-	664	532	-
Stage 1	-	-	-	-	-	-	791	739	-	835	757	-
Stage 2	-	-	-	-	-	-	879	757	-	866	698	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.4	10.6	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	637	899	1469	-	-	1302	-	-	-	-
HCM Lane V/C Ratio	0.131	0.07	-	-	-	0.017	-	-	-	-
HCM Control Delay (s)	11.5	9.3	0	-	-	7.8	-	-	0	0
HCM Lane LOS	B	A	A	-	-	A	-	-	A	A
HCM 95th %tile Q(veh)	0.5	0.2	0	-	-	0.1	-	-	-	-

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	103	88	14	107	0	92	0	51	0	0	0
Future Vol, veh/h	0	103	88	14	107	0	92	0	51	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	143	-	-	143	-	-	0	-	-	0	-	-
Veh in Median Storage, #	0	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	0	112	96	15	116	0	100	0	55	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	116	0	0	208	0	0	248	306	104	202	354	58
Stage 1	-	-	-	-	-	-	160	160	-	146	146	-
Stage 2	-	-	-	-	-	-	88	146	-	56	208	-
Critical Hdwy	4.2	-	-	4.2	-	-	7.6	6.6	7	7.6	6.6	7
Critical Hdwy Stg 1	-	-	-	-	-	-	6.6	5.6	-	6.6	5.6	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.6	5.6	-	6.6	5.6	-
Follow-up Hdwy	2.25	-	-	2.25	-	-	3.55	4.05	3.35	3.55	4.05	3.35
Pot Cap-1 Maneuver	1449	-	-	1339	-	-	677	600	921	730	563	986
Stage 1	-	-	-	-	-	-	818	757	-	833	768	-
Stage 2	-	-	-	-	-	-	901	768	-	941	721	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1449	-	-	1339	-	-	671	593	921	680	557	986
Mov Cap-2 Maneuver	-	-	-	-	-	-	671	593	-	680	557	-
Stage 1	-	-	-	-	-	-	818	757	-	833	760	-
Stage 2	-	-	-	-	-	-	891	760	-	884	721	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.9	10.6	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	671	921	1449	-	-	1339	-	-	-	-
HCM Lane V/C Ratio	0.149	0.06	-	-	-	0.011	-	-	-	-
HCM Control Delay (s)	11.3	9.2	0	-	-	7.7	-	-	0	0
HCM Lane LOS	B	A	A	-	-	A	-	-	A	A
HCM 95th %tile Q(veh)	0.5	0.2	0	-	-	0	-	-	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	514	10	0	386	10	0
Future Vol, veh/h	514	10	0	386	10	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized		None		None		None
Storage Length	-	-	100	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	100	100	5	100	100
Mvmt Flow	559	11	0	420	11	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	570	0	775	285
Stage 1	-	-	-	-	565	-
Stage 2	-	-	-	-	210	-
Critical Hdwy	-	-	6.1	-	8.8	8.9
Critical Hdwy Stg 1	-	-	-	-	7.8	-
Critical Hdwy Stg 2	-	-	-	-	7.8	-
Follow-up Hdwy	-	-	3.2	-	4.5	4.3
Pot Cap-1 Maneuver	-	-	546	-	188	488
Stage 1	-	-	-	-	328	-
Stage 2	-	-	-	-	577	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	546	-	188	488
Mov Cap-2 Maneuver	-	-	-	-	266	-
Stage 1	-	-	-	-	328	-
Stage 2	-	-	-	-	577	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	19.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	266	-	-	-	546	-
HCM Lane V/C Ratio	0.041	-	-	-	-	-
HCM Control Delay (s)	19.1	0	-	-	0	-
HCM Lane LOS	C	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	441	10	0	460	10	0
Future Vol, veh/h	441	10	0	460	10	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized		None		None		None
Storage Length	-	-	100	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	100	100	5	100	100
Mvmt Flow	479	11	0	500	11	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	490	0	735	245
Stage 1	-	-	-	-	485	-
Stage 2	-	-	-	-	250	-
Critical Hdwy	-	-	6.1	-	8.8	8.9
Critical Hdwy Stg 1	-	-	-	-	7.8	-
Critical Hdwy Stg 2	-	-	-	-	7.8	-
Follow-up Hdwy	-	-	3.2	-	4.5	4.3
Pot Cap-1 Maneuver	-	-	605	-	203	527
Stage 1	-	-	-	-	373	-
Stage 2	-	-	-	-	542	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	605	-	203	527
Mov Cap-2 Maneuver	-	-	-	-	289	-
Stage 1	-	-	-	-	373	-
Stage 2	-	-	-	-	542	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	17.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	289	-	-	-	605	-
HCM Lane V/C Ratio	0.038	-	-	-	-	-
HCM Control Delay (s)	17.9	0	-	-	0	-
HCM Lane LOS	C	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	-	0	-

Intersection	
Int Delay, s/veh	2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	360	154	5	270	116	5
Future Vol, veh/h	360	154	5	270	116	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	391	167	5	293	126	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	558	0	632	279
Stage 1	-	-	-	-	475	-
Stage 2	-	-	-	-	157	-
Critical Hdwy	-	-	4.2	-	6.9	7
Critical Hdwy Stg 1	-	-	-	-	5.9	-
Critical Hdwy Stg 2	-	-	-	-	5.9	-
Follow-up Hdwy	-	-	2.25	-	3.55	3.35
Pot Cap-1 Maneuver	-	-	988	-	406	709
Stage 1	-	-	-	-	583	-
Stage 2	-	-	-	-	846	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	988	-	404	709
Mov Cap-2 Maneuver	-	-	-	-	485	-
Stage 1	-	-	-	-	583	-
Stage 2	-	-	-	-	842	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	14.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	485	709	-	-	988	-
HCM Lane V/C Ratio	0.26	0.008	-	-	0.006	-
HCM Control Delay (s)	15	10.1	-	-	8.7	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	1	0	-	-	0	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	308	133	5	322	138	5
Future Vol, veh/h	308	133	5	322	138	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	335	145	5	350	150	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	480	0	593	240
Stage 1	-	-	-	-	408	-
Stage 2	-	-	-	-	185	-
Critical Hdwy	-	-	4.2	-	6.9	7
Critical Hdwy Stg 1	-	-	-	-	5.9	-
Critical Hdwy Stg 2	-	-	-	-	5.9	-
Follow-up Hdwy	-	-	2.25	-	3.55	3.35
Pot Cap-1 Maneuver	-	-	1058	-	430	752
Stage 1	-	-	-	-	631	-
Stage 2	-	-	-	-	819	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1058	-	428	752
Mov Cap-2 Maneuver	-	-	-	-	512	-
Stage 1	-	-	-	-	631	-
Stage 2	-	-	-	-	815	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	14.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	512	752	-	-	1058	-
HCM Lane V/C Ratio	0.293	0.007	-	-	0.005	-
HCM Control Delay (s)	14.9	9.8	-	-	8.4	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	1.2	0	-	-	0	-

Intersection	
Int Delay, s/veh	2.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	211	154	10	159	116	10
Future Vol, veh/h	211	154	10	159	116	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized		None		None		None
Storage Length	-	-	100	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	229	167	11	173	126	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	396	0	422	198
Stage 1	-	-	-	-	313	-
Stage 2	-	-	-	-	109	-
Critical Hdwy	-	-	4.2	-	6.9	7
Critical Hdwy Stg 1	-	-	-	-	5.9	-
Critical Hdwy Stg 2	-	-	-	-	5.9	-
Follow-up Hdwy	-	-	2.25	-	3.55	3.35
Pot Cap-1 Maneuver	-	-	1138	-	552	801
Stage 1	-	-	-	-	706	-
Stage 2	-	-	-	-	895	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1138	-	546	801
Mov Cap-2 Maneuver	-	-	-	-	598	-
Stage 1	-	-	-	-	706	-
Stage 2	-	-	-	-	886	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	12.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	598	801	-	-	1138	-
HCM Lane V/C Ratio	0.211	0.014	-	-	0.01	-
HCM Control Delay (s)	12.6	9.6	-	-	8.2	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0.8	0	-	-	0	-

Intersection	
Int Delay, s/veh	2.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	181	132	10	189	138	10
Future Vol, veh/h	181	132	10	189	138	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	197	143	11	205	150	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	340	0	394	170
Stage 1	-	-	-	-	269	-
Stage 2	-	-	-	-	125	-
Critical Hdwy	-	-	4.2	-	6.9	7
Critical Hdwy Stg 1	-	-	-	-	5.9	-
Critical Hdwy Stg 2	-	-	-	-	5.9	-
Follow-up Hdwy	-	-	2.25	-	3.55	3.35
Pot Cap-1 Maneuver	-	-	1194	-	575	835
Stage 1	-	-	-	-	743	-
Stage 2	-	-	-	-	878	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1194	-	570	835
Mov Cap-2 Maneuver	-	-	-	-	620	-
Stage 1	-	-	-	-	743	-
Stage 2	-	-	-	-	870	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	12.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	620	835	-	-	1194	-
HCM Lane V/C Ratio	0.242	0.013	-	-	0.009	-
HCM Control Delay (s)	12.7	9.4	-	-	8	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0.9	0	-	-	0	-

Intersection	
Int Delay, s/veh	4.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	73	103	29	35	77	60
Future Vol, veh/h	73	103	29	35	77	60
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	79	112	32	38	84	65

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	191	0	218	96
Stage 1	-	-	-	-	135	-
Stage 2	-	-	-	-	83	-
Critical Hdwy	-	-	4.2	-	6.9	7
Critical Hdwy Stg 1	-	-	-	-	5.9	-
Critical Hdwy Stg 2	-	-	-	-	5.9	-
Follow-up Hdwy	-	-	2.25	-	3.55	3.35
Pot Cap-1 Maneuver	-	-	1358	-	742	932
Stage 1	-	-	-	-	868	-
Stage 2	-	-	-	-	922	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1358	-	724	932
Mov Cap-2 Maneuver	-	-	-	-	733	-
Stage 1	-	-	-	-	868	-
Stage 2	-	-	-	-	900	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.5	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	733	932	-	-	1358	-
HCM Lane V/C Ratio	0.114	0.07	-	-	0.023	-
HCM Control Delay (s)	10.5	9.2	-	-	7.7	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0.4	0.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	66	88	20	29	92	90
Future Vol, veh/h	66	88	20	29	92	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized		None		None		None
Storage Length	-	-	100	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	72	96	22	32	100	98

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	168	0	180	84
Stage 1	-	-	-	-	120	-
Stage 2	-	-	-	-	60	-
Critical Hdwy	-	-	4.2	-	6.9	7
Critical Hdwy Stg 1	-	-	-	-	5.9	-
Critical Hdwy Stg 2	-	-	-	-	5.9	-
Follow-up Hdwy	-	-	2.25	-	3.55	3.35
Pot Cap-1 Maneuver	-	-	1385	-	784	949
Stage 1	-	-	-	-	883	-
Stage 2	-	-	-	-	947	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1385	-	771	949
Mov Cap-2 Maneuver	-	-	-	-	764	-
Stage 1	-	-	-	-	883	-
Stage 2	-	-	-	-	932	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.1	9.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	764	949	-	-	1385	-
HCM Lane V/C Ratio	0.131	0.103	-	-	0.016	-
HCM Control Delay (s)	10.4	9.2	-	-	7.6	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0.4	0.3	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	40	0	485	908	63
Future Vol, veh/h	0	40	0	485	908	63
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized		None		None		None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	0	43	0	527	987	68

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	528	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.35	-	-	-	-
Pot Cap-1 Maneuver	0	487	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	487	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	487	-	-
HCM Lane V/C Ratio	-	0.089	-	-
HCM Control Delay (s)	-	13.1	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.3	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	50	0	1079	503	50
Future Vol, veh/h	0	50	0	1079	503	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized		None		None		None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	0	54	0	1173	547	54

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	301	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.35	-	-	-	-
Pot Cap-1 Maneuver	0	686	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	686	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	686	-	-
HCM Lane V/C Ratio	-	0.079	-	-
HCM Control Delay (s)	-	10.7	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.3	-	-

PRELIMINARY TRANSPORTATION MANAGEMENT STATEMENT

PROJECT BRUIN

A 2,315,252 square foot, two-story e-commerce storage and distribution Facility

within the Sakioka Farms Business Park

4-6-2020

Summary:

The purpose of this plan is to provide a Transportation Management Statement ("TMS) for the proposed Project Bruin development on a +/-64.65 acre site (the "Subject Site") within the Sakioka Farms Business Park (the "Park") in an effort to demonstrate the End Users operational transportation management for the Subject Site. This TMS is provided to show how they will address the following concerns or issues;

- Air Quality
- Traffic Congestion
- Highest and Best Use of Land

Project Description:

The project site is approximately 64.65 acres located within Area 5 of the Sakioka Farms Business Park Specific Plan and further described in Exhibit A (Property Description) and Exhibit B (Project Site Plan). Area 5 totals 116 acres and is designated for light industrial uses and meant to cater to major industrial tenants desiring to relocate to the Oxnard area. The Specific Plan circulation system was created to accommodate the build of the specific plan and regulated by the Trip Generation Budget for each land use. For Area 5, the Trip Generation Budget assumed the below traffic generation. Traffic circulation for Area 5 was intended to be accessed from Road A (adjacent to the site), Rice Ave., and Del Norte Blvd.

The Facility will be occupied and operated by a large internet retailer. This Facility will typically be occupied 24 hours a day and operational 22 hours, 7 days a week, 365 days a year. It is anticipated that the Facility will involve two 8- or-10-hour shifts (as may be permitted by state) consistent with typical operations for this type of use. Shift start and stop times are staggered, which significantly limits congestion both inside and outside the Facility.

The Facility will be considered a Group S-1 or Special Industrial occupancy and will be dedicated primarily to the storage and distribution of Class I-IV and Group A plastic commodities. The building's structural elements will be comprised of tilt-up concrete wall panels and steel columns supporting steel joist girders and bar joists. The facilities auto parking will be screened with landscaping along the public way. The facilities truck court / loading area will be screened using an 8' concrete wall and landscaping along the public way. The site will be lit with cut-off LED fixtures mounted on the building or on-site poles. The parking areas are designed to maximize pedestrian and auto traffic flow utilizing generous two-way traffic aisles and walkways that connect to the building and public way. The parking areas will be shaded via trees at landscaping islands and buffers within the parking rows.

Land Use:

The Subject Site is currently zoned M-1 (Light/General Industrial) per the Sakioka Farms Business Park Specific Plan. Permitted uses in Area 5 include manufacturing, fabrication, assembly, processing materials, agricultural produce, maintenance and repair, warehouse and storage, packaging, and office (not to exceed 20% of the primary use).

Public Transit:
Goldcoast Transit has current public transit lines near the Subject Facility along Rice Ave. The End User will work with Goldcoast directly to find possible solutions for additional stops and infrastructure needed to service the Subject Facility.

New Employee Orientation:
Each new employee will be provided, during their initial orientation, information and an overview of all the related commuting alternatives and amenities available to them. The goal is to encourage employees to actively pursue commuting alternatives by providing them easy access to materials concerning the same and dedicated people to answer questions.

Transportation Coordinator
The End User shall designate a transportation coordinator in charge of an in-house commuter program. This person will 1) keep the information board updated, 2) Provide information on how to organize a car pool such as utilizing fee parking areas like Park and Rides, 3) provide information on how to connect with other workers, and 4) provide any company benefits/assistance for commuting.

Information Boards:
The End user shall post an information board in the employee break room providing information, such as; how to organize a car pool including utilizing free parking areas like Park and Rides, how to connect with other workers looking to carpool, providing sign-up sheets for employees wishing to carpool, providing company policy/programs facilitating alternative transportation, and providing location of public transportation when it becomes available.

Parking Lot Location:
The main parking lot for the Subject Facility is located adjacent to the office area within the building and along Road A to provide the best possible access to main arterials, bus and shuttle stops.

Pedestrian Pathways:
The Subject Site has been designed to provide immediate access to pedestrian and bicycle pathways along all roadways abutting the Subject Site. Bike lanes and sidewalks have been designed into the adjacent streets and frontages to meet Sakioka Farms Business Park desires to have transportation linkages to amenities in the Park.

Retail Support Facilities:
The Subject Facility will not include retail support facilities as part of its development but as future development in the Park increases, access to these amenities will be available to employees thru pedestrian pathways, bike lanes, etc. The Subject Facility will provide onsite food services thru vending, food preparation areas, and a large breakroom.

Preferential Parking:
The Subject Facility will have preferential parking for carpool, van pool, and flexible fuel/cleaner fuel vehicles to meet Cal Green standards.

Bicycle Facilities/Showers:
The Subject Facility will have on site bicycle racks, lockers, and the appropriate shower facilities to meet Cal Green standards and to incentivize employees to utilize bikes as an alternative means of transportation to and from work.

Work Hour Management:
The Subject Facility will continually monitor work hours and shifts for its employees to better manage the transportation to and from the Subject Facility.

Passenger Loading Areas:
A passenger loading for ride sharing vehicles shall be incorporated into the site design.