

**ADDENDUM TO
THE CAMPUS 257 NEQSP TRAFFIC IMPACT ANALYSIS
January 2025**

This addendum to the March 2024 Traffic Impact Analysis (TIA) has been prepared to address recent changes to the proposed Campus 257 Northeast Quadrant Specific Plan project (i.e. project) design and to clarify some information in the TIA.

Project Land Uses

The project will include the development of about 257 acres in the City's Northeast Quadrant Specific Plan. The project will consist of the following elements:

- 813 single family residences
- 225 high density residential living (HDR)
- 47.42 acres Tech Park
- 2.00 acres commercial development

The Tech Park is assumed to have a Floor to Area Ratio (FAR) of 0.30 while the commercial development is assumed to have an FAR of 0.25. This will result in the Tech Park containing about 619,680 square feet of space and the commercial development containing 27,780 square feet.

Two scenarios were analyzed for the study, the proposed 2025 Opening Day and 2040 Buildout conditions. The Opening Day scenario was analyzed with 495 housing units constructed. This Opening Day condition was reviewed and approved by the City prior to analysis. The full project was assumed completed by 2040.

The HDR site has since been swapped with a portion of the southwest corner of the Tech Park, adjacent to Professional Drive. It is projected that access to the HDR site will be via Professional Drive and internally at the Campus Parkway / Opportunity Parkway roundabout. Additionally, the drainage basin has been relocated from the southern portion of the project site to the center-east portion, adjacent to Pedrick Road and across from Campbell's facility. The single-family residential units that were located at the center-east of the project have been relocated to the south where the drainage basin had originally been located (see TIA Figure 2 (revised)).

Qualitatively, traffic along Opportunity Parkway will decrease with some HDR traffic using Professional Drive to access Pedrick Road. Similarly, traffic from the relocated southern residential area will use Commercial Drive to access either Pedrick Road or Professional Drive; Opportunity Drive is expected to receive inconsequential traffic from this relocated area. Traffic along Opportunity Drive accessing Pedrick Road will decrease while traffic along Pedrick Road from Commercial Drive will increase. Based on the 2040 + Project LOS results adequate capacity is available to accommodate the additional traffic along Professional Drive and Pedrick Road with the reduced traffic along Opportunity Drive.

Vaughn Road Realignment

The City of Dixon's General Plan 2040 identifies the Vaughn Road realignment project. This project, as identified in the General Plan, "will construct a four-lane bypass route to connect Vaughn Road with Pedrick Road while avoiding the Union Pacific Railroad tracks". The City's October 2021 *Dixon Area Advanced Traffic And Railroad Safety Study* further describes the recommended improvements in response to development of the project site. The proposed 2021 study shows reconstructed Vaughn Road west of the Union Pacific Railroad (UPRR) tracks with an "S" curve connecting as a tee intersection to Pedrick Road north of the existing UPRR rail crossing and the Vaughn Road / Pedrick Road intersection (see Figure A of this Addendum). Vaughn Road would be vacated at the railroad crossing. As there are some land uses between the to-be realigned Vaughn Road and the Pedrick Road intersection, Vaughn Road access to these properties would occur via a new tee intersection to the "S" curve portion of the realigned Vaughn Road. A single farmland property will exist on the south side of Vaughn Road between Pedrick Road and the UPRR while an existing commercial property with primary access along Pedrick Road would exist on the north side of the project. A single lane access on the west side of the Pedrick Road / Vaughn Road intersection would continue to exist and see few vehicles into the farmland area. The new connection at Pedrick Road would include a tee intersection with minor street stop control.

Project Roadways

With the project, the proposed local roadway layout includes a new intersection on Vaughn Road along the west side of the site. The new intersection is proposed at Professional Drive, which will extend along the west side of the project, turn to the east on the north side of the project, and intersect Pedrick Road (see TIA Figure 2 (revised)). Instead of the "S" curve connecting Vaughn Road directly to Pedrick Road, the proposed plan now includes a tee intersection along Professional Drive at the south side of the project, connecting with a tee intersection to Pedrick Road. This roadway is currently identified as Commercial Drive, as shown in TIA Figure 2 (revised). Almost all traffic between Vaughn Road west of Professional Drive and I-80 is expected to use Professional Drive.

With the construction of Professional Drive and Commercial Drive, no additional traffic is projected to travel between Vaughn Road west of Professional Drive and east of Pedrick Road as well as south on Pedrick Road. The traffic patterns will be altered with traffic either traveling along Pedrick Road through the intersection or a new turn to and from Vaughn Road east of Pedrick Road. Additionally, as noted in the *Dixon Area Advanced Traffic And Railroad Safety Study* the proposed operations of the Pedrick Road / Vaughn Road (now Commercial Drive) intersection will be minor street stop control. The existing Pedrick Road / Vaughn Road intersection will continue to be a four-way intersection; however, the west leg will serve farmland traffic.

Traffic Volumes, Truck Percentage, and Peak Hour Factors

Intersection turning movement data and truck data for background traffic was based on the information contained in the DKS *Streets Master Plan Update*, adopted by the City in October 2021. The DKS traffic count data was collected in December 2020. A review of this data showed that the truck percentage at the Pedrick Road / Vaughn Road (to be Commercial Drive under the project) intersection was 5%. The remaining study intersections along Pedrick Road used 2% truck traffic. This percentage reduction is consistent where high volume locations such as Interstate 80 are approached. The higher traffic volume would “dilute” the truck traffic, resulting in a lower truck percentage.

For the study intersections along Pedrick Road the peak hour factors (phf) used in the Master Plan Update varied between 0.92 and 0.97. In preparing the TIA, the more conservative 0.92 rate was used throughout (the analysis is conservative because a lower phf results in a higher intersection volume analyzed).

The project may generate some truck traffic along Pedrick Road between I-80 and Professional Drive, and along Professional Drive to the Tech Park driveways. The Research and Development (R&D) land use (LU 760) in ITE *Trip Generation* is considered an Office land use and does not contain truck percentage data unlike Industrial land uses in *Trip Generation*. The expected truck uses for those areas of the project are those of deliveries to the site and not of warehousing or manufacturing that would be associated with larger amounts of truck traffic. The truck traffic that may be generated by the project in this area as it has been redesigned, specifically, the R&D land use is below a level that would change conclusions in the TIA.

Crash History

The review of crash history conducted along 1st Street and Pedrick Road was completed for the TIA. An inadvertent error is noted in the 2nd half of TIA Table 4, in that the heading should read “Pedrick Road, Sievers Road / I-80 WB Ramps to Vaughn Road”. TIA Table 4 (Revised) below presents the corrected headings.

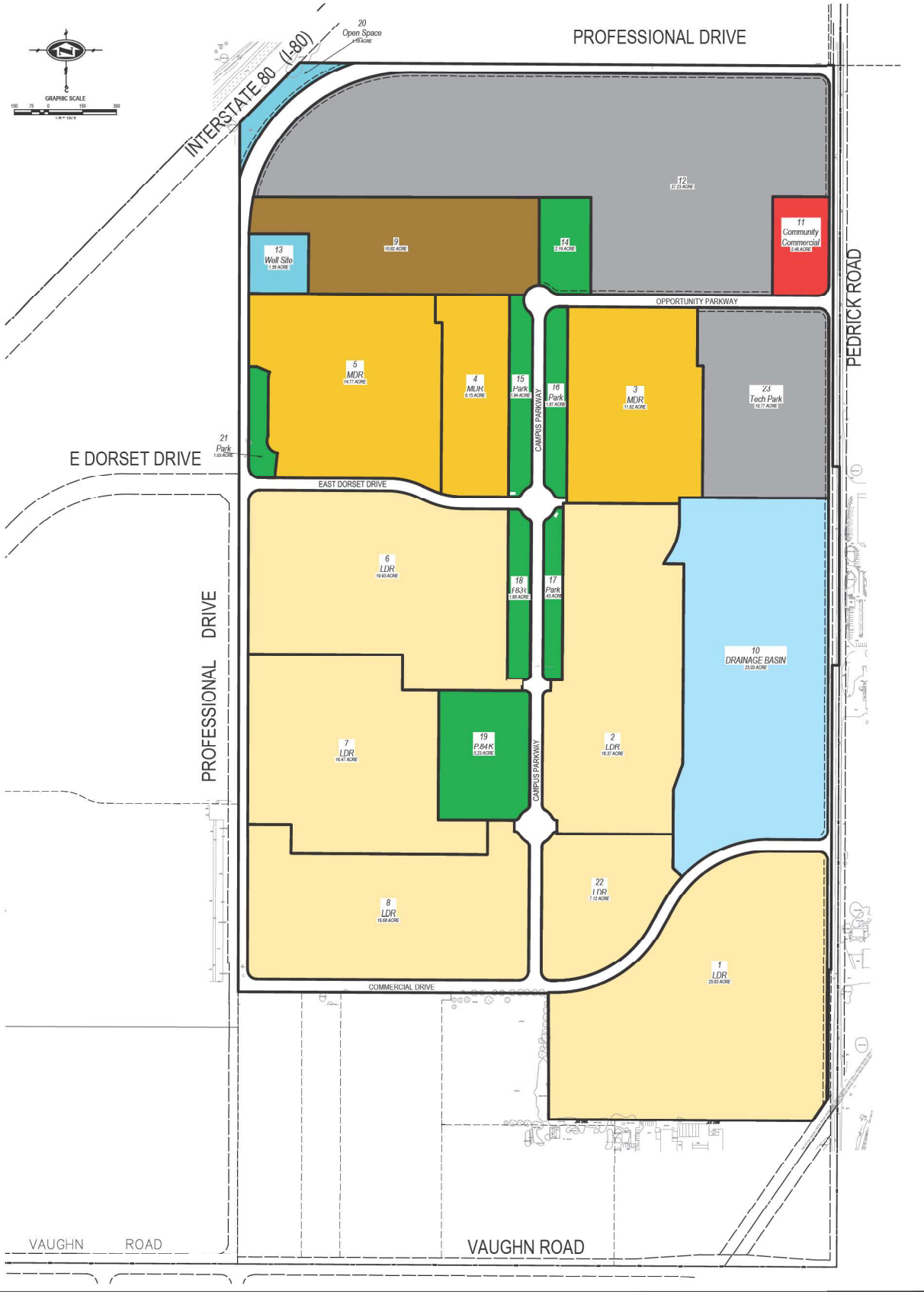
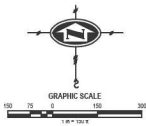
TABLE 4 (REVISED)				
2020-2022 COLLISION HISTORY				
N. 1ST St / Dorset Dr Intersection to N.1ST St /Vaughn Rd intersection				
Crash Type	2020	2021	2022	Total
Speed	1*		3† / 1*	5
Unsafe Starting / Backing			1†	1
Improper Turn	1†	1*	1†	2
Right-of-Way	1†		1†	3
Signal Violation		1†		1
Improper Passing	1†			1
Total Crashes				13
† N. 1 ST St / Dorset Dr				
* N. 1 ST St / Vaughn Rd				
Pedrick Rd / Vaughn Rd Intersection to Pedrick Rd / Sievers Rd – I-80 WB Ramps				
Following too Closely	1 Δ			1
DUI	1‡			1
Speed	1◊ / 1‡	1◊		3
Unsafe Starting / Backing			1 Δ / 1‡	2
Improper Turn	1◊	1◊	1‡	3
Right-of-Way			1‡	1
Total Crashes				11
Δ Pedrick Rd / Sparling Ln – I-80 EB Ramps				
‡ Pedrick Rd / Sievers Rd – I-80 WB Ramps				
◊ Pedrick Rd (midblock)				

2040 Plus Project Analysis

To gauge the impact of adding 3% additional truck traffic an additional conservative analysis was completed using the 5% truck traffic used in the DKS study for the adjacent intersections along Pedrick Road. These intersections included Pedrick Road at Commercial Drive and Pedrick Road at the Campus 257 North intersection (now identified as Opportunity Drive). The analysis considered the 2040 Plus Project conditions for both a.m. and p.m. peak hours. These conditions are the worst-case scenario with buildout of the project during the Cumulative time frame.

Both intersections will continue to operate with the worst LOS (the eastbound approach) operating at level of service (LOS) B conditions at the Pedrick Road / Commercial Drive intersection and at LOS D or better conditions at the Pedrick Road / Campus 257 North intersection. Left turn queues along Pedrick Drive at each of the intersections will be less than one vehicle while the longest queue for either of the minor streets will be 108 feet for the eastbound Campus 257 North approach. The Synchro software analysis results are attached.

THE CAMPUS-LAND USE PLAN
 NORTHEAST QUADRANT SPECIFIC PLAN (NEQSP)
 JANUARY 4, 2025 - SHEET 1 OF 1



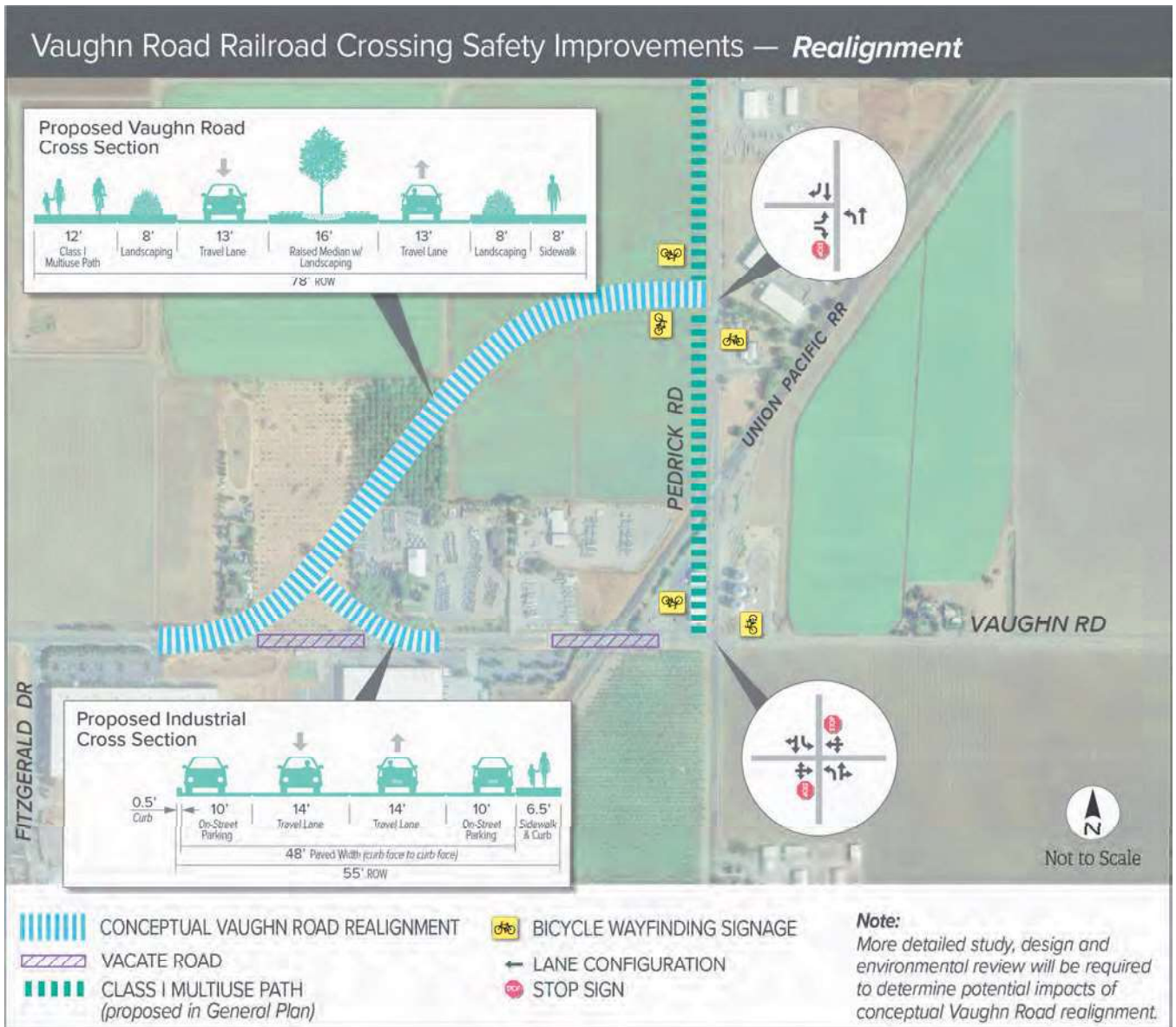


FIGURE 8. VAUGHN ROAD REALIGNMENT AND AT-GRADE RAILROAD CROSSING CLOSURE

CENTRAL AREA RAILROAD CROSSING IMPROVEMENTS

The recommended improvements at the First Street and A Street railroad crossings are described in the following sections, as well as other safety enhancements in the central area.

FIRST STREET RAILROAD CROSSING RECOMMENDED IMPROVEMENTS

Safety improvements at the First Street (SR 113) crossing were recently constructed in December 2019; accepted in the spring of 2020. Therefore, the only additional improvements recommended at this location include enhanced street lighting and simplifying signage near the railroad crossing, as detailed in *Appendix E: Diagnostic Meeting Minutes*.

Intersection						
Int Delay, s/veh	3.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y		Y	↑	↑↑	
Traffic Vol, veh/h	78	10	133	324	104	213
Future Vol, veh/h	78	10	133	324	104	213
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	-	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	85	11	145	352	113	232

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	870	172	345	0	-	0
Stage 1	229	-	-	-	-	-
Stage 2	641	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	306	842	1213	-	-	-
Stage 1	788	-	-	-	-	-
Stage 2	523	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	269	842	1213	-	-	-
Mov Cap-2 Maneuver	269	-	-	-	-	-
Stage 1	694	-	-	-	-	-
Stage 2	523	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	23.22	2.44	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1213	-	292	-	-
HCM Lane V/C Ratio	0.119	-	0.328	-	-
HCM Ctrl Dly (s/v)	8.4	-	23.2	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.4	-	1.4	-	-

Intersection						
Int Delay, s/veh	2.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↘	↗	↘	↗	↗	↗
Traffic Vol, veh/h	53	85	56	404	63	17
Future Vol, veh/h	53	85	56	404	63	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	200	0	200	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	58	92	61	439	68	18

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	629	68	87	0	0
Stage 1	68	-	-	-	-
Stage 2	561	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	446	995	1509	-	-
Stage 1	954	-	-	-	-
Stage 2	571	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	428	995	1509	-	-
Mov Cap-2 Maneuver	428	-	-	-	-
Stage 1	916	-	-	-	-
Stage 2	571	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	11.19	0.91	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1509	-	428	995	-	-
HCM Lane V/C Ratio	0.04	-	0.135	0.093	-	-
HCM Ctrl Dly (s/v)	7.5	-	14.7	9	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	0.3	-	-

Intersection						
Int Delay, s/veh	7.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y		Y	↑	↑↑	
Traffic Vol, veh/h	155	103	32	181	356	173
Future Vol, veh/h	155	103	32	181	356	173
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	-	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	168	112	35	197	387	188

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	747	288	575	0	-	0
Stage 1	481	-	-	-	-	-
Stage 2	266	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	364	710	996	-	-	-
Stage 1	588	-	-	-	-	-
Stage 2	778	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	351	710	996	-	-	-
Mov Cap-2 Maneuver	351	-	-	-	-	-
Stage 1	568	-	-	-	-	-
Stage 2	778	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	26.46	1.31	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	996	-	440	-	-
HCM Lane V/C Ratio	0.035	-	0.637	-	-
HCM Ctrl Dly (s/v)	8.7	-	26.5	-	-
HCM Lane LOS	A	-	D	-	-
HCM 95th %tile Q(veh)	0.1	-	4.3	-	-

Intersection						
Int Delay, s/veh	2.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↘	↗	↘	↗	↗	↗
Traffic Vol, veh/h	33	77	88	157	399	60
Future Vol, veh/h	33	77	88	157	399	60
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	200	0	200	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	84	96	171	434	65

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	796	434	499	0	-	0
Stage 1	434	-	-	-	-	-
Stage 2	362	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	356	622	1065	-	-	-
Stage 1	653	-	-	-	-	-
Stage 2	705	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	324	622	1065	-	-	-
Mov Cap-2 Maneuver	324	-	-	-	-	-
Stage 1	595	-	-	-	-	-
Stage 2	705	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	13.42	3.13	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1065	-	324	622	-	-
HCM Lane V/C Ratio	0.09	-	0.111	0.135	-	-
HCM Ctrl Dly (s/v)	8.7	-	17.5	11.7	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0.3	-	0.4	0.5	-	-