



WEST YANKTON COUNTY

SUBAREA TRANSPORTATION PLAN



Prepared for:



Prepared by:



OCTOBER 2023

WEST YANKTON COUNTY SUBAREA TRANSPORTATION STUDY

Prepared for:



Prepared by:



October 2023

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Executive Summary

Introduction

The West Yankton County subarea included in this transportation planning study is highly influenced by activities at and development that relies on or is associated with the summer activities at the Lewis and Clark State Recreation Area. The recreation area creates **direct impacts** from visitors coming to the area for boating, camping, day picnics and/or to hike/bike/walk trails within the park in passenger cars, recreational vehicles (RV), vehicles pulling boats or vehicles pulling boats and RVs. In addition, as the park draws visitors from a substantial area around Yankton, it has created a summer economy generating **indirect impacts** from vehicle, pedestrian and bicycle traffic from retail businesses catering to recreation visitors, campgrounds, camper and boat sales, and summer homes. The need for additional detailed analysis of the area most influenced by the summer activities was documented in the 2015 Yankton County Master Transportation Plan. Recognizing the influence of the recreation activity areas, traffic growth rates along roads in the West Yankton County Subarea Transportation Plan were proposed to be much higher than the county in general. Additionally, the 2015 plan included recommendations for identifying designated recreation vehicle routes as a part of the truck route analysis. The county proposed the West Yankton County Subarea Transportation Study as a more detailed assessment of the transportation system most influenced by recreation activities and enhanced growth opportunities spinning off the recreation uses.

The subarea transportation plan focuses on:

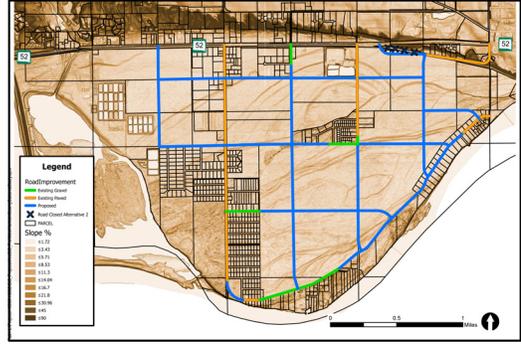
- Understanding the current physical multimodal network of state routes, county routes, and multi-purpose trails within the study area.
- Reviewing crash data for state and county routes to understand whether there are opportunities to make changes to the network to reduce crashes.
- Inventorying and evaluating access points along the primary network in the study area. For most segments of the state road network in the study area the number of access points that have evolved over time exceed the desirable number/density defined in the SDDOT Road Design Manual. Through the subarea plan development, the question of whether there is the need to proactively consolidate and/or close access points is critical to answer.
- Looking to the future county network transportation needs. In the area directly east of Lewis and Clark State Recreation Area there has been a tremendous amount of development, led by more and more campground/RV parks popping up each year. Most of the development has occurred on parcels with frontage road access to SD52 or off primary routes such as Deer Boulevard and Timberland Drive. Continued development of the area south of SD52 without consideration of an internal support network directs even local traffic on to the state highway network for very short trips. A missing internal network results in traffic being pushed through a small number of corridors to/from SD52 that results in congestion.

Recommendations

When prioritized from the perspective of need and benefit, the county focused much of the analysis effort on the area south of and including SD52 between the recreation area and the Yankton city limits. The SD52 corridor through this area carries the most recreation-destination traffic in the summer and is the area with the greatest potential for new development. While there is on-going residential development farther west along SD52, in the SD314 corridor and along SD153, subdivisions in these areas may have the capacity to accommodate 15 to 30 units. In the areas south SD52, there is an estimated capacity of an



additional 3,500 residential units¹, which has the potential generate volume that will warrant additional lanes at intersection and upgraded intersection control. To mitigate the impacts of future development of the area south of SD52, the plan includes recommendations for development of an internal arterial/collector framework network supporting travel across the subarea, provides additional paths into and out of currently developed areas to the south that rely on Deer Boulevard as the only means of access, and balances traffic along the SD52 corridor.



Arterial/Collector Framework Network

A universal concern among residents and business owners attending public meetings and Stakeholder meetings is congestion and safety, especially in the higher volume summer months, at SD52/Deer Boulevard. Based on peak summer hourly traffic, it is recommended that a signal be installed at the intersection. The SDDOT completed a parallel independent analysis of the intersection and based on the work have included a signal at the intersection for fiscal year 2024 (FY24).



Looking North from Deer Boulevard to SD52

Access along most segments of each of the state routes in the study area include more access than is supported in the SDDOT Road Design Manual for rural highway corridors (five access points per side).

While the number of access points exceeds the threshold level, there is not an elevated number or rate of crashes along any segment of the state network in the study area. Thus, review of each location with the intention of preparing a program of driveway consolidations and closures is not currently warranted. Going forward, however, the SDDOT and Yankton County will review every development proposal along the state network with the goal of not increasing the density of access points and if possible, working back towards the SDDOT design guideline.

More minor intersection improvement recommendations are outlined in the Recommendations section of the final plan, with recommendations being limited to adding turn lanes to minor street approaches. No changes to the intersection control, other than at SD52/Deer Boulevard, have been included in the plan recommendations.

¹ West Yankton Sanitary Sewer Feasibility Study, Amendment #1, April 2022, Table 2.



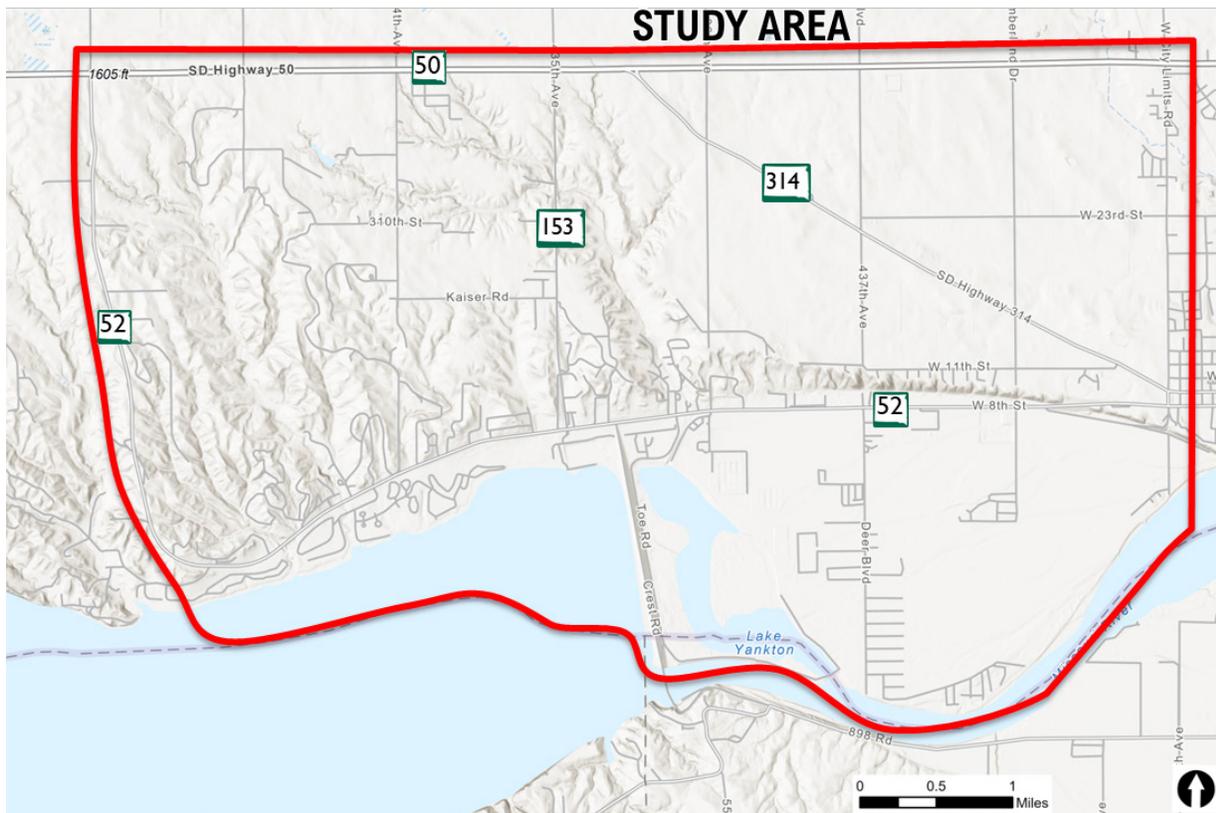
Introduction/Study Approach

Introduction

In 2015, Yankton County and the South Dakota Department of Transportation (SDDOT) completed an update of the Transportation Master Plan. Through the countywide effort, the areas immediately west of Yankton through the Gavin's Point Recreation area and north to South Dakota 50 (SD50) was identified as the portion of the county likely to see development at levels substantially greater than other areas of the county outside one of the municipalities. Figure 1 displays the West Yankton County Transportation Study coverage area. The area is generally bounded by:

- SD50 on the north
- West City Limits Road on the east
- Missouri River on the south
- SD52 on the west.

Figure 1. West Yankton County Study Area



To quantify the assumption the study area is a higher growth opportunity area in the county, population and employment change in the period from the 2010 census to the 2020 census was reviewed for three geographies:

- The study area.
- The city limits of Yankton.
- Yankton County.

Change over the 10-year period in the west Yankton County study area relative to Yankton and the remainder of the county was quantified through a comparison of Census data change by tract for the county. In the tracts representing the study area (note: study area boundaries do not exactly follow the tract boundaries) growth has outpaced change in both Yankton and the remainder of Yankton County. Thus, one of the principal assumptions of the need for the study is supported by census data. Population and employment change in the general study area relative to the remainder of the county is documented in Table 1. In 2010, the population of the study area was less than 40% of the population of either Yankton or the remainder of the county. Over the next decade, population in the study area grew by more than 3.5 times the amount of the city. Population growth in the remainder of the county was minor.

Employment values over the same 10-year period reflect a different picture for the combination of the study area, Yankton and the remainder of the county. In 2010, just over 75 percent of the employment in the county was located within the city limits of Yankton. By 2020, the percentage increased slightly to just over 77 percent. This high percentage of total county employment is expected as critical services needed to support employment development (municipal water and sewer) are principally available only within the city limits. Municipal water and sewer are not available in the study area, which limits opportunities for higher density employment developments that would need these critical services.

Table 1. Yankton County/Yankton/Study Area Change in Population and Employment – 2010 through 2020

Location/Area	Population By Census Year		Change in Decade	Employment Change by Census Year		Change in Decade
	2010	2020		2010	2020	
West Yankton County Study Area	3,462	4,125	663	353	555	202
City of Yankton	9,613	9,798	185	8,743	9,365	790
Remainder of Yankton County (Outside Yankton and Study Area)	9,363	9,386	23	2,458	2,122	-336

Source: US Census Bureau

Study Approach

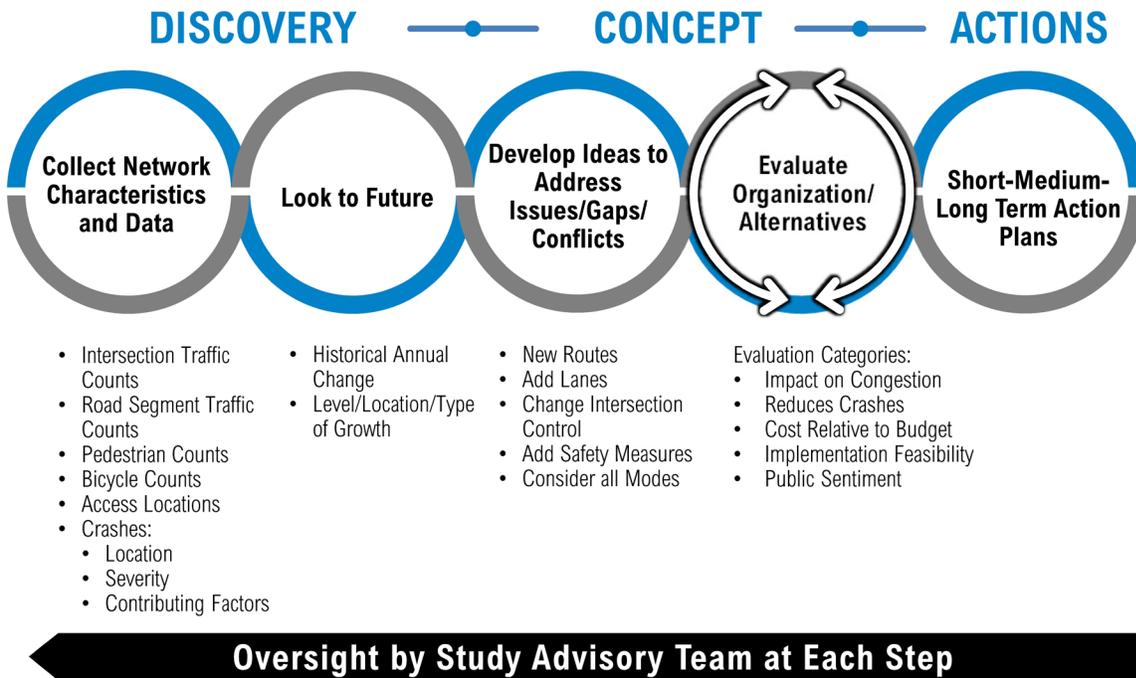
Completion of the subarea transportation plan was organized into a five-step process as outlined below:

Step 1: Discovery – In this phase of the study the consultant team collected and analyzed a range of transportation network facility physical attributes and use of the range of facilities by vehicles, person by bicycles and pedestrians. Traffic and pedestrian, and bicycle counts were collected at key intersections of county or other routes and the state highway network. Crash data retained by the SDDOT was also collected, aligned with specific intersections and roadway segments and analyzed to detail total numbers, crash rates, crash severity and basic information about the crashes observed.

Through this step the team held the initial public meeting at which the technical data collected and evaluated was presented and local stakeholders were asked to provide input about their travel (across all modes), locations where they see issues, and parts of the network they think are positives and negatives for the community.

The purpose of completing the study is to provide recommendations for transportation network improvements that will provide benefit today and into the longer-term future through 2050. To assist with implementation phasing of any improvements, an interim period of 2035 is also included in the future period analysis.

Figure 2. West Yankton County Transportation Study Approach



Step 2: Concept - The heart of the study is development and review of alternatives to address current and future gaps/issues/deficiencies identified in the transportation network. Alternatives developed need to address all modes from pedestrians, bicyclists and motorized vehicles and the intersection/road segment operations issues, access management needs, and gaps in the network to support development.

The range of alternatives will be assessed using a broad range of criteria, including:

- A concept's ability to reduce/resolve congestion along a segment or through an intersection
- A concept's impact on crashes, with an emphasis on severe crashes
- Cost of an improvement relative to the transportation budget
- The feasibility of implementing the concept
- Public input received through meetings with landowners and with the public



Step 3: Actions – Improvements needed in the study area not all be warranted for the same period and the cost of the range of improvements recommended will likely exceed the budget for any one year of construction. Thus, a multi-year implementation plan for the study area will be needed to provide for an orderly advancement of projects from the study phase, through engineering and into construction.

Technical analysis throughout the study was supported by engaging local engineering and planning staff from Yankton County and the SDDOT, coordinating with County Commissioners, conversation with stakeholders made up of residents and business owners and through open public meetings. A Study Advisory Team (SAT) including representatives from the agencies/organizations listed to the right met six times through the course of the study. Each of the meetings focused on specific aspects of the study from identifying and discussing issues to be addressed to operations and safety analysis results, to development of improvements to evaluate to reviewing recommendations and options for funding implementation.

Study Advisory Team (SAT)

- Yankton County Planning and Zoning
- Yankton County Board of Commissioners
- City of Yankton
- SDDOT Road Design
- SDDOT Project Development
- Yankton County Highway Department
- SDDOT Yankton Area Office
- US Corps of Engineers
- South Dakota Game, Fish and Parks



Analysis of Existing Conditions

Through the information in this section, data collection efforts, roadway characteristics reviews, pedestrian/bicycle facilities review, traffic operations analysis, access inventory, and crash review conducted are detailed. Included are the:

- Data collection methods and results.
- Analysis methods for the individual elements reviewed.
- Results of the evaluation.

Traffic Data Collection

12-hour vehicle turning movement and pedestrian/bicyclist counts were collected by All Traffic Data Services (ATD) during the weeks of July 25, 2022, and September 19, 2022, at the following study intersections.

- SD52/Gavin's Point Road
- SD52/Toe Road
- SD52/Timberland Drive
- SD52/West City Limits Road
- SD50/SD52
- SD50/SD153
- SD50/SD314

In addition, the South Dakota Department of Transportation (SDDOT) collected 12-hr vehicular turning movement and pedestrian/bicyclist counts during the week of June 6th, 2022, at the following study intersections:

- SD52/Deer Boulevard
- SD52/SD153

Traditionally, the SDDOT methods are to evaluate traffic operations at intersections and along road segments using data collected during periods when school is in session, as peak period traffic volumes are generally greater. The Lewis and Clark State Recreation Area changes the traffic dynamics in the study area from those typically observed in most other areas of the state. Along key corridors and at focus intersections, the recreation traffic in the peak hours of summer months (June through August) results in the following unique conditions that lead to collecting summertime traffic also:

- Overall peak hour volume is greater/higher than during the traditional school in session periods.
- Turning movement percentages by intersection and approach have a greater orientation to the park area than in the fall/winter months.

The SDDOT also obtained roadway segment classification counts from Thursday, July 28 to Tuesday, August 2, 2022 at eight (8) locations in the study area. The segment counts provided 24-hour volumes, vehicle classification, and speed data, which are discussed further in this document. Segments where volume and speed information were collected were:

1. Segment 1: SD52 between SD50 and Gavin's Point Road



2. Segment 2: SD52 between Gavin's Point Road and SD153
3. Segment 3: SD52 between SD153 and Deer Boulevard
4. Segment 4: SD52 between Deer Boulevard and West City Limits Road
5. Segment 5: SD50 between SD52 and SD153
6. Segment 6: SD50 between SD153 and SD314
7. Segment 7: SD153 between SD50 and SD52
8. Segment 8: SD314 between SD50 and SD52

A summary of the data collected as part of the study is shown in Figure 3.

Traffic Volumes

The traffic data collected was analyzed to determine seasonal traffic volume changes, as well as vehicle classifications and speeds within the study area, which are summarized in the following sections.

Seasonal Traffic Volume Comparison

The Lewis and Clark State Recreation Area, located immediately west of the SD52/SD153 intersection, attracts regional recreational traffic during the summer. To understand whether the recreational area creates operational differences within the study area, collected during both the school-in-session (non-summer) and peak summer conditions were utilized to develop and compare hourly volume profiles along the study segments.

Volume Profile - SD52 East of Lewis and Clark State Recreational Area

When comparing summer weekday (Thursday), summer "weekend" (counts on a Friday) and what is traditionally the traffic condition analyzed by the SDDOT (weekdays with school in session), hourly volume pattern differences in both magnitude and percent of daily volume were evident in the SD52 corridor. Figure 4 displays hourly volume profiles for each of the collection dates.

The data indicates:

- School-in-session (non-summer) weekday volumes are higher than both summer counts (weekday and weekend) during the traditional morning peak hour starting at 7 a.m.
- After the morning peak, the general hourly patterns for the summer weekday and school in session periods are similar, with the summer weekday carrying slightly more traffic in each hour.
- Weekend summer traffic does not show the morning "peak" observed in the other two collection periods. Traffic essentially builds through the morning with a peak at noon, followed by a small decline, which is followed by another building through the 5 p.m. hour. Throughout the day (except for the early morning) peak summer weekend volumes exceed the weekday summer and weekday school-in-session (non-summer) volumes.
- Summer weekend traffic is typically 50 to 60 percent higher each hour after approximately 9:30 a.m. than school-in-session (non-summer) counts and approximately 35 to 45 percent higher than summer weekday traffic.
- SD52 volumes adjacent to Timberland Park Drive represent the highest segment volume along the corridor and within the study area. While segment volumes to the west of Timberland Park Drive are lower, the hourly patterns through west of SD153 are similar.



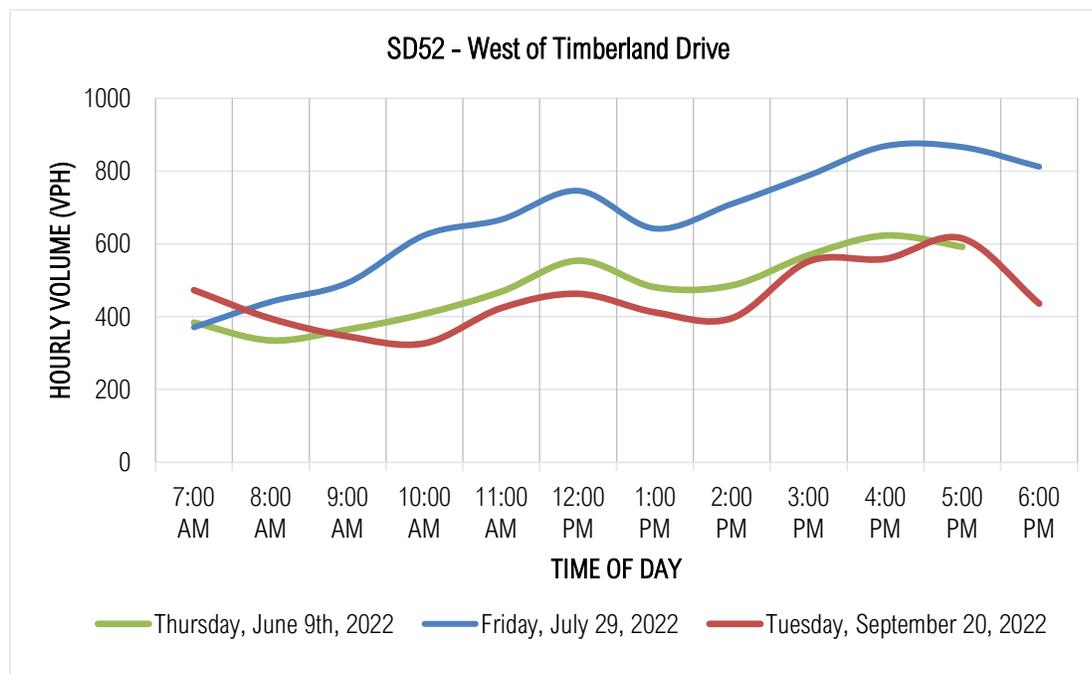


Data Collection Summary
 West Yankton County Subarea Study
 SDDOT & Yankton County

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Figure 3

Figure 4. SD52 West of Timberland Drive Hourly Traffic Volume Profile



Volume Profile - SD50, SD153 and SD314 Corridors

Figure 5 displays the profiles for SD50 west of the junction with SD52. The hourly profile pattern displayed in the figure is representative of the hourly profiles also observed along the SD153 and SD314 corridors, even as the volume in each corridor may differ at the collection points within the study area. A comparison of school-in-session (non-summer) and peak summer volumes indicates traffic volumes remained relatively consistent over the course of the day between the periods. Key observations of the data across the various locations are:

- A similar less pronounced or essentially non-existent morning peak is not observed in the summer weekend traffic profile.
- Traffic in the summer builds throughout the morning period, while traffic in the school-in-session (non-summer) period decreases slightly through the morning period.
- A modest noon hour peak is observed in the summer weekend traffic, while the school-in-session period traffic peaks closer to 1 p.m.
- Afternoon traffic during summer weekends build quickly in the early afternoon, slightly level off before building again with an afternoon peak at about 5 p.m. Non-summer traffic afternoon also builds from the early hours of the afternoon, but at a slower rate. Additionally, the peak in the late afternoon is not as pronounced and takes a longer period to subside.

Vehicle Classification Summary

Vehicle classification data was collected along the eight (8) target segments within the study area. The data was classified based on the Federal Highway Administration (FHWA) Vehicle Classifications criteria, which is shown in Table 2. Classification numbers four (4) through 13 are considered heavy vehicles. Table 3 represents the daily vehicles per classification at each of the eight (8) segment locations. In general, SD52 and SD153 have heavy vehicle percentages between three (3) and six (6) percent, whereas SD50 and SD314 generally have higher heavy vehicle percentages, ranging from nine (9) to 12 percent.



Figure 5. SD50 West of SD52 Hourly Traffic Profile

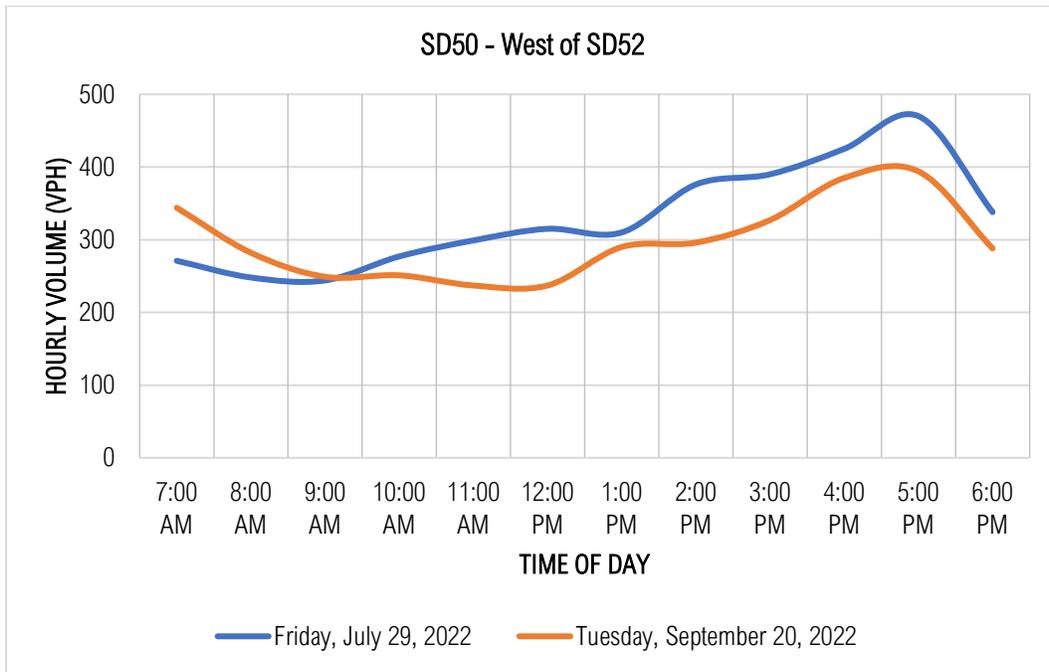


Table 2. FHWA Vehicle Classifications

Classification Number	Vehicle Description	Classification Number	Vehicle Description
#1	Motorcycles – 2 axles	#8	Double Unit – 4 axles or less
#2	Passenger Cars – 2 axles	#9	Double Unit – 5 axles
#3	Pickup Trucks, Vans – 2 axles	#10	Double Unit – 6 axles or more
#4	Buses – 2 or 3 axles	#11	Multi-Unit – 5 axles or less
#5	Single Unit – 2 axles, 6 tires	#12	Multi-Unit – 6 axles
#6	Single Unit – 3 axles	#13	Multi-Unit – 7 axles or more
#7	Single Unit – 4 axles or more		



Table 3. Weekday Vehicle Classification by Location

Segment Number	Percent by Classification Category			Weekday ADT
	Passenger Car/Pickups (#1 - #3)	Bus/Single-Unit Trucks (#4 - #7)	Double/Multi-Unit Trucks (#8-#13)	
1 - SD52 West of Gavin's Point Road	482 (95%)	10 (2%)	14 (3%)	506
2 - SD52 from SD153 to Gavin's Point Road	2814 (97%)	28 (1%)	60 (2%)	2902
3 - SD52 From Deer Boulevard to SD153	5133 (95%)	54 (1%)	207 (4%)	5394
4 - SD52 from West City Limits Road to Deer Boulevard	7432 (96%)	81 (1%)	266 (3%)	7779
5 - SD50 from SD52 to SD153	3810 (88%)	101 (2%)	439 (10%)	4350
6 - SD50 east of SD153	4983 (89%)	128 (2%)	471 (9%)	5582
7 - SD153 from SD50 to SD52	1370 (94%)	38 (2%)	54 (4%)	1462
8 - SD314 fromSD50 to West City Limits Road	1487 (91%)	65 (4%)	88 (5%)	1640

Vehicle Speeds

Vehicular speed data was collected at the eight (8) segment locations within the study area and is summarized in Table 4. Note the posted speed limit can vary based on the location along the segment. Average and 85th percentile speeds were generally consistent with the posted speed limits, except segment 8, which is the segment of SD314, between SD50 and SD52. This segment was observed to have 85th percentile speeds approximately 8-mph over the posted speed limit.

Table 4. Vehicle Speed by Segment Location

Segment Number/Location	Posted Speed Limit (MPH)	Average Speed (MPH)	85th Percentile Speed (MPH)
1 - SD52 West of Gavin's Point Road	55	50	57
2 - SD52 From SD153 to Gavin's Point Road	50	47	52
3 - SD52 From Deer Boulevard to SD153	50	46	51
4 - SD52 From West City Limits Road to Deer Boulevard	40/50 ⁽¹⁾	42	47
5 - SD50 From SD52 to SD153	65	60	66
6 - SD50 East of SD153	65	50	56
7 - SD153 From SD50 to SD52	45/55 ⁽²⁾	42	49
8 - SD314 FromSD50 to West City Limits Road	55	57	63

(1) Speed limit is 40-mph immediately west of West City Limits Road and transitions to 50-mph approximately ¼-mile west of the West City Limits Road.

(2) Speed limit is 45-mph south and 55-mph north of Horeshoe Hollow Drive.

 - Average and 85th percentile speeds exceed the current posted speed limit



Pedestrian/Bicycle Facilities

The *Yankton County Master Transportation Plan* was used to identify current non-motorized facilities within the study area. A summary of the existing pedestrian and bicycle facilities is illustrated in Figure 6. There is an existing off-street trail along the south side of SD52 and along the west side of Deer Boulevard. These facilities provide an important connection from the City of Yankton to the Lewis and Clark Recreation Area. While the south side of SD52 is well served with multi-modal facilities, the north side of SD52 generally lacks any multi-modal facilities. As future development is planned within the study area, it is important to address gaps and enhance multimodal facilities and connections.

Roadway Characteristics

In addition to traffic data collection, the following observations were completed to identify roadway characteristics within the study area (i.e., roadway geometry, posted speeds limits, and traffic controls). A summary of the roadway characteristics is shown in Table 5 and the roadway lane configuration is summarized in Figure 7. Note that SD52 is broken up into three segments within Table 5, due to the deviations of the roadway characteristics as the roadway extends west of Yankton. It should be noted that all study roadways are classified as rural within the *Yankton County Transportation Master Plan*. From a traffic control perspective, all study intersections are unsignalized with side-street stop control.

Table 5. Existing Roadway Characteristics

Roadway	Functional Classification ⁽¹⁾	General Configuration	Posted Speed Limit (MPH)	Shoulder Width	Ped/Bike Facilities?
SD52 (SD50 to State Park Entrance)	Minor Arterial	4-Lane divided	50/55 ⁽²⁾	5 ft	No
SD52 (State Park Entrance to SD153)	Minor Arterial	3-lane undivided	50	9 ft	No
SD52 (SD153 to West City Limits)	Minor Arterial	5-lane undivided	40/50 ⁽³⁾	6 ft	Yes – South Side
SD50	Principal Arterial	2-lane undivided	65	9 ft	No
SD153	Major Collector	2-lane undivided	45/55 ⁽⁴⁾	1 ft	No
SD314	Major Collector	2-lane undivided	55	3 ft	No

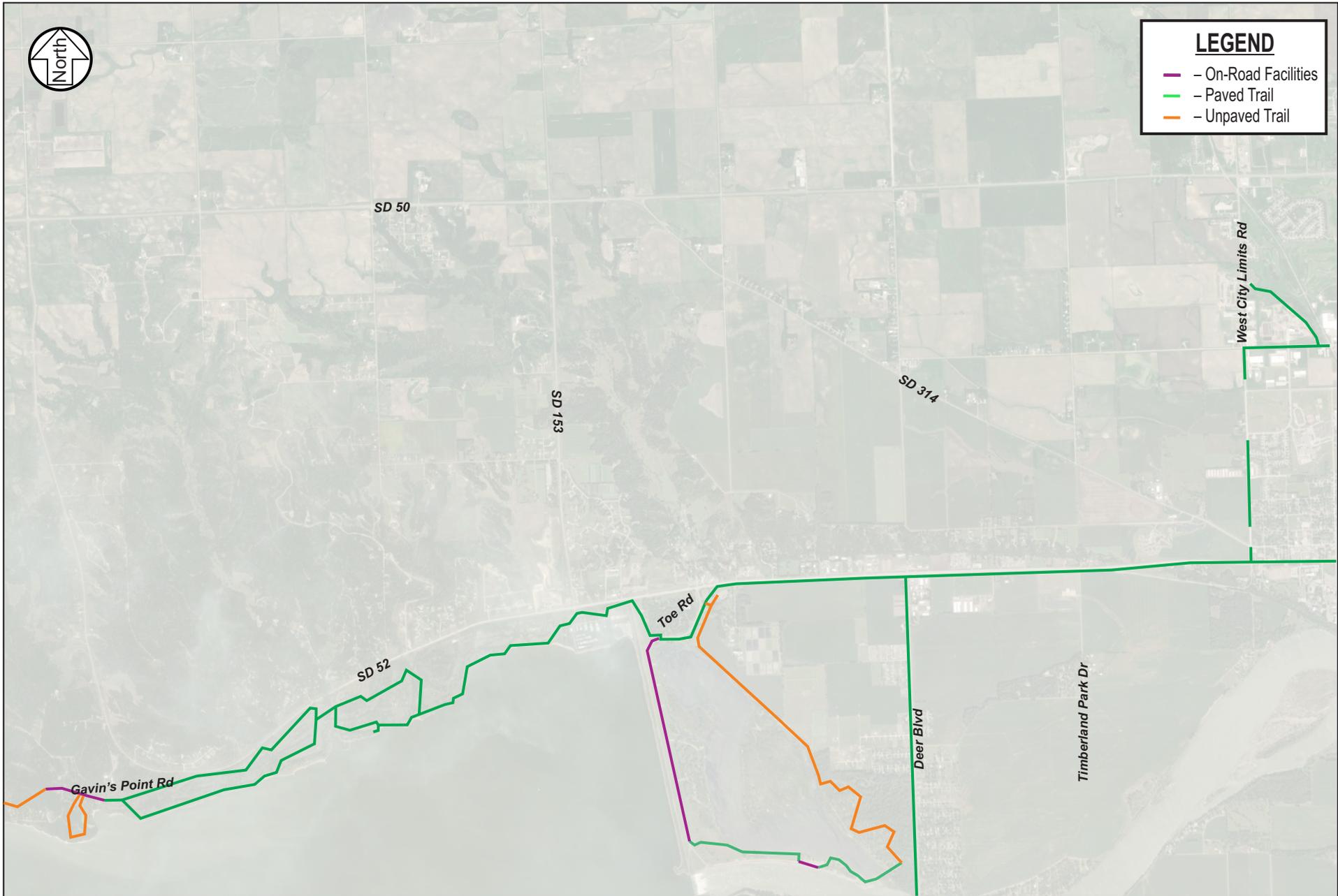
(1) Functional Classification based on the Yankton County Transportation Master Plan. Note all study segments are classified as rural roadways.

(2) The speed limit of SD52 is 50-mph east of Gavin's Point Rd and 55-mph west of Gavin's Point Rd.

(3) The speed limit of SD52 transitions from 40-mph to 50-mph 0.25 miles west of West City Limits Rd.

(4) The speed limit of SD153 is 45-mph south of Horseshoe Hollow Dr and 55-mph north of Horseshoe Hollow Dr.



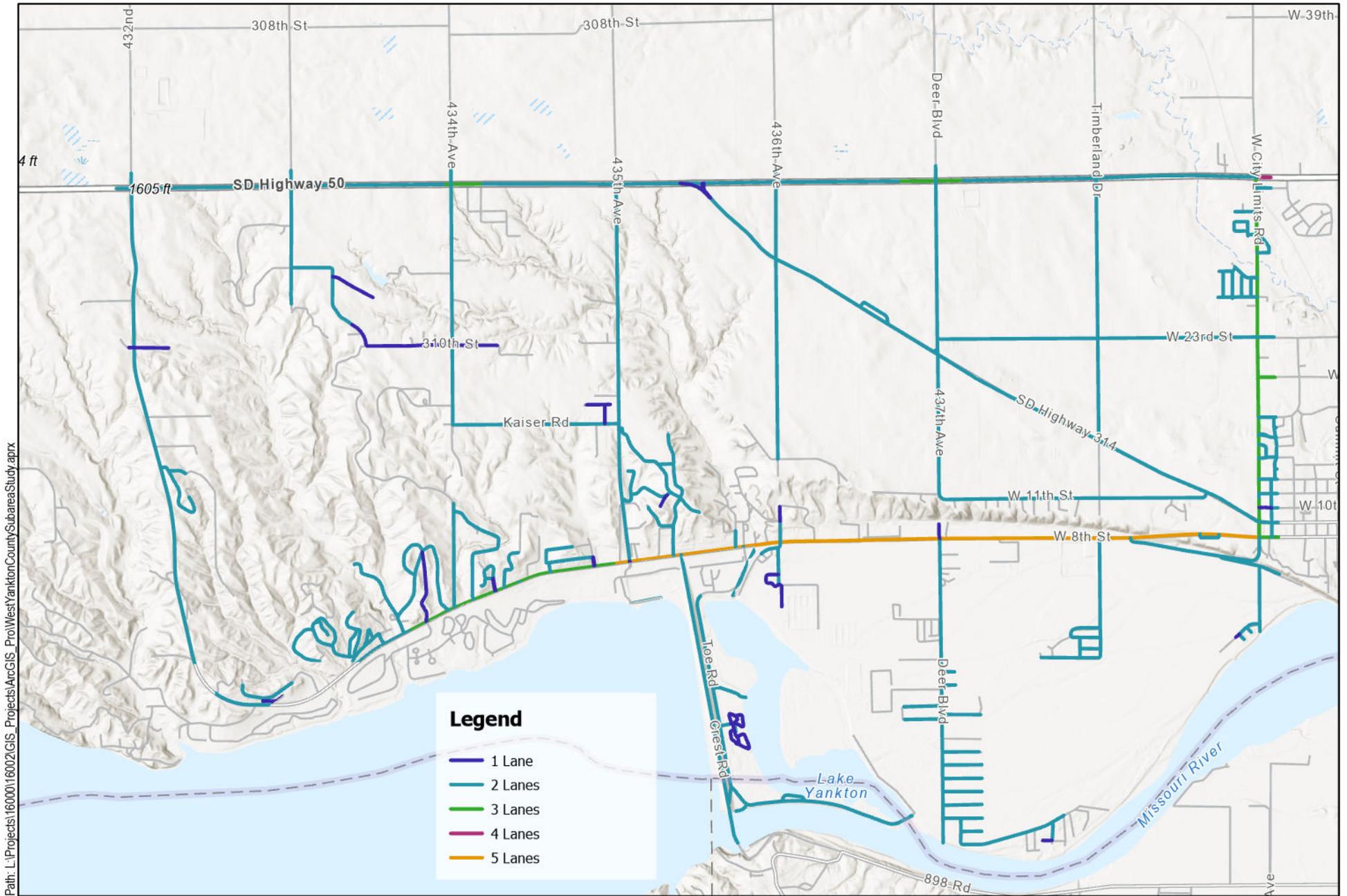


Existing Bicycle and Pedestrian Facilities

West Yankton County Subarea Study
SDDOT & Yankton County

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Figure 6



Roadway Lane Configuration

West Yankton County Subarea Transportation Study
 South Dakota Department of Transportation and Yankton County

Figure 7

Traffic Operations Analysis

In the Existing Conditions analysis, the quality of traffic flow in the study area was evaluated in two ways:

- Roadway segment analysis utilizing the Highway Capacity Software (HCS).
- Detailed intersection capacity analysis utilizing Synchro/SimTraffic software.

Analysis of both key segments and intersections employ methods outlined in the *Highway Capacity Manual, 6th Edition (HCM)*. The following information summarizes the capacity analyses conducted for existing conditions. As mentioned previously, all study segments are classified as rural within the *Yankton County Transportation Master Plan*. However, the SD52/West City Limits Road intersection is considered urban, whereas all other study intersections are classified as rural. Based on SDDOT policy, the minimum level of service guidelines are as follows:

- Rural:
 - Segment – LOS B
 - Overall Intersection – LOS B
 - Worst Intersection Approach (side-street stop) – LOS C
- Urban:
 - Segment – LOS D
 - Overall Intersection – LOS D
 - Worst Intersection Approach (side-street stop) – LOS E

Segment (Corridor) Operations Analysis

Analysis of the key segments using existing traffic and current geometrics and intersection control was completed using HCS software to identify any existing issues and establish a baseline for future conditions operations. Results of the corridor analysis, shown in Table 6, indicate that all study segments currently operate with an acceptable LOS B or better during the typical weekday a.m. and p.m. peak hours, and the summer p.m. peak hour.

Table 6. Existing Corridor Analysis Summary

Segment	Level of Service		
	School-in-Session Weekday		Peak Summer PM
	AM Peak Hour	PM Peak Hour	
1 – SD52: SD50 to Gavin’s Point Rd	A	A	A
2 – SD52: Gavin’s Point Rd to SD153	A	A	A
3 – SD52: SD153 to Deer Blvd	A	A	A
4 – SD52: Deer Blvd to West City Limits Rd	A	A	A
5 – SD50: SD52 to SD153	B	A	B
6 – SD50: SD153 to SD314	B	B	B
7 – SD153: SD52 to SD50	A	A	A
8 – SD314: SD50 to West City Limits Rd	A	A	A



In addition to the segment/corridor analysis, average daily traffic volumes collected as part of the study were reviewed for each facility type with general ADT guidance from the SDDOT Design Manual and are summarized in Table 7. Note that both the typical weekday ADT and summer peak ADT are shown in the table for comparison purposes. Results of the detailed corridor analysis and ADT comparison indicate that all roadway segments provide sufficient capacity to accommodate current traffic volumes.

Table 7. Average Daily Traffic (ADT) Volume Review

Segment Number and Description	School-in-Session Weekday ADT	Summer Peak ADT	SDDOT Lane Configuration Guidance
1 – SD52: SD50 to Gavin’s Point Road	500	800	<8,000
2 – SD52: Gavin’s Point Road to SD153	2,900	4,900	<8,000
3 – SD52: SD153 to Deer Blvd	5,400	8,000	8,000 – 20,000
4 – SD52: Deer Boulevard to West City Limits Road	7,800	10,500	8,000 – 20,000
5 – SD50: SD52 to SD153	4,350	5,000	<8,000
6 – SD50: SD153 to SD314	5,580	6,375	<8,000
7 – SD153: SD52 to SD50	1,460	2,100	<8,000
8 – SD314: SD50 to West City Limits Road	1,640	1,700	<8,000

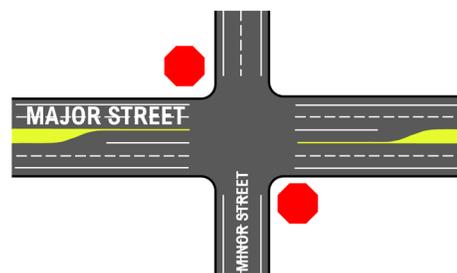
Intersection Capacity Analysis

Each of the key study area intersections were evaluated relative to their ability to reasonably accommodate current summer and fall traffic using the Synchro/SimTraffic software. The current condition analysis also establishes a baseline to which forecasted 2035 and 2050 traffic would be compared to characterize the need for action. The capacity analysis was completed for the typical weekday a.m. and p.m. peak hours, as well as the summer p.m. peak hour at the study intersections.

Capacity analysis results identify a Level of Service (LOS), which indicates the quality of traffic flow through an intersection. Signal, all-way stop control, and roundabout intersections are assigned a measure from LOS A through LOS F based on the seconds of delay each vehicle experiences as it travels through the intersection. Characteristics associated with each letter grade category are shown in Table 8. LOS A reflects the least amount of delay per vehicle and smooth travel through the intersection. The other end of the measurement table, LOS F indicates an intersection where demand exceeds capacity, or a breakdown of traffic flow.

The SDDOT has set minimum preferred operating guidelines for urban and rural intersections. The minimum threshold for rural intersection, which are most of those in the study area, is LOS B. For intersections in urban areas, the SDDOT has established a minimum LOS of D. Of the key intersections, only SD52/ West City Limits Road is located in an urban area. All others are reviewed against the rural LOS guidelines.

For two-way stop control conditions, special emphasis is given to providing an estimate for the level of service of the side-street approach. Traffic operations at an unsignalized intersection with two-way stop control were described in two ways:



Minor Street Stop Control Intersection



Table 8. Level of Service Criteria for Signalized and Unsignalized Intersections

Level-of-Service (LOS) Designation	Signalized Intersection Average Delay/Vehicle (seconds)	Unsignalized Intersection Average Delay/Vehicle (seconds)
A	≤ 10	≤ 10
B	> 10 - 20	> 10 – 15
C	> 20 - 35	> 15 – 25
D	> 35 - 55	> 25 – 35
E	> 55 - 80	> 35 - 50
F	> 80	> 50

Source: Highway Capacity Manual, 6th Edition, US DOT

- First, consideration was given to the overall intersection level of service, takes into account the total number of vehicles entering the intersection and the capability of the intersection to support the volumes. This metric provides a basis of comparison to other intersections in the subarea and helps understand impacts associated with a lack of left-turn lanes.
- Second, consider delay on the minor approach. As the mainline does not have to stop, most delay calculated is attributed to the side-street approaches. It is typical of intersections with higher mainline traffic volumes to experience high levels of delay (i.e., poor level of service) on the side-street approaches, but an acceptable overall intersection level of service during peak hour conditions. Therefore, the delay and level of service for the worst minor road approach is considered for two-way stop-controlled intersections.

Results of the existing capacity analysis, shown in Table 9, indicate the key study intersections currently operate at an acceptable **overall** LOS A during the typical weekday a.m. and p.m. peak hours, and the summer p.m. peak hour, with the existing geometric layout and traffic controls. All reported delay and LOS are based on the HCM analysis. Detailed traffic operation results are provided in the **Appendix**. The existing geometrics, traffic controls, speed data, volumes, and traffic operations within the study area are summarized in Figure 8.

All of the key intersections in the study area operate within the SDDOT LOS thresholds which are reflective of the peak **hour**. Within the peak hour, there are periods (generally relatively short) where intersection queuing and delay for vehicles is elevated. These times and conditions are outlined below:

- SD52/Deer Boulevard: Methods employed in characterizing traffic flow through the intersection reflect conditions over the one hour peak. While factors have been incorporated into the analysis that address the short, higher volume conditions that exist over the entire one hour period, conditions reported by travelers in the peak summer period reflect more delay than is calculated in the operations analysis. The increased delay may be connected to recreational vehicle traffic (vehicles towing trailers into/out of campgrounds, vehicle towing trailers and boats, etc.) and travelers that are relatively unfamiliar with the area as they are from out of town visiting the recreation area being overly cautious in their selection of a gap in the mainline traffic that does not stop.

The intersection operations analysis assumptions were not adjusted to consider the speculative conditions listed above, however, in the mitigation analysis additional leeway to be conservative in the assumptions for determining whether improvements such as a signal were warranted was incorporated in the analysis. While typically, warrant analysis for



Table 9. Existing Intersection Capacity Analysis

Intersection	Level of Service (Delay) ⁽¹⁾		
	School-in-Session Weekday		Peak Summer PM
	AM Peak Hour	PM Peak Hour	
SD52 / Gavin's Point Road	A/A (9 sec.)	A/A (9 sec.)	A/A (9 sec.)
SD52 / SD153	A/B (10 sec.)	A/B (11 sec.)	A/B (13 sec.)
SD52 / Toe Road	A/A (10 sec.)	A/A (10 sec.)	A/C (16 sec.)
SD52 / Deer Boulevard	A/B (11 sec.)	A/C (16 sec.)	A/C (16 sec.)
SD52 / Timberland Park Road	A/B (12 sec.)	A/A (10 sec.)	A/B (13 sec.)
SD52 / West City Limits Road ⁽²⁾	A/E (46 sec.)	A/C (19 sec.)	A/D (26 sec.)
SD50 / SD52	A/B (12 sec.)	A/B (12 sec.)	A/B (13 sec.)
SD50 / SD153	A/B (15 sec.)	A/B (14 sec.)	A/C (17 sec.)
SD50 / SD314	A/B (12 sec.)	A/B (14 sec.)	A/B (14 sec.)

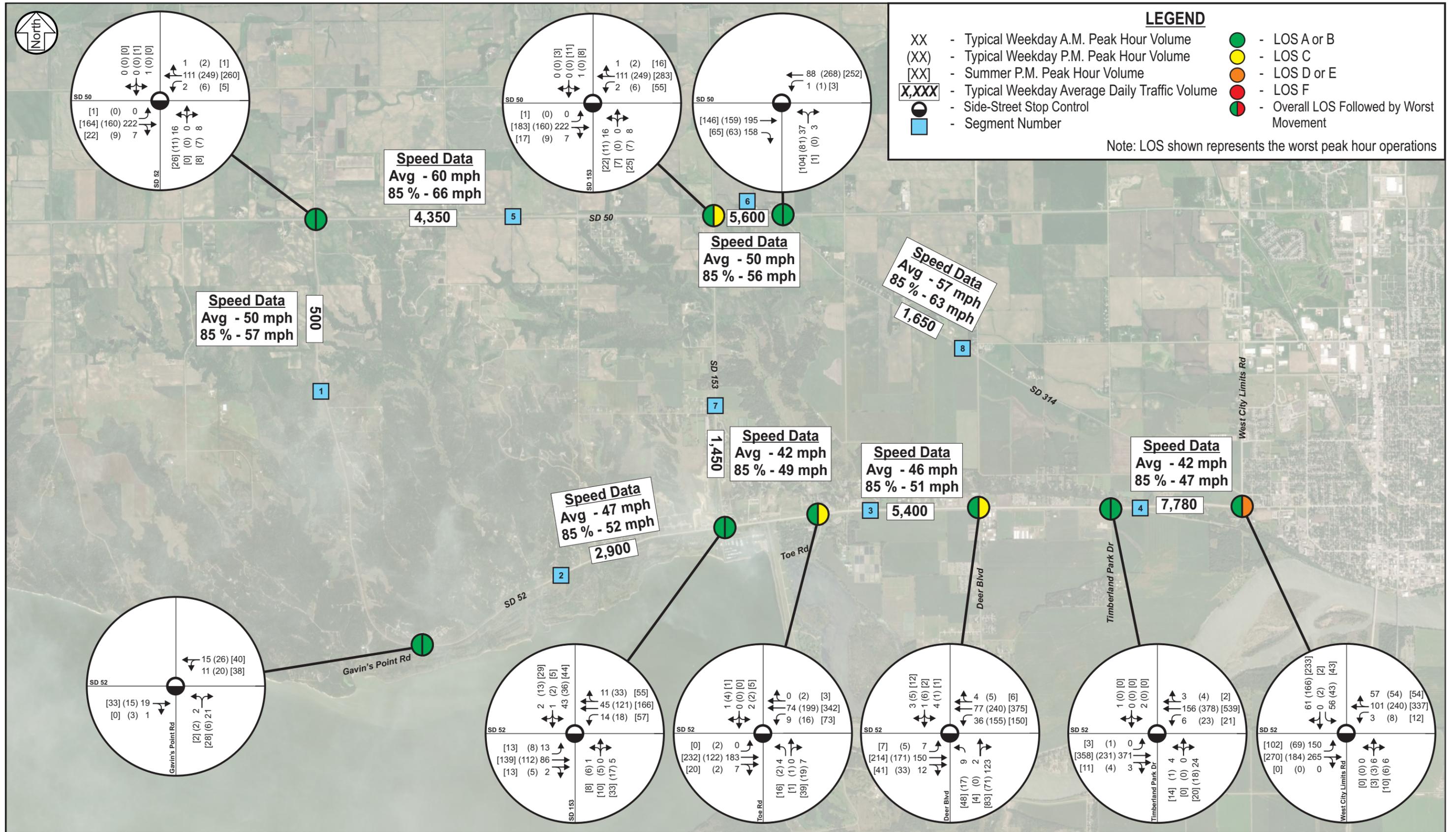
1 – All intersection reflect unsignalized traffic control with side-street stop control. First value is the overall intersection LOS. The second value is the worst side-street approach LOS. The delay shown represents the worst side-street approach delay.

2 – Considered an urban intersection, which has different LOS thresholds than rural intersections based on SDDOT policy.

signals discounts right turning volume to a great extent (as these vehicles are less influenced by cross route traffic relative to left turning vehicles) for the mitigation analysis at Deer Boulevard incorporated half of the right turning vehicles. This assumption is included in this section as there may be some inconsistencies given the operations analysis results with the minor street stop condition do not reflect the need for action today relative to the warrant analysis (a signal is warranted today based on peak summer traffic). To ensure clarity, the assumptions regarding addressing northbound right turning vehicle accounting is repeated.

- SD52/West City Limits Road: During the peak 15-minute window (i.e., 7:45 to 8:00 a.m.) of the school-in-session a.m. peak hour, as high as 45 percent of the entire hourly eastbound traffic tries to use the intersection. This influx in eastbound traffic, destined to Yankton, is likely due to a combination of the Yankton High School start time (i.e. 8:05 a.m.) and typical business/shift hours.
- SD52/West City Limits Road: The high eastbound peaking characteristics (traffic does not have a stop sign) result in the southbound left-turn movement from West City Limits Road (which has a stop sign) backs up and reflects an average vehicle delay characteristic of LOS E (46 seconds). This condition occurs during the peak 15-minute window each day. Outside of the peak 15-minute window, there is substantially less traffic, and the southbound left turn movement operates much better (LOS C).
- SD52/West City Limits Road: There are numerous complementary alternate paths for **passenger cars** that experience the noted delay. Thus, the level of delay experienced at the intersection can be mitigated by passenger car drivers finding an alternate path to avoid the intersection during the highest traffic period. Truck traffic using this intersection does not have the same opportunities to use alternates with less delay. Both West City Limits Road and SD52 are designated truck routes and many of the alternates to West City Limits Road from the north are restricted for trucks.





Corridor Access Locations and Density

To determine the existing level of access along the study segments, an access inventory was compiled. Results of the access inventory is shown in Table 10. In addition to the study intersections previously mentioned, other access locations along the corridor include frontage roads and minor roadways, residential and commercial driveways, and farm fields. Access density varies throughout the study area, with more frequent access located along SD52 from West City Limits Road to Gavin's Point Road.

The South Dakota Access Location Criteria (see *SDAR Chapter 70:09:02 Appendix A*) provides access guidance based on the roadway classification. As mentioned previously, based on the *Yankton County Transportation Master Plan* all study segments are classified as rural roadways. Access density along rural roadways should be no more than five (5) accesses per side per mile, with a minimum access spacing of 660 feet if approved by an Area Engineer. Therefore, as future development occurs, it is important to review existing access locations for potential consolidations, relocations and/or closures to meet guidelines and justify that any new access allowed will not be detrimental to the existing roadway. Furthermore, as opportunities arise, existing access should be reviewed to determine if access consolidation is feasible.

Table 10. South Dakota State Route Access Point Density

Segment	Side of Roadway	Access Points	Segment Length (miles)	Access Density (points/mile)
1 – SD52: SD50 to Gavin's Point Road	North	18	3.5	5
	South	16		5
2 – SD52: Gavin's Point Road to SD153	North	19	2.6	7
	South	3		1
3 – SD52: SD153 to Deer Boulevard	North	29	1.9	15
	South	5		3
4 – SD52: Deer Blvd to West City Limits Road	North	14	2.0	7
	South	13		7
5 – SD50: SD52 to SD153	North	11	3.0	4
	South	20		7
6 – SD50: SD153 to SD314	North	4	0.5	8
	South	3		6
7 – SD153: SD52 to SD50	East	16	2.4	7
	West	16		7
8 – SD314: SD50 to West City Limits Road	North	31	4.2	7
	South	17		4

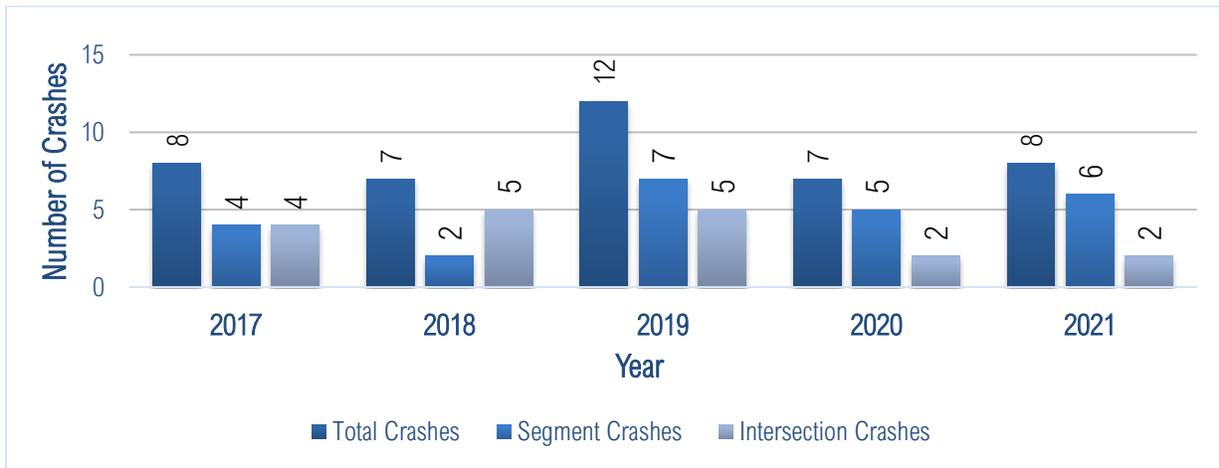
 - Number of access points per side per mile exceeds the SDDOT threshold



Crash Data Collection and History

Crash data was provided by the SDDOT from July 1, 2017 through June 30, 2022, which represents the most recent five-year period relative to the study. This data was used to summarize current conditions and crash trends, and as well as provide inputs to *Highway Safety Manual (HSM) Predictive Method* model used to predict future crashes within the study area. The crash frequency by year, with respect to total study area segment and intersection crashes, which excludes animal crashes, is presented in Figure 9. A summary of the crash data is illustrated in Figure 10. Reported crashes occurring at study area intersections and segments over the analysis period are summarized in Tables 10 and 11, respectively.

Figure 9. Total Crash Frequency by Year



NOTE: 1 - Excludes animal crashes.

Table 11. Crash Type Summary - Intersections

Intersection	Single Vehicle Crashes		Multiple Vehicle Crashes		Total
	Animal	Ran off Road	Angle	Rear End	
SD52 / Gavin's Point Road	-	-	-	-	0
SD52 / SD153	1	2	2	-	5
SD52 / Toe Road	3	-	-	-	3
SD52 / Deer Boulevard	1	-	2	2	5
SD52 / Timberland Drive	1	-	-	-	1
SD52 / West City Limits Road	3	1	2	-	6
SD50 / SD52	2	1	1	-	4
SD50 / SD153	3	-	1	1	5
SD50 / SD314	3	1	2	-	6
Intersection Totals	17	5	10	3	35



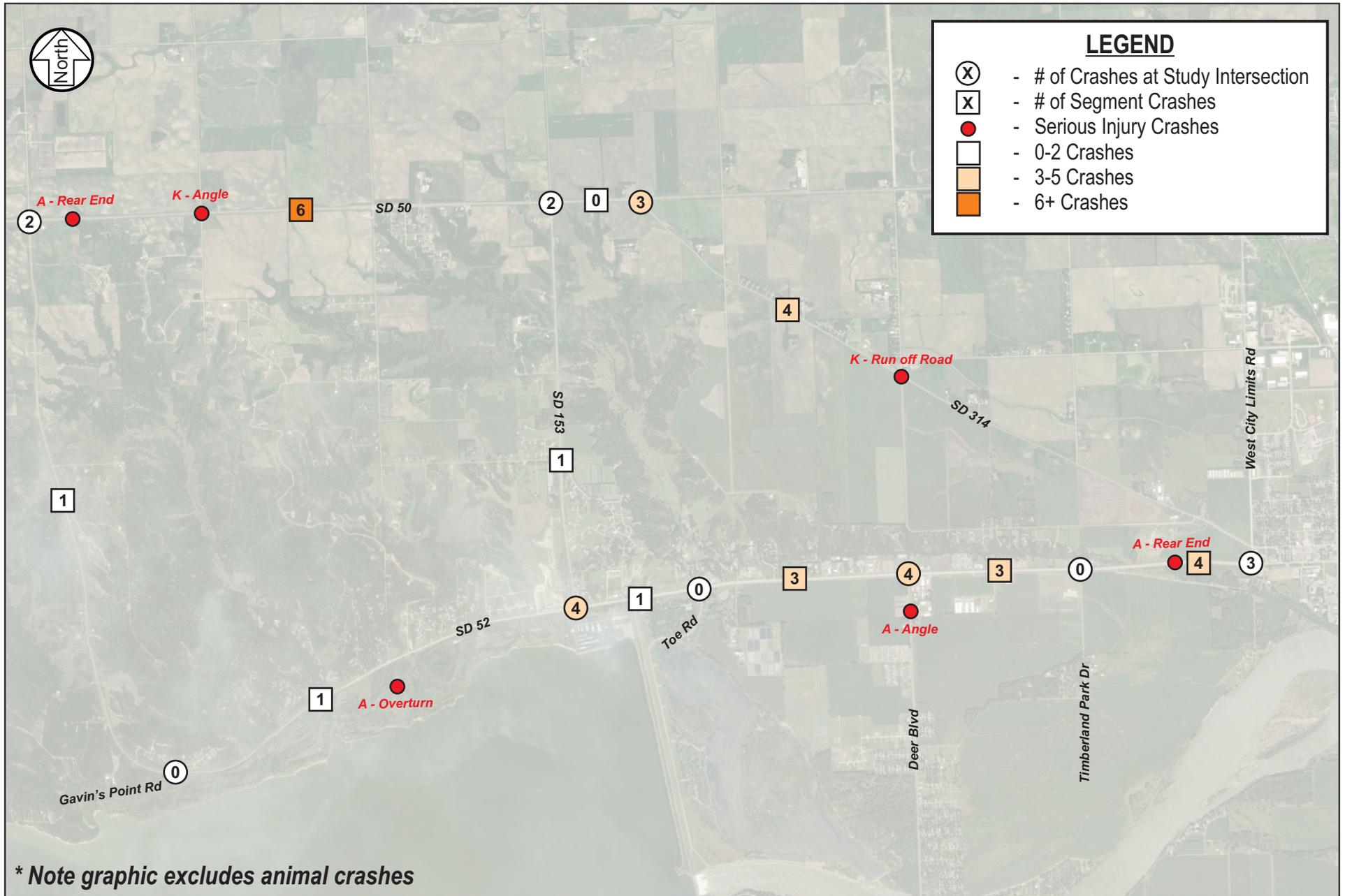


Table 12. Crash Type Summary - Segments

Segment	Single Vehicle Crashes			Multiple Vehicle Crashes				Total
	Animal	Ran off Road	Other	Angle	Head On	Rear End	Side swipe	
SD52								
SD50 to Gavin's Point Road	4	1	-	-	-	-	-	5
Gavin's Point Road to SD153	18	-	-	-	-	1	-	19
SD153 to Toe Road	6	-	-	1	-	-	-	7
Toe Rd to Deer Boulevard	14	1	-	2	-	-	-	17
Deer Blvd to Timberland Drive	4	1	-	-	-	2	-	7
Timberland Drive to West City Limits Road	18	2	-	-	-	1	1	22
SD50								
SD52 to SD153	35	1	1	1	-	3	-	41
SD153 to SD314	5	-	-	-	-	-	-	5
SD153								
SD50 to SD52	7	-	1	-	-	-	-	8
SD314								
SD50 to West City Limits Road	8	3	-	1	-	-	-	12
Segment Totals	119	9	2	5	0	7	1	143

The South Dakota Strategic Highway Safety Plan (SHSP) identifies core performance measures, including the number of fatalities, fatality rate (per vehicle mile of travel), number of serious injuries, and serious injury rate (per 100 million vehicle miles traveled (MVMT)). The following information provides a summary of how reported crashes (between years 2017 to 2021) within the study area relate to these performance measures:

1. Number of Fatalities: Two (2)
2. Fatality Rate: 1.68 Fatalities per MVMT (the goal identified in the SHSP is 1.55 per MVMT)
3. Number of Serious Injuries: Two (2)
4. Serious Injury Rate: 3.36 Injuries per MVMT (no goal is identified)

A summary of predominant crash statistics includes:

- Crash Severity:
 - 13 percent of the reported crashes were injury crashes:
 - Two (2) fatal crashes were reported:
 - One was an alcohol-related run off the road crash along SD314, and the other was an angle crash at a non-study intersection access along SD50.

- Four (4) incapacitating injuries were reported:
 - Two incapacitating injuries were the result of rear end crashes, one along SD52 just west of West City Limits Road, and one along SD50 just east of SD52.
 - The other two incapacitating injuries occurred off the state system. One was an angle crash along Deer Boulevard involving a motorcycle. The other was a rollover crash within the Lewis and Clark Recreational Area and the report did not include clear contributing factors.
- Time of the Year Summary:
 - 40 percent of the reported crashes took place during summer/camping season (May-September).
 - 65 percent of reported crashes along SD52 took place during summer/camping season (May-September).
 - 19 percent of the reported summer/camping season crashes were injury crashes, including both fatal crashes recorded in the last 5 years.
- Animal Crashes:
 - 76 percent of the reported crashes were animal hits.
- Lighting Conditions:
 - 41 percent of the reported crashes occurred in the dark with the roadway not lighted.
- Surface Conditions:
 - 8 percent of the reported crashes occurred in icy or snowy conditions.



Analysis of Future Conditions

One of the products of the West Yankton County Transportation Study is a plan of action to not only address traffic and safety concerns of today but look to the future in 2023 in order to identify an orderly set of actions needed to accommodate anticipated growth. The focus of this section of the plan includes:

- Developing traffic forecasts for key routes in the study area.
- Assessing the traffic operations impacts of the increment of traffic added to the current network.

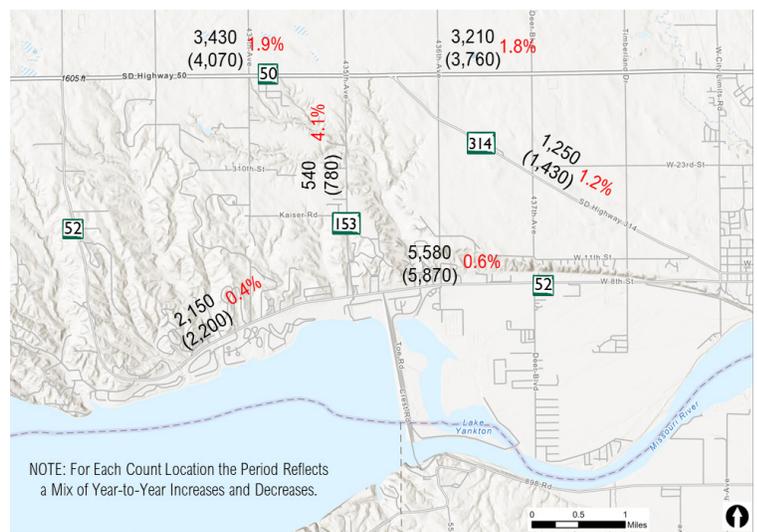
Traffic Forecasts

Future interim (2035) and horizon (2050) year forecasts were developed for key segments and intersections in the study area through a two-step process:

- Step 1: Applying similar methods and assumptions developed and used in the *2015 Yankton County Transportation Master Plan*.
- Step 2: Modifying the transportation plan process to address the potential for more residential and commercial development identified for areas south of SD52 in the *2022 West Yankton Sanitary Sewer Study*.

To confirm that the 2015 Transportation Master Plan methodology was still valid, changes in average daily traffic from 2012 to 2021 were reviewed along the study area routes. Figure 11 displays the traffic counts from 2012 to 2021 and the average annual change across the analysis period. Over the analysis period, the annual change in traffic volumes on most segments did not keep pace with the two percent per year change assumption in the 2015 Transportation Master Plan. The exception to the slower paced change was SD153 between SD50 and SD52, which has shown a growth of about four percent per year.

Figure 11. Historical Change in Average Daily Traffic (2012 through 2021)



2,150 - 2012 Average Daily Traffic
 (2,200) - 2021 Average Daily Traffic
 X.X% - Annual Change in AADT Over 2012 to 2021 Period



In general, historical counts do not capture the summer recreational peak, which was captured as part of this study. This statement is supported by the fall counts along SD52, east of SD153, that more closely reflect historical values. In addition, summer period counts from July 2022 were approximately 35 percent higher than the fall counts. As historical count data was reviewed as the source of annual growth rates, the key to determining the reasonableness of the data is whether peak summer and off-peak remainder of the year volume change over the period were similar or different. SDDOT counting methods are to conduct data collection while school is in session, which does not provide a multi-year source to compare summer peak and school in session periods. Thus, for the growth assessment, published counts were the basis for assessing annual change on state routes.

Traffic Growth Rates for State Routes

The SDDOT maintains a traffic growth factor table covering rural interstates, urban interstates, rural arterial/collector/local routes and urban arterials/collectors/local routes looking ahead 20 to 35 years, in five-year increments. The 2021 table was the latest available for this study. Table 1 documents the SDDOT growth rates for Yankton County routes. This table, along with historical count data was used as the basis for expanding traffic volumes along segments and intersections to derive 2035 and 2050 traffic.

Table 13. SDDOT Yankton County Traffic Growth Factors

Roadway Category	Horizon Period			
	20 Year	25 Year	30 Year	35 Year
Rural Arterial/Collector/ Local	1.504	1.630	1.756	1.882

Source: SDDOT, 2021

The *2015 Transportation Master Plan* utilized a similar methodology, where both the average annual change in traffic counts and the SDDOT growth factors were assessed.

The *2015 Transportation Master Plan* recommended growth rates ranging from 1.0 percent to 2.0 percent across the county to expand base year volumes used in the planning effort to the 2040 horizon. The 2021 SDDOT growth factors for Yankton County rural arterial/collector/local routes represent a compounded average growth rate of 1.8 percent, which was rounded to 2 percent for the study. This rate, when compared to the historical change observed in the 2012 through 2021 period data represented a more conservative (higher) rate than observed at the count locations with more than 1,000 vehicle per day. Understanding there is an expectation a combination of residential and retail-commercial growth will continue to occur throughout the study area, it is recommended that the more conservative rate calculated from the SDDOT growth factors be used to expand current summer peak and fall counts used in the base year traffic operations analysis.

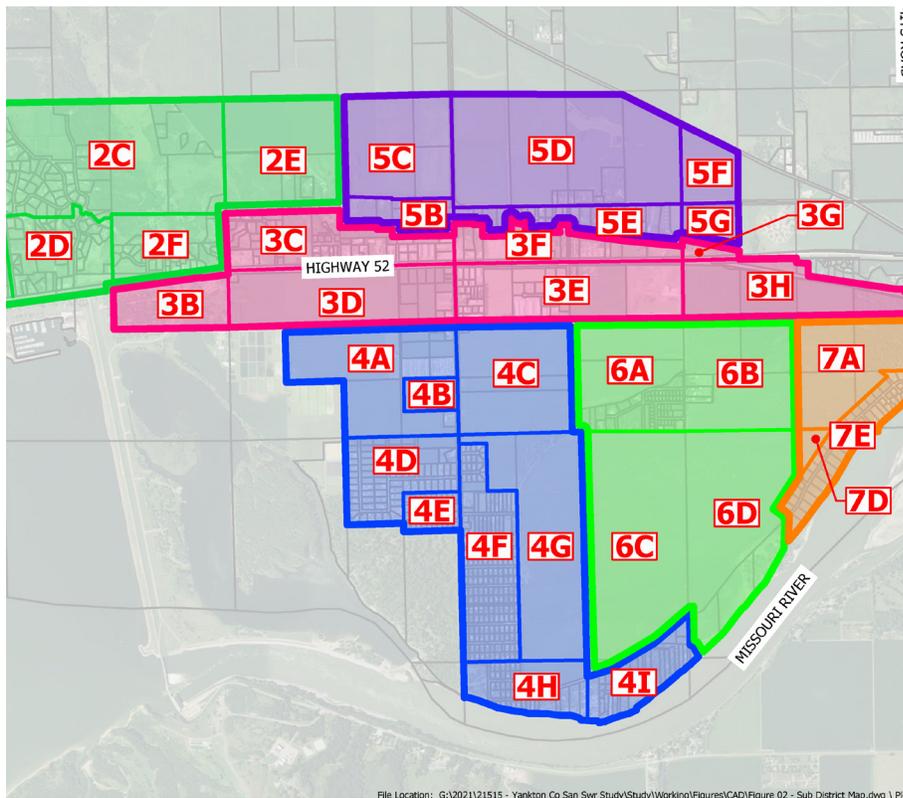
Traffic Growth – Deer Boulevard and Timberland Drive

Cross route forecasts on Timberland Drive and Deer Boulevard to/from the south incorporated development opportunities in the areas south of SD52. In April 2022, the county completed a sanitary sewer feasibility study that included estimates of future development potential for the area south of SD52. The increment of residential expansion potential was the basis for estimating traffic growth on Deer Boulevard and Timberland Drive as they approach SD52 from the south. The method for using the combination of current traffic and future development is outlined below:



- Step 1: Estimate peak period traffic per residence using current data. Deer Boulevard traffic counts for the peak periods and estimates of residential units from the 2022 sewer study were the basis for estimating traffic per unit. Peak summer traffic data was used to prepare the peak hour generation of 0.66 vehicles per unit.
- Step 2: Apply the vehicles per unit rate from 2022 summer Deer Boulevard counts to the increments of residential development in the 2022 sewer feasibility study. The sewer study increment represented what was defined as ultimate growth, which has been interpreted to be a level of development that would result in a conservative sizing for sewer needs as expansion is difficult. The ultimate growth level represents an annual housing unit growth rate of 1.5 percent per year. For the transportation study, residential unit expansion from the sewer study were reduced to reflect the likely conservative nature of the sewer sizing-based development forecasts. Subareas outlined in the sewer basin study are displayed in Figure 12 and the increment of growth assumed for the forecasting is documented in Table 14.

Figure 12. 2022 Sewer Feasibility Study – Sub District Map



Source: 2022 Sewer Feasibility Study – Figure 2

- Step 3: Apply peak hour directional splits and intersection movement percentages from current counts to the forecasted peak period link volumes on Deer Boulevard and Timberland Drive to derive intersection movements.
- Step 4: Adjust SD52 through and turning volumes to account for added cross route volume without substantially increasing mainline total volume. Growth in the SD52 corridor average daily volume has been modest over the last nine years, while development on the south side has continued. Thus, SD52 forecasts derived through application of SDDOT growth factors were assumed to be reasonable. Increased cross route traffic was assumed to be included in the SD52 factored growth, which results in reassignment of turning movements, not increasing the total approach traffic.



Table 14. 2022 Sewer Feasibility Study Sub District Growth – Traffic Forecasting Assumptions

Development Area (Sub Basin)	2022 Sewer Study Increment	Traffic Forecast Estimated Increment	Traffic Study Percent of Sewer Study
Deer Boulevard Corridor			
4A	287	144	50%
4B	34	17	50%
4C	267	134	50%
4D	38	19	50%
4E	0	0	50%
4F	34	17	50%
4G	350	175	50%
4H	41	21	50%
4I	27	14	50%
Totals	1078	541	50%
Timberland Drive Corridor			
6A	208	104	50%
6B	250	125	50%
6C	460	115	25%
6D	387	97	25%
Totals	1,305	441	34%

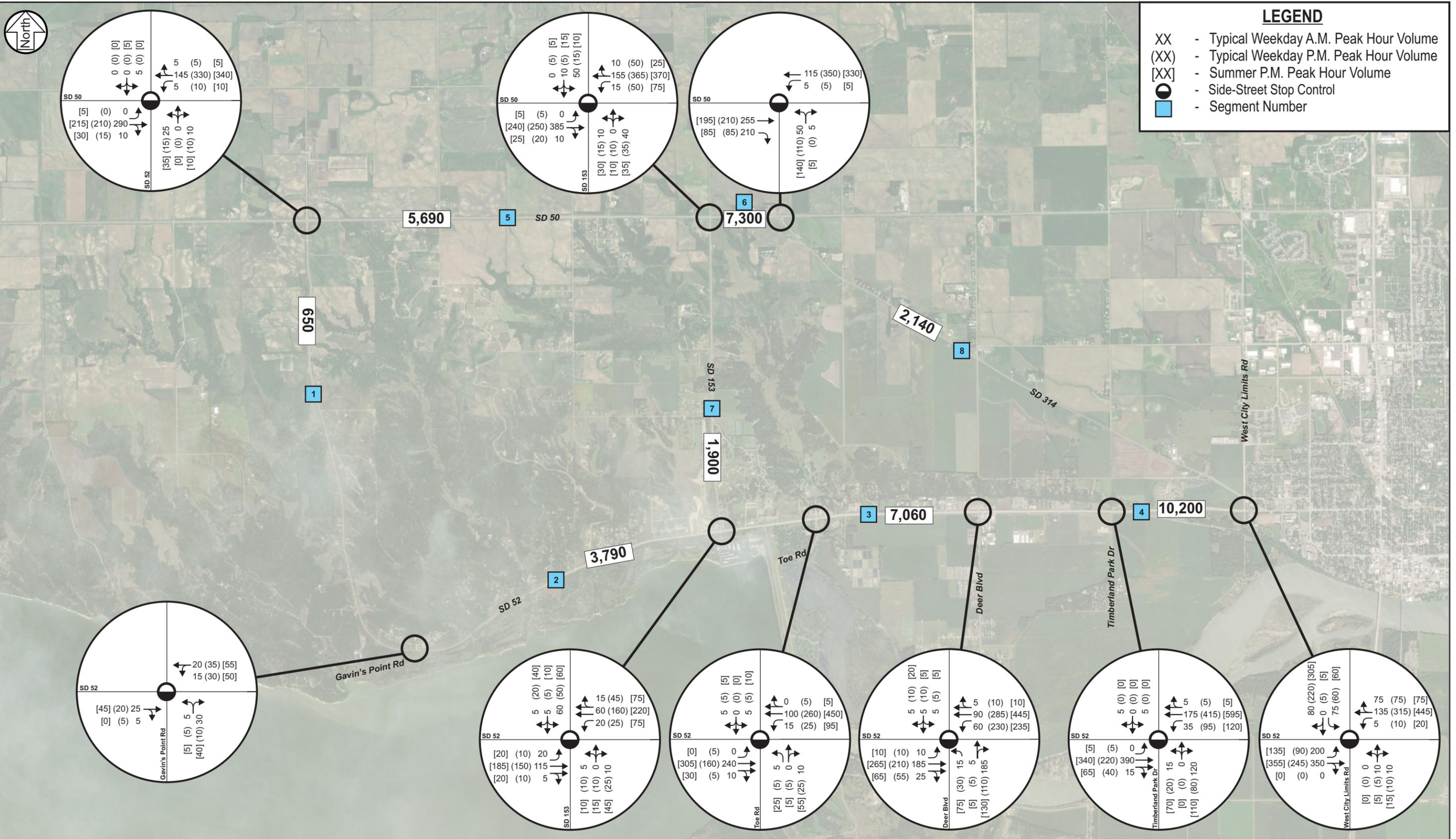
Forecasted volumes for key intersections in the study area for 2035 (interim) and 2050 (horizon) are displayed in Figure 13 and Figure 14.

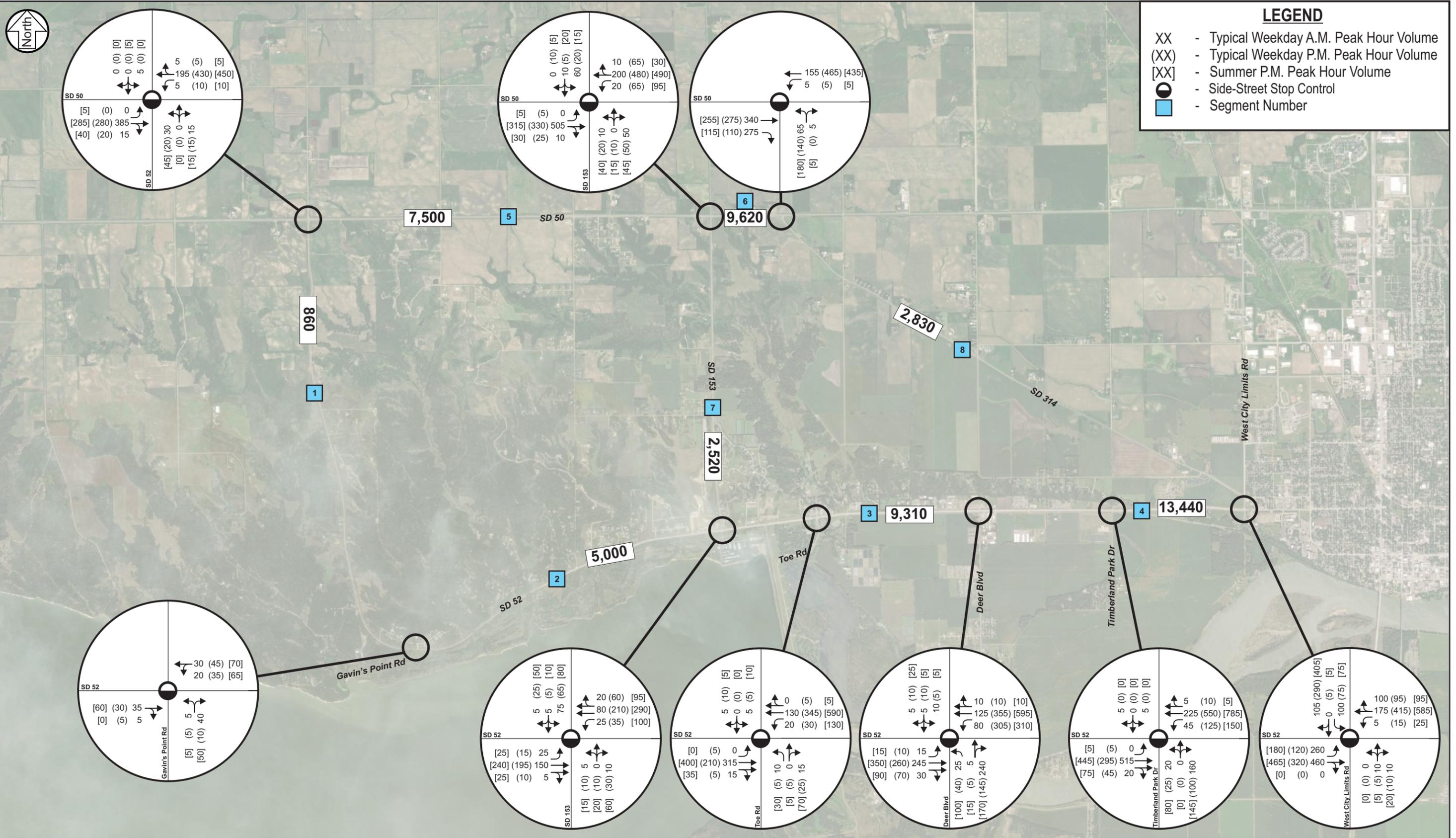
Traffic Operations Analysis

Two capacity analyses were conducted to quantify future operations. These analyses focused on both the segment analysis utilizing the Highway Capacity Software (HCS), as well as a detailed intersection capacity analysis utilizing Synchro/SimTraffic software, both of which are based on the *Highway Capacity Manual, 6th Edition (HCM)*. The following information summarizes the capacity analyses conducted for both 2035 interim and 2050 horizon conditions. Note that the SD52/West City Limits Road intersection is considered urban, whereas all other study intersections and segments are classified as rural. Based on SDDOT policy, the minimum level of service (LOS) guidelines are as follows:

- Rural:
 - Segment – LOS B
 - Overall Intersection – LOS B
 - Worst Intersection Approach (side-street stop) – LOS C
- Urban:
 - Segment – LOS D
 - Overall Intersection – LOS D
 - Worst Intersection Approach (side-street stop) – LOS E







Corridor Operations Analysis

A future corridor segment analysis was completed using HCS software to further understand how the existing roadways can accommodate the future traffic forecasts and is summarized in Table 15. Note the existing conditions analysis was included in the table for comparison purposes. Results of the corridor analysis indicate that Segment 6 (SD50 between SD153 and SD314) is expected to operate at a LOS C in Year 2050 conditions, which is below the SDDOT LOS criteria threshold. All other study segments are expected to operate with an acceptable LOS B or better during the school-in-session (non-summer) weekday a.m. and p.m. peak hours, and the summer p.m. peak hour through the 2050 horizon year.

Table 15. Future Corridor Analysis Summary

Segment No.	Existing Level of Service			2035 Level of Service			2050 Level of Service		
	School-in-Session Weekday		Peak Summer PM	School-in-Session Weekday		Peak Summer PM	School-in-Session Weekday		Peak Summer PM
	AM Peak Hour	PM Peak Hour		AM Peak Hour	PM Peak Hour		AM Peak Hour	PM Peak Hour	
1 – SD52: SD50 to Gavin’s Point Rd	A	A	A	A	A	A	A	A	A
2 – SD52: Gavin’s Point Rd to SD153	A	A	A	A	A	A	A	A	A
3 – SD52: SD153 to Deer Blvd	A	A	A	A	A	A	A	A	A
4 – SD52: Deer Blvd to West City Limits Rd	A	A	A	A	A	A	A	A	A
5 – SD50: SD52 to SD153	B	A	B	B	A	B	B	A	B
6 – SD50: SD153 to SD314	B	B	B	B	B	B	C	C	C
7 – SD153: SD52 to SD50	A	A	A	A	A	A	A	A	A
8 – SD314: SD50 to West City Limits Rd	A	A	A	A	A	A	A	A	A

 - Segment operations below the SDDOT threshold for a rural state highway.

In addition to the detailed corridor analysis, the projected future daily traffic volumes for 2035 and 2050 were reviewed for each facility type with general ADT guidance from the SDDOT Design Manual and are summarized in Table 16. Traffic volumes were reviewed for both the school-in-session (non-summer) weekday ADT and summer peak ADT. Note that existing ADT information was included in the table for comparison purposes. Results of the ADT comparison indicate that Segment 6 (SD50 between SD153 and SD314) is over the general lane configuration guidance in the peak summer conditions in 2035 and all conditions in 2050. Additionally, Segment 2 (SD52 between Gavin’s Point Rd and SD153) and Segment 5 (SD50 between SD52 and SD153) are slightly over the guidance in 2050 summer peak conditions. All other roadway segments provide sufficient capacity to accommodate future traffic volumes.



Table 16. Future Projected Average Daily Traffic (ADT) Volume Review

Segment No.	School-in-Session Weekday ADT (Summer Peak ADT)			SDDOT Lane Configuration Guidance
	Existing	2035	2050	
1 – SD52: SD50 to Gavin’s Point Rd	500 (800)	650 (1,050)	860 (1,380)	<8,000
2 – SD52: Gavin’s Point Rd to SD153	2,900 (4,900)	3,790 (6,410)	5,000 (8,440)	<8,000
3 – SD52: SD153 to Deer Blvd	5,400 (8,000)	7,060 (10,460)	9,310 (13,790)	8,000 – 20,000
4 – SD52: Deer Blvd to West City Limits Rd	7,800 (10,500)	10,200 (13,730)	13,440 (18,100)	8,000 – 20,000
5 – SD50: SD52 to SD153	4,350 (5,000)	5,690 (6,540)	7,500 (8,620)	<8,000
6 – SD50: SD153 to SD314	5,580 (6,375)	7,300 (8,340)	9,620 (10,990)	<8,000
7 – SD153: SD52 to SD50	1,460 (2,100)	1,910 (2,750)	2,520 (3,620)	<8,000
8 – SD314: SD50 to West City Limits Rd	1,640 (1,700)	2,140 (2,220)	2,830 (2,930)	<8,000

 - Segment volume exceeds SDDOT Design Manual volume threshold for two-lane rural highway.

Intersection Capacity Analysis

To further understand how the existing roadway network can accommodate the future traffic forecasts, a Year 2035 and Year 2050 intersection capacity analysis was completed and summarized in Table 5. The capacity analysis was completed for the school-in-session (non-summer) weekday morning, and afternoon peak hours, as well as the summer afternoon, peak hour at the study intersections. Note the existing conditions analysis was included in the table for comparison purposes. The study intersections were analyzed using Synchro/SimTraffic software, which is based on the *Highway Capacity Manual, 6th Edition (HCM)*. Detailed traffic operation results are provided in the Appendix.

Results of the Year 2035 and Year 2050 capacity analysis indicate all study intersections are expected to operate at an acceptable **overall** LOS A in Year 2035 during all peak periods, with the existing geometric layout and traffic controls. In Year 2050, the intersections of SD52/West City Limits Road and SD52/Deer Boulevard are expected to operate at a below-satisfactory overall LOS D during the summer PM peak hour, with side-street stop delays of two (2) minutes or greater.



Table 17. Future Intersection Capacity Analysis

Intersection ⁽¹⁾	Existing Level of Service (Delay)			2035 Level of Service (Delay)			2050 Level of Service (Delay)		
	School-in-Session Weekday		Peak Summer PM	School-in-Session Weekday		Peak Summer PM	School-in-Session Weekday		Peak Summer PM
	AM Peak Hour	AM Peak Hour		AM Peak Hour	PM Peak Hour		AM Peak Hour	PM Peak Hour	
SD52 / Gavin's Point Road	A/A (9 sec.)	A/A (9 sec.)	A/A (9 sec.)	A/A (9 sec.)	A/A (9 sec.)	A/A (9 sec.)	A/A (9 sec.)	A/A (9 sec.)	A/A (9 sec.)
SD52 / SD153	A/B (10 sec.)	A/B (11 sec.)	A/B (13 sec.)	A/B (11 sec.)	A/B (12 sec.)	A/C (16 sec.)	A/B (12 sec.)	A/B (14 sec.)	A/D (27 sec.)
SD52 / Toe Road	A/A (10 sec.)	A/A (10 sec.)	A/C (16 sec.)	A/B (10 sec.)	A/B (10 sec.)	A/C (21 sec.)	A/B (11 sec.)	A/B (11 sec.)	A/D (32 sec.)
SD52 / Deer Boulevard	A/B (11 sec.)	A/C (16 sec.)	A/C (16 sec.)	A/B (12 sec.)	A/C (20 sec.)	A/E (39 sec.)	A/B (14 sec.)	A/D (34 sec.)	F/F (~2.5 min)
SD52 / Timberland Drive	A/B (12 sec.)	A/A (10 sec.)	A/B (13 sec.)	A/B (13 sec.)	A/B (11 sec.)	A/D (28 sec.)	A/B (14 sec.)	A/B (14 sec.)	A/F (135 sec.)
SD52 / West City Limits Road ⁽²⁾	A/E (46 sec.)	A/C (19 sec.)	A/D (26 sec.)	A/D (26 sec.)	A/C (16 sec.)	A/D (28 sec.)	C/F (~2 min)	A/D (29 sec.)	D/F (~2 min)
SD50 / SD52	A/B (12 sec.)	A/B (12 sec.)	A/B (13 sec.)	A/B (13 sec.)	A/B (13 sec.)	A/B (15 sec.)	A/B (15 sec.)	A/C (16 sec.)	A/C (19 sec.)
SD50 / SD153	A/B (15 sec.)	A/B (14 sec.)	A/C (17 sec.)	A/C (17 sec.)	A/C (19 sec.)	A/C (20 sec.)	A/D (25 sec.)	A/D (28 sec.)	A/D (33 sec.)
SD50 / SD314	A/B (12 sec.)	A/B (14 sec.)	A/B (14 sec.)	A/B (12 sec.)	A/C (16 sec.)	A/C (16 sec.)	A/B (14 sec.)	A/C (24 sec.)	A/D (26 sec.)

(1) Indicates an unsignalized intersection with side-street stop control, where the overall LOS is shown followed by the worst side-street approach LOS. The delay shown represents the worst side-street approach delay.

(2) Considered an urban intersection, which has different LOS thresholds based on SDDOT policy.

- Intersection of two state highways – LOS C on at least one approach. - Rural intersection with LOS D on at least one approach

- Intersection with LOS E/F one at least one approach -



Crash Prediction – 2050 Current Road Conditions

Data presented in the Existing Conditions section documented the study area averaged approximately eight crashes per year over the latest five-year period. Using the historical data and the Interactive Highway Safety Design Model (IHSDM) Predictive Method (crash prediction model) a 2050 baseline condition, which assumes no change in the number of lanes or the intersection control for facilities in the study area, along the corridor. Thus, the primary factor contributing to changes in crashes would be the anticipated change in traffic. Traffic volumes within the study area are forecasted to increase by approximately two percent per year through 2050, which results in approximately a doubling of traffic.

In the crash modeling approach, there is a direct relationship between the change in volume and change in crashes. As corridor traffic volumes are anticipated to nearly double over the 30-year planning horizon, without any roadway improvements crashes would likely increase by a similar magnitude. The 2050 baseline model is the basis for comparison of the crash/safety impacts of alternate roadway improvements within the corridor.



Mitigation Alternatives to Address Traffic Operations

Issues to be addressed in the study area were identified through a combination of technical analysis of the current and projected operations through 2050, review of the crash data and assessment of access locations relative to SDDOT guidelines as well as a review of crash experience at access locations and information gathered through the public engagement process. Development of potential solutions, or mitigation measures, for identified issues followed two tracks:

- Track 1: What location specific mitigation measures have the potential to reduce or eliminate issues (traffic operations, safety, access) at specific bottleneck or problem points in the current network? Mitigation measures along this track would include actions such as:
 - Adding additional lanes (turn or through lanes) to an existing intersection or roadway segment.
 - Changing the traffic control at an intersection, such as replacing two-way or all-way stop control with a signal.
- Track 2: What new facilities have the potential to reduce or eliminate transportation issues identified and/or are needed to support development in the study area. Mitigation measures in this track would be new streets to provide access to development areas where there are not roads today.

This section of the final report is organized into actions to address isolated location issues observed in the current or future conditions, such as an over capacity intersection or segment of road and a recommended collector/minor arterial roadway framework in the area south of SD52 and east of Crest Road. In general, for most locations the actions needed are relatively minor (such as adding a turn lane), which do not require an exhaustive alternatives development and screening process. Thus, for each of the locations where action is needed, a preferred action is presented.

Actions to Address Roadway Segment Needs

SD50 from SD153 to West City Limits Road

By 2050, the segment of SD50 from SD153 to West City Limits Road was forecasted to be over the LOS threshold for the two-lane roadway present along the segment. As this is a state highway and the focus of the Transportation Study is the county network, a limited level of mitigation review was completed. The expectation is the SDDOT would take the information from this study and integrate it into their project development process for addressing state route needs. Additionally, as the need for action along the corridor is not identified until after the 2035 period (but before 2050), there is not a need to immediately address the corridor.

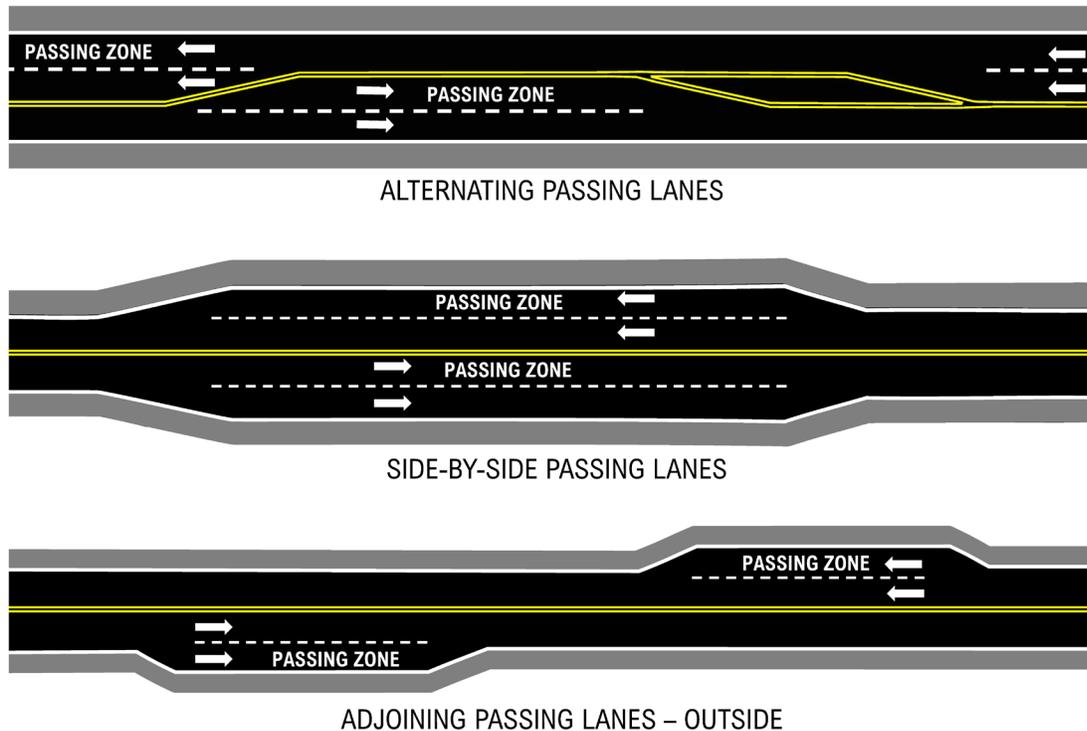
Mitigation ideas suggested for future review by the SDDOT for the segment are:

- Adding an additional through lane in each direction. By 2050, average daily traffic is forecasted to approach or exceed the level that can be reasonably accommodated in two-lanes and would be similar to the level of traffic presently carried on SD52 east of SD153 into/out of Yankton. While the SD52 segment between Yankton and SD153 carries more traffic to/from Lewis and Clark State Recreation Area than SD50 does or likely would and part of the reason SD52 has been widened to five-lanes is to serve recreation traffic, the operational analysis for 2050 along SD50 supports the need for some action. Expanding a two-lane route to four lanes without turn lanes where warranted is rarely done any more. Thus,

adding a through lane in each direction would likely be accompanied by adding turn lanes as either focused turn lanes at key intersections or a continuous center two-way left turn lane, as is provided along SD52.

- Adding “continuous” passing zones along the segment from SD52 to West City Limits Road. As a narrower footprint alternative to a four-lane divided or five-lane section, adding alternating passing lane would increase the capacity of the road segments along the SD50 corridor. There are numerous cross section alternatives for a super-two lane corridor, which the SDDOT would review as part of their assessment of needs and alternatives for the corridor. Figure 15 displays several possible passing lane configurations that may be considered in the range of super-two concepts.

Figure 15. Examples of Super-Two Configurations



Actions to Address Intersection Operations

Intersection geometrics necessary to provide acceptable operations through 2050 were developed by reviewing the school-in-session (non-summer) weekday a.m. and p.m., and summer peak hour traffic operations relative to the respective rural and urban LOS thresholds. Considering action at specific intersections is based on the current, 2035 and 2050 period peak period traffic operations relative to the level-of-service guidelines set by the SDDOT. It is emphasized the level-of-service goals for urban and rural areas are not binary decisions where if the traffic delay exceeds the threshold action is required. SDDOT and local decision-makers have the ability to consider conditions such as the length of the period of impact, how far into the future the condition is identified, the level of growth required to occur before an operational issue is triggered and other factors. Thus, for locations where delay on minor street approaches may be slightly beyond the thresholds, improvements may not be warranted and/or have conflicts with driver expectations and safety. The following sections describe the intersection geometric improvements reviewed for each intersection.

SD52 / Gavin's Point Road

Current intersection geometrics are adequate to accommodate forecasted traffic through 2050.

SD52 / SD153

Adding a right-turn lane to the southbound side-street approach would provide adequate capacity through 2050. However, it should be noted that the side-street approach is only beyond LOS thresholds by approximately two (2) seconds during the summer p.m. peak hour under 2050 traffic conditions.

SD52 / Toe Road

The side-street approach only operates beyond LOS thresholds (LOS D) during the peak summer condition with forecasted 2050 traffic. There are currently left-turn lanes on all approaches (note the southbound approach is wide enough for two exiting lanes) and the intersection volumes do not meet warrants for installing a traffic signal. Therefore, no improvements are recommended at the intersection for further evaluation.

SD52 / Deer Boulevard

Forecasted traffic at the intersection exceed the level that can be reasonably accommodated by retaining the current cross-street stop control or installing all-way stop control. The results of the Existing Conditions analysis included an analysis of replacing the minor street two-way stop control with a signal to address summer period peak conditions and the potential impacts of recreational vehicles or vehicle towing trailers as well as many drivers are relatively unfamiliar with the areas has they are visitors. The proposal to address reported conditions was to signalize the intersection. Adding the signal would result in LOS B operations through 2050 even during the peak summer traffic period.

Recommendation: Design and install a traffic signal. The signal would be operated year round.

SD52 / Timberland Drive

Constructing a northbound right-turn lane should be considered, however, it would still not provide enough capacity to accommodate peak summer conditions (i.e. side-street approach would still operate at LOS F (55 seconds) under 2050 summer conditions). It should be noted that the side-street approach only operates beyond LOS thresholds during the peak summer conditions. The intersection volumes likely would not meet warrants for a traffic signal until 2050.

Additionally, the forecasted traffic at the intersection does not take into account the internal collector/arterial framework network needed to support future development in the area south of SD52. The framework is discussed in more detail in the next section and would provide the opportunity for travelers to move east-west through the study area without using the intersection with SD52. With the framework in place, the amount of traffic likely getting to the Timberland Drive/SD52 intersection would likely be less than in the level forecasted for the operations analysis. Northbound left turns at SD52 would likely be the movement impacted the most as it is the movement experiencing the highest delay at the stop controlled intersection. Vehicles coming from development to the south would be able to travel on lower volume internal streets to get to the signalized intersection at Deer Boulevard, reducing the impact at Timberland Drive/SD52 and reducing the pressure to provide a signal.

It is emphasized that if the framework streets/roads are not added to the area, the level of development occurring would likely also be substantially less and the level of trips generated in the area would be lower. Again, reducing the need to signalize the intersection at SD52/Timberland Drive.

Recommendation: Construct a northbound right-turn lane. Monitor the intersection to determine if/when traffic volumes warrant intersection improvements.

SD52 / West City Limits Road

Forecasted traffic at the intersection exceed the level that can be reasonably accommodated by retaining the current cross-street stop control or installing all-way stop control. To provide adequate traffic capacity through the 2050 horizon year, the action reviewed was adding a signal, while retaining the current intersection geometrics. The intersection is expected to warrant a signal by 2050.

The intersection is within the city limits and needs at the intersection, while studied in the West Yankton County Transportation Study actions at the intersection will be addressed by the City of Yankton.

SD50 / SD52

Current intersection geometrics are adequate to accommodate forecasted traffic through 2050.

SD50 / SD153

Providing northbound and southbound right-turn lanes could be considered, however, it would still not provide adequate capacity through 2050. Note a five-lane segment alternative was identified for evaluation for SD50 from SD153 to West City Limits Road. However, even if this configuration was extended through the SD153 intersection, it would still not provide adequate capacity for the side-street approaches through 2050. In addition, the intersection volumes would not meet warrants for installing a traffic signal.

The worst movement at the intersection would operate at LOS D, which while over the threshold, the level assumed 25 years of almost two percent per year growth in traffic. Over the current nine year period, traffic growth on SD50 has been near but under the growth rate included in the analysis.

Recommendation: Based on the time period until traffic volume exceeds the operations threshold, the recommendation is maintain the current geometrics and intersection control, monitor traffic change and consider alternative that add lanes and change the control as part of a future SD50 corridor study by the SDDOT.

SD50 / SD314

Adding a right-turn lane to the northbound side-street approach would provide adequate capacity through 2050. However, it should be noted that the side-street approach is only beyond LOS thresholds by one (1) second during the peak summer condition in year 2050. In addition, the northbound right turn movement at the intersection is minimal (i.e. 5 peak hour vehicles or less) during peak hours.

Recommendation: Retain current intersection lane geometrics and control, while monitoring traffic change and operations. If traffic grows at the forecasted rate, consider adding a northbound right turn lane.

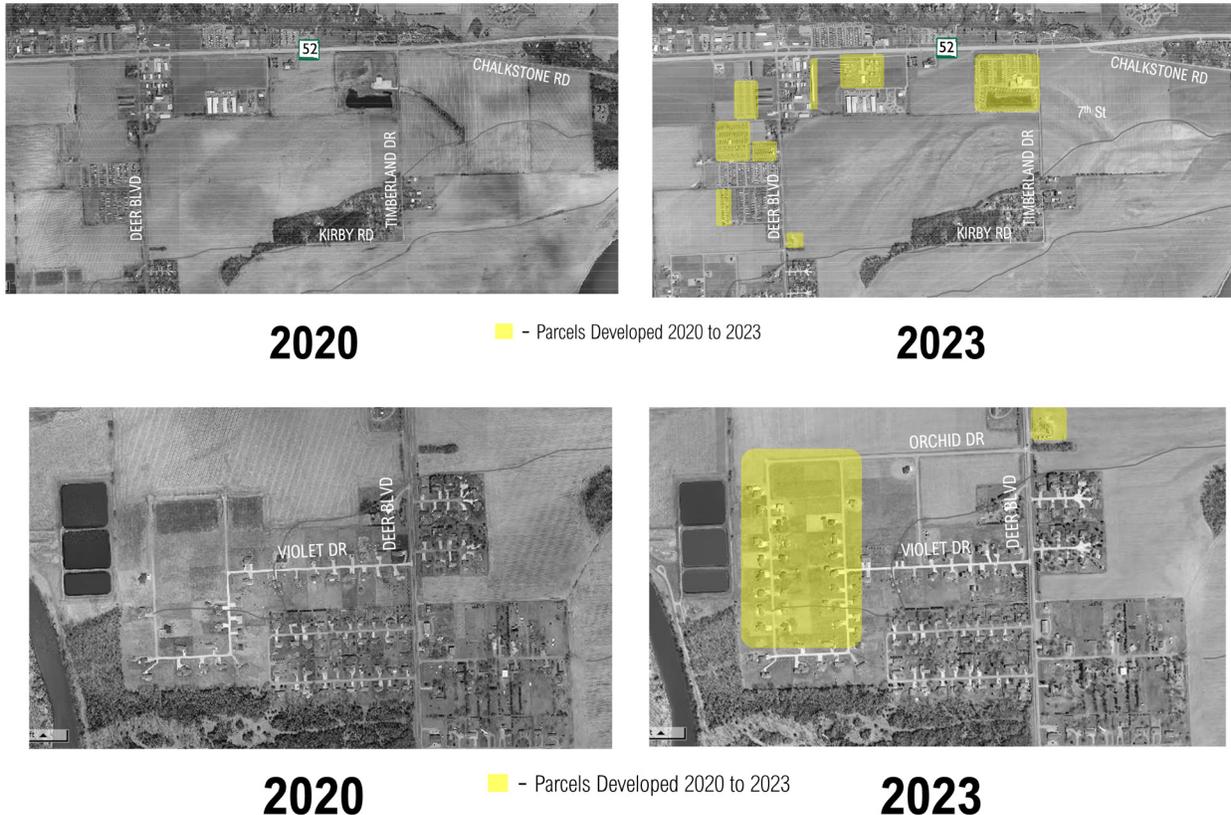
South of SD52 Collector/Arterial Framework

As outlined in the Traffic Growth – Deer Boulevard and Timberland Drive forecasting section, development in the area south of SD52 and between Toe Road and the Yankton city limits is an enhanced focus area for future development. In the last 10 years



a number of residential, commercial sales and campground developments have occurred. In general, development has been focused in areas where there is at least a gravel access road, with higher density uses such as campgrounds and commercial uses being located adjacent to SD52 and along paved routes such as Deer Boulevard and Timberland Drive. Figure 16 displays several locations in the study area where a combination of commercial, campground and residential development has occurred in the recent period since 2020.

Figure 16. Locations of Recent Development – Commercial and Residential



In 2022, the county developed a sewer concept plan to gain an understanding of potential need if the area develops at higher densities and the cost associated with providing sewer rather than current reliance on septic systems throughout the area. This study provided the basis for a possible development concept for the area south of SD52. Completion of the sewer concept analysis reflected an assumption that continued development of the area will need to be accompanied by services more reflective of Yankton rather than the remainder of the county. These include sewer extensions and, relative to this study, extension of the roadway network to provide access to parcels that today are in agricultural use.

Through the West Yankton County Transportation Study effort the intent is to identify a core framework of road corridors that provide access and connectivity to potential development areas in the focus area, including:

- The general alignment of routes defined as either collector street or arterial streets. Both of these typologies place a greater emphasis on moving people and goods within the subarea and between the subarea and regional access routes such as SD52, rather than on direct property access.
- Identifying a typical section anticipated for the routes based on the level of traffic forecasted and anticipated function of the routes.

- Provide general assumptions regarding the density of access points along the collector/arterial network.

Foundational assumptions in this analysis are that the routes discussed would only be required to be added to the network IF the area continues to development and the collector/arterial network would be constructed by developers of areas adjacent to the network facilities, not the county. Connected to these assumptions is another assumption that routes would be constructed over time, likely by a number of different developers, which raises the importance of creating the framework plan route alignment and sections as early as possible. Early definition of these elements supports more uniform construction of routes and reduces the potential for developers to establish subdivision street networks that limit through traffic along key half-mile corridors.

The route concept proposed is conceptual and should be revisited annually to allow the county to remain current on the relationship between the framework status and development that is being proposed. As such, a process for revising the network will also be important to have in place to give developers the opportunity adjust alignments within a preset range of conditions set by the county.

Framework Network Alignments

The framework concept for the subarea is intended to provide a grid through the area at approximately a half-mile density. At this density level, the grid will not likely overly influence development opportunities and provide enough alternate travel routes to not need any multi-lane corridors as the area develops. Development of the framework provides:

- Alternatives to using SD52 to get from one end of the focus area south of the state route to the other. Presently, traveling from areas adjacent to North Timberland Drive to Toe Road can be accomplished only by using SD52. The primary purpose of the state route system is to support longer distance travel, not the subdivision-to-subdivision traffic across the subarea. The one-mile and half-mile routes within the focus area are intended to provide internal growth area alternate routes, reducing the need to use the state highways for many shorter trips.
- Added roadway capacity and route alternatives which support more development, by providing more route alternatives for shorter trips than currently exist.
- Multimodal corridor opportunities for travel. It is unlikely there would be adequate demand and/or funding for trails for bicycles and/or pedestrians throughout the south of SD52 focus area to complement development. An arterial and collector framework network would provide multimodal corridors available to all modes, With the density of routes needed to provide adequate access to developable property, the level of vehicle traffic on most segments would allow for shared use by bicyclists and pedestrians.

The intent of the framework concept is to identify an arterial and collector network to support the functions identified in the above bulletpoints. General design characteristics of the framework concept are:

- Future arterial roadways would be located, when appropriate, along section lines and, where possible, within land identified for transportation right-of-way.
- Future arterial routes would be located approximately one mile apart and collector roadways one-half mile.
- Existing road alignments would be maintained and incorporated into future alignments when possible.
- Profile review to address steep ground slopes. This assessment was done with a GIS visualization of existing slopes in the area and comparing the profile to design criteria. Figure 1 displays the slope/topography visualization map for the subarea.

- Access points connecting local street to one-mile and/or half-mile routes would be located, as much as possible, at one-quarter mile spacing.
- The framework is focused on private land. Limited or no route would be placed on federal or state-owned property.
- Maximum 700-foot radius (outside of assumed stop conditions where tighter curves are permitted) to meet urban 40 mph standards with a normal crown.

Figure 17 displays the proposed framework concept for the study focus area. As part of the internal framework roadway network conversation, the northeast area where Sister Grove Road, West City Limits Road and Chalkstone Drive interact was discussed as:

- In the current condition there are skewed intersections with limited sight distances that should be addressed to better accommodate traffic growth.
- Not all of the routes are needed to provide a reasonable level of access.

Two alternative concepts for the area were developed and are displayed in Figure 18. In Alternative 1, West City Limits Road would be terminated approximately 300 feet south of the West 8th Street (SD52) intersection and Sister Grove Road-to-Chalkstone Road would be the principal east-west connection. By continuing West City Limits Road at least 300 feet south of West 8th Street, access to the residential properties could be retained. A critical concern with this alternative is presently, Chalkstone Road can serve as an alternate corridor to SD52 if there was an incident that west of the SD52/West City Limits intersection to the SD52/Chalkstone Road intersection. Without the Chalkstone Road access from the south to the SD52/West City Limits Road intersection, the likely diversion route would be SD153 to SD50 then to West City Limits Road. A substantial distance diversion route.

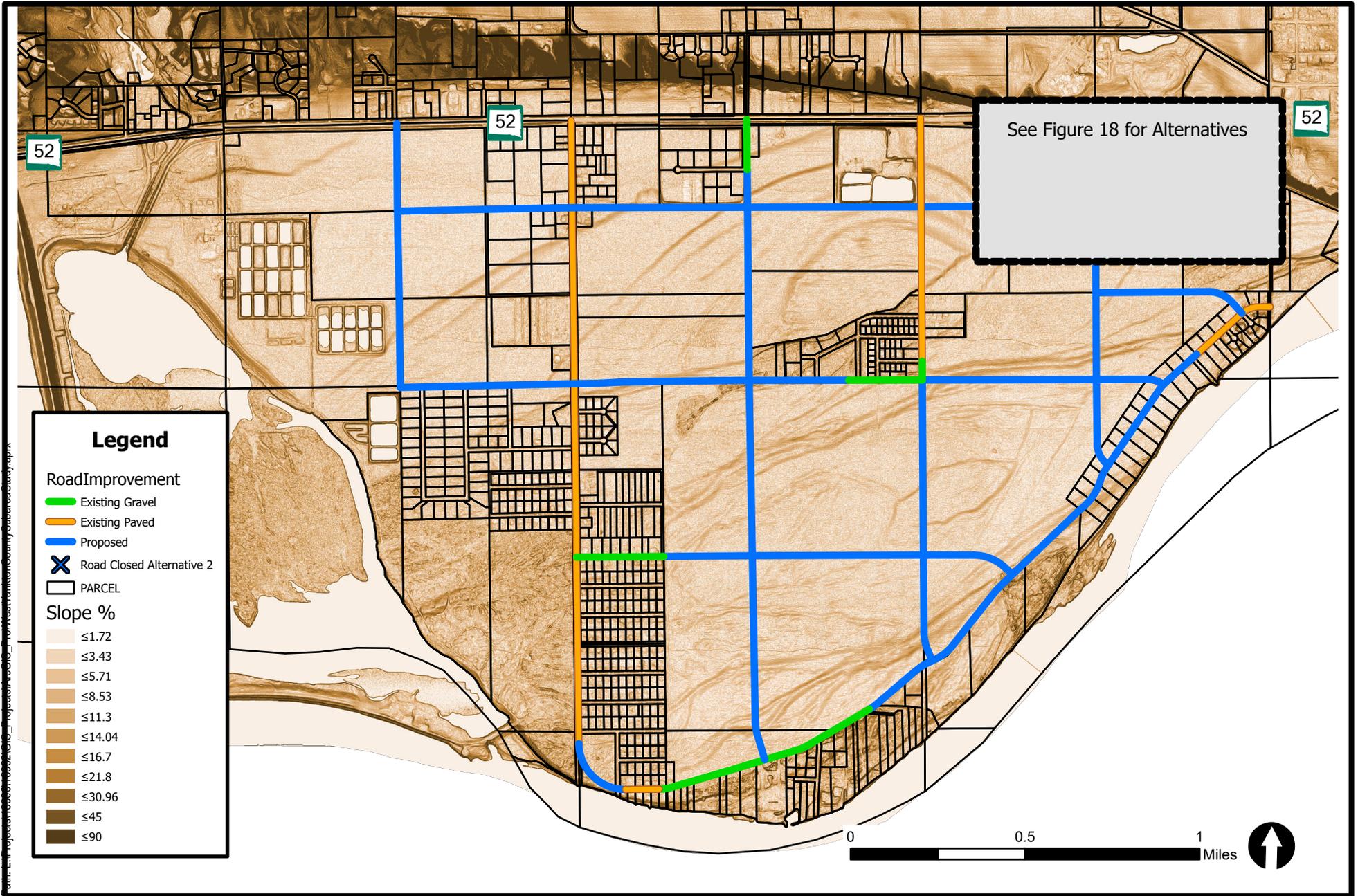
Alternative 2 reverses the importance and continuity of Sisters Grove Road relative to Alternatives 1. In Alternative 2, the current connection of Chalkstone Road to West City Limits Road would be retained as the primary route. Sisters Grove Road would remain a lower-level gravel road to provide parcel access, but not be considered as a primary access connecting areas to the south and east. In both alternatives, the collector/arterial framework streets throughout the area would provide multiple routes to currently developed and future development areas to the south. Thus, reducing or removing the current one way in and out concerns of residents in the areas closer to the river.

The alternatives were discussed with the SAT, at stakeholder meetings and a public meeting. From these discussions, the preliminary recommendation is to retain Alternative 2 for consideration as the area continues to develop. Primary reasons for selecting Alternative 2 were:

- Development of the areas directly adjacent to Sisters Grove are not expected to develop as areas to the south are expected to. Thus, using Sister Grove as the higher level facility, while terminating the West City Limits Road connection, would provide an overall lower level of accessibility.
- Removing the Chalkstone Road access to the SD52/West City Limits Road intersection removes a convenient alternate route in the event of an incident on SD52.

Framework Network Cross Section

It is anticipated that framework roads would operate at acceptable levels-of-service as two-lane routes and two or four-way stop control at intersections. A range of sections representing rural (ditches for drainage) and urban (curb and gutter with storm sewer) were discussed with the SAT. Based on the cost, environment and use of the roads, it was concluded routes would be planned as rural sections. Figure 19 displays the assumed typical cross section.



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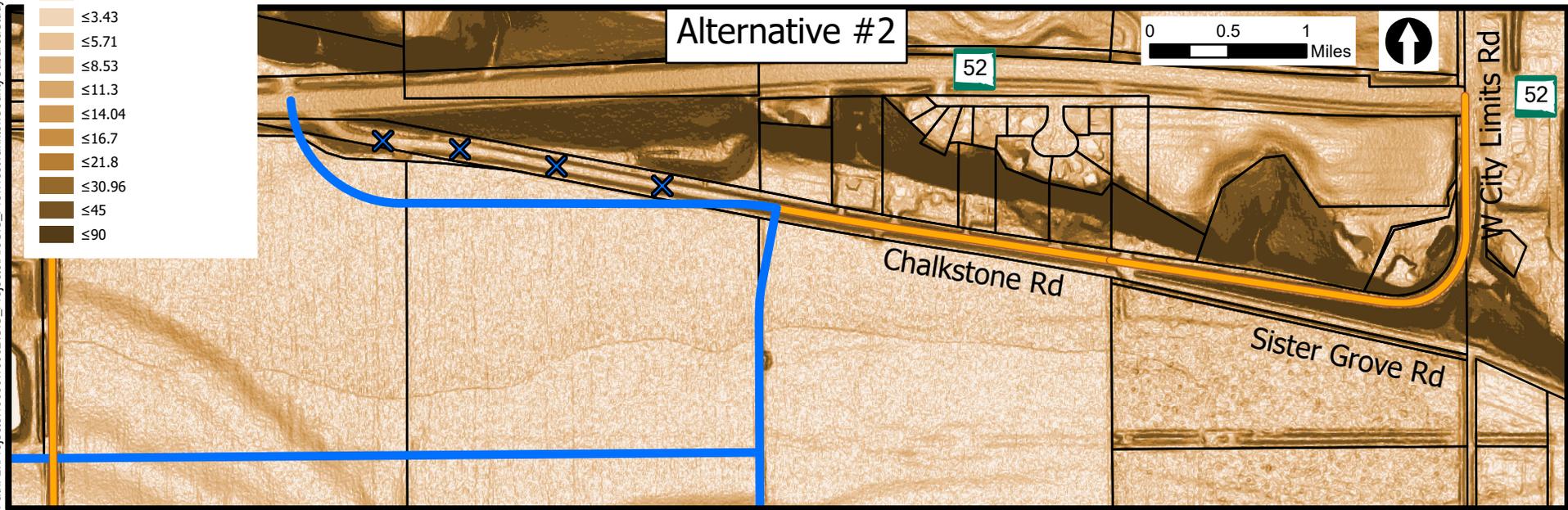
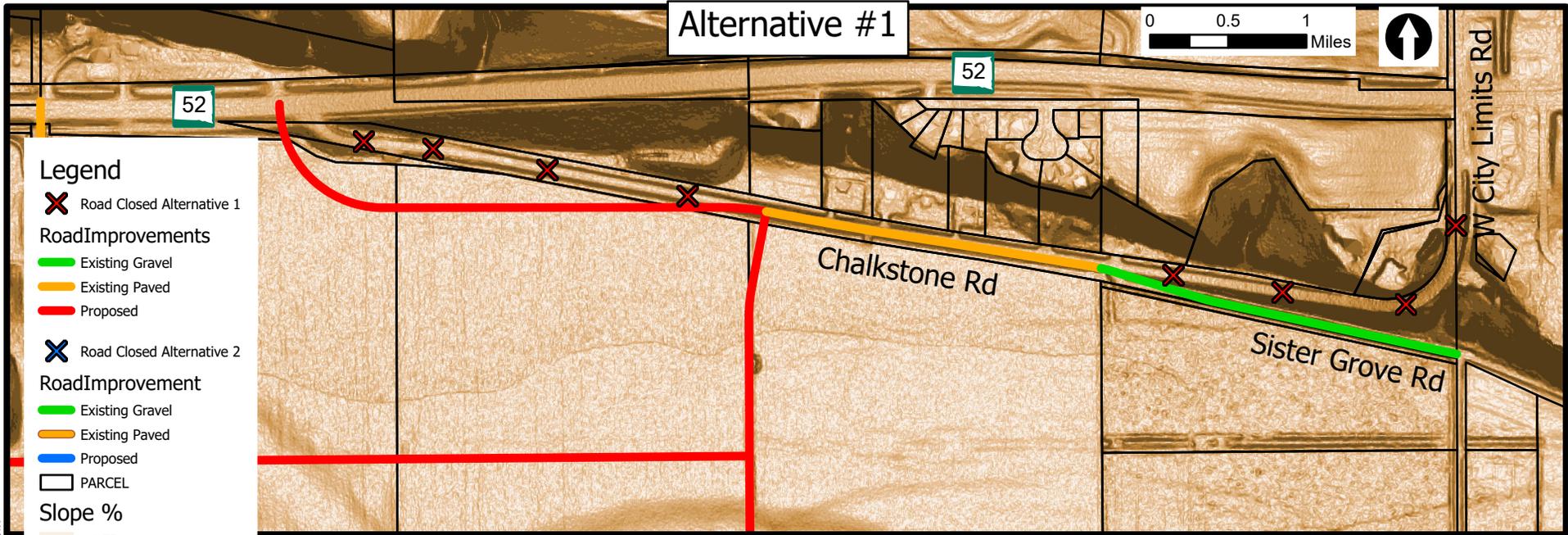
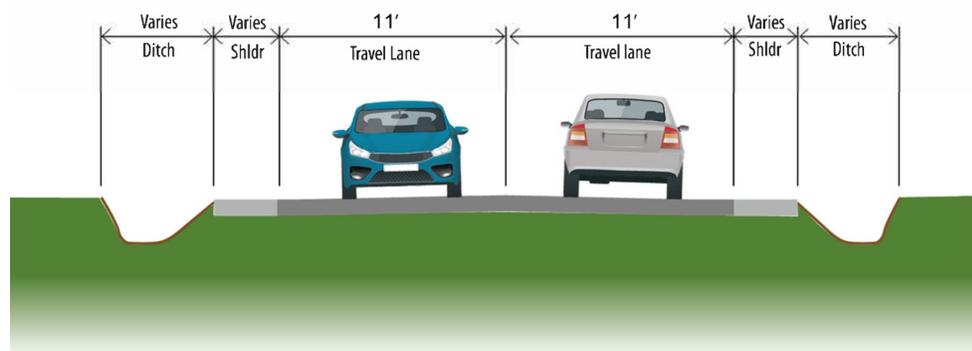


Figure 19. Collector/Arterial Framework Route Typical Section



Funding Collector/Arterial Framework Construction and Maintenance

The assumption at this point is the internal routes would be implemented as the area develops and would be part of other owner-provided infrastructure improvements associated with development proposals. If uses in the area do not change from their current uses, the need to provide the internal network does not exist and would not be pursued by the county. However, there is the expectation the area will develop as a combination of residential (ranging from lower to higher density) and commercial uses supporting residential and recreational activity. Thus, implementation of the concept would be timed with future development.

Maintaining framework routes was a topic of discussion at the staff, SAT and public levels. Typically, roads similar in function to those included in the framework would be included in a county’s mileage and maintenance responsibilities or would be maintained through the township. Since the mid-1970s, the county has had a policy of not taking on additional mileage and currently, there is not an appetite at the county board level to revise the policy. As South Utica is an unorganized township, there is not a township board to take on the managing maintenance. For unorganized townships, the county has the responsibility for maintaining roads in the township, which are almost exclusively gravel. To address the needs for roads in unorganized townships, the county can levy a property tax to address maintenance needs. For the South Utica township, the county has established both a base levy and an opt-out levy (an additional levied rate to support costs in addition to those that can be covered through revenue generated from the base levy). In 2017, the county formed a Township Taskforce to review the cost of maintaining unorganized township roads for the purpose of assessing whether there would be an advantage to establishing organized township. In South Dakota, organized townships have the responsibility of funding and managing maintenance of the road network under their jurisdiction. Unorganized township roads are maintained by the county through specific taxes levied for the purpose of road maintenance. Analysis of maintenance costs by township prepared for the Taskforce, revealed the cost of maintaining roads in South Utica township exceeded the funds collected through secondary road taxes. Since the 2017 analysis, the county has tracked maintenance costs by township as well as revenue generated through road taxes. For South Utica township, costs continue to exceed the level of revenue generated through secondary road taxes.

Including the collector/arterial framework roads would add approximately 20 lane miles to the area, which would substantially increase maintenance costs within the area. As adding the roadway mileage is directly tied to development of area, with construction would also come increased tax revenue for maintenance. Should the county elect to advance the recommendations in the West Yankton County Transportation Study, a revenue analysis reviewing estimated maintenance

costs to anticipated revenue at the current mill levy to estimate whether secondary road taxes are a viable option for maintain the infrastructure.

An alternative to relying on secondary road tax revenue would be development of one large or multiple road districts. Developers/landowners of parcels proposed for development can establish a road district for the purposes of constructing and/or maintaining roads outside a municipality. From the perspective of the home or business owner, the road district alternative would look similar to the use of secondary road tax in there would be an added line item to their property state statement. The road district would be different from the secondary road tax alternative in that specific corridors would be identified as target corridors for use of the revenue generated. Additionally, over time, the board tasked with overseeing expenditure of funds would migrate from one with greater representation by the developer to one operated by landowners within the district.

Assessment of how one or more districts may be established is outside the scope of this work. If the road district path is pursued, the county's access to secondary road tax funds generated today across the properties in the focus area would no longer be available as the source would be replaced with road district generated funds that would need to be used only for maintenance of the defined routes. Thus, a first next step in preparing a plan of how orderly and sustainable development of the area's infrastructure should be prepared. This plan would address items beyond the roadway network, including:

- Sanitary service
- Public safety (fire and police)
- Open space
- Road maintenance



Public and Stakeholder Engagement

Engagement

Public Meetings

The first public meeting was held at the Yankton Community Library on December 1, 2022. This meeting served to inform the public about the purpose of the plan and to gather initial feedback. During and after the presentation, attendees shared their questions and comments as follows:

- There is some pedestrian traffic in the study area roadways, but not as much as there would be within the recreational area. There are a small number of bicycle commuters.
- Most bikes stay on the south side of SD52. One local business owner rides his bicycle between the lake and the City of Yankton.
- There is an ice cream shop on the north side of SD52; tourists complain they can't cross easily on foot to reach this/other destinations. Similarly, people using the private campgrounds would like to be able to cross SD52 by bike.
- Agricultural vehicles and large trucks came up repeatedly as having specific problems/needs. Two to three meeting attendees are farmers. One commented that finding a gap in traffic to turn onto SD52 is more difficult with a trailer.
- Trucks have a turning radius problem at the intersection of 8th and West City Limit. SDDOT is aware of the problem and a widening project is underway.
- The subject of a summer-only signal at Deer Boulevard and SD52 came up.
- One attendee commented that the situation here is unique in South Dakota. The area is rural most of the year, but in summer the tourist presence turns it into a small city.
- There is difficulty in turning left from SD52 onto Deer Boulevard. There can be queues 10 vehicles deep in the turn lane in summer.
- Frontage access roads came up repeatedly as a proposed solution.
- A local property owner noted that he was planning to build a general store/bar/restaurant on the northwest corner of Deer Boulevard and SD52. It will have parking for 200 cars. He left his contact information for a follow-up conversation.
- One attendee asked about the possibility of a pedestrian overpass.

A meeting summary of the public meeting is included in the Appendix.

The second and final public meeting was held on September 6, 2023 at the NFAA Archery Center in Yankton. The focus of this meeting was the recommendations for action in the study area. The meeting included a presentation that was live streamed and an open house where county, SDDOT and consultant staff were present to answer questions or clarify work completed as part of the plan.

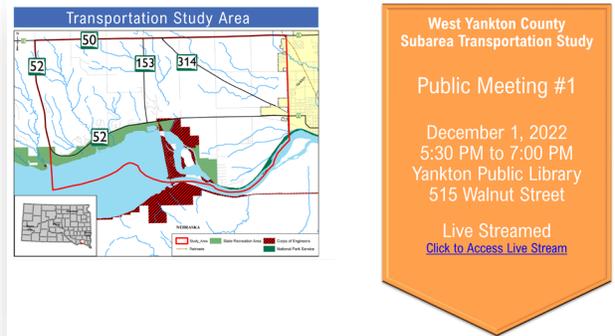


Photo Credit: Yankton Press and Dakotan



The presentation included a brief recap of the work completed to date as it has been approximately nine months since the first public meeting, introduction of the type of improvements evaluated and a list of roadway and intersection control improvements. Areas of question/discussion included:

- A proactive plan for providing a secondary access to residential areas near the river is needed. The transportation plan provides for alternative paths throughout the study area, but only if the area develops. If there is no added development or development does not fill in the entire area to the north, which would provide developer constructure routes, there is not a mechanism to build the secondary access. Without a secondary access there is concern for adequate emergency access in the event of a large scale event.
- Pedestrian crossing traffic of SD52 is increasing and will continue to increase as development occurs both north and south of SD52. Are there alternatives? Throughout the study, pedestrian crossings have been discussed. With the exception of including pedestrian signals at a future Deer Boulevard/SD52 crossing, there not no other areas that warrant action based on pedestrian activity or where it would be appropriate to add a crossing. Adding a marked pedestrian crossing in areas with a speed limit of 40 MPH or more is generally not recommended (Federal Highway Administration, Selecting Safety Treatments). A crossing of SD52 east of Welkom Drive was identified a location where pedestrian volume is increasing. The question of whether an underpass would be possible was discussed, but no commitment to the concept was provided.
- Secondary Road Taxes provide an alternative to developing a road district and should be included in the range of funding alternatives. The county manages secondary road funds in unorganized townships, such as South Utica.



Photo Credit: Yankton Press and Dakotan

West Yankton County Subarea Transportation Plan

CONTACTS
 Gary Vetter, Development Services Director
 Yankton County
 605-290-4443
 Gary@co.yankton.sd.us

Bill Tron, Principal
 SRF Consulting Group
 402-513-2158
 btron@srfconsulting.com

Study Steps

- Existing/Future Conditions Goals
- Network Gaps/Deficiencies/Conflicts
- Ideas to Address Gaps
- Evaluate Organization/Alternatives
- Short-Medium-Long Term Action Plans

Current Status

Consider All Modes
 By Trip Type/Purpose
 Account Summer Peak / Off-Peak Times

State Routes
 County Routes

Consider All Modes

Intersection Upgrades
 Segments
 Upgrade to Paved New Lanes
 New Collector Routes
 Adjust Access Locations

Overseen by Study Advisory Team at Each Step

Primary Evaluation Areas

The subarea transportation study is a collaborative effort between Yankton County and the South Dakota Department of Transportation (SDDOT). However, the focus of actions associated with the work is on the county network, with the state highway network coming into play where it intersects with the county network. Segments and intersections on the state system have been included for analysis and to inform SDDOT staff of needs and locations to focus on in the future. Included in the analysis are traffic and traffic operations; crashes and driveways along each of the key routes in the study area.

Traffic/Traffic

- Evaluate Both Summer and School In-session Periods
- Assess Road Segments
- Assess Key Intersections
- Periods Reviewed: Today/2035/2050

Crashes

- Data Period: 2017 - 2022
- Assess Segments and Intersections
- Review Crash Severity and Contributing Factors

Access

- Focus on State Highways
- Public and Private Access Points
- Base Analysis on SDDOT Access Management Guidelines

Public Meeting #2 Handout Material

WEST YANKTON COUNTY SUBAREA TRANSPORTATION PLAN

Draft Recommendations - Key Intersections

- A - DEER BLVD:**
 - Add Signal
 - Meets Warrant in SUMMER
 - Install FY 2024
- B - TIMBERLAND DR:**
 - Add Northbound Right Turn Lane
 - Meets Signal Warrants in Summer 2050 Only
 - Internal Streets can Re-distribute Traffic - May not need Signal
- C - SD52/SD153:**
 - No Action Proposed
- D - SD52/WEST CITY LIMITS RD:**
 - Signalize in Future (Meets Warrant in 2050)
- E - SD50 from SD52 to WEST CITY LIMITS RD:**
 - Add Lanes (Through or Passing)
 - Determined in Future by

Draft Recommendations - South of SD52

Anticipated Typical Section

- Propose One-half Mile Collector Grid
- Paved with Shoulder (See Section Above)
- Roads Likely Lower Volume - Bicyclists and Pedestrians Share Lane
- Limited Direct Property Access - Primary Purpose is to Connect Area
- When:
 - Development Driven
 - No Development - No Streets
- Funding: Development Financed
- Maintenance: Through Road District(s)



Landowner Meetings

The study team gathered information directly from existing landowners in the area both at the public meetings and by holding one-on-one meetings in early March. Invitations were sent to every property owner within the growth area south of SD52; property owners up to a quarter-mile north of SD52 were included as well.

The majority of the property owners who participated in the meetings were there primarily to find out more about the study. Most held one or two residential lots for which they had no major development plans. A few recurring themes were dissatisfaction with the growing number of campgrounds, an increase in truck traffic on SD52 and SD314, and concern that future traffic patterns would alter residents' safety and quality of life.

Deer Boulevard and SD52

Several people commented that the intersection of SD52 and Deer Boulevard was difficult and/or dangerous to navigate. The reasons cited include long waits to turn onto SD52, risky bicycle and pedestrian crossings, and reckless driving and parking by customers of the bar and grill on the southeast corner.

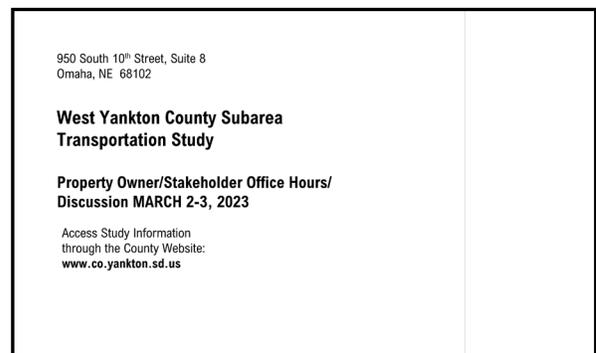
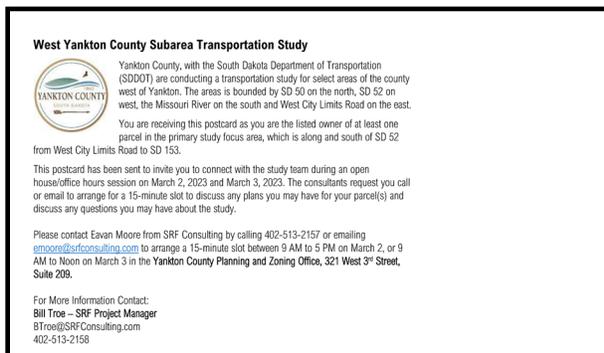
The owner of the bar and grill in question participated in a meeting. He said that drivers often use his property as a cut-through to access SD52 instead of turning right at the intersection. He expressed willingness to turn part of the property into a formal frontage road.

The owners of the property on the northwest corner of the intersection also met with the study team to expand on the plans they had previously shared at the December public meeting. As envisioned, the development of a new bar, event venue, and parking lot would generate enough new traffic to impact this intersection.

As detailed earlier in this report, the primary mitigation strategy – signaling the intersection – has already been included in the State Transportation Improvement Program. Other mitigation steps could include painting clear lane markings on Deer Boulevard north of SD52; looking into creation of a south-side frontage road; and considering a safety education/enforcement campaign at this location.

Lewis & Clark State Recreation Area

The District Park Supervisor responsible for the Lewis & Clark State Recreation Area scheduled a meeting. He described plans to add campsites, cabins, boat slips, and jet ski slips.



Landowner/Stakeholder Meeting Invitation Postcard



Appendix



West Yankton County Subarea Transportation Plan Public Meeting 1 Summary

December 1, 2022

South Dakota Department of Transportation and Yankton County

Prepared by:



SRF No.19-95

Newspaper Ads

AFFIDAVIT OF PUBLICATION

YANKTON DAILY PRESS AND DAKOTAN

SRF CONSULTING GROUP
950 SOUTH 10TH STREET SUITE 8
OMAHA NE 68108

STATE OF SOUTH DAKOTA
COUNTY OF YANKTON

KELLY HERTZ, BEING FIRST DULY SWORN ON OATH DEPOSES AND SAYS THAT (S)HE IS THE MANAGING EDITOR OF YANKTON MEDIA INC, A CORPORATION, THE PRINTER AND THE PUBLISHER OF THE YANKTON DAILY PRESS AND DAKOTAN, A LEGAL DAILY NEWSPAPER PUBLISHED AND CIRCULATED IN THE CITY OF YANKTON, SAID COUNTY AND STATE, AND ONE OF THE OFFICIAL NEWSPAPERS OF THE SAID COUNTY OF FACTS STATED IN THIS AFFIDAVIT; THAT THE ANNEXED SDDOT NOTICE OF PUBLIC IN

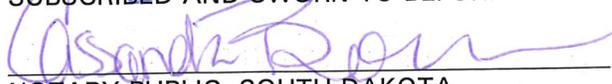
TAKEN FROM THE PAPER, IN WHICH IT WAS LAST PUBLISHED IN THE NEWSPAPER ON THE 25th DAY OF November, 2022 THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION OF SAID NOTICE TO WIT \$78.88 ENSURES TO THE BENEFITS OF THE PUBLISHER OF SAID NEWSPAPER AND THAT NO AGREEMENT AND UNDERSTANDING FOR THE DIVISION THEREOF HAS BEEN MADE WITH ANY OTHER PERSON, AND THAT NO PART THEREOF HAS BEEN AGREED TO BE PAID TO ANY PERSON WHOMSOEVER.

PUBLISHED ON: 11/17/2022 11/25/2022

FILED ON: 11/25/2022



SUBSCRIBED AND SWORN TO BEFORE ME THIS 25th DAY OF November, 2022



NOTARY PUBLIC, SOUTH DAKOTA
MY COMMISSION EXPIRES 07/04/2026

NOTARY PUBLIC, SOUTH DAKOTA
MY COMMISSION EXPIRES 07/04/2026
I HEREBY CERTIFY THAT THE ABOVE NAMED PERSONS ARE QUALIFIED TO BE NOTARIES PUBLIC IN THE STATE OF SOUTH DAKOTA
AND THAT I AM A NOTARY PUBLIC IN THE STATE OF SOUTH DAKOTA
AND THAT I AM A MEMBER OF THE NATIONAL ASSOCIATION OF NOTARIES PUBLIC



**SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION
NOTICE OF PUBLIC INFORMATION MEETING**

West Yankton County Transportation Plan Study

Date: December 1, 2022

Time: 5:30 PM to 7:00 PM

Location: Yankton Community Library

515 Walnut Street

Yankton, SD 57078

The South Dakota Department of Transportation (SDDOT) with Yankton County will hold the first of two rounds of public meetings to discuss and receive input on the above project. The subarea transportation plan area is bounded by SD 50 on the north, West City Limits Road on the east, the Missouri River on the south and SD 52 on the west.

The open house style public meeting will begin with a presentation shortly after 5:30 PM, with one-on-one discussion with county, SDDOT and consultant staff following. The presentation will be broadcast live and a link to the broadcast will be on the Yankton County website.

During and after the broadcast, members of the public may submit questions or comments about the project by email to btroe@srfconsulting.com or by calling 402-513-2158 and providing verbal comments.

The county website (www.co.yankton.sd.us) will have information on the study scope, study schedule and meeting displays one week before the public meeting.

The live and recorded meeting presentation will be accessible through the county website (www.co.yankton.sd.us). Questions and comments sent during the meeting will be addressed during the live broadcast.

Notice is further given to individuals with disabilities that this meeting is being held in a physically accessible place. Any individuals with disabilities who will require a reasonable accommodation in order to participate in the public meeting should submit a request to the department's ADA Coordinator at 605-773-3540 or 1-800-877-1113 (Telecommunication Relay Services for the Deaf). Please request the accommodations **no later than 2 business days** prior to the meeting in order to ensure accommodations are available.

For further information regarding this project, contact Steve Gramm, Planning Squad Leader at (605) 773-3281 / email at steve.gramm@state.sd.us or Bill Troe at (402) 513-2158 / email at btroe@srfconsulting.com.

Notice published twice at the total approximate cost of \$78.88 and can be viewed free of charge at www.sdpublicnotices.com
Published November 17 and November 25, 2022.

AFFIDAVIT OF PUBLICATION
THE OBSERVER

SRF CONSULTING GROUP
950 SOUTH 10TH ST, SUITE 8
OMAHA, NE 68108

STATE OF SOUTH DAKOTA
COUNTY OF YANKTON

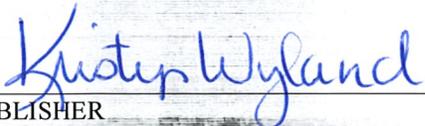
KRISTY WYLAND BEING FIRST DULY SWORN ON OATH DEPOSES AND SAYS THAT SHE IS THE PUBLISHER OF THE YANKTON COUNTY OBSERVER, THE PRINTER AND THE PUBLISHER OF THE OBSERVER, A LEGAL WEEKLY NEWSPAPER PUBLISHED AND CIRCULATED IN THE CITY OF YANKTON, SAID COUNTY AND STATE, AND ONE OF THE OFFICIAL NEWSPAPERS OF THE SAID COUNTY OF FACTS STATED IN THIS AFFIDAVIT; THAT THE ANNEXED

MEETING NOTICE PUBLISHED NOV. 18 AND 25, 2022

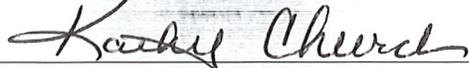
TAKEN FROM THE PAPER IN, WHICH IT WAS PUBLISHED IN THE NEWSPAPER FOR THE MONTH OF NOV. 18 & 25, 2022 THAT THE FULL AMOUNT OF THE FEE CHARGED FOR THE PUBLICATION OF SAID PROCEEDINGS TO WIT \$280.00 ENSURES TO THE BENEFITS OF THE PUBLISHER OF SAID NEWSPAPER AND THAT NO AGREEMENT AND UNDERSTANDING FOR THE DIVISION THEREOF HAS BEEN MADE WITH ANY OTHER PERSON, AND THAT NO PART THEREOF HAS BEEN AGREED TO BE PAID TO ANY PERSON WHOMSOEVER.

PUBLISHED IN: NOV. 18 & 25, 2022

FILED ON: NOV. 25, 2022


PUBLISHER

SUBSCRIBED AND SWORN TO BEFORE ME THIS 25 DAY OF Nov. 2022


NOTARY PUBLIC, SOUTH DAKOTA

MY COMMISSION EXPIRES 10/18/24



Have a Great Break, RAIDERS!!

Weekly SUDOKU

by Linda Thistle

8			4					9
	2				1	7		
		6		8				2
4					2		8	
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6				3		8		1
		3			5			6
	1		8					9

Place a number in the empty boxes in such a way that each row across, each column down and each small 9-box square contains all of the numbers from one to nine.

DIFFICULTY THIS WEEK: ◆◆◆

◆ Moderate ◆◆ Challenging
◆◆◆ HOO BOY!

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SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION NOTICE OF PUBLIC INFORMATION MEETING

West Yankton County Transportation Plan Study

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Notice published twice at the total approximate cost of \$280.00

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Since the summer of 2020, so many orca whales have launched attacks on boats off the coast of Spain and Portugal that sailors have been advised to stay in port at night.

Actor Mike Meyers originally gave the character of Shrek a thick Canadian accent but decided, after animation had begun, that a Scottish one would better suit the character. The film had to be re-animated and cost over \$4 million, or around 10% of its overall budget.

Association of Agriculture

plies, marketing, prices, weather and a vast al in planning and administration of federal ects this data across South Dakota. Work ine and conducting crop counts in the field.

Work in your local area
Great for building experience in the agriculture sector
Also a great second income or for those semi-retired

artscher (SD Field Supervisor):

Press Release



Yankton Area Office

1306 West 31st St.

Yankton, SD 57078-9662

Phone: 605-668-2929 FAX: 605-668-2927

Website: <https://dot.sd.gov> and <https://sd511.org>

For Immediate Release:

Monday, Nov. 28, 2022

Contact:

Steve Gramm, Planning Squad Leader, 605-773-3281

SDDOT and Yankton County Seek Public Input into West Yankton County Master Transportation Plan Study

YANKTON, S.D. - The South Dakota Department of Transportation (SDDOT), in collaboration with Yankton County, will hold an open house public meeting on Thursday, Dec. 1, 2022, to gather public input for help in developing the West Yankton County Master Transportation Plan. This open house public meeting will be held at the Yankton Community Library (515 Walnut St. in Yankton) from 5:30 p.m. to 7 p.m.

The West Yankton County Master Transportation Plan study will address a full range of transportation options and issues, including pedestrian, bicycle, transit, freight, and automobile, within the area of Yankton County west of the City of Yankton and south of S.D. Highway 50. The purpose for the open house public meeting is to inform the public of the study's intent, to record any concerns the public may have on transportation within the study area, and to gather ideas to help determine the future look of roadway, bus/transit, bicycle, and pedestrian systems within the study area.

For those who cannot attend the meeting, or desire additional information on the study, information will be made available online after the meeting on the Yankton County website at www.co.yankton.sd.us. The presentation will begin shortly after 5:30 and will be broadcast live on the Yankton County website.

The opportunity to present written comments will be provided. Written comments will be accepted until Friday, Dec. 16, 2022.

Notice is further given to individuals with disabilities that this open house is being held in a physically accessible place. Any individuals with disabilities who will require a reasonable accommodation in order to participate in the open house should submit a request to the department's ADA Coordinator at 605-773-3540 or 1-800-877-1113 (Telecommunication Relay

Services for the Deaf). Please request the accommodations no later than two business days prior to the meeting in order to ensure accommodations are available.

For more information, contact Steve Gramm, Planning Squad Leader, at 605-773-3281 or by email at steve.gramm@state.sd.us.

About SDDOT:

The mission of the South Dakota Department of Transportation is to efficiently provide a safe and effective public transportation system.

For the latest on road and weather conditions, road closures, construction work zones, commercial vehicle restrictions, and traffic incidents, please visit <https://sd511.org> or dial 511.

Read more about the innovative work of the SDDOT at <https://dot.sd.gov>.

Sign In Sheets

DATE 12/1/22

Meeting Purpose: Public Meeting #1

NAME	ADDRESS	EMAIL	PHONE	Email Updates (Yes Only)
Eavan Moore	950 S 10 th Street 68114	ecmoore@srfconsulting.com		✓
Steve Gramm	700 E. Broadway Ave	Steve.Gramm@State.sd.us		✓
Gary Vetter	321 West Third St., #209	gary@co.yankton.sd.us		✓
Wade Lippert	3702 Kristi Lane Yankton	WLippert@astecindustries.com		
Mike Sedlacek	3302 W. City Limits Rd Yankton	mikes@co.yankton.sd.us	605-260-4473	
Dan Klimisch		dan.k@co.yankton.sd.us		✓
John Margwardt	2809 W city limits Rd	john.m@margtrans.com	605-660-3030	
Mike Healy	1811 Cedar St	MTH@VYN.MIDCO.NET		✓
Robbie Wiebe	4410 W 8 th St	robbie@piddleshop@gmail.com		
Tom Noecker	3703 W 8 th	tnoecker@wartel.net	402-841-4475	
Rob Nielsen	304 Greenview Dr. #6	rob.nielsen@yankton.net		✓
Andy Bryan	3711 Kristi Lane	rockytrax@gmail.com	605-660-0157	✓
JOHN & NANCY COUGHRAN	155 CRESTVIEW DR	ncougran3@gmail.com		✓
Kelly Hertz	807 West St. #	Yankton Post Kelly news@yankton.net		
Tom & Beth Kaltsulas	188 Marina Dell Avenue	te6532@gmail.com		✓

DATE 12/1/22

Meeting Purpose: Public Meeting #1

NAME	ADDRESS	EMAIL	PHONE	Email Updates (Yes Only)
DENNIS MALY	1501 RIVER ASPEN ROAD-YANKTON	d.maly@outlook.com	402-675-7200	YES
Delight Paulson	505 Cedar - yktn	delightjanda@gmail.com	605 260 0832	yes
Don Kettering	4281 W 11th St	dpkettering@gmail.com	605 664 3033	yes
Nancy Wenande	1205 Peyton Lane	nancy@yankton.sd.com	605 660 0438	yes
Jerry Oster	603 E 94	juster@wnax.com	605-668-1178	Yes
Ryan Heine	4700 Alphonse Rd.	ryan.m.heine@gmail.com	605 760 9084	Yes
Greg Rothschild	1306 W. 31st St	greg.rothschild@state.sd.us	605-668-2929	Yes
Joseph Sestak	1306 W 31 st St	Joseph.Sestak@state.sd.us	605-668-2929	JAT member
Richard Kloycek	42479-298th St Scotland, SD		605 661-4305	
Ward Youngblom	43197 SD Hwy 52	youngblomw@gmail.com	605-237-2190	Yes
Cathy & John Young Darcy	42979 SD Hwy 52 Yankton SD	cdarcy66@gmail.com	605-661-6059 (c) 605-665-1993 (c)	
Darlene Kunde	43916 310th St YKN.	dkunde38@gmail.com	605-665-9245	
Wanda Howey - Fox	Yankton	whfoxlaw@midco.net	665-1001	Yes
Cam McAllister	3804 W 8 FIRE ICE	fireandice.sd@gmail.com	605-760-4546	Yes
+1				

Public Meeting Presentation



Western Yankton County Subarea Study

PUBLIC MEETING 1

December 1, 2022

Agenda

1. Team Introductions
2. Purpose of the First Public Meeting
3. Overview of the Study:
 - Location
 - Study Approach
4. Current Conditions
5. Mitigation Toolbox
5. Schedule
6. Open Discussion/Questions
7. Wrap-up

Key Areas Evaluated to Understand Needs

Traffic Operations



- Evaluate Both Summer and School In-session Conditions
- Road Segments
- Key Intersections
- Today – 2035 and 2050

Crashes

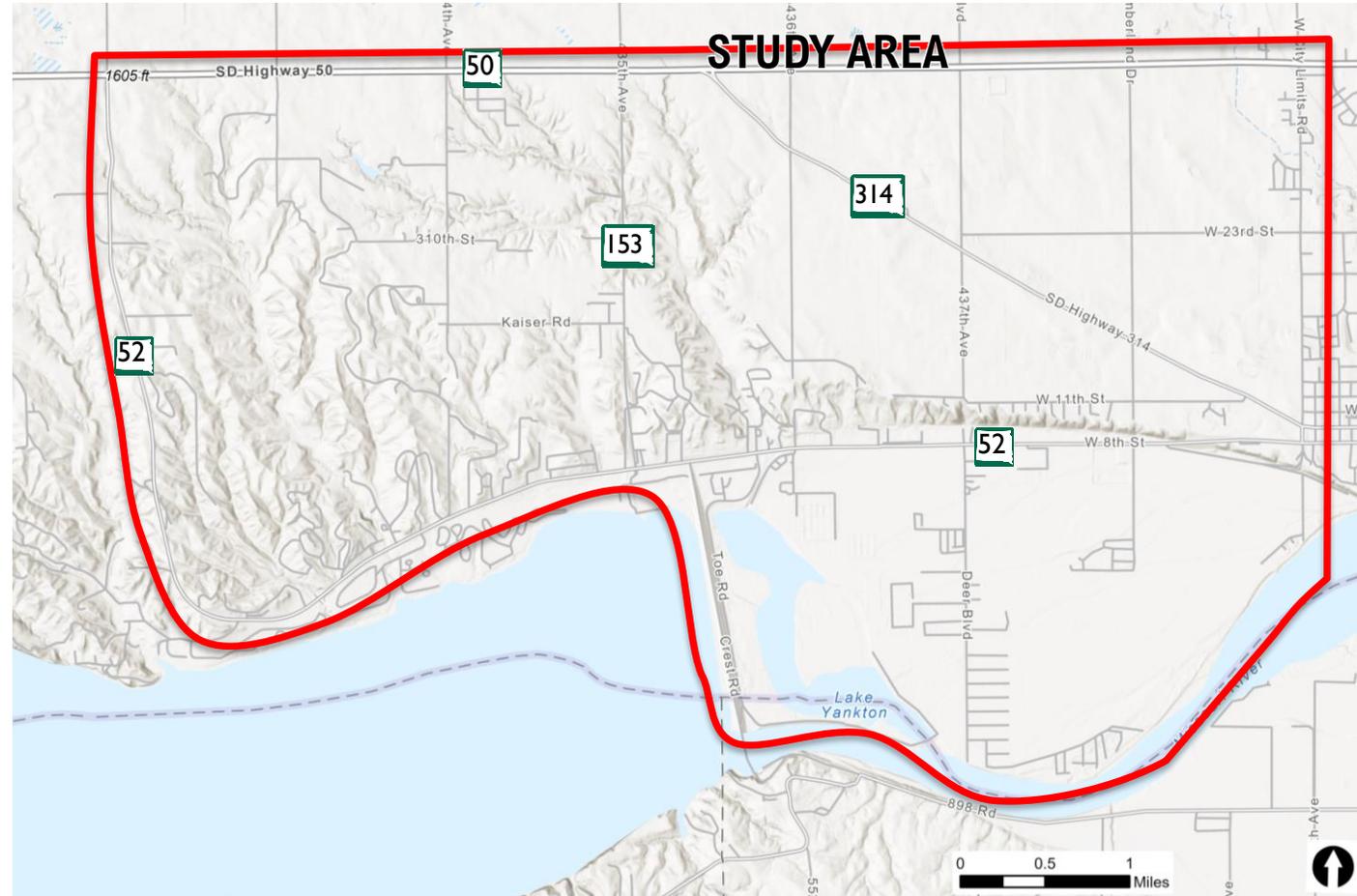


- Period from 2017 to 2022
- Rate at Intersections/ Segments
- Severity/Contributing Factors

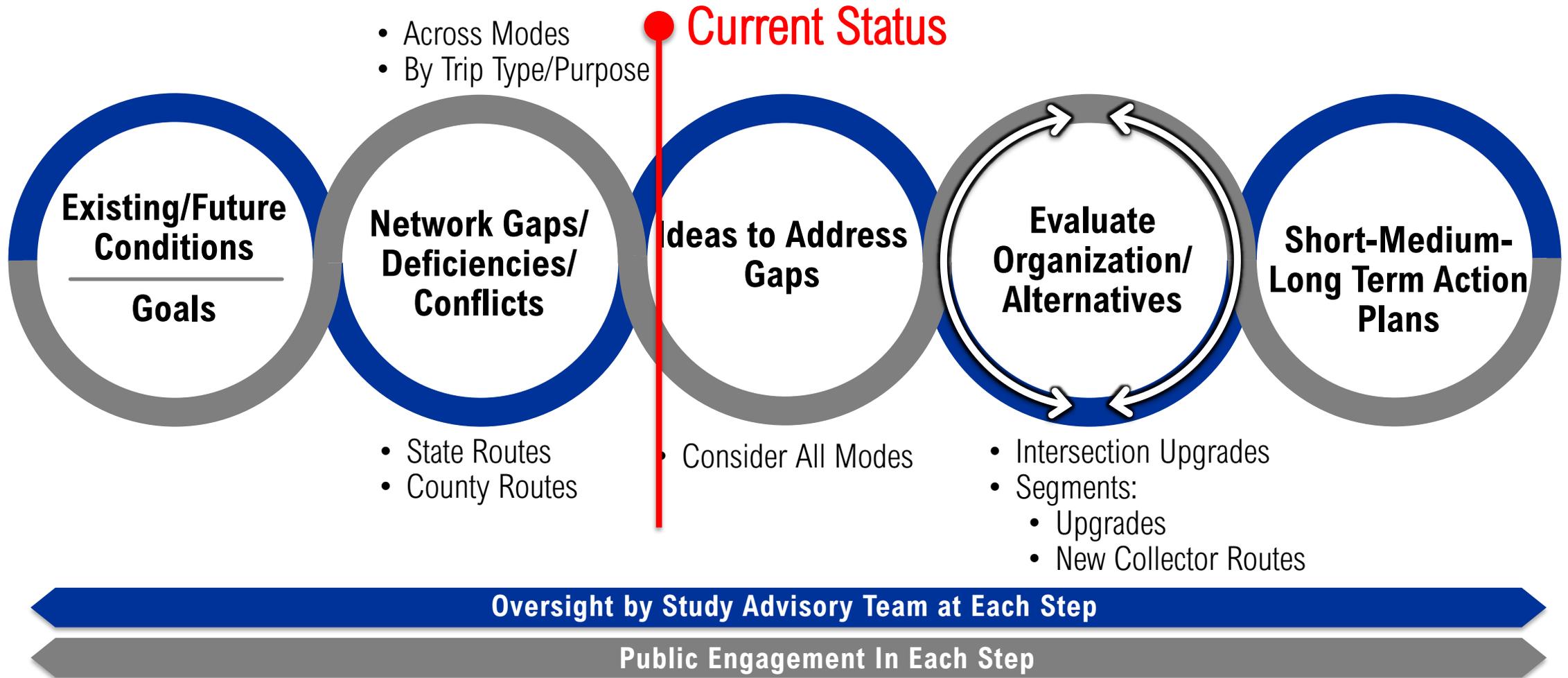
Access



- State highways
- Public and Private Access Points
- Compare to SDDOT Guidelines



Applying Our Approach – Work Plan

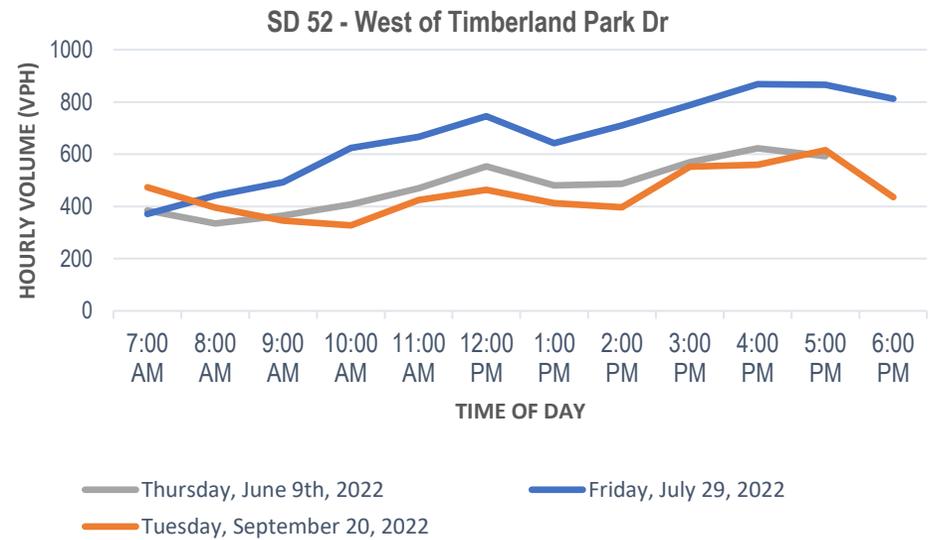
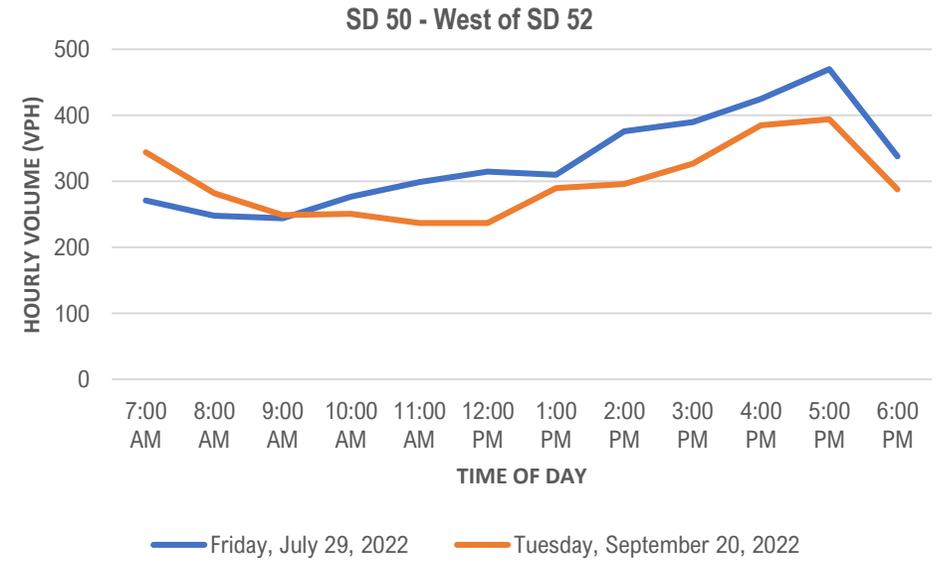
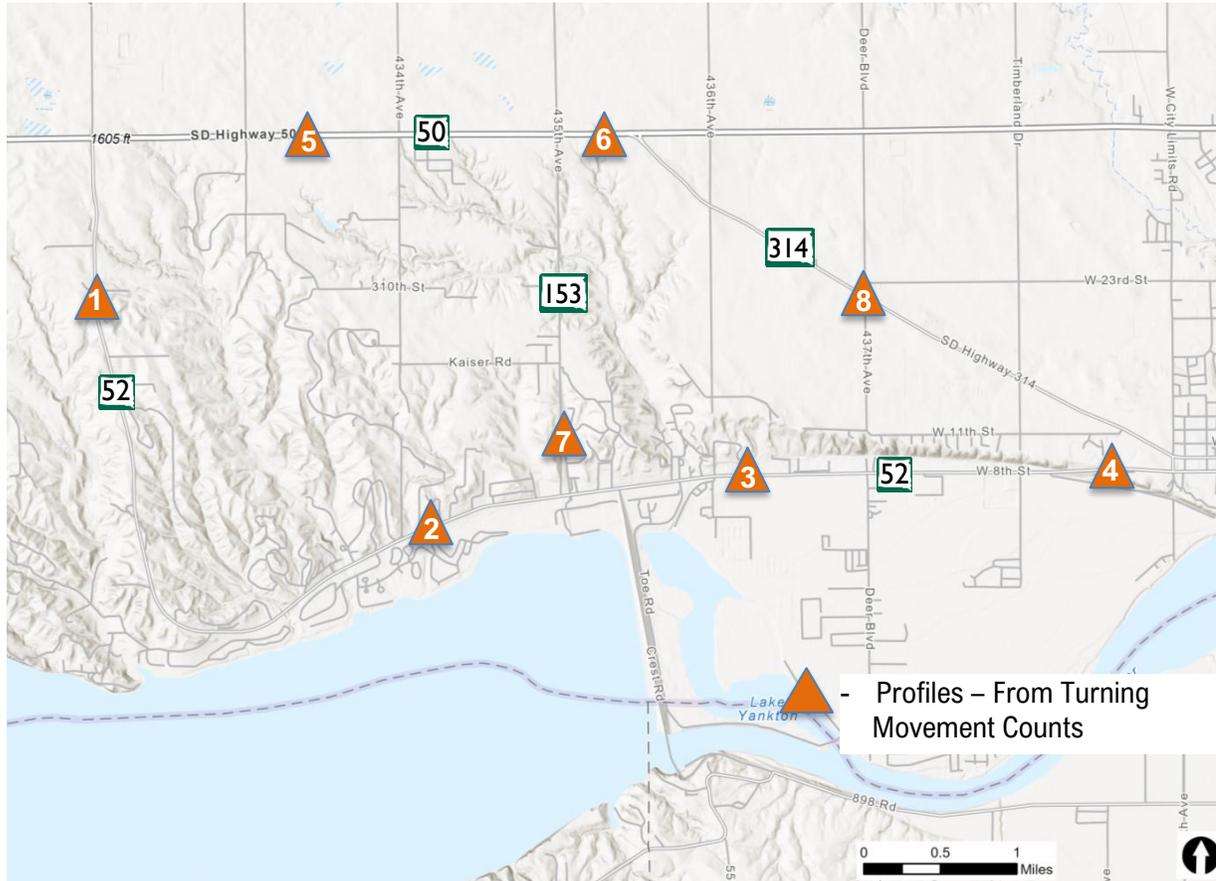




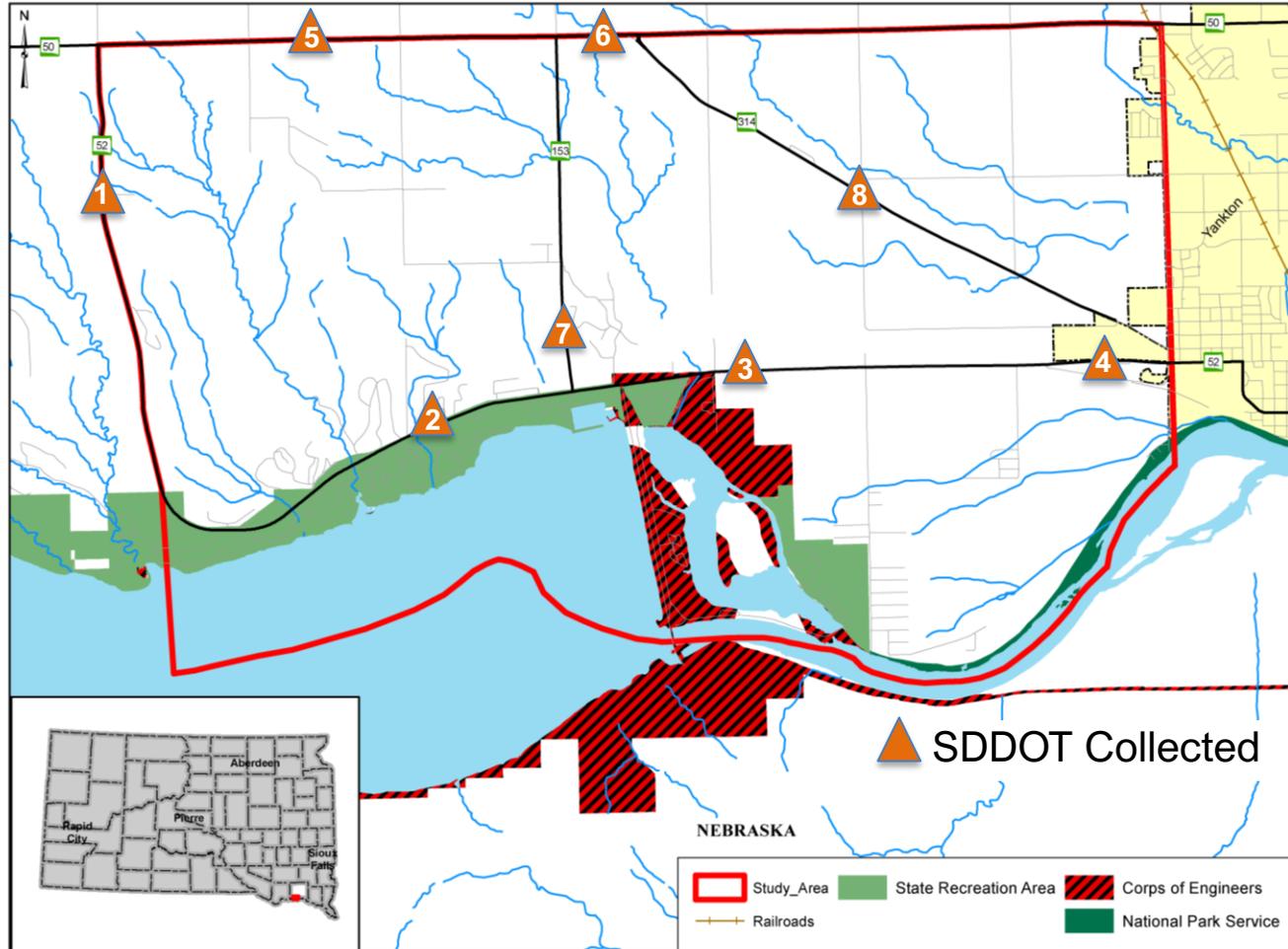
Traffic Data and Operations

December 1, 2022

Route Segment Count Locations



Route Segment Count Locations



Segment Number	Percent by Classification Category			Weekday ADT
	Passenger Car/Pickups (#1 - #3)	Bus/Single-Unit Trucks (#4 - #7)	Double/Multi-Unit Trucks (#8-#13)	
1 (SD 52)	482 (95%)	10 (2%)	14 (3%)	506
2 (SD 52)	2,814 (97%)	28 (1%)	60 (2%)	2902
3 (SD 52)	5,133 (95%)	54 (1%)	207 (4%)	5,394
4 (SD 52)	7,432 (96%)	81 (1%)	266 (3%)	7,779
5 (SD 50)	3,810 (88%)	101 (2%)	439 (10%)	4,350
6 (SD 50)	4,983 (89%)	128 (2%)	471 (9%)	5,582
7 (SD 153)	1,370 (94%)	38 (2%)	54 (4%)	1,462
8 (SD 314)	1,487 (91%)	65 (4%)	88 (5%)	1,640

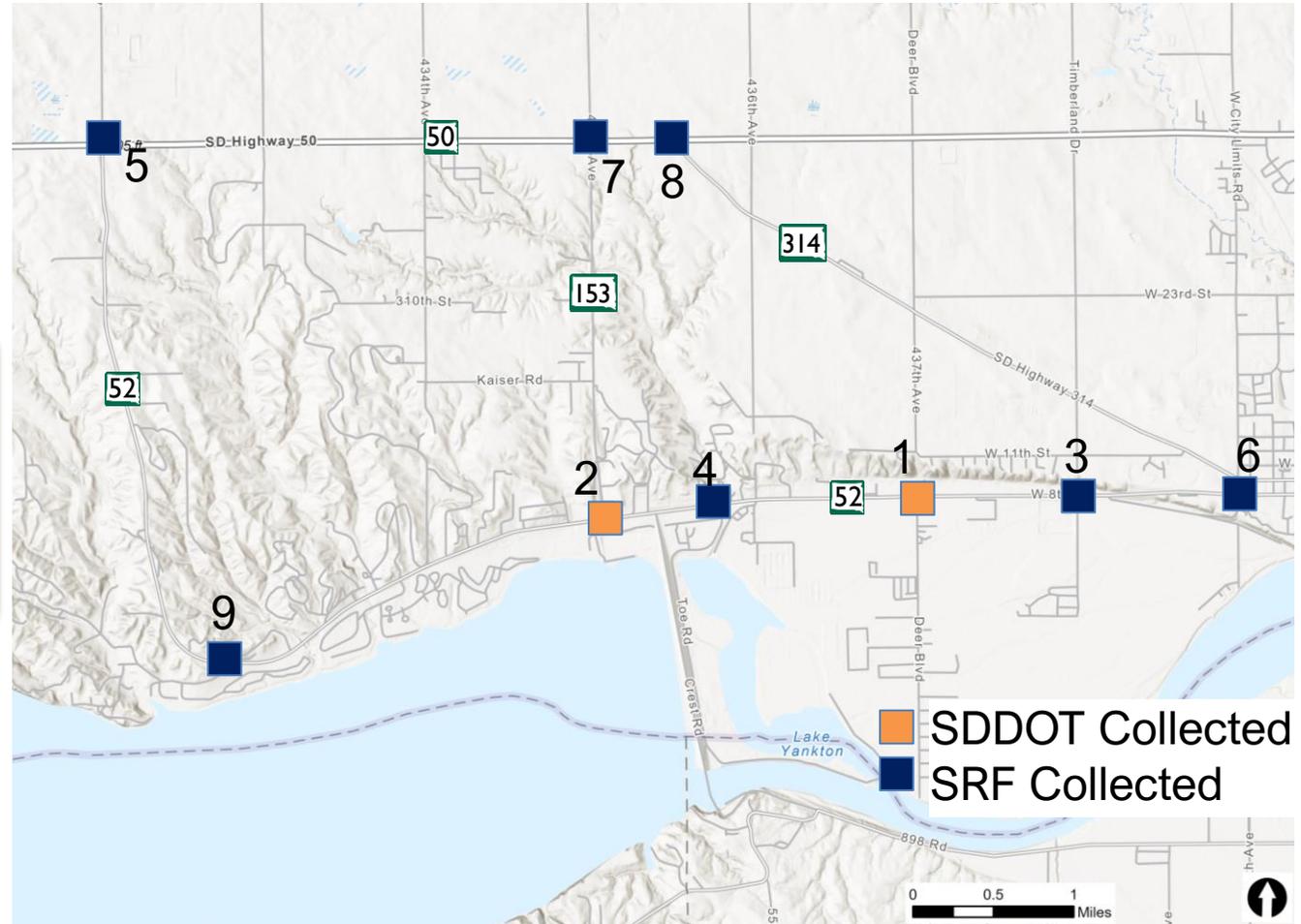
PEDESTRIAN AND BICYCLE COUNTS

Count Periods – Few/If Any In Peak Hours

Ask Meeting Participants – Consistent with Your Experience

Intersection Count Locations Operations Summary

Intersection ⁽⁴⁾	Level of Service (Delay)		
	School-in-Session Weekday		Peak Summer PM
	AM Peak Hour	PM Peak Hour	
SD 52 / Gavin's Point Road	A/A (9 sec.)	A/A (9 sec.)	A/A (9 sec.)
SD 52 / SD 153	A/B (10 sec.)	A/B (11 sec.)	A/B (13 sec.)
SD 52 / Toe Road	A/A (10 sec.)	A/A (10 sec.)	A/C (16 sec.)
SD 52 / Deer Boulevard	A/B (11 sec.)	A/C (16 sec.)	A/C (16 sec.)
SD 52 / Timberland Park Road	A/B (12 sec.)	A/A (10 sec.)	A/B (13 sec.)
SD 52 / West City Limits Road	A/E (46 sec.)	A/C (19 sec.)	A/D (26 sec.)
SD 50 / SD 52	A/B (12 sec.)	A/B (12 sec.)	A/B (13 sec.)
SD 50 / SD 153	A/B (15 sec.)	A/B (14 sec.)	A/C (17 sec.)
SD 50 / SD 314	A/B (12 sec.)	A/B (14 sec.)	A/B (14 sec.)

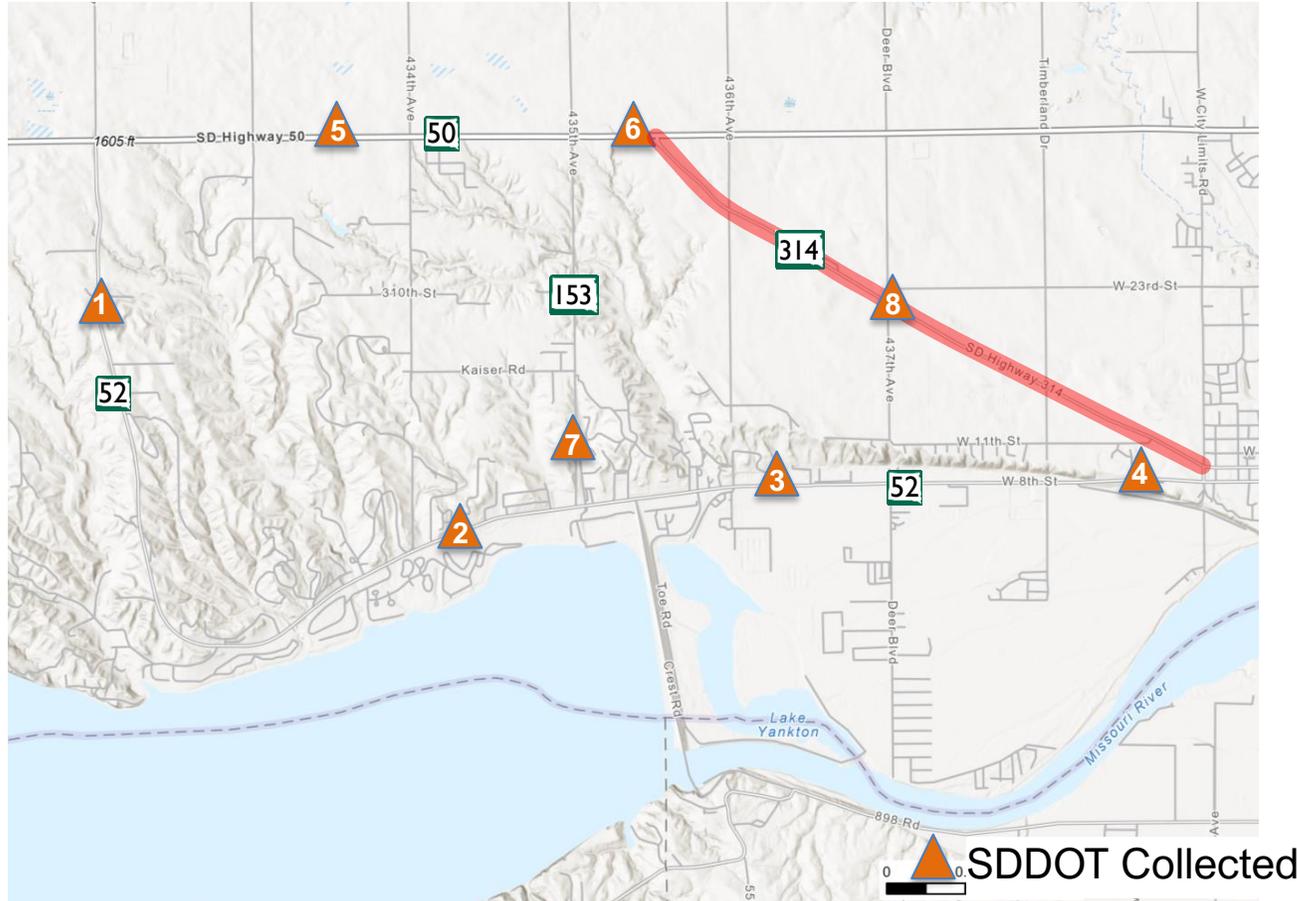




Speed Assessment

December 1, 2022

Route Segment Operating Speed Review



Segment Number	Posted Speed Limit (MPH)	Average Speed (MPH)	85th Percentile Speed (MPH)
1 (SD 52)	55	50	57
2 (SD 52)	50	47	52
3 (SD 52)	50	46	51
4 (SD 52)	40/50 ⁽¹⁾	42	47
5 (SD 50)	65	60	66
6 (SD 50)	65	50	56
7 (SD 153)	45/55 ⁽²⁾	42	49
8 (SD 314)	55	57	63

(1) Speed limit is 40-mph immediately west of West City Limits Road and transitions to 50-mph approximately ¼-mile west of the West City Limits Road.

(2) Speed limit is 45-mph south and 55-mph north of Horeshoe Hollow Drive.



Access Point Review

December 1, 2022

Access Locations – State Routes



Access Point Assessment

Segment	Side of Roadway	Access Points	Segment Length (miles)	Access Density (points/mile)
1 – SD 52: SD 50 to Gavin’s Point Rd	North	19	3.5	6
	South	18		5
2 – SD 52: Gavin’s Point Rd to SD 153	North	20	2.6	8
	South	4		2
3 – SD 52: SD 153 to Deer Blvd	North	29	1.9	15
	South	5		3
4 – SD 52: Deer Blvd to West City Limits Rd	North	16	2.0	8
	South	14		7
5 – SD 50: SD 52 to SD 153	North	14	3.0	5
	South	21		7
6 – SD 50: SD 153 to SD 314	North	4	0.5	8
	South	3		6
7 – SD 153: SD 52 to SD 50	East	15	2.4	6
	West	16		7
8 – SD 314: SD 50 to West City Limits Rd	North	37	4.2	9
	South	21		5



Mitigation Options

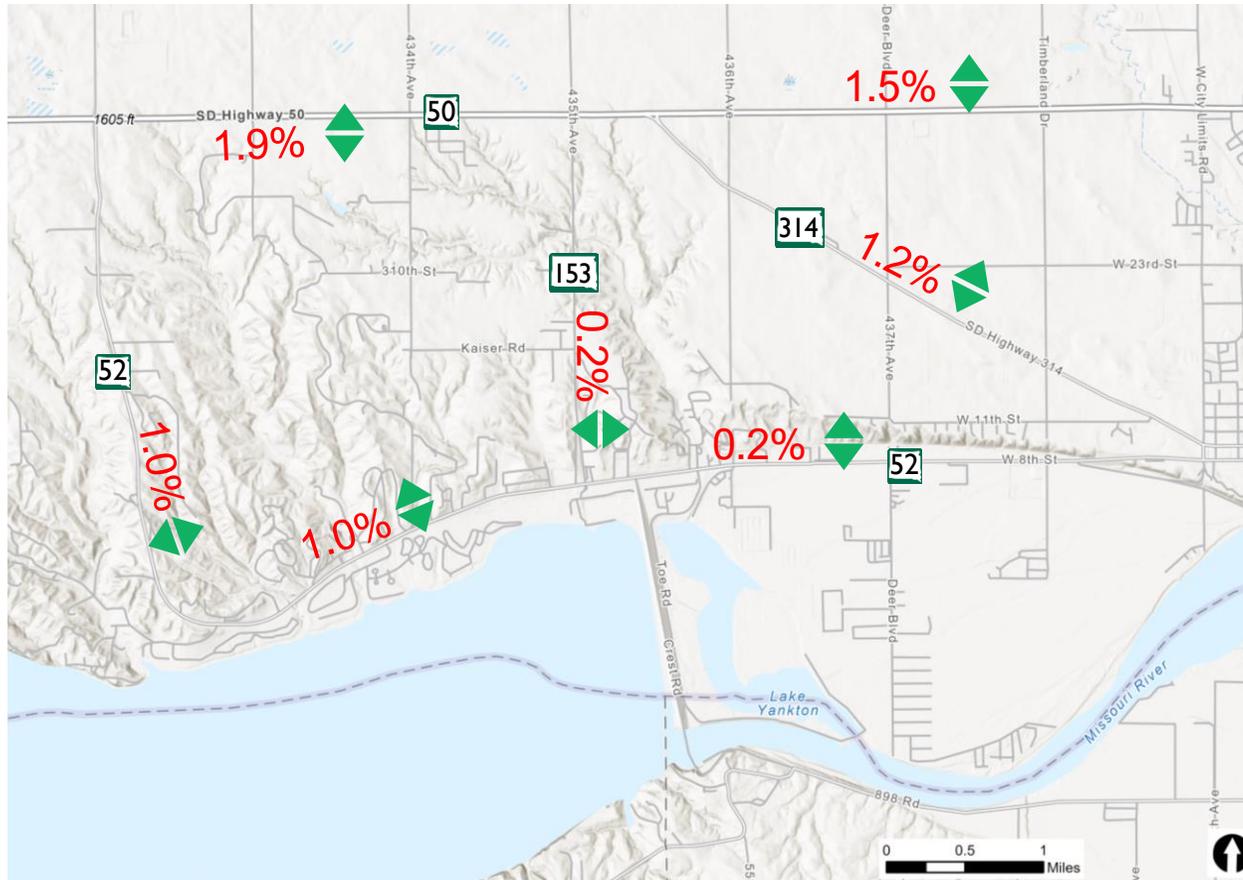
- Consolidate Driveways:
 - Multiple per Parcel
 - Adjacent Properties
- Frontage/Backage Roads
- Eliminate Drives



Traffic Growth Rates

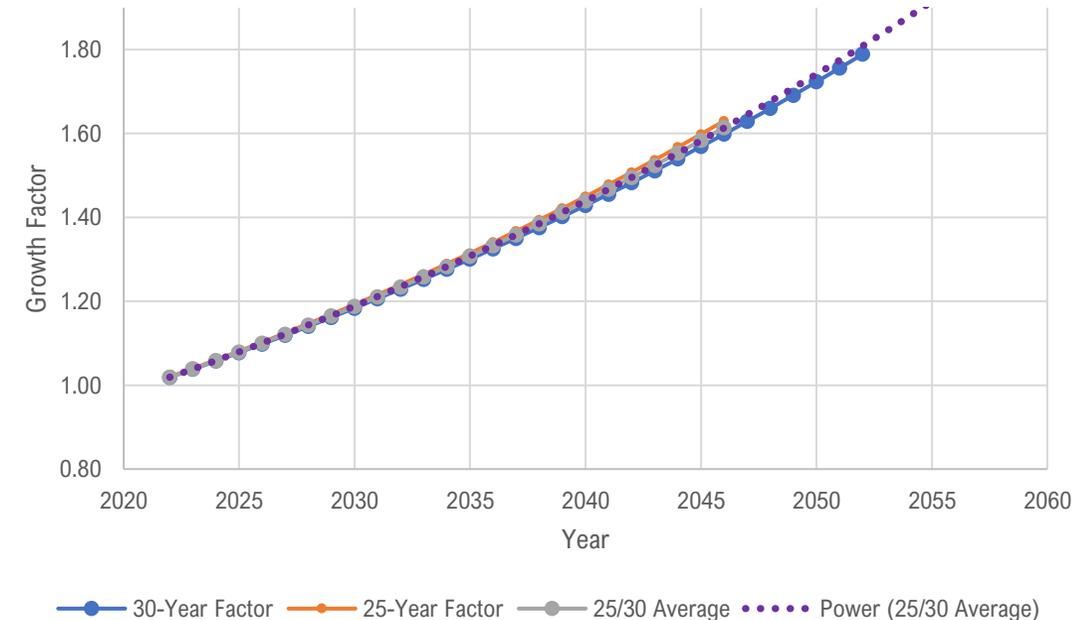
December 1, 2022

Historic and Proposed Traffic Growth By Route



**HISTORICAL ANNUAL CHANGE
(2012-2021)**

- ▲ - Steady Growth
- ▼ - Steady Decline
- ◄ - Mix of Increases and Decreases



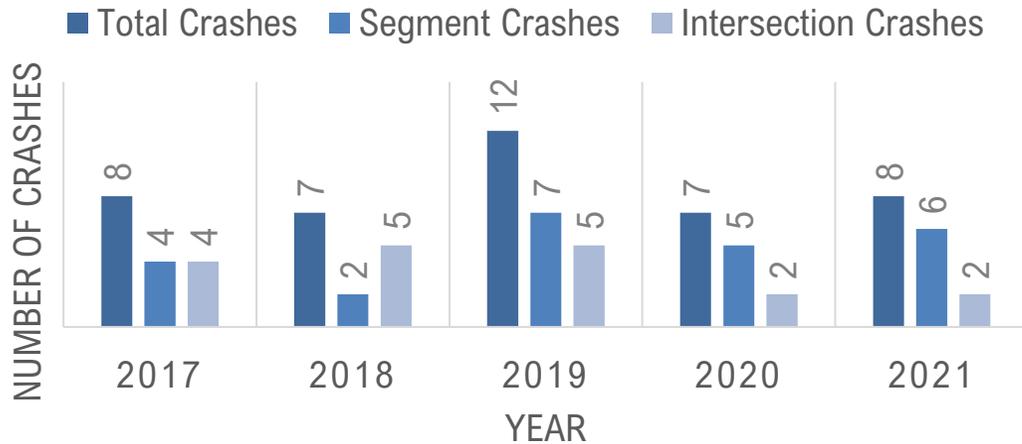


Crash Data Assessment

November 21, 2022

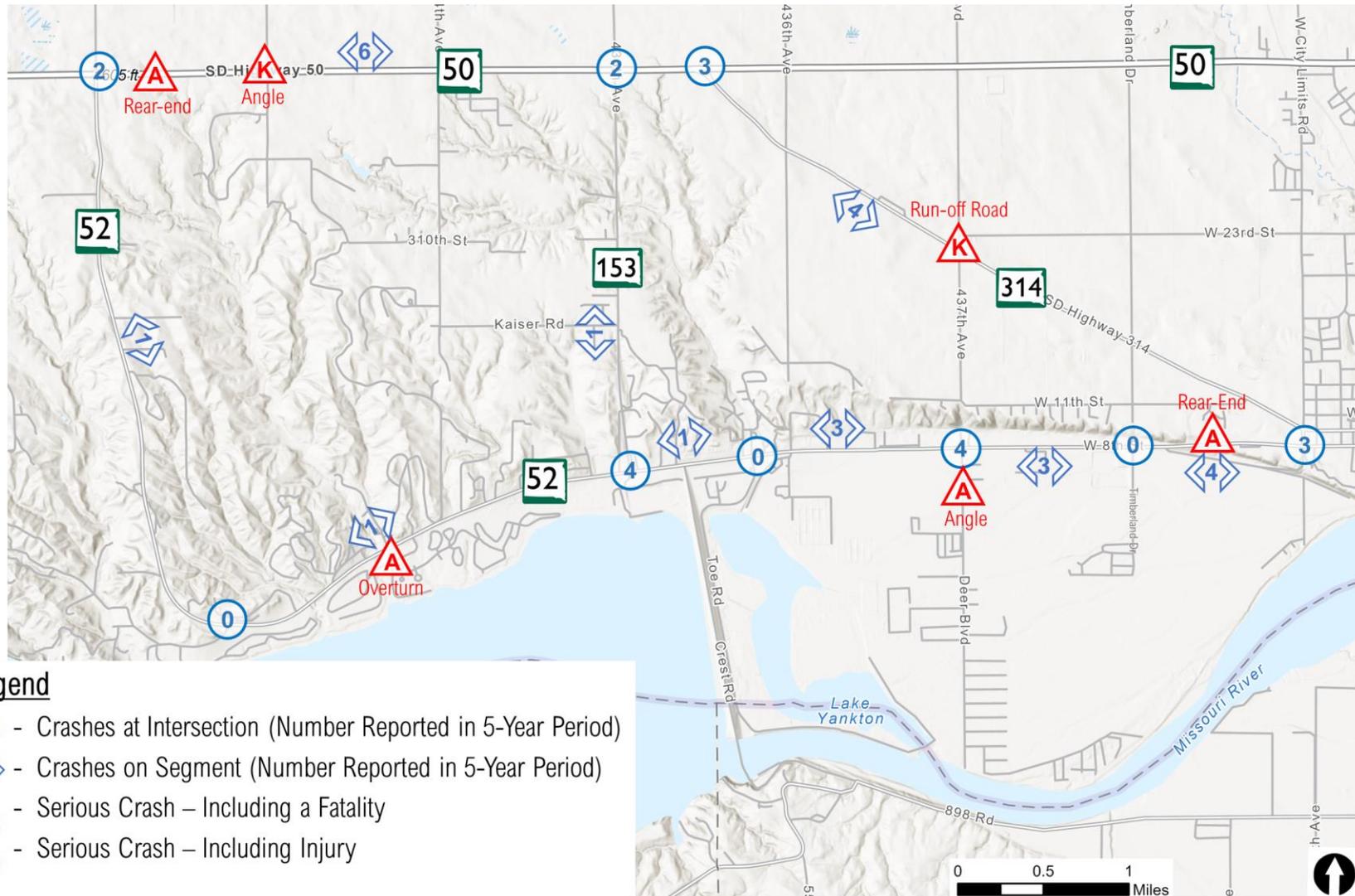
Crash Assessment

CRASH FREQUENCY BY YEAR (1)



	Single Vehicle Crashes		Multiple Vehicle Crashes		Total
	Animal	Ran off Road	Angle	Rear End	
SD 52 / Gavin's Point Road	-	-	-	-	0
SD 52 / SD 153	1	2	2	-	5
SD 52 / Toe Road	3	-	-	-	3
SD 52 / Deer Boulevard	1	-	2	2	5
SD 52 / Timberland Drive	1	-	-	-	1
SD 52 / West City Limits Road	3	1	2	-	6
SD 50 / SD 52	2	1	1	-	4
SD 50 & SD 153	3	-	1	1	5
SD 50 & SD 314	3	1	2	-	6
Intersection Totals	17	5	10	3	35

Crashes by Location (2017-2022)



Findings

- No Intersections display elevated numbers/ rates
- No segments display elevated numbers/rates
- Injury crashes – No pattern of location or type of crash



Mitigation

December 1, 2022

Mitigation Toolbox

Traffic Operations



- Add Local Road Network
- Add Frontage/Backage Roads
- Add Turn Lanes
- Intersection Control:
 - Four-way Stop
 - Signalize
- Modify Access Locations

Correctable Crashes



- Shoulder Improvements
- Modify Access Locations
- Enhanced Ped Xing
- Speed Reductions
- Add Rumble Strips
- Pavement Edge Treatment
- Design Changes:
 - Extend Sight Distance
 - Lengthen Curves
- Curve Delineators
- Modify Ditch Slopes
- Improve Lighting

Access Management

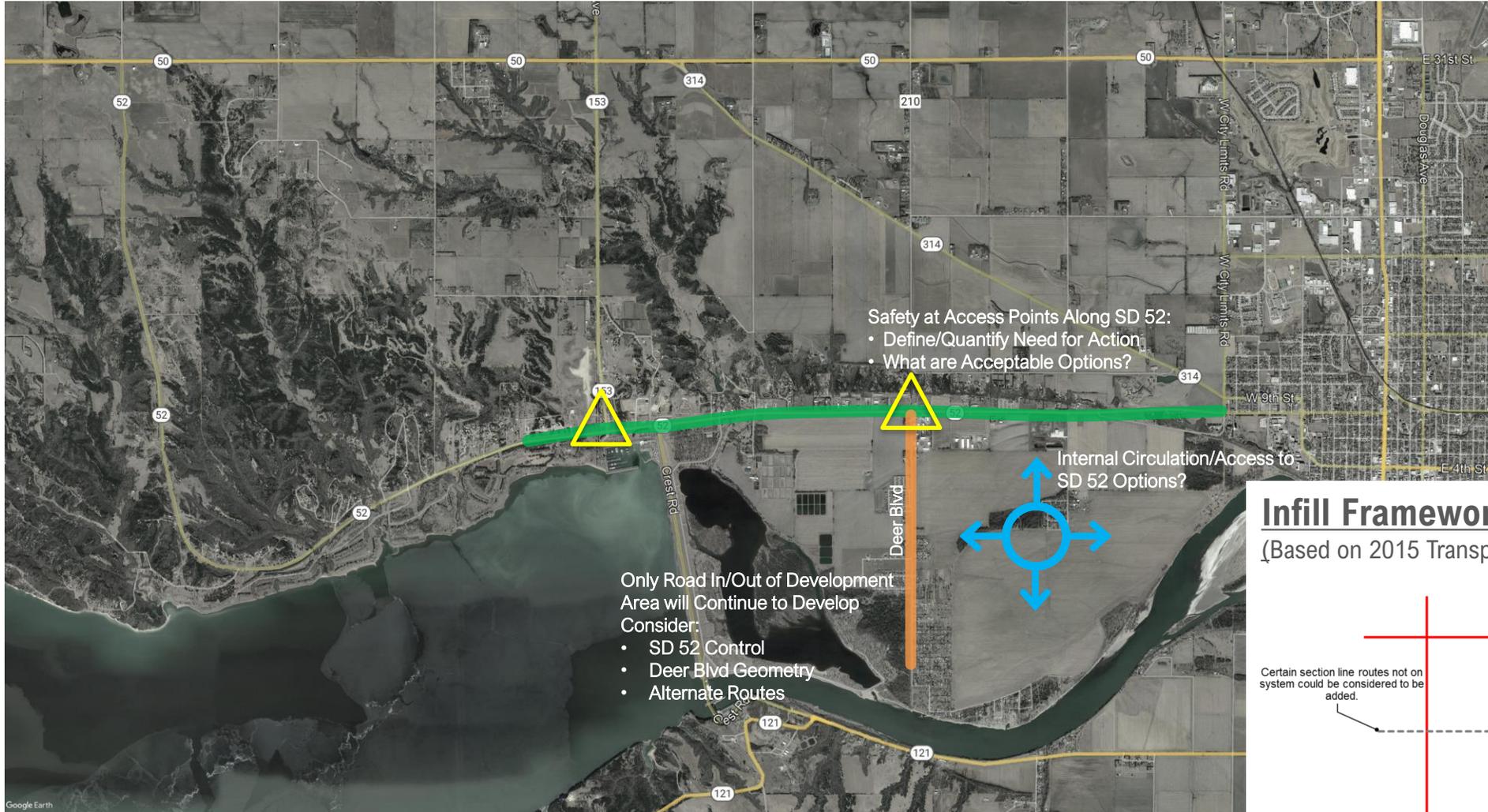


- Add Frontage/Backage Roads
- Relocate Access to Cross Route/ Frontage/Backage Road
- Consolidate Drives
- Reduce Drives
- Assess Median on SD 52 – 5-Lane Section



All Mitigation Concepts Reviewed Relative to a Consistent Set of Criteria

Concerns and Mitigation Considerations

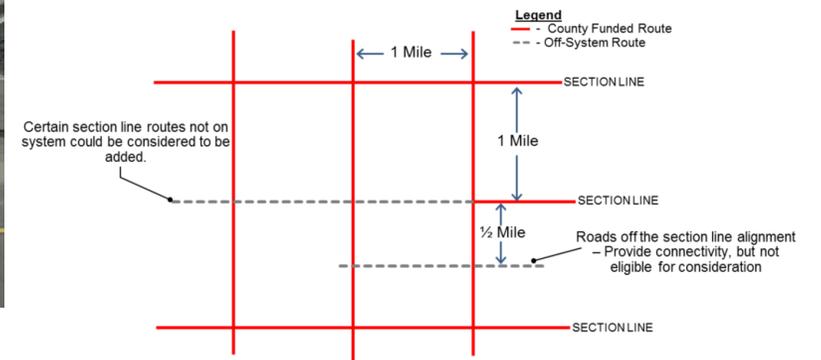


In Your Daily Travel:

- Are there locations where you encounter daily congestion?
- Are there areas you are more cautious?
- Are there gaps in the MULTIMODAL network to fill?
- What should we know that you know?

Infill Framework

(Based on 2015 Transportation Plan Concept for County Routes)

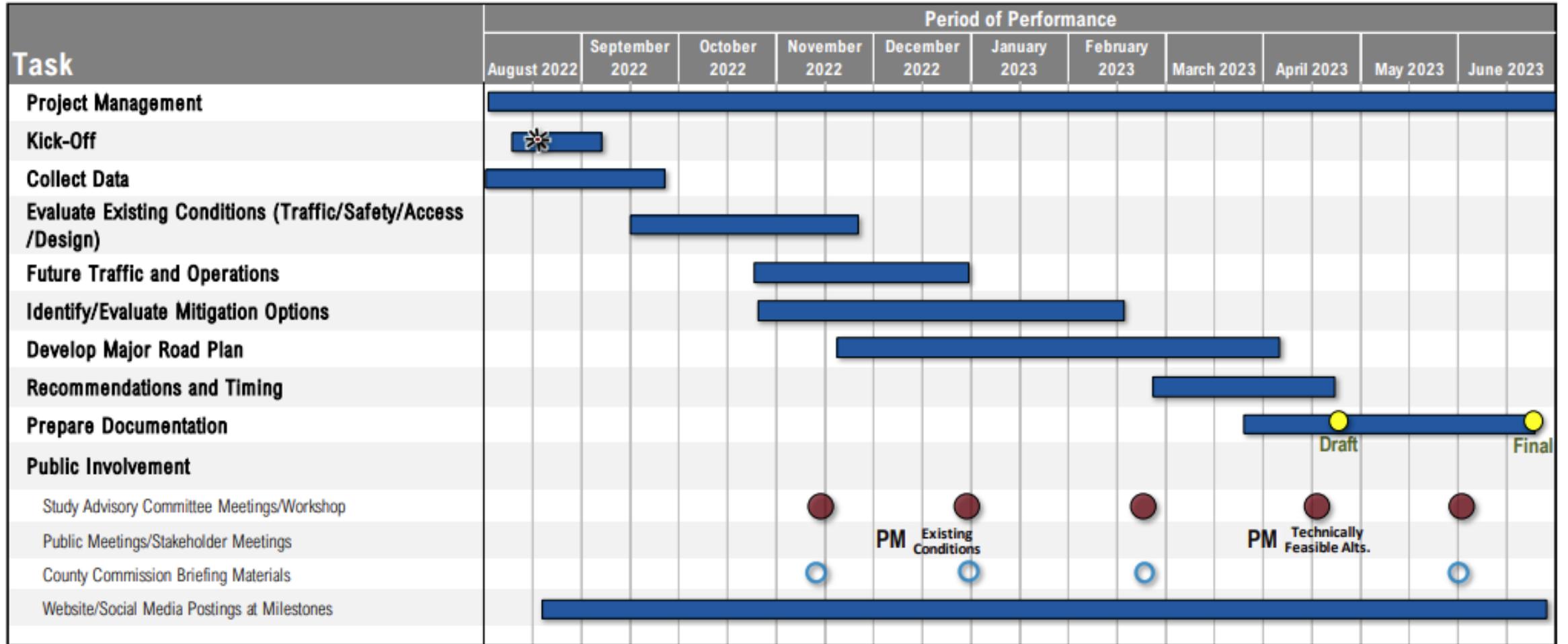




Schedule

December 1, 2022

Schedule



Wrap Up

- Open Discussion – Anyone Have Questions?
- Next Steps

Bill Troe, Principal
Project Manager
402-513-2158
btroe@srfconsulting.com

Brent Clark, PE
Senior Traffic Engineer
763-267-6618
bclark@srfconsulting.com

Eavan Moore
Planner
402-513-2157
ecmoore@srfconsulting.com



THANKS FOR ATTENDING! PLEASE SIGN IN IF YOU DID NOT EARLIER

December 1, 2022

Comments

Public Meeting Comments

December 1, 2022

Please record your comments, questions or thoughts regarding the information presented and/or discussed at the public meeting. Please return your completed form to sign-in table or to one of the consultant staff.

You may also send your comments in an email to BTroe@SRFConsulting.com

Please provide your name and email address in the space provided below.

Nancy Weirand nancy@yankton.sd.com

Name Email Address City State

Comments, Needs & Concerns

- ① Ped traffic to get from trail on South side to businesses on north side should be looked at
- ② Hwy 314 has increased semi traffic because they are avoiding RR crossings and Broadway traffic. Would love to have "origin or destination only" for semi traffic. Would eliminate 100's of semis from the WEL + 52 intersection
- ③ I'm not opposed to roundabouts but 99% of other resident may be opposed
- ④ Drainage needs to be addressed in the area between Deer Blvd + Timberline.
- ⑤ Maybe an under pass needs to be considered if it is possible.
- ⑥ I think pedestrian / bike traffic could increase if access points were available and the trails continue to be maintained at a safe level.

> Continue on the back or attach additional sheets

Public Meeting Comments

December 1, 2022

Please record your comments, questions or thoughts regarding the information presented and/or discussed at the public meeting. Please return your completed form to sign-in table or to one of the consultant staff.

You may also send your comments in an email to BTroe@SRFConsulting.com

Please provide your name and email address in the space provided below.

Cam McAllister	fireandicesd@gmail.com		
Name	Email Address	City	State
		Yankton	SD

Comments, Needs & Concerns

OWN THE PROPERTY ON N.W. CORNER OF
52 + DEER BLVD. FIRE AND ICE - GENERAL STORE
CUSTOMERS HAVE DIFFICULTY TURNING LEFT (EAST)
ON 52 WHEN LEAVING STORE.

DESPERATE NEED FOR TRAFFIC LIGHT AT INTERSECTION.
WITH A NORTH-SOUTH PEDESTRIAN CROSSING
LIGHT.

WE HAVE CAMERAS ON SIGN SHOWING INTERSECTION.

CAM - 605-760-4546 Fire and Ice

THANK YOU for your consideration.

3804 W 8TH ST.

> Continue on the back or attach additional sheets

Summary of Q&A and Open Discussion Comments

During and after the presentation, attendees shared their questions and comments as follows:

- There is some pedestrian traffic in the study area roadways, but not as much as there would be within the recreational area. There are a small number of bicycle commuters.
- Most bikes stay on the south side of SD 52. One local business owner rides his bicycle between the lake and the City of Yankton.
- There is an ice cream shop on the north side of SD 52; tourists complain they can't cross easily on foot to reach this/other destinations. Similarly, people using the private campgrounds would like to be able to cross SD 52 by bike.
- Agricultural vehicles and large trucks came up repeatedly as having specific problems/needs. Two to three meeting attendees are farmers. One commented that finding a gap in traffic to turn onto SD 52 is more difficult with a trailer.
- Trucks have a turning radius problem at the intersection of 8th and West City Limit. SDDOT is aware of the problem and a widening project is underway.
- The subject of a summer-only signal at Deer Boulevard and SD 52 came up.
 - Steve Gramm responded that there are a few of those in Sturgis. The poles are up year-round, but the signals are only there for 3 weeks out of the year.
 - The concern in Yankton would be making sure locals know. There would need to be a media blitz every year for the first few years until people get used to it.
 - It would likely continue to be a surprise for visitors, as it is rare for rural areas to have stoplights.
- One attendee commented that the situation here is unique in South Dakota. The area is rural most of the year, but in summer the tourist presence turns it into a small city.
- There is difficulty in turning left from SD 52 onto Deer Boulevard. There can be queues 10 vehicles deep in the turn lane in summer.
- Frontage access roads came up repeatedly as a proposed solution.
- A local property owner noted that he was planning to build a general store/bar/restaurant on the northwest corner of Deer Boulevard and SD 52. It will have parking for 200 cars. He left his contact information for a follow-up conversation.
- One attendee asked about the possibility of a pedestrian overpass.

From: Tom's Electric <te6532@gmail.com>
Sent: Friday, December 2, 2022 6:23 PM
To: Bill Troe <BTroe@srfconsulting.com>
Subject: Western Yankton County Transportation Study

Thank you for opening this study up for public input. Your presentation was complete and informational.

My husband and I live in the Marina Dell Avenue area just off of Highway 153. We've lived there for 26 years. We also own a business on Deer Boulevard NORTH of Highway 52; that business has been in operation since 2003. So, we know this target area very well.

Here are some things to consider:

One of our concerns is the West City Limits/Highway 52 intersection. As we drive east on Highway 52 to Yankton, the right MERGE lane has been very dangerous because people fail to merge until the last minute. We have witnessed many near misses at this place. If the left turn lane could start farther west coming into that intersection from the west, it would ease the bottleneck there. Many locals are moving into the median before the merge on the right to prevent collision or bottleneck. There is a lot of truck traffic at that intersection and that really slows the traffic flow. Maybe a traffic signal would be beneficial there. The intersection is in the city limits and it would slow the speeding traffic to/from the lake area. If you examine the curbs there, you'll see how trucks jump the curbs.

Another thing to think about is the large amount of ATV traffic from May-October. Many of these motorists fail to follow traffic rules and drive anywhere they want. The north frontage road on Highway 52 (running along campgrounds, Shell, Meat Locker, Yankton Motorsports) is a high-speed thoroughfare during these months. We've personally had trespassing and vandalism due to these drivers at our business on Deer Boulevard.

Again, thank you for requesting public input. We look forward to the spring meeting. Feel free to contact us if you have questions.

Beth and Tom Kaltsulas
188 Marina Dell Avenue
Yankton, SD

Tom's Electric
3800 South View Road
809 Deer Boulevard
Yankton, SD

--

Beth Kaltsulas
Tom's Electric
Yankton, SD 57078

West Yankton County Subarea Transportation Plan Public Meeting 2 Summary

September 6, 2023

South Dakota Department of Transportation and Yankton County

Prepared by:



SRF No.16002.00

Newspaper Ads

NOTICE OF PUBLIC INFORMATION MEETING

West Yankton County Transportation Plan Study

Date: September 6, 2023

Time: 5:30 PM to 7:00 PM

Location: NFAA Easton Yankton Archery Center 800 Archery Lane Yankton, SD 57078

The South Dakota Department of Transportation (SDDOT) with Yankton County will hold the second of two rounds of public meetings to discuss and receive input on the West Yankton County Transportation Plan Study. The subarea transportation plan area is bounded by SD 50 on the north, West City Limits Road on the east, the Missouri River on the south and SD 52 on the west.

The open house style public meeting will begin with a presentation shortly after 5:30 PM, with one-on-one discussion with county, SDDOT and consultant staff following. The presentation will be broadcast live and a link to the broadcast will be on the Yankton County website.

During and after the broadcast, members of the public may submit questions or comments about the project by email to btroe@srfconsulting.com or by calling 402-513-2158 and providing verbal comments.

The county website (www.co.yankton.sd.us) will have information on the study recommendations and meeting displays one week before the public meeting.

The live and recorded meeting presentation will be accessible through the county website (www.co.yankton.sd.us). Questions and comments sent during the meeting will be addressed during the live broadcast.

Notice is further given to individuals with disabilities that this meeting is being held in a physically accessible place. Any individuals with disabilities who will require a reasonable accommodation in order to participate in the public meeting should submit a request to the department's ADA Coordinator at 605-773-3540 or 1-800-877-1113 (Telecommunication Relay Services for the Deaf). Please request the accommodations no later than 2 business days prior to the meeting in order to ensure accommodations are available.

For further information regarding this project, contact Steve Gramm, Planning Squad Leader at 605-773-3281 / email at steve.gramm@state.sd.us or Bill Troe at 402-513-2158 / email at btroe@srfconsulting.com.

Notice published twice at the total approximate cost of \$280.00.

and Verlinda's Crafts. They enjoyed craft shows making new friends with other vendors. A favorite activity was bus tours usually with Alfred and Leona Schaeffer. Many trips were taken visiting their daughters and families always bringing along a bag of candy. They loved playing games with their grandchildren.

Calvin and Verlinda spent their final years at MOCC. She became involved with activities including playing piano for events. Following a long illness, Verlinda entered into the presence of her Lord and Savior on Friday, August 11, 2023. She is very loved by her family and will be greatly missed.

Verlinda is survived by her daughters, Di (Scott) Keller, LaVon Herrboldt, and Cindy (Ted) Boese; 14 grandchildren and 18 great-grandchildren; her sister, Leona Schaeffer and sister-in-law, Ruth Roesler; along with a host of nieces and nephews.

She was preceded in death by her parents, Reinhold and Anna Schempp; her husband, Calvin; her brothers, Wilfred and Vernon; a sister, Gertrude; and her son-in-law, Bruce Herrboldt.



any minute someone as the world behind, are all in "the line" without knowing it. wait in line, make moments Don't put off anything. make small things big. make someone smile. / "I love you" often.

SOUTH DAKOTA DEPARTMENT OF
TRANSPORTATION
NOTICE OF PUBLIC INFORMATION MEETING

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his written exam and flight test and received his pilot's license in September of 1961.

Don's world came crashing down one cold December day in 2000 when he came down with severe clinical depression. After two admissions to Human Service Center and one to Avera Hospital in Sioux Falls, and thanks to the help of wonderful doctors, nurses, and staff, he began to get better. He remembered Jesus's word in scripture: "Ask and ye shall receive" when he spent every waking moment pleading for help. His prayer was answered some five years later when he experienced the depression leaving his body up over his head while washing dishes at his brother, Father Marbach's, house. The "black monster" was gone forever!

For fun, Don enjoyed bow hunting in his younger days with four buddies Don Musil,

ause

Monday, August 21, 2023 at Avera Sacred battle with cancer.

Friday, September 8 at Wintz & Ray Funeral ds two hours prior to the service from 4-6 nily burial will be in the Garden of Memo-

15, 1956. He grew up in Winfred, SD and He then moved to Yankton where he met ed in marriage in Luverne, MN at St. Cath-

oney Company with his brother, Gordon, o sons, Tom and Greg. He enjoyed visiting . Keith's grandchildren were his greatest g with them and telling them stories.

ation in Fordyce, NE visiting and playing d always willing to lend a helping hand.

Yankton; his three children: Tom (Sheri) tton, and Melissa (Jordan) Cornay of Elk- and Jax Gause, Kate and Kyle Cornay, and

ase visit www.wintzrayfuneralhome.com.

Press Release

PUBLIC MEETING OPEN HOUSE SCHEDULED FOR WEST YANKTON COUNTY MASTER TRANSPORTATION PLAN STUDY

For Immediate Release: Friday, Sept. 1, 2023

Contact: Steve Gramm, Planning Squad Leader, 605-773-3281

YANKTON, S.D. - The South Dakota Department of Transportation (SDDOT), in collaboration with Yankton County, will hold a public meeting open house on Wednesday, Sept. 6, 2023, to gather public input on the recommendations of the West Yankton County Master Transportation Plan. This public meeting open house will be held at the NFAA Easton Yankton Archery Center located at 800 Archery Ln. in Yankton. The public meeting open house will be held from 5:30 to 7 p.m.

The West Yankton County Master Transportation Plan study will address a full range of transportation options and issues, including pedestrian, bicycle, transit, freight, and automobile, within the area of Yankton County west of the City of Yankton and south of S.D. Highway 50. The purpose for the public meeting open house is to inform the public of the study's recommendations and to record any concerns or questions the public may have about those recommendations.

For those who cannot attend the public meeting in person but wish to participate, the public meeting will be available online at <https://srfconsulting.zoom.us/j/93183013662?pwd=Mmpjd2k1VDhmbUNvcG90bzhISWJSZz09>. The presentation will begin shortly after 5:30 and will be broadcast live on the Yankton County website.

For those who cannot attend the public meeting or desire additional information on the study, information will be made available online after the meeting on the Yankton County website (<https://www.co.yankton.sd.us>).

The opportunity to present written comments will be provided at the meeting or online. Written comments will be accepted through Monday, Sept. 18, 2023.

Notice is further given to individuals with disabilities that this open house is being held in a physically accessible place. Any individuals with disabilities who will require a reasonable accommodation in order to participate in the open house should submit a request to the department's ADA Coordinator at 605-773-3540 or 1-800-877-1113 (Telecommunication Relay Services for the Deaf). Please request the accommodations no later than 2 business days prior to the meeting in order to ensure accommodations are available.

For more information, contact Steve Gramm, Planning Squad Leader, at (605) 773-3281 or by email at steve.gramm@state.sd.us.

About SDDOT:

The mission of the South Dakota Department of Transportation is to efficiently provide a safe and effective public transportation system.

For the latest on road and weather conditions, road closures, construction work zones, commercial vehicle restrictions, and traffic incidents, please visit <https://sd511.org> or dial 511.

Read more about the innovative work of the SDDOT at <https://dot.sd.gov>.

Sign In Sheets

DATE: SEPTEMBER 6, 2023 PUBLIC MEETING #2

NAME	ADDRESS	EMAIL	PHONE	Email Updates (Yes Only)
Steve Gramm	700 E. Broadway Ave Pierre	Steve.gramm@state.sd.us	605-773-3281	Yes
Rebecca Wallingford	700 E. Broadway Ave Pierre	rebecca.wallingford@state.sd.us	605-773-3268	Yes
Katrina Buschard	700 E. Broadway Ave. Pierre, SD 57501	Katrina.Buschard@state.sd.us	605-773-6671	Yes
Gary Vetter	321 W. 3rd St Yankton, SD 57078	gary@co.yankton.sd.us	605-260-4445	Yes
Berlene Kende	4396 310 St YKT	berlene@prair.com	605-665-9245	Yes
Samuel Hummel	2300 Western Ave Yankton SD	Samhummel71@gmail.com	605-660-8476	Yes
Cora Van, Olson	801 Maple St.	cora.vandolson@gmail.com	605-655-4426	NO
MIKE WELSH	114 QUARRY PINES DR	MWELSH130@GMAIL.COM	712 202 4488	NO
Judy VanDerhale	510 Chalkstone Rd, YKT	jvanderhale@usa.net	605 665 2532	
Dan Klinisch	2946 437 th Ave YKT	dan@co.yankton.sd.us	605-661-1254	
Mike Sedlacek	3302 W. City Limits Rd Yankton	mikes@co.yankton.sd.us	605-260-4473	
DENNIS MALY	1501 RIVER ASPEN ROAD YANKTON	dmaly@OUTLOOK.COM	605 -402-675-7200	✓
Scott Bormann	104 S. Finatti Ave, Mission Hill, SD	scotty.bormann@4561@gmail.com	605-653-0913	
Ken Carda	PO Box 158 Tolon, SD 57063	kcarda@bgelectric	605-661-4025	
Kelly Hertz	807 West St. # 17	kelly.hertz@yankton.net	605-661-0289	

DATE: SEPTEMBER 6, 2023 PUBLIC MEETING #2

NAME	ADDRESS	EMAIL	PHONE	Email Updates (Yes Only)
Ryan Heine	4200 Alphonse Rd	ryan.m.heine@gmail.com	605 760 3033	✓
Nancy Bauder	2501 Dorian Dr	knbauder@yahoo.com	605-660-0328	✓
Greg Rothschild	1306 W 31st St; Yankton	Greg.Rothschild@state.sd.us	605-668-2929	
Gale Vogt	143 Yuka Rd	galejvogt@gmail.com	402-750-6892	
Julie Auch	Lesterville SD	julie.auch@sdlegislature.gov	605-665-8659	✓
John Maryland	2809 W City Front Rd	johnm@margtrans.com	605 660-3030	
CURTIS Oberer	184 OAK HILLS DR YANKTON	dahync@midconetwork.com	605-660-2164	
Chris Frick	44154 306 Yankton	Cfrick@ekctair.net	661-8154	
Wanda Honey-Fox	721 Douglas #101 Yankton	whfox@hotmail.com	665-8032	
Cheri Loest			665 4478	
Mike Healy	1811 Cedar	mhealy mth@vyn.midconet.net	661-6661	

Public Meeting Presentation



Western Yankton County Subarea Study

PUBLIC MEETING 2

SEPTEMBER 6, 2023

Agenda

1. Welcome:

- Introductions
- Meeting is being Recorded/Broadcast
- Please Sign In/Take a Comment Form

2. Purpose of the Second Public Meeting

3. Overview of the Study:

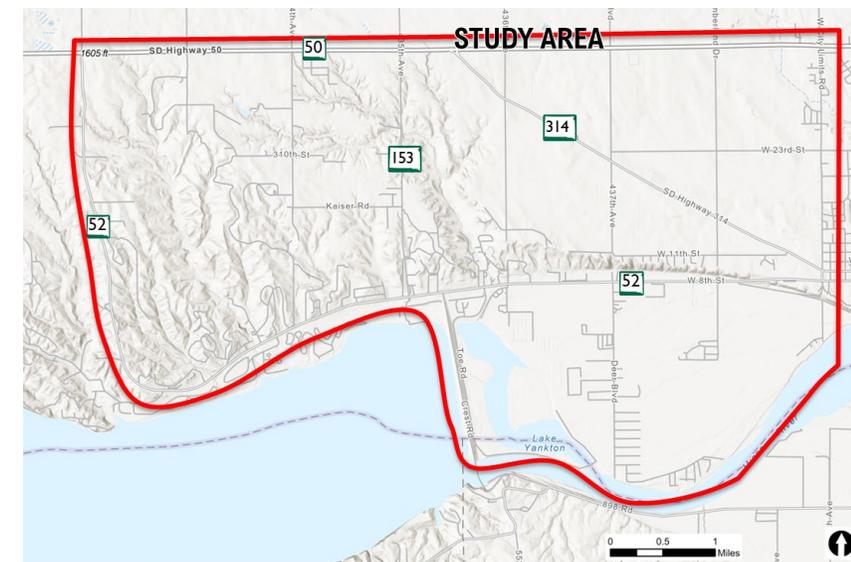
- Location
- Status of Work

4. Proposed Network Improvements:

- Current Network Upgrades
- New Roadways

5. Open Discussion/Questions

6. Wrap-up



Key Areas Evaluated to Understand Needs

Traffic Operations



- Evaluate Both Summer and School In-session Conditions
- Road Segments
- Key Intersections
- Today – 2035 and 2050

Crashes

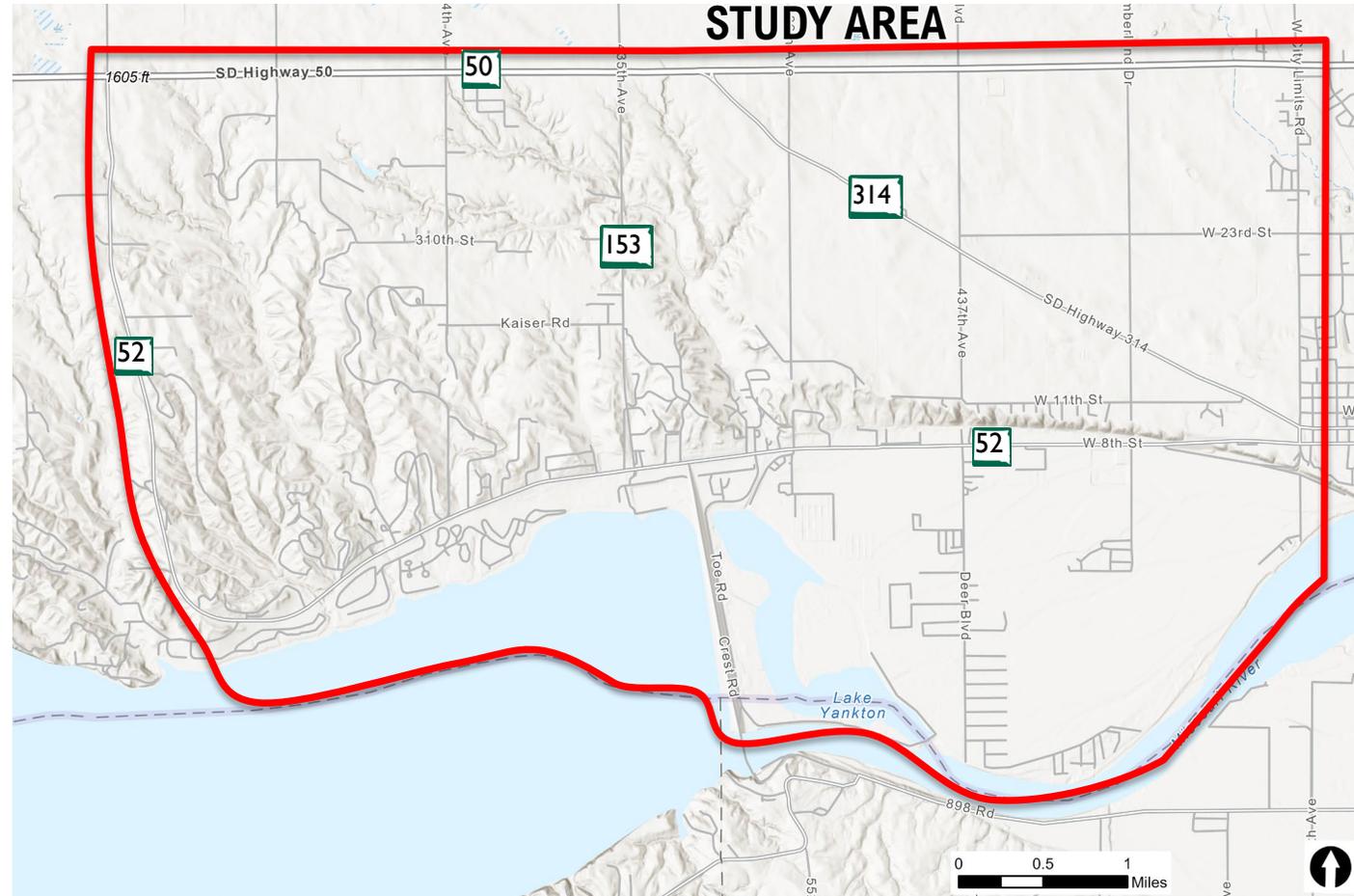


- Period from 2017 to 2022
- Rate at Intersections/ Segments
- Severity/Contributing Factors

Access



- State highways
- Public and Private Access Points
- Compare to SDDOT Guidelines

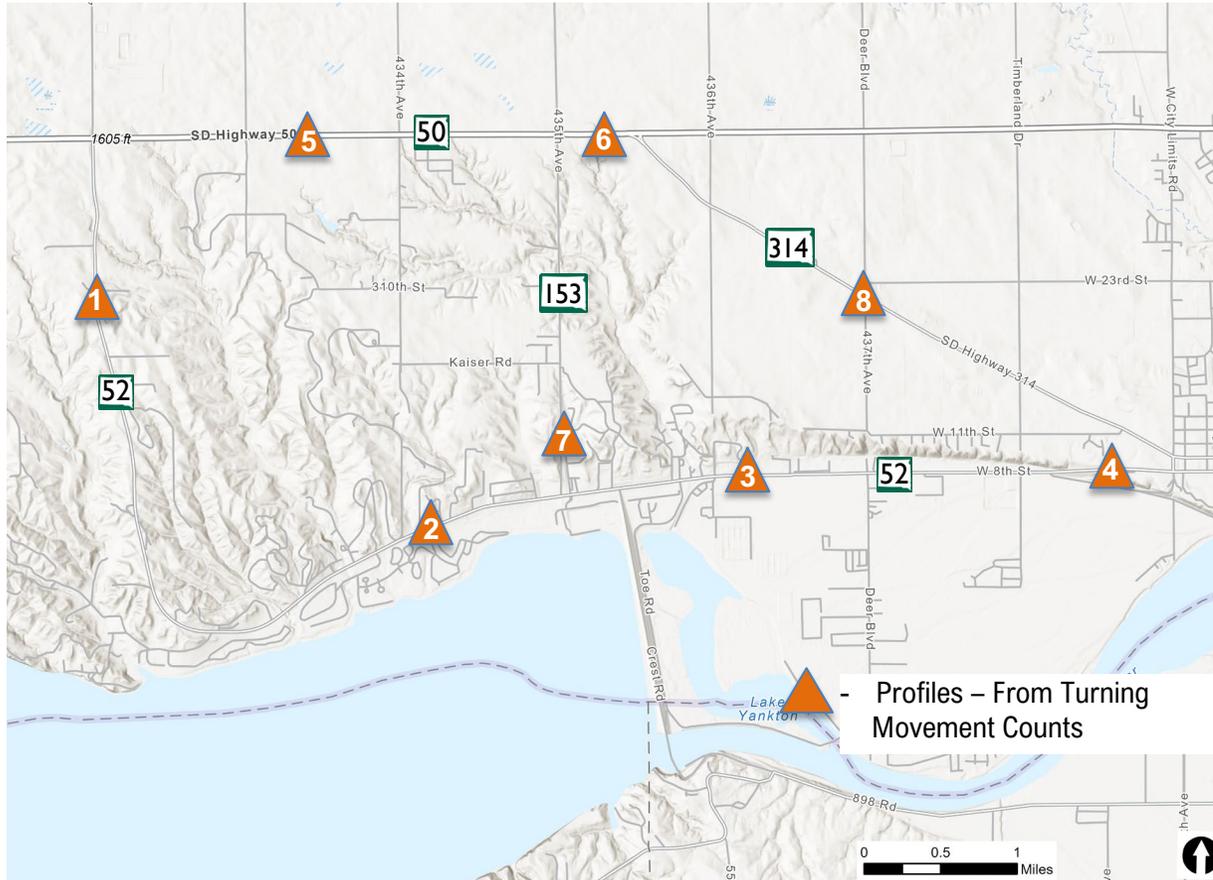




Traffic Data and Operations

SEPTEMBER 6, 2023

Route Segment Count Locations



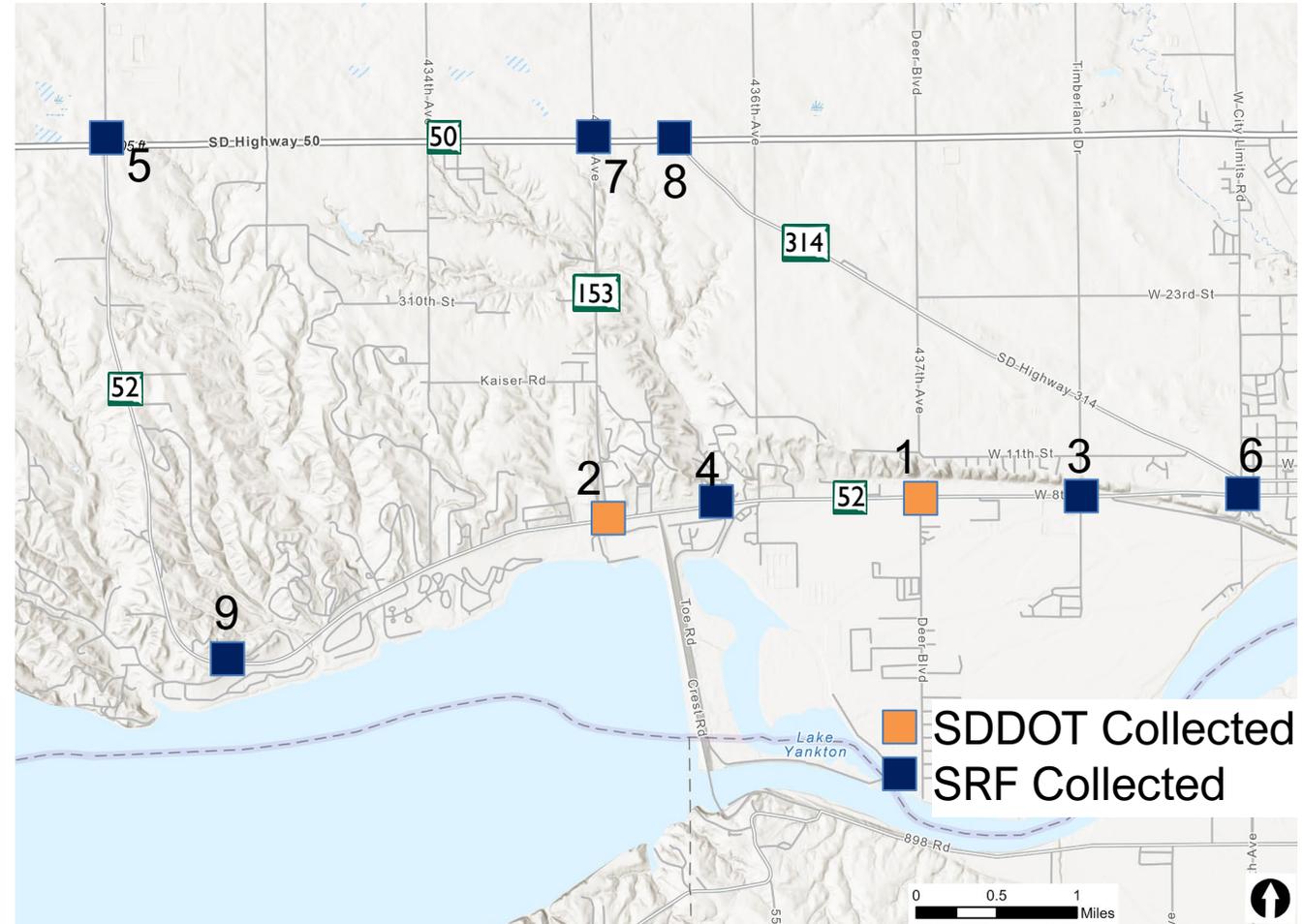
Recap of Work

- Collected Traffic Data for Two Periods;
 - Summer/Peak Traffic (Including Weekends)
 - School in Session
- Road Segments
- Intersections

Intersection Count Locations Operations Summary

Recap of Work

- Operations in Summer – Generally Worse than Other Months
- Deer Boulevard/SD52 – Only Intersection of Concern:
 - Peak Period Operations below Threshold
 - Meets Signal Warrant

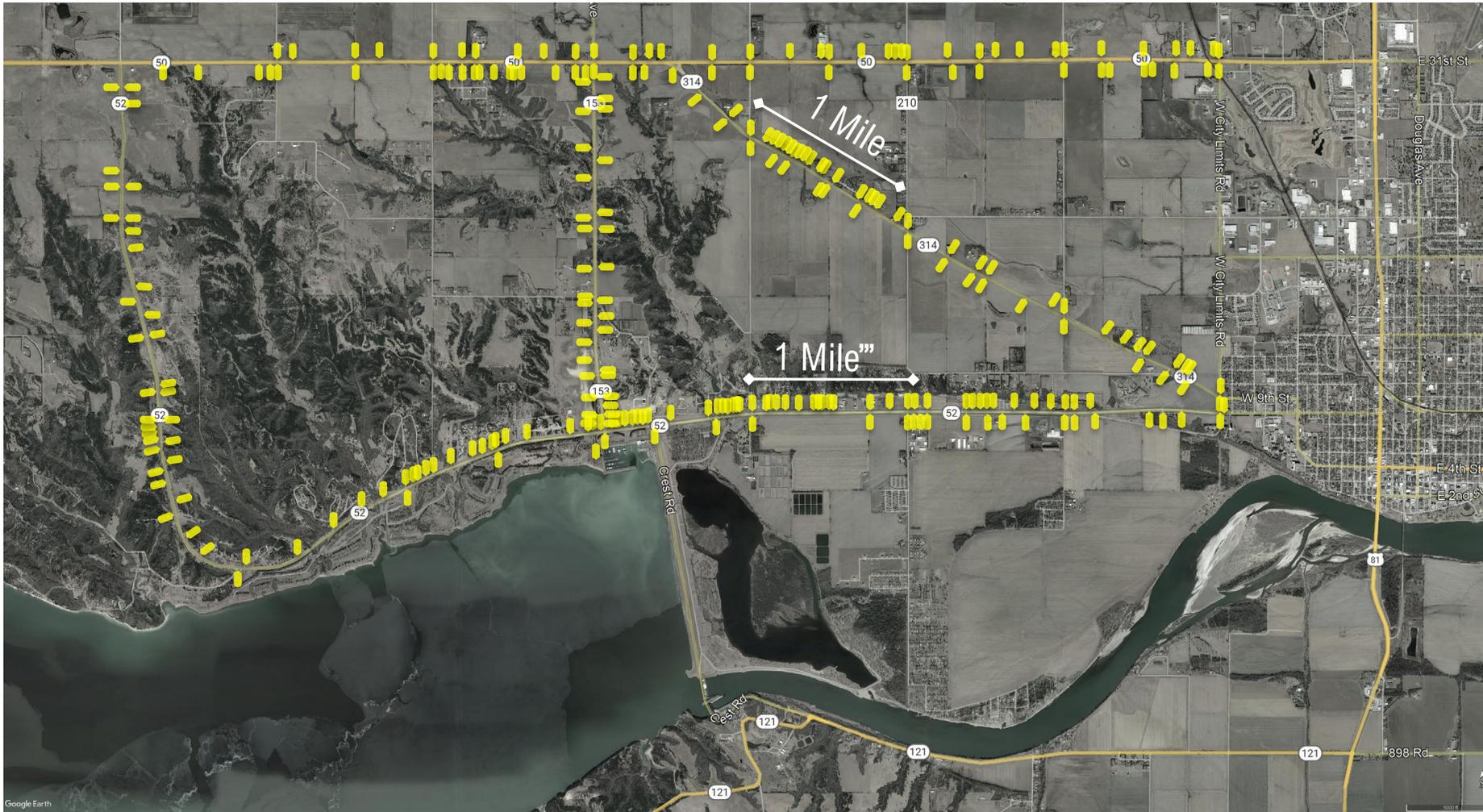




Access Point Review

SEPTEMBER 6, 2023

Access Locations – State Routes



Access Point Assessment

Recap of Work

- Every Route in Study Area has MORE Access Points than Policy Supports
- Not seeing Crash Issues
- Not Recommending Action to Consolidate/Remove
- Going Forward – Review All Development Proposals:
 - Apply/Review Access Guidelines-Conditions at Location



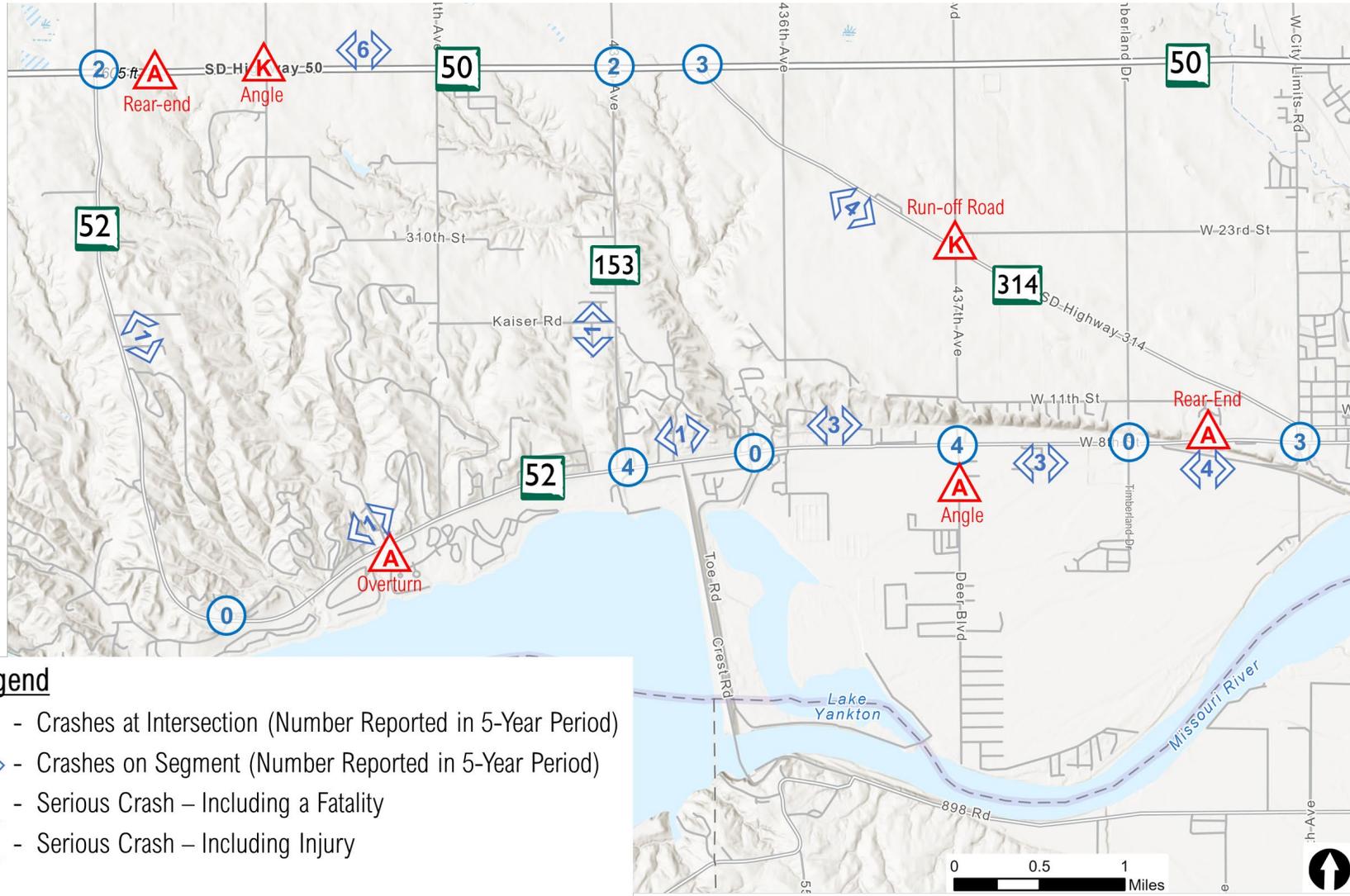
Segment	Side of Roadway	Access Points	Segment Length (miles)	Access Density (points/mile)
1 - SD 52: SD 50 to Gavin's Point Rd	North	19	3.5	6
	South	18		5
2 - SD 52: Gavin's Point Rd to SD 153	North	20	2.6	8
	South	4		2
3 - SD 52: SD 153 to Deer Blvd	North	29	1.9	15
	South	5		3
4 - SD 52: Deer Blvd to West City Limits Rd	North	16	2.0	8
	South	14		7
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	South	21		7
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7 - SD 153: SD 52 to SD 50	East	15	2.4	6
	West	16		7
8 - SD 314: SD 50 to West City Limits Rd	North	37	4.2	9
	South	21		5



Crash Data Assessment

SEPTEMBER 6, 2023

Crashes by Location (2017-2022)



Findings

- No Intersections display elevated numbers/ rates
- No segments display elevated numbers/rates
- Injury crashes – No pattern of location or type of crash



Mitigation – Recommended Actions

SEPTEMBER 6, 2023

Mitigation Toolbox

Traffic Operations



- Add Local Road Network
- Add Frontage/Backage Roads
- Add Turn Lanes
- Intersection Control:
 - Four-way Stop
 - Signalize
- Modify Access Locations

Correctable Crashes



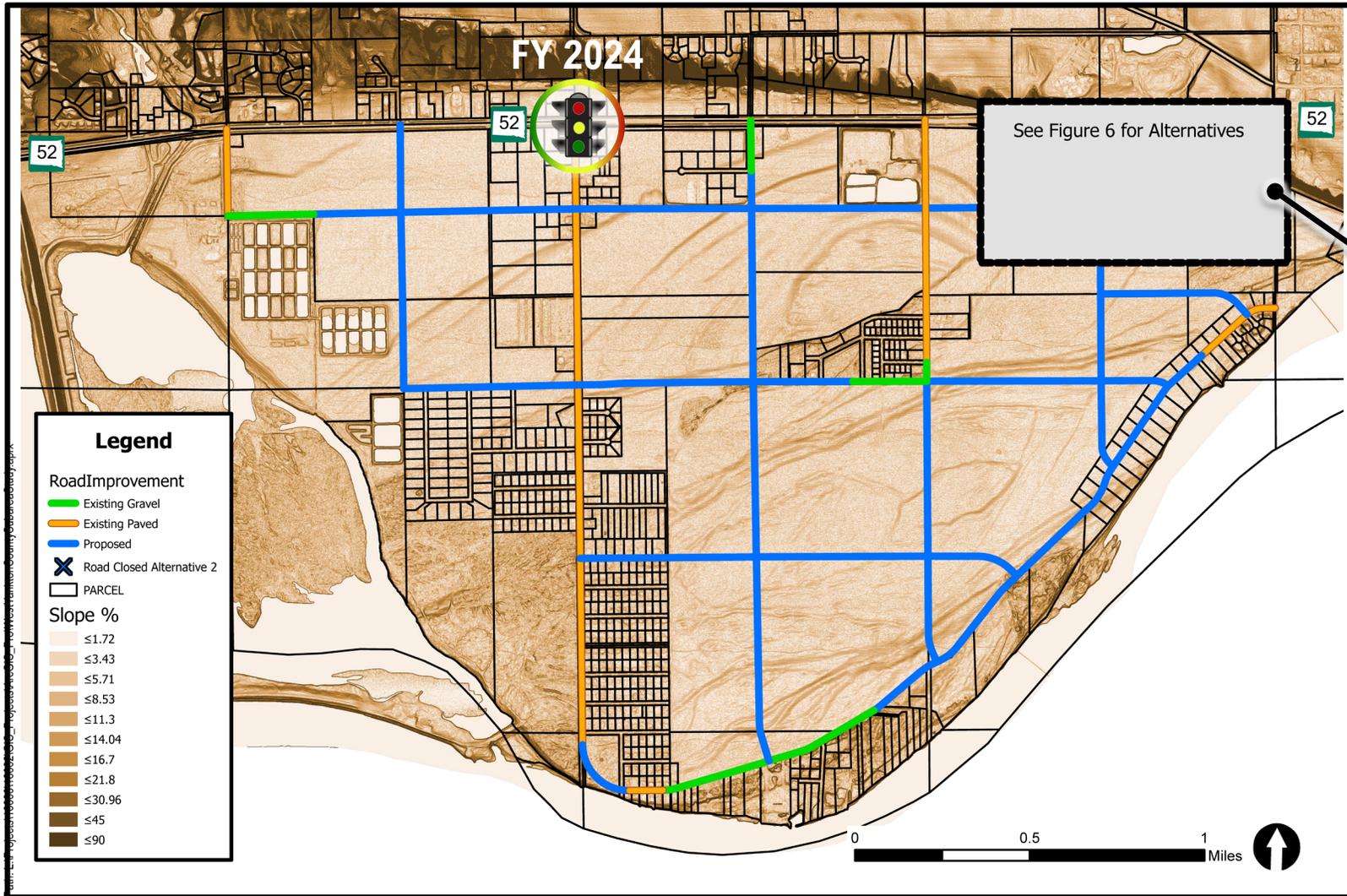
- Shoulder Improvements
- Modify Access Locations
- Enhanced Ped Xing
- Speed Reductions
- Add Rumble Strips
- Pavement Edge Treatment
- Design Changes:
 - Extend Sight Distance
 - Lengthen Curves
- Curve Delineators
- Modify Ditch Slopes
- Improve Lighting

Access Management



- Add Frontage/Backage Roads
- Relocate Access to Cross Route/ Frontage/Backage Road
- Consolidate Drives
- Reduce Drives
- Assess Median on SD 52 – 5-Lane Section

Arterial/Collector Network



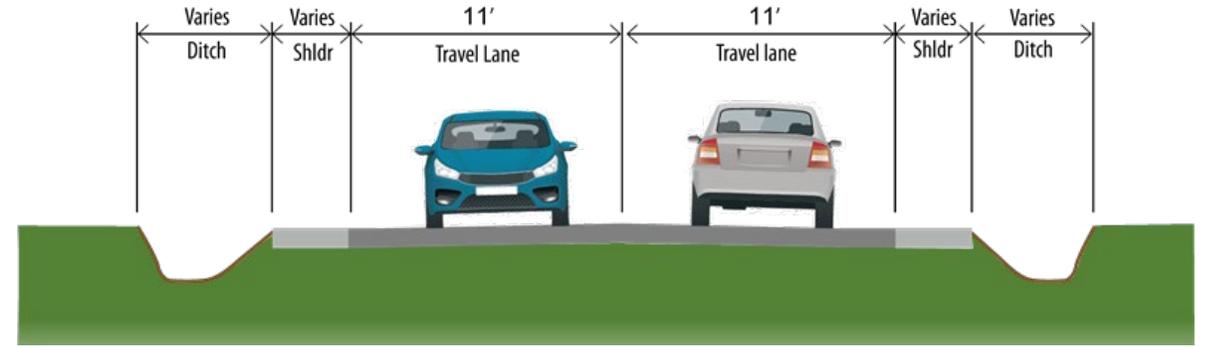
Options Reviewed for NE Area



**DRAFT RECOMMENDATION –
OPTION 2**

Internal Framework Roads – Section/Lanes

- All Routes Assumed to be 2 Lanes – No INTERNAL NETWORK Turn Lanes
- Section Representative of Deer Boulevard (But, No Multi-use Path):
 - Limited Direct Property Access
 - ±2 Foot Shoulder



Anticipated Typical Section



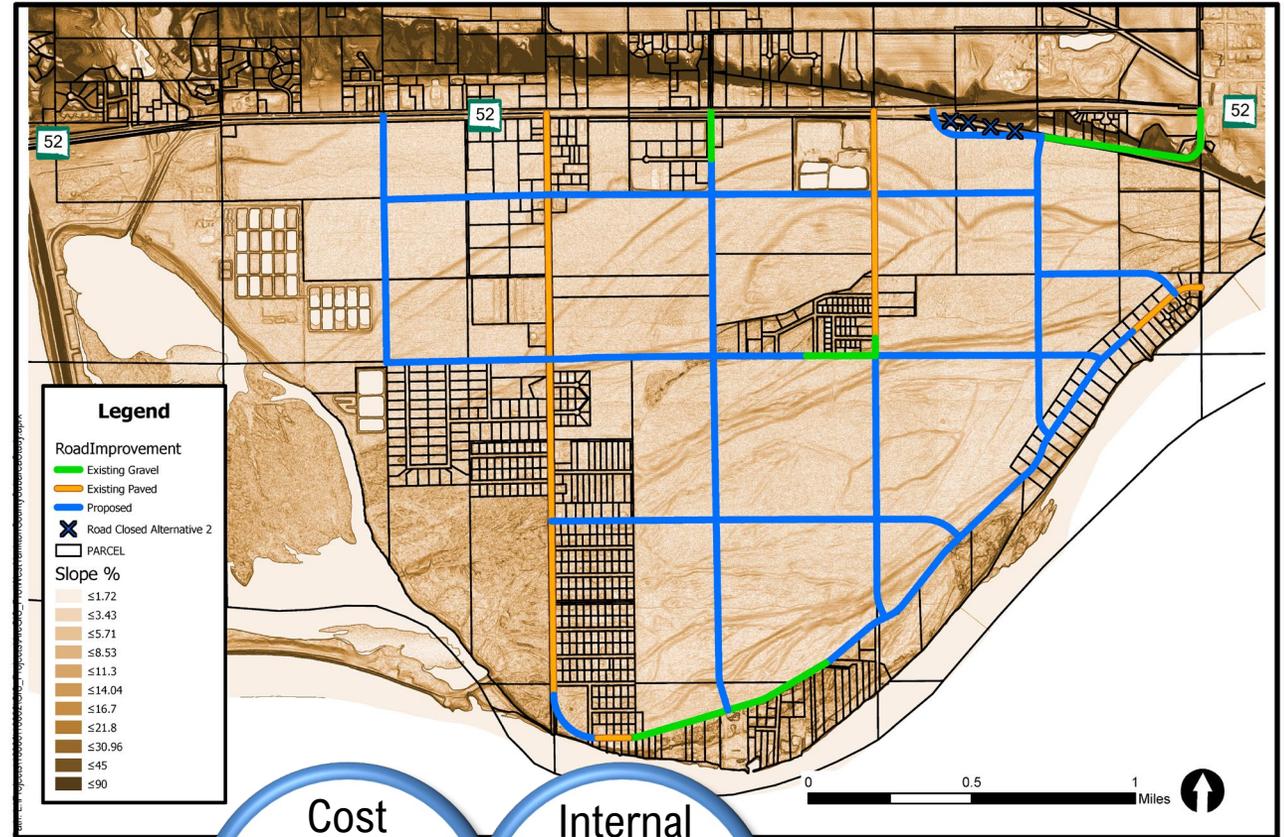
Typical LOCAL Paved



Deer Boulevard

Arterial/Collector Improvement Timing/Cost Responsibility

- Timing:
 - Improvements are DEVELOPMENT DRIVEN – No Development, No New/Improved Segments
- Cost Assumptions:
 - Construction:
 - Developer is Responsible
 - Establishing a Plan is Important So All Know Alignment and Lanes Concept
 - Maintenance – Next Slide



Cost
Approx.
\$1.8 Million
Per Mile

Internal
Mileage
10.1
Miles

Arterial/Collector Improvement - Maintenance

- Cost Assumptions:

- Construction:

- Developer is Responsible
- Plan is Important So All Know Alignment and Lanes Concept

- Maintenance:

- Reviewed Options

Option

1

New/Improved become County Roads:

- Requires Ordinance Change
- Is this Feasible? Warranted?

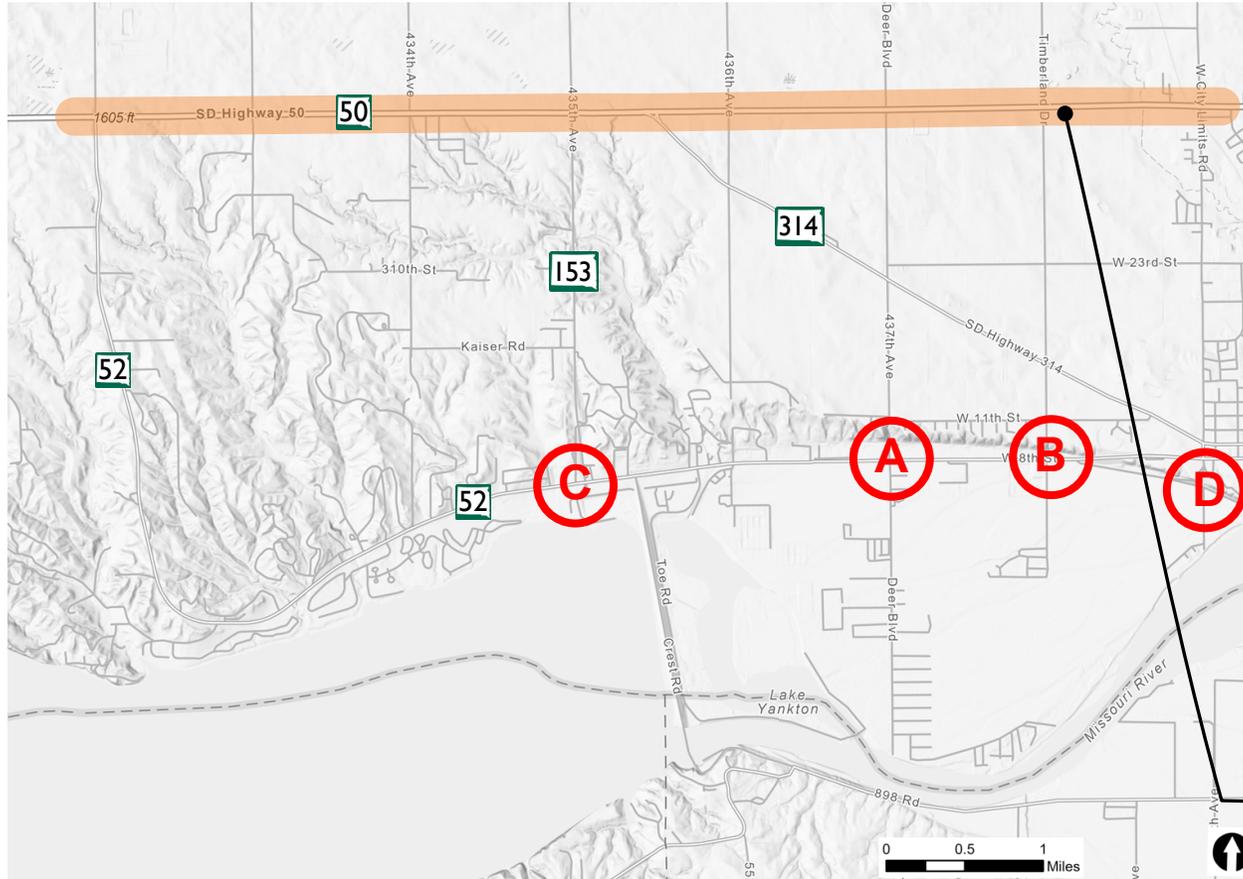
Option

2

Create Road Improvement District(s):

- Is a single district with phased rate and responsibility feasible?
 - How to establish benefit-cost responsibility?
- If a series of districts:
 - Boundaries?
 - Triggers?
 - District inter-dependencies?
 - How to establish benefit-cost responsibility?

Intersection/Segment Operations Mitigation



- A: Deer Blvd
 - Add signal provides mitigation
 - Meets warrants in SUMMER – Not in other times
 - Install in FY 2024
- B: Timberland Dr
 - Add NB right turn lane
 - Meets warrants in SUMMER in 2050 – Not other times
 - Internal framework streets can re-distribute traffic
- C: SD52 / SD153
 - No action proposed at this time
- D: SD52/West City Limits:
 - Signalize
 - Meets warrants by 2050
- E: SD50 from SD52 to West City Limits Road:
 - Add Lanes – Turn lanes or through lane?
 - Determined in Future by SDDOT

Wrap Up

- Open Discussion – Anyone Have Questions?
- Finalizing the Study

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Traffic Studies Lead
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Eavan Moore
Planner
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THANKS FOR ATTENDING! PLEASE SIGN IN IF YOU DID NOT EARLIER

SEPTEMBER 6, 2023



ALL TRAFFIC DATA SERVICES

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www.alltrafficdata.net

Location: 1 TIMBERLAND PARK ROAD & SD 52 AM

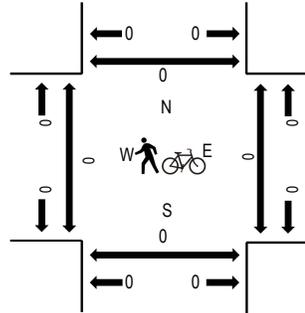
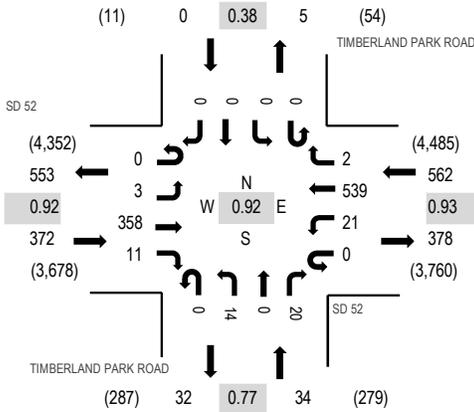
Date: Friday, July 29, 2022

Peak Hour: 04:30 PM - 05:30 PM

Peak 15-Minutes: 04:30 PM - 04:45 PM

Peak Hour - All Vehicles

Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	SD 52 Eastbound				SD 52 Westbound				TIMBERLAND PARK ROAD Northbound				TIMBERLAND PARK ROAD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	46	0	0	1	20	0	0	1	0	5	0	0	0	0	73	394	0	0	0	0
7:15 AM	0	0	40	0	0	1	21	0	0	0	0	4	0	0	0	0	66	440	0	0	0	0
7:30 AM	0	1	80	0	0	2	24	0	0	0	0	3	0	0	0	0	110	465	0	0	0	0
7:45 AM	0	0	100	2	1	2	34	0	0	2	0	4	0	0	0	0	145	495	0	0	0	0
8:00 AM	0	0	66	2	0	3	40	0	0	3	0	4	0	1	0	0	119	471	0	0	0	0
8:15 AM	0	1	52	1	0	1	27	1	0	0	0	6	0	2	0	0	91	477	0	0	0	0
8:30 AM	0	0	80	0	0	1	56	0	0	1	0	2	0	0	0	0	140	521	0	0	0	0
8:45 AM	0	0	50	2	0	4	57	0	0	3	0	5	0	0	0	0	121	506	0	0	0	0
9:00 AM	0	0	72	1	0	1	48	0	0	0	0	3	0	0	0	0	125	520	0	0	1	0
9:15 AM	0	1	63	1	0	5	58	0	0	3	0	4	0	0	0	0	135	551	0	0	0	0
9:30 AM	0	0	71	0	0	5	44	0	0	4	0	1	0	0	0	0	125	576	0	0	0	0
9:45 AM	0	0	66	0	0	4	60	1	0	1	0	3	0	0	0	0	135	623	0	0	0	0
10:00 AM	0	0	75	2	0	4	67	0	0	4	0	4	0	0	0	0	156	665	0	0	0	0
10:15 AM	1	0	70	0	0	4	75	1	0	3	0	5	0	0	1	0	160	680	0	0	0	0
10:30 AM	0	0	88	3	0	6	66	0	0	4	0	5	0	0	0	0	172	683	0	0	0	0
10:45 AM	0	0	83	1	0	5	76	0	0	6	0	6	0	0	0	0	177	684	0	0	0	0
11:00 AM	0	0	75	1	0	4	88	0	0	2	0	0	0	1	0	0	171	695	0	0	0	0
11:15 AM	0	0	67	1	0	4	89	0	0	0	0	2	0	0	0	0	163	733	0	0	0	0
11:30 AM	0	0	77	1	0	3	82	2	0	5	0	3	0	0	0	0	173	755	0	0	0	0
11:45 AM	0	0	94	3	0	4	82	1	0	0	0	4	0	0	0	0	188	768	0	0	0	0
12:00 PM	0	0	82	1	0	2	118	2	0	0	0	4	0	0	0	0	209	789	0	0	0	0
12:15 PM	0	1	96	1	0	4	76	0	0	3	0	4	0	0	0	0	185	763	0	0	0	0
12:30 PM	0	2	71	6	0	7	94	0	0	2	0	3	0	0	0	1	186	748	0	0	0	0
12:45 PM	0	1	99	4	0	6	86	0	0	2	0	11	0	0	0	0	209	732	0	0	0	0
1:00 PM	0	1	67	2	0	2	102	1	0	3	0	5	0	0	0	0	183	679	0	0	0	0
1:15 PM	0	0	67	3	0	5	91	1	0	2	0	1	0	0	0	0	170	677	0	0	0	0
1:30 PM	0	1	61	2	0	4	94	2	0	1	0	5	0	0	0	0	170	707	0	0	0	0
1:45 PM	0	0	58	1	0	5	86	0	0	0	0	6	0	0	0	0	156	726	0	0	0	0
2:00 PM	0	0	75	0	0	1	98	1	0	3	0	3	0	0	0	0	181	740	0	0	0	0
2:15 PM	0	0	77	3	0	6	108	0	0	3	0	3	0	0	0	0	200	758	0	0	0	0
2:30 PM	0	0	72	2	0	4	109	1	0	0	0	1	0	0	0	0	189	745	0	0	0	0
2:45 PM	0	0	62	4	0	6	93	1	0	1	0	3	0	0	0	0	170	791	0	0	0	0
3:00 PM	0	0	67	1	0	6	121	0	0	2	0	1	0	0	0	1	199	815	0	0	0	0
3:15 PM	0	0	87	1	0	2	91	0	0	4	0	2	0	0	0	0	187	840	0	0	0	0
3:30 PM	0	0	86	3	0	6	138	0	0	0	0	2	0	0	0	0	235	859	0	0	0	0

3:45 PM	0	1	66	2	0	4	114	0	0	3	0	4	0	0	0	0	194	887	0	0	0	0
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6:00 PM	0	3	80	1	0	7	134	4	0	2	0	4	0	0	0	1	236	863	0	0	0	0
6:15 PM	0	0	92	3	0	8	107	2	0	0	0	5	0	0	0	1	218		0	0	0	0
6:30 PM	0	1	70	0	0	3	109	1	0	6	0	2	0	0	0	0	192		0	0	0	0
6:45 PM	0	0	83	2	0	6	115	4	0	1	0	5	0	0	0	1	217		0	0	0	0
Count Total	1	19	3,575	83	1	203	4,246	35	0	100	0	179	0	5	1	5	8,453		0	0	1	0
Peak Hour	0	3	358	11	0	21	539	2	0	14	0	20	0	0	0	0	968		0	0	0	0



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Location: 2 TOE ROAD & SD 52 AM

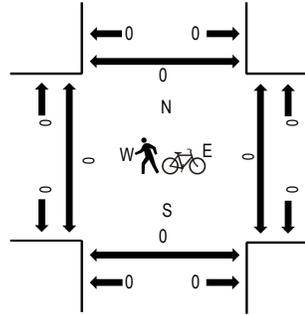
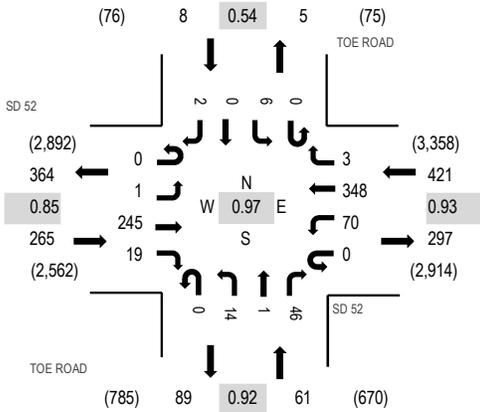
Date: Friday, July 29, 2022

Peak Hour: 04:15 PM - 05:15 PM

Peak 15-Minutes: 04:45 PM - 05:00 PM

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	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru			Right	West	East	South	North	
7:00 AM	0	1	37	0	0	0	3	17	0	0	1	0	4	0	0	0	1	64	264	0	0	0	0
7:15 AM	0	0	33	1	0	0	10	0	0	0	1	0	5	0	0	0	1	51	279	0	0	0	0
7:30 AM	0	0	45	0	0	5	11	0	0	0	2	0	3	0	1	0	1	68	295	0	0	0	0
7:45 AM	0	1	47	1	0	3	20	0	0	0	2	0	3	0	2	0	2	81	321	0	0	0	0
8:00 AM	0	0	45	1	0	4	18	0	0	0	5	0	5	0	0	0	1	79	327	0	0	0	0
8:15 AM	0	0	37	2	0	3	18	1	0	0	2	0	3	0	1	0	0	67	354	0	0	0	0
8:30 AM	0	1	39	1	0	14	33	0	0	0	0	0	5	0	0	0	1	94	383	0	0	0	0
8:45 AM	0	1	39	2	0	6	29	0	0	0	1	0	7	0	1	0	1	87	386	0	0	0	0
9:00 AM	0	1	42	9	0	9	36	0	0	0	1	0	6	0	1	0	1	106	394	1	1	0	0
9:15 AM	0	0	41	1	0	8	34	1	0	0	2	0	8	0	0	0	1	96	405	0	0	0	0
9:30 AM	0	0	39	1	0	4	36	1	0	0	3	0	11	0	1	0	1	97	442	0	0	0	0
9:45 AM	0	2	49	2	0	10	25	0	0	0	0	0	6	0	1	0	0	95	498	1	0	0	0
10:00 AM	0	0	42	3	0	9	51	0	0	0	1	0	10	0	0	0	1	117	537	0	1	0	0
10:15 AM	0	1	48	1	0	9	53	3	0	0	1	0	15	0	2	0	0	133	570	0	0	0	0
10:30 AM	0	2	62	2	0	10	57	2	0	0	1	0	13	0	2	0	2	153	569	0	0	0	0
10:45 AM	0	1	57	1	0	13	44	1	0	0	1	0	13	0	2	0	1	134	555	0	0	0	0
11:00 AM	0	0	54	1	0	13	66	1	0	0	2	0	13	0	0	0	0	150	576	0	0	0	0
11:15 AM	0	0	53	3	0	10	48	1	0	0	2	0	13	0	0	0	2	132	599	0	0	0	0
11:30 AM	0	1	48	3	0	11	57	3	0	0	4	0	9	0	3	0	0	139	634	0	0	0	0
11:45 AM	0	1	60	7	0	12	51	1	1	0	2	0	17	0	3	0	0	155	643	0	0	0	0
12:00 PM	0	0	55	4	0	14	76	3	0	0	1	0	18	0	2	0	0	173	661	0	0	0	0
12:15 PM	0	1	61	8	0	10	62	0	0	0	4	0	18	0	1	1	1	167	646	0	0	0	0
12:30 PM	0	0	45	4	0	12	66	0	0	0	7	0	13	0	1	0	0	148	610	0	0	0	0
12:45 PM	0	0	60	6	0	14	74	2	0	0	6	0	11	0	0	0	0	173	594	0	0	0	0
1:00 PM	1	0	52	2	0	15	70	2	1	0	3	0	12	0	0	0	0	158	569	0	0	0	0
1:15 PM	0	0	44	4	0	10	55	0	0	0	6	0	10	0	1	0	1	131	564	0	0	0	0
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1:45 PM	0	1	51	4	0	12	58	1	0	0	4	0	11	0	2	0	4	148	574	0	0	0	0
2:00 PM	0	0	49	5	0	10	65	1	0	0	3	0	17	0	1	1	1	153	585	0	0	0	0
2:15 PM	0	0	39	1	0	9	55	1	0	0	0	0	12	0	1	0	1	119	595	0	0	0	0
2:30 PM	0	1	39	5	0	17	73	1	0	0	4	1	13	0	0	0	0	154	640	0	0	0	0
2:45 PM	0	1	49	5	0	14	66	1	0	0	8	0	13	0	2	0	0	159	641	0	0	0	0
3:00 PM	0	1	46	5	0	18	78	0	0	0	2	0	13	0	0	0	0	163	636	0	0	0	0
3:15 PM	0	2	53	3	0	17	67	3	0	0	5	0	12	0	1	0	1	164	655	0	0	0	0
3:30 PM	0	0	42	3	0	17	78	1	0	0	3	0	10	0	1	0	0	155	680	0	0	0	0

3:45 PM	0	1	47	9	0	15	64	1	0	2	0	14	0	0	0	1	154	707	0	0	0	0
4:00 PM	0	2	55	6	0	19	81	0	0	7	0	11	0	0	0	1	182	747	0	0	0	0
4:15 PM	0	1	60	3	0	21	86	1	0	4	0	11	0	1	0	1	189	755	0	0	0	0
4:30 PM	0	0	63	1	0	20	81	0	0	2	0	13	0	1	0	1	182	732	0	0	0	0
4:45 PM	0	0	52	7	0	14	98	1	0	7	0	13	0	2	0	0	194	705	0	0	0	0
5:00 PM	0	0	70	8	0	15	83	1	0	1	1	9	0	2	0	0	190	685	0	0	0	0
5:15 PM	0	0	47	4	0	24	80	1	0	6	0	4	0	0	0	0	166	667	0	0	0	0
5:30 PM	0	0	47	5	0	13	77	1	0	6	0	6	0	0	0	0	155	678	0	0	0	0
5:45 PM	0	0	68	8	0	13	71	2	0	4	0	7	0	1	0	0	174	680	0	0	0	0
6:00 PM	0	3	51	4	0	25	73	1	0	2	0	12	0	1	0	0	172	685	0	0	0	0
6:15 PM	0	0	61	3	0	16	75	2	0	2	0	18	0	0	0	0	177		0	0	0	0
6:30 PM	0	0	49	3	0	18	65	1	0	7	0	13	0	1	0	0	157		0	0	0	0
6:45 PM	0	0	58	7	0	28	62	1	0	10	0	13	0	0	0	0	179		0	0	0	0
Count Total	1	27	2,359	175	0	606	2,706	46	2	155	2	511	0	44	2	30	6,666		2	2	0	0
Peak Hour	0	1	245	19	0	70	348	3	0	14	1	46	0	6	0	2	755		0	0	0	0

3:45 PM	0	0	31	5	0	2	51	0	0	5	0	1	0	0	0	0	95	415	0	0	0	0
4:00 PM	0	0	33	2	0	4	56	0	0	9	0	0	0	0	0	0	104	440	0	0	0	0
4:15 PM	0	0	36	8	0	2	54	0	0	9	0	2	0	0	0	0	111	474	0	0	0	0
4:30 PM	0	0	35	9	0	0	47	0	0	11	0	2	0	0	0	1	105	469	0	0	0	0
4:45 PM	0	0	48	9	0	0	53	1	0	5	0	3	0	0	1	0	120	488	0	0	0	0
5:00 PM	0	0	53	5	0	3	71	0	0	5	0	1	0	0	0	0	138	484	0	0	0	0
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6:15 PM	0	0	32	6	1	6	44	0	0	9	0	1	0	0	0	0	99		0	0	0	0
6:30 PM	0	0	35	8	0	2	57	1	0	2	0	2	0	0	0	0	107		0	0	0	0
6:45 PM	0	0	19	6	0	3	33	0	0	4	0	2	0	1	0	0	68		0	0	0	0
Count Total	0	4	1,688	207	1	84	1,806	10	0	256	5	74	0	15	4	2	4,156		0	0	0	0
Peak Hour	0	1	164	22	0	5	260	1	0	26	0	8	0	0	1	0	488		0	0	0	0



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Location: 4 WEST CITY LIMITS ROAD & SD 52 AM

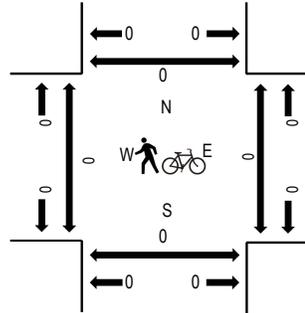
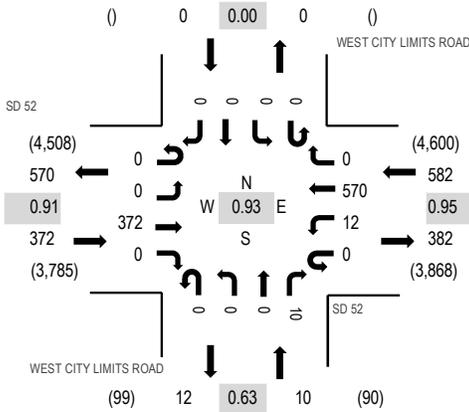
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Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	SD 52 Eastbound				SD 52 Westbound				WEST CITY LIMITS ROAD Northbound				WEST CITY LIMITS ROAD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	47	0	0	0	23	0	0	0	0	0	0	0	0	70	394	0	0	0	0	
7:15 AM	0	0	45	0	0	1	24	0	0	1	0	1	0	0	0	72	437	0	0	0	0	
7:30 AM	0	0	78	0	0	0	27	0	0	0	0	3	0	0	0	108	466	0	0	0	0	
7:45 AM	0	0	108	0	0	1	35	0	0	0	0	0	0	0	0	144	488	0	0	0	0	
8:00 AM	0	0	75	0	0	0	37	0	0	0	0	1	0	0	0	113	460	0	0	0	0	
8:15 AM	0	0	61	0	0	2	37	0	0	0	0	1	0	0	0	101	472	0	0	0	0	
8:30 AM	0	0	77	0	0	2	50	0	0	0	0	1	0	0	0	130	493	0	0	0	0	
8:45 AM	0	0	56	0	1	3	53	0	0	1	0	2	0	0	0	116	497	0	0	0	0	
9:00 AM	0	0	75	2	0	0	45	0	0	0	0	3	0	0	0	125	527	0	0	0	0	
9:15 AM	0	0	64	0	0	0	56	0	0	0	0	2	0	0	0	122	544	0	0	0	0	
9:30 AM	0	0	77	0	0	2	53	0	0	0	0	2	0	0	0	134	583	0	0	0	0	
9:45 AM	0	0	69	0	0	1	75	0	0	0	0	1	0	0	0	146	619	0	0	0	0	
10:00 AM	0	0	77	0	0	1	64	0	0	0	0	0	0	0	0	142	656	0	0	0	0	
10:15 AM	0	0	72	0	0	2	85	0	0	1	0	1	0	0	0	161	676	0	0	0	0	
10:30 AM	0	0	95	0	1	2	72	0	0	0	0	0	0	0	0	170	693	0	0	0	0	
10:45 AM	0	0	95	0	0	1	85	0	0	1	0	1	0	0	0	183	689	0	0	0	0	
11:00 AM	0	0	72	0	0	1	87	0	0	0	0	2	0	0	0	162	705	0	0	1	0	
11:15 AM	0	0	75	0	0	1	99	0	0	1	0	2	0	0	0	178	746	0	0	0	0	
11:30 AM	0	0	76	0	0	1	87	0	0	0	0	2	0	0	0	166	756	0	0	0	0	
11:45 AM	0	0	106	0	0	2	91	0	0	0	0	0	0	0	0	199	767	0	0	1	0	
12:00 PM	0	0	84	0	0	1	117	0	0	0	0	1	0	0	0	203	772	0	0	0	0	
12:15 PM	0	0	103	0	0	2	81	0	0	0	0	2	0	0	0	188	752	0	0	0	0	
12:30 PM	0	0	76	0	0	1	99	0	0	0	0	1	0	0	0	177	749	0	0	0	0	
12:45 PM	0	0	103	0	0	2	97	0	0	0	0	2	0	0	0	204	740	0	0	0	0	
1:00 PM	0	0	77	0	0	3	97	0	0	0	0	6	0	0	0	183	700	0	0	0	0	
1:15 PM	0	0	76	0	0	4	101	0	0	0	0	4	0	0	0	185	705	0	0	0	0	
1:30 PM	0	0	66	1	0	2	96	0	0	0	0	3	0	0	0	168	724	0	0	0	0	
1:45 PM	0	0	66	0	0	3	93	0	0	0	0	2	0	0	0	164	736	0	0	0	0	
2:00 PM	0	0	80	0	0	2	105	0	0	0	0	1	0	0	0	188	740	0	0	0	0	
2:15 PM	0	0	80	0	0	2	118	0	0	0	0	4	0	0	0	204	754	0	0	0	0	
2:30 PM	0	0	71	0	0	1	107	0	0	0	0	1	0	0	0	180	740	0	0	0	0	
2:45 PM	0	0	62	1	0	2	99	0	0	0	0	4	0	0	0	168	786	0	0	0	0	
3:00 PM	0	0	66	0	0	3	131	0	0	0	0	2	0	0	0	202	817	0	0	0	0	
3:15 PM	0	0	94	0	0	2	94	0	0	0	0	0	0	0	0	190	847	0	1	0	0	
3:30 PM	0	0	85	0	0	2	138	0	0	0	0	1	0	0	0	226	866	0	1	0	0	

3:45 PM	0	0	72	0	0	5	119	0	0	0	0	3	0	0	0	0	199	898	0	0	0	0
4:00 PM	0	0	78	0	0	3	149	0	0	0	0	2	0	0	0	0	232	923	0	0	0	0
4:15 PM	0	0	69	0	1	6	133	0	0	0	0	0	0	0	0	0	209	939	0	0	0	0
4:30 PM	0	0	100	0	0	2	152	0	0	0	0	4	0	0	0	0	258	964	0	0	0	0
4:45 PM	0	0	81	0	0	2	140	0	0	0	0	1	0	0	0	0	224	911	0	0	0	0
5:00 PM	0	0	102	0	0	6	139	0	0	0	0	1	0	0	0	0	248	908	0	0	0	0
5:15 PM	0	0	89	0	0	2	139	0	0	0	0	4	0	0	0	0	234	894	0	0	0	0
5:30 PM	0	0	66	0	0	2	134	0	0	0	0	3	0	0	0	0	205	881	0	0	0	0
5:45 PM	0	0	89	0	0	4	128	0	0	0	0	0	0	0	0	0	221	881	0	0	0	0
6:00 PM	0	0	94	0	0	2	137	0	0	0	0	1	0	0	0	0	234	873	0	0	0	0
6:15 PM	0	0	92	1	0	1	126	0	0	0	0	1	0	0	0	0	221		0	0	0	0
6:30 PM	0	0	70	0	0	1	132	0	0	0	0	2	0	0	0	0	205		0	0	0	0
6:45 PM	0	0	89	0	0	3	117	0	0	0	0	4	0	0	0	0	213		0	0	0	0
Count Total	0	0	3,780	5	3	94	4,503	0	0	5	0	85	0	0	0	0	8,475		0	2	2	0
Peak Hour	0	0	372	0	0	12	570	0	0	0	0	10	0	0	0	0	964		0	0	0	0



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Location: 5 SD 153 & SD 50 AM

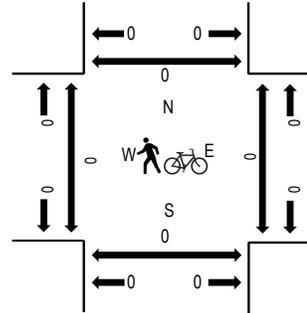
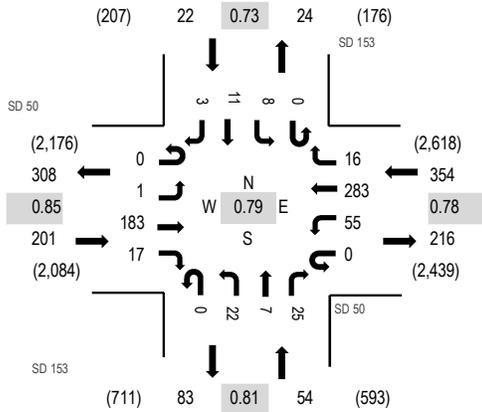
Date: Friday, July 29, 2022

Peak Hour: 04:45 PM - 05:45 PM

Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles

Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	SD 50 Eastbound				SD 50 Westbound				SD 153 Northbound			SD 153 Southbound				Total	Rolling Hour	Pedestrian Crossings					
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru			Right	West	East	South	North	
7:00 AM	0	0	31	0	0	0	3	15	0	0	4	0	3	0	2	2	0	60	390	0	0	0	0
7:15 AM	0	0	42	5	0	2	23	0	0	0	0	9	0	3	2	1	87	421	0	0	0	0	
7:30 AM	0	0	60	2	0	4	22	1	0	2	0	9	0	8	2	0	110	430	0	0	0	0	
7:45 AM	0	1	66	0	0	8	31	0	0	4	0	14	0	9	0	0	133	392	0	0	0	0	
8:00 AM	0	1	41	2	0	3	27	1	0	4	0	8	0	3	1	0	91	366	0	0	0	0	
8:15 AM	0	1	51	2	0	3	29	1	0	2	1	5	0	1	0	0	96	362	0	0	0	0	
8:30 AM	0	0	32	0	0	4	21	2	0	3	1	8	0	1	0	0	72	348	0	0	0	0	
8:45 AM	0	0	47	0	0	3	31	4	0	2	0	14	0	4	1	1	107	366	0	0	0	0	
9:00 AM	0	1	29	1	0	5	31	0	0	5	0	8	0	4	3	0	87	352	0	0	0	0	
9:15 AM	0	1	36	3	0	2	27	2	0	0	1	6	0	4	0	0	82	376	0	0	0	0	
9:30 AM	0	0	42	2	0	10	27	0	0	3	0	5	0	1	0	0	90	388	0	0	0	0	
9:45 AM	0	0	37	4	0	9	24	2	0	0	1	11	0	3	2	0	93	393	0	0	0	0	
10:00 AM	0	0	39	3	0	14	40	1	0	2	0	9	0	2	1	0	111	397	0	0	0	0	
10:15 AM	0	0	38	2	0	9	31	1	0	3	1	6	0	2	1	0	94	392	0	0	0	0	
10:30 AM	0	0	33	4	0	9	33	0	0	1	0	9	0	3	3	0	95	389	0	0	0	0	
10:45 AM	0	0	47	4	0	7	19	1	0	6	2	5	0	4	2	0	97	389	0	0	0	0	
11:00 AM	0	0	46	3	0	11	31	0	0	1	0	12	0	0	1	1	106	401	0	0	0	0	
11:15 AM	0	0	32	1	0	10	39	1	0	0	1	5	0	2	0	0	91	427	0	0	0	0	
11:30 AM	0	0	42	2	0	11	28	2	0	1	2	4	0	0	3	0	95	433	0	0	0	0	
11:45 AM	0	0	44	2	0	9	36	3	0	5	0	7	0	2	1	0	109	451	0	0	0	0	
12:00 PM	0	0	48	8	0	20	36	2	0	3	0	12	0	2	0	1	132	471	0	0	0	0	
12:15 PM	0	1	32	2	1	11	38	2	0	1	1	5	0	2	1	0	97	470	0	0	0	0	
12:30 PM	0	0	32	4	0	18	39	2	0	5	0	11	0	2	0	0	113	485	0	0	0	0	
12:45 PM	0	0	53	1	0	14	39	3	0	2	0	15	0	2	0	0	129	475	0	0	0	0	
1:00 PM	0	1	44	4	0	10	55	2	0	4	1	9	0	1	0	0	131	441	0	0	0	0	
1:15 PM	0	0	44	3	0	11	34	2	0	4	1	10	0	1	2	0	112	446	0	0	0	0	
1:30 PM	0	0	42	5	0	9	35	0	0	1	0	8	0	2	1	0	103	465	0	0	0	0	
1:45 PM	0	0	32	1	0	8	35	2	0	0	1	11	0	3	2	0	95	488	0	0	0	0	
2:00 PM	0	0	41	2	0	14	53	4	0	4	1	12	0	2	3	0	136	518	0	0	0	0	
2:15 PM	0	1	35	3	0	14	58	5	0	2	1	8	0	2	2	0	131	502	0	0	0	0	
2:30 PM	0	0	46	2	0	11	39	5	0	6	4	8	0	3	1	1	126	504	0	0	0	0	
2:45 PM	0	0	33	3	0	12	60	2	0	3	1	7	0	2	1	1	125	519	0	0	0	0	
3:00 PM	0	1	31	2	0	17	52	3	0	2	1	7	0	4	0	0	120	524	0	0	0	0	
3:15 PM	0	1	38	1	0	9	58	4	0	2	3	11	0	3	2	1	133	540	0	0	0	0	
3:30 PM	0	1	36	2	0	14	64	1	0	3	5	10	0	2	3	0	141	549	0	0	0	0	

3:45 PM	0	0	35	5	0	14	56	4	0	3	2	7	0	1	3	0	130	546	0	0	0	0
4:00 PM	0	0	31	3	0	15	68	4	0	3	2	6	0	2	2	0	136	555	0	0	0	0
4:15 PM	0	1	44	3	1	12	58	4	0	2	2	10	0	0	3	2	142	619	0	0	0	0
4:30 PM	0	0	38	5	0	17	52	4	0	5	2	9	0	4	2	0	138	617	0	0	0	0
4:45 PM	0	0	46	3	0	14	55	3	0	4	2	6	0	2	3	1	139	631	0	0	0	0
5:00 PM	0	0	63	7	0	19	86	8	0	5	2	8	0	0	2	0	200	620	0	0	0	0
5:15 PM	0	1	36	4	0	11	65	2	0	6	2	7	0	2	3	1	140	540	0	0	0	0
5:30 PM	0	0	38	3	0	11	77	3	0	7	1	4	0	4	3	1	152	519	0	0	0	0
5:45 PM	0	1	39	3	0	15	44	1	0	4	4	12	0	1	3	1	128	494	0	0	0	0
6:00 PM	0	1	37	6	0	13	41	0	0	9	2	7	0	3	1	0	120	467	0	0	0	0
6:15 PM	0	0	33	1	0	9	53	3	0	3	3	5	0	3	2	4	119		0	0	0	0
6:30 PM	0	1	38	6	0	11	57	6	0	2	0	4	0	1	0	1	127		0	0	0	0
6:45 PM	0	0	30	4	0	11	40	1	0	2	2	6	0	1	3	1	101		0	0	0	0
Count Total	0	16	1,930	138	2	500	2,012	104	0	145	56	392	0	115	73	19	5,502		0	0	0	0
Peak Hour	0	1	183	17	0	55	283	16	0	22	7	25	0	8	11	3	631		0	0	0	0



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Location: 6 SD 314 & SD 50 AM

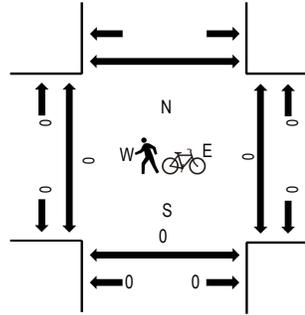
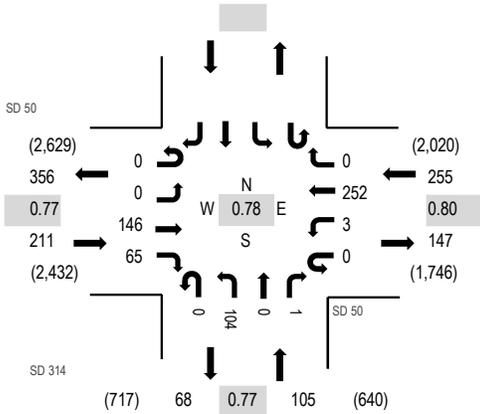
Date: Friday, July 29, 2022

Peak Hour: 04:45 PM - 05:45 PM

Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles

Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	SD 50 Eastbound				SD 50 Westbound				SD 314 Northbound				Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	28	9	0	0	12	0	0	8	0	0	0	0	0	0	57	371	0	0	0	
7:15 AM	0	0	37	18	0	0	18	0	0	6	0	0	0	0	0	0	79	399	0	0	0	
7:30 AM	0	0	51	26	0	0	20	0	0	7	0	1	0	0	0	0	105	411	0	0	0	
7:45 AM	0	0	46	44	0	0	32	0	0	7	0	1	0	0	0	0	130	375	0	0	0	
8:00 AM	0	0	37	17	0	0	26	0	0	5	0	0	0	0	0	0	85	347	0	0	0	
8:15 AM	0	0	32	24	0	0	28	0	0	7	0	0	0	0	0	0	91	338	0	0	0	
8:30 AM	0	0	26	15	0	0	25	0	0	3	0	0	0	0	0	0	69	327	0	0	0	
8:45 AM	0	0	53	12	0	0	29	0	0	8	0	0	0	0	0	0	102	344	0	0	0	
9:00 AM	0	0	29	11	0	0	27	0	0	8	0	1	0	0	0	0	76	330	0	0	0	
9:15 AM	0	0	25	20	0	0	28	0	0	7	0	0	0	0	0	0	80	355	0	0	0	
9:30 AM	0	0	31	18	0	0	30	0	0	7	0	0	0	0	0	0	86	364	0	0	0	
9:45 AM	0	0	37	14	0	0	24	0	0	13	0	0	0	0	0	0	88	363	0	0	0	
10:00 AM	0	0	40	8	0	0	46	0	0	7	0	0	0	0	0	0	101	356	0	0	0	
10:15 AM	0	0	38	11	0	0	27	0	0	13	0	0	0	0	0	0	89	361	0	0	0	
10:30 AM	0	0	39	6	0	0	33	0	0	7	0	0	0	0	0	0	85	358	0	0	0	
10:45 AM	0	0	41	13	0	0	26	0	0	1	0	0	0	0	0	0	81	362	0	0	0	
11:00 AM	0	0	33	27	0	0	34	0	0	12	0	0	0	0	0	0	106	385	0	0	0	
11:15 AM	0	0	31	8	0	1	34	0	0	12	0	0	0	0	0	0	86	401	0	0	0	
11:30 AM	0	0	37	10	0	1	34	0	0	7	0	0	0	0	0	0	89	406	0	0	0	
11:45 AM	0	0	35	16	0	0	42	0	0	11	0	0	0	0	0	0	104	423	0	0	0	
12:00 PM	0	0	45	19	0	1	45	0	1	11	0	0	0	0	0	0	122	445	0	0	0	
12:15 PM	0	0	34	6	0	0	38	0	0	13	0	0	0	0	0	0	91	442	0	0	0	
12:30 PM	0	0	39	5	0	1	51	0	0	10	0	0	0	0	0	0	106	453	0	0	0	
12:45 PM	0	0	54	14	0	0	40	0	0	18	0	0	0	0	0	0	126	444	0	0	0	
1:00 PM	0	0	37	18	0	0	53	0	0	11	0	0	0	0	0	0	119	414	0	0	0	
1:15 PM	0	0	43	12	0	0	36	0	0	10	0	1	0	0	0	0	102	415	0	0	0	
1:30 PM	0	0	34	19	0	0	32	0	0	12	0	0	0	0	0	0	97	441	0	0	0	
1:45 PM	0	0	35	12	0	1	37	0	0	11	0	0	0	0	0	0	96	454	0	0	0	
2:00 PM	0	0	41	12	0	0	55	0	0	12	0	0	0	0	0	0	120	475	0	0	0	
2:15 PM	0	0	34	12	0	0	66	0	0	16	0	0	0	0	0	0	128	473	0	0	0	
2:30 PM	0	0	46	12	0	0	44	0	0	7	0	1	0	0	0	0	110	463	0	0	0	
2:45 PM	0	0	31	10	0	2	51	0	0	23	0	0	0	0	0	0	117	488	0	0	0	
3:00 PM	0	0	28	13	0	1	63	0	0	13	0	0	0	0	0	0	118	483	0	0	0	
3:15 PM	0	0	37	15	0	0	53	0	0	13	0	0	0	0	0	0	118	496	0	0	0	
3:30 PM	0	0	36	14	0	3	65	0	0	16	0	1	0	0	0	0	135	498	0	0	0	

3:45 PM	0	0	32	9	0	1	49	0	0	21	0	0	112	492	0	0	0
4:00 PM	0	0	22	17	0	0	65	0	0	25	0	2	131	505	0	0	0
4:15 PM	0	0	32	13	0	0	58	0	0	14	0	3	120	557	0	0	0
4:30 PM	0	0	41	10	0	0	59	0	0	19	0	0	129	561	0	0	0
4:45 PM	0	0	35	18	0	0	56	0	0	16	0	0	125	571	0	0	0
5:00 PM	0	0	50	19	0	1	79	0	0	34	0	0	183	566	0	0	0
5:15 PM	0	0	26	20	0	1	54	0	0	22	0	1	124	489	0	0	0
5:30 PM	0	0	35	8	0	1	63	0	0	32	0	0	139	467	0	0	0
5:45 PM	0	0	43	16	0	1	46	0	0	14	0	0	120	447	0	0	0
6:00 PM	0	0	32	14	0	1	39	0	0	20	0	0	106	415	0	0	0
6:15 PM	0	0	28	12	0	0	43	0	0	19	0	0	102		0	0	0
6:30 PM	0	0	31	12	0	0	49	0	0	27	0	0	119		0	0	0
6:45 PM	0	0	27	10	0	1	38	0	0	12	0	0	88		0	0	0
Count Total	0	0	1,734	698	0	18	2,002	0	1	627	0	12	5,092		0	0	0
Peak Hour	0	0	146	65	0	3	252	0	0	104	0	1	571		0	0	0



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Location: 7 GAVINS POINT ROAD & SD 52 AM

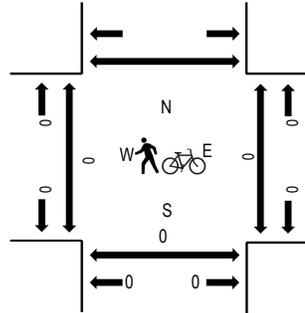
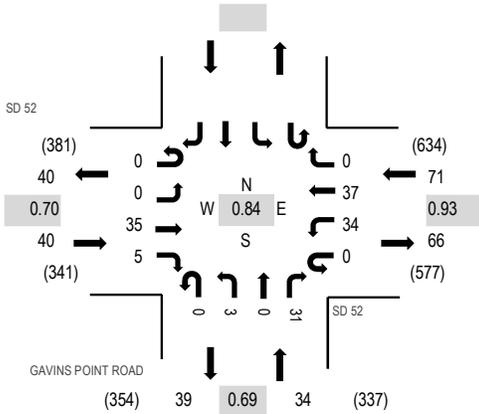
Date: Friday, July 29, 2022

Peak Hour: 02:45 PM - 03:45 PM

Peak 15-Minutes: 02:45 PM - 03:00 PM

Peak Hour - All Vehicles

Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	SD 52 Eastbound				SD 52 Westbound				GAVINS POINT ROAD Northbound				Southbound				Total	Rolling Hour	Pedestrian Crossings		
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South
7:00 AM	0	0	3	2	0	3	0	0	0	1	0	5					14	74	0	0	0
7:15 AM	0	0	4	5	0	8	5	0	0	0	0	2					24	75	0	0	0
7:30 AM	0	0	4	0	0	2	6	0	0	2	0	7					21	69	0	0	0
7:45 AM	0	0	4	0	0	3	6	0	0	0	0	2					15	66	0	0	0
8:00 AM	0	0	7	1	0	0	3	0	0	1	0	3					15	74	0	0	0
8:15 AM	0	0	5	0	0	3	5	0	0	1	0	4					18	73	0	0	0
8:30 AM	0	0	1	1	0	1	9	0	0	0	0	6					18	74	0	0	0
8:45 AM	0	0	6	0	0	6	3	0	0	2	0	6					23	74	0	0	0
9:00 AM	0	0	4	0	0	4	4	0	0	0	0	2					14	73	0	0	0
9:15 AM	0	0	4	0	0	5	7	0	0	1	0	2					19	86	0	0	0
9:30 AM	0	0	4	0	0	3	7	0	0	0	0	4					18	87	0	0	0
9:45 AM	0	0	9	1	0	3	4	0	0	0	0	5					22	93	0	0	0
10:00 AM	0	0	6	2	0	5	9	0	0	0	0	5					27	92	0	0	0
10:15 AM	0	0	6	1	0	3	3	0	0	2	0	5					20	89	0	0	0
10:30 AM	0	0	4	0	0	8	8	0	0	0	0	4					24	95	0	0	0
10:45 AM	0	0	4	1	0	7	0	0	0	3	0	6					21	102	0	0	0
11:00 AM	0	0	6	1	0	6	6	0	0	2	0	3					24	101	0	0	0
11:15 AM	0	0	5	2	0	4	7	0	0	0	0	8					26	96	0	0	0
11:30 AM	0	0	8	0	0	12	4	0	0	0	0	7					31	111	0	0	0
11:45 AM	0	0	6	1	0	4	4	0	0	0	0	5					20	108	0	0	0
12:00 PM	0	0	1	3	0	5	6	0	0	0	0	4					19	114	0	0	0
12:15 PM	0	0	6	4	0	5	10	0	0	1	0	15					41	115	0	0	0
12:30 PM	0	0	6	1	0	6	6	0	0	2	0	7					28	109	0	0	0
12:45 PM	0	0	1	2	0	6	7	0	0	2	0	8					26	104	0	0	0
1:00 PM	0	0	7	0	0	1	6	0	0	1	0	5					20	109	0	0	0
1:15 PM	0	0	8	1	0	9	11	0	1	1	0	4					35	127	0	0	0
1:30 PM	0	0	4	1	0	5	7	0	0	1	0	5					23	122	0	0	0
1:45 PM	0	0	5	3	1	8	7	0	0	0	0	7					31	132	0	0	0
2:00 PM	0	0	6	5	0	8	10	0	0	1	0	8					38	144	0	0	0
2:15 PM	0	0	7	1	0	6	10	0	0	1	0	5					30	137	0	0	0
2:30 PM	0	0	4	0	0	12	5	0	0	1	0	11					33	143	0	0	0
2:45 PM	0	0	9	0	0	9	14	0	0	1	0	10					43	145	0	0	0
3:00 PM	0	0	9	0	0	11	6	0	0	1	0	4					31	134	0	0	0
3:15 PM	0	0	8	2	0	9	10	0	0	0	0	7					36	139	0	0	0
3:30 PM	0	0	9	3	0	5	7	0	0	1	0	10					35	140	0	0	0

3:45 PM	0	0	3	2	0	10	9	0	0	1	0	7	32	140	0	0	0
4:00 PM	0	0	6	0	0	8	6	0	0	5	0	11	36	145	0	0	0
4:15 PM	0	0	11	1	0	4	12	0	0	2	0	7	37	145	0	0	0
4:30 PM	0	0	8	0	0	9	12	0	0	0	0	6	35	141	0	0	0
4:45 PM	0	0	12	0	0	6	9	0	0	1	0	9	37	128	0	0	0
5:00 PM	0	0	6	0	0	14	7	0	0	0	0	9	36	120	0	0	0
5:15 PM	0	0	7	0	0	9	12	0	0	1	0	4	33	113	0	0	0
5:30 PM	0	0	2	1	0	5	6	0	0	2	0	6	22	116	0	0	0
5:45 PM	0	0	6	0	0	5	11	0	0	0	0	7	29	132	0	0	0
6:00 PM	0	0	5	1	0	10	8	0	0	1	0	4	29	132	0	0	0
6:15 PM	0	0	8	1	0	10	8	0	0	4	0	5	36		0	0	0
6:30 PM	0	0	15	0	0	6	10	0	0	0	0	7	38		0	0	0
6:45 PM	0	0	7	5	0	7	3	0	0	0	0	7	29		0	0	0
Count Total	0	0	286	55	1	298	335	0	1	46	0	290	1,312		0	0	0
Peak Hour	0	0	35	5	0	34	37	0	0	3	0	31	145		0	0	0



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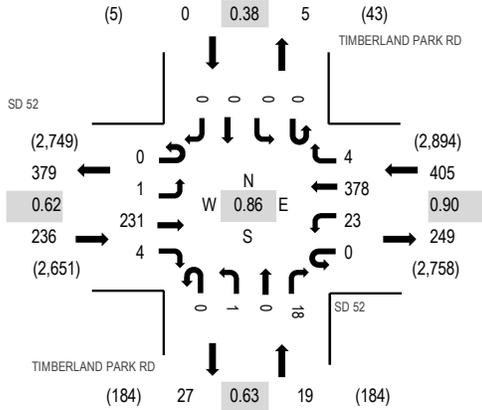
Location: 1 TIMBERLAND PARK RD & SD 52 AM

Date: Tuesday, September 20, 2022

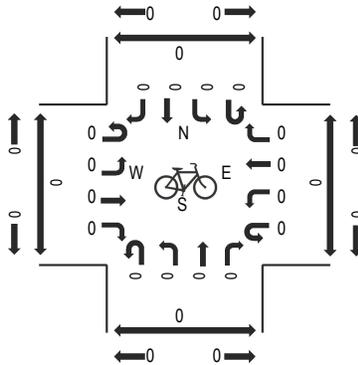
Peak Hour: 05:00 PM - 06:00 PM

Peak 15-Minutes: 05:00 PM - 05:15 PM

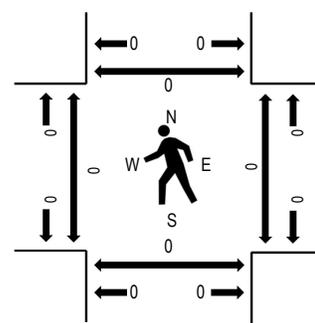
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	SD 52 Eastbound				SD 52 Westbound				TIMBERLAND PARK RD Northbound				TIMBERLAND PARK RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
	7:00 AM	0	0	46	0	0	0	24	0	0	2	0	6	0	0	0			0	78	503	0
7:15 AM	0	0	65	0	0	0	20	0	0	0	0	2	0	0	0	0	87	546	0	0	0	0
7:30 AM	0	0	91	1	0	0	31	1	0	1	0	11	0	1	0	0	137	570	0	0	0	0
7:45 AM	0	0	155	1	0	2	34	1	0	2	0	6	0	0	0	0	201	529	0	0	0	0
8:00 AM	0	0	71	1	0	3	40	0	0	1	0	3	0	1	0	1	121	421	0	0	0	0
8:15 AM	0	0	54	0	0	1	51	1	0	0	0	4	0	0	0	0	111	381	0	0	0	0
8:30 AM	0	0	61	0	0	2	27	1	0	0	0	5	0	0	0	0	96	368	0	0	0	0
8:45 AM	0	0	55	0	0	1	32	0	0	1	0	4	0	0	0	0	93	365	0	0	0	0
9:00 AM	0	0	44	0	0	3	32	0	0	0	0	2	0	0	0	0	81	360	0	0	0	0
9:15 AM	0	0	44	1	0	1	51	0	0	0	0	1	0	0	0	0	98	362	0	0	0	0
9:30 AM	0	1	55	1	0	1	35	0	0	0	0	0	0	0	0	0	93	351	0	0	0	0
9:45 AM	0	0	43	0	0	2	37	1	0	2	0	3	0	0	0	0	88	347	0	0	0	0
10:00 AM	0	0	34	0	0	2	43	1	0	1	0	2	0	0	0	0	83	347	0	0	0	0
10:15 AM	0	0	47	0	0	2	35	1	0	0	0	2	0	0	0	0	87	358	0	0	0	0
10:30 AM	0	2	48	0	0	0	36	0	0	0	0	3	0	0	0	0	89	387	0	0	0	0
10:45 AM	0	0	44	1	0	5	35	0	0	1	0	2	0	0	0	0	88	413	0	0	0	0
11:00 AM	0	1	38	2	0	3	45	0	0	1	0	4	0	0	0	0	94	441	0	0	0	0
11:15 AM	0	0	55	1	0	2	56	0	0	0	0	2	0	0	0	0	116	474	0	0	0	0
11:30 AM	0	0	47	1	0	0	63	0	0	1	0	3	0	0	0	0	115	459	0	0	0	0
11:45 AM	0	0	52	1	0	1	59	2	0	1	0	0	0	0	0	0	116	476	0	0	0	0
12:00 PM	0	1	42	2	0	5	72	1	0	0	0	4	0	0	0	0	127	498	0	0	0	0
12:15 PM	0	0	43	2	0	5	45	1	0	0	0	5	0	0	0	0	101	482	0	0	0	0
12:30 PM	0	0	63	0	0	3	61	1	0	0	0	4	0	0	0	0	132	497	0	0	0	0
12:45 PM	0	1	68	0	0	0	61	1	0	2	0	5	0	0	0	0	138	464	0	0	0	0
1:00 PM	1	0	44	2	0	6	54	1	0	0	0	3	0	0	0	0	111	434	0	0	0	0
1:15 PM	0	0	62	1	0	2	48	0	0	1	0	2	0	0	0	0	116	417	0	0	0	0
1:30 PM	0	0	37	1	0	3	53	1	0	1	0	2	0	1	0	0	99	408	0	0	0	0
1:45 PM	0	1	55	1	0	1	50	0	0	0	0	0	0	0	0	0	108	417	0	0	0	0
2:00 PM	0	0	45	1	0	3	43	0	0	0	0	2	0	0	0	0	94	424	0	0	0	0
2:15 PM	0	0	43	0	0	3	56	0	0	0	0	5	0	0	0	0	107	451	0	0	0	0
2:30 PM	0	0	54	2	0	0	47	0	0	1	0	4	0	0	0	0	108	494	0	0	0	0
2:45 PM	0	0	49	0	0	4	55	3	0	0	0	4	0	0	0	0	115	533	0	0	0	0
3:00 PM	0	0	56	1	0	1	60	0	0	1	0	2	0	0	0	0	121	582	0	0	0	0
3:15 PM	0	0	54	0	0	5	88	0	0	1	0	2	0	0	0	0	150	630	0	0	0	0

3:30 PM	0	1	45	0	0	5	92	1	0	0	0	3	0	0	0	0	147	627	0	0	0	0
3:45 PM	0	1	59	1	0	9	90	1	0	2	0	1	0	0	0	0	164	618	0	0	0	0
4:00 PM	1	0	64	0	0	4	96	1	0	2	0	1	0	0	0	0	169	591	0	0	0	0
4:15 PM	0	0	48	3	0	3	87	2	0	1	0	3	0	0	0	0	147	613	0	0	0	0
4:30 PM	0	0	48	0	0	6	82	0	0	0	0	2	0	0	0	0	138	621	0	0	0	0
4:45 PM	0	0	49	0	0	5	77	2	0	1	0	3	0	0	0	0	137	643	0	0	0	0
5:00 PM	0	1	66	3	0	5	107	1	0	1	0	7	0	0	0	0	191	660	0	0	0	0
5:15 PM	0	0	56	1	0	7	84	2	0	0	0	5	0	0	0	0	155	600	0	0	0	0
5:30 PM	0	0	54	0	0	2	99	0	0	0	0	5	0	0	0	0	160	558	0	0	0	0
5:45 PM	0	0	55	0	0	9	88	1	0	0	0	1	0	0	0	0	154	518	0	0	0	0
6:00 PM	0	2	51	2	0	10	60	0	0	1	0	4	0	1	0	0	131	473	0	0	0	0
6:15 PM	0	0	47	1	0	2	59	0	0	1	0	3	0	0	0	0	113		0	0	0	0
6:30 PM	0	0	56	0	0	6	54	1	0	1	0	2	0	0	0	0	120		0	0	0	0
6:45 PM	0	0	40	0	0	4	60	1	0	1	0	3	0	0	0	0	109		0	0	0	0
Count Total	2	12	2,602	35	0	149	2,714	31	0	32	0	152	0	4	0	1	5,734		0	0	0	0
Peak Hour	0	1	231	4	0	23	378	4	0	1	0	18	0	0	0	0	660		0	0	0	0



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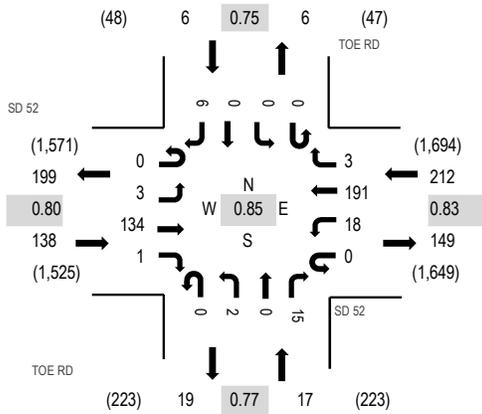
Location: 2 TOE RD & SD 52 AM

Date: Tuesday, September 20, 2022

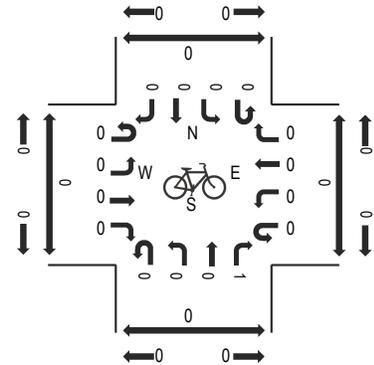
Peak Hour: 04:45 PM - 05:45 PM

Peak 15-Minutes: 05:00 PM - 05:15 PM

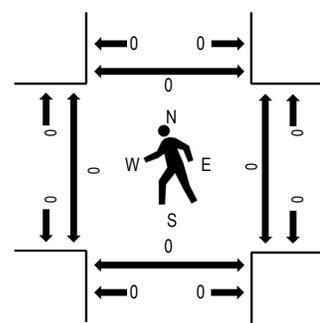
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	SD 52 Eastbound				SD 52 Westbound				TOE RD Northbound				TOE RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	23	0	0	4	24	1	0	0	0	1	0	1	0	0	54	273	0	1	0	0
7:15 AM	0	1	36	1	0	1	10	0	0	1	0	2	0	0	0	0	52	272	0	0	0	0
7:30 AM	0	0	59	0	0	2	16	0	0	0	0	1	0	0	0	0	78	287	0	0	0	0
7:45 AM	0	0	59	1	0	2	23	0	0	1	0	1	0	1	0	1	89	276	0	1	0	0
8:00 AM	0	0	34	1	0	2	12	0	0	3	0	1	0	0	0	0	53	255	0	2	0	0
8:15 AM	0	0	31	5	0	3	23	0	0	0	0	4	0	1	0	0	67	257	0	0	0	0
8:30 AM	0	0	37	0	0	1	25	0	0	3	0	1	0	0	0	0	67	246	0	0	0	0
8:45 AM	0	0	37	1	0	3	20	0	0	2	0	3	0	1	0	1	68	253	0	0	0	0
9:00 AM	0	0	24	0	0	4	21	0	0	3	0	2	0	1	0	0	55	239	0	0	0	0
9:15 AM	0	1	30	2	0	1	19	1	0	0	0	2	0	0	0	0	56	236	0	0	0	0
9:30 AM	0	0	37	0	0	1	28	1	0	0	0	4	0	1	0	2	74	232	0	0	0	0
9:45 AM	0	0	27	1	0	2	20	0	0	2	0	1	0	1	0	0	54	228	0	1	0	0
10:00 AM	0	0	22	0	0	2	22	1	0	3	0	1	0	1	0	0	52	239	0	0	0	0
10:15 AM	0	1	18	1	0	3	21	0	0	1	0	5	0	1	0	1	52	238	0	0	0	0
10:30 AM	0	0	33	2	0	6	23	0	0	0	0	5	0	0	0	1	70	261	0	0	0	0
10:45 AM	0	0	27	4	0	2	24	1	0	4	0	3	0	0	0	0	65	256	0	0	0	0
11:00 AM	0	0	21	3	0	3	20	1	0	1	0	2	0	0	0	0	51	264	0	0	0	0
11:15 AM	0	0	37	1	0	7	25	0	0	1	0	4	0	0	0	0	75	281	0	0	0	0
11:30 AM	0	0	21	0	0	2	34	2	0	2	0	4	0	0	0	0	65	271	0	0	0	1
11:45 AM	0	1	29	2	0	6	23	1	0	3	0	7	0	1	0	0	73	284	0	0	0	0
12:00 PM	0	0	28	1	0	1	30	0	0	1	0	7	0	0	0	0	68	296	0	0	0	0
12:15 PM	0	0	23	2	0	9	24	0	0	2	0	4	0	0	0	1	65	310	0	0	0	0
12:30 PM	0	0	26	1	0	5	35	1	0	1	0	7	0	1	0	1	78	318	0	0	0	0
12:45 PM	0	1	28	1	0	5	37	1	0	3	0	8	0	1	0	0	85	304	0	0	0	0
1:00 PM	0	0	24	1	0	6	39	0	0	2	0	7	0	2	0	1	82	290	0	0	0	0
1:15 PM	0	0	27	1	0	4	39	0	0	1	0	1	0	0	0	0	73	284	0	0	0	0
1:30 PM	0	0	23	1	0	5	27	1	0	2	0	4	0	0	0	1	64	298	0	0	0	0
1:45 PM	0	0	34	2	0	4	26	1	0	1	0	3	0	0	0	0	71	311	0	0	0	0
2:00 PM	0	1	27	0	0	3	40	0	0	0	0	5	0	0	0	0	76	314	0	0	0	0
2:15 PM	0	0	38	2	0	6	33	0	0	2	0	5	0	0	0	1	87	312	0	0	0	0
2:30 PM	0	1	37	0	0	3	28	1	0	0	0	7	0	0	0	0	77	302	0	0	0	0
2:45 PM	0	0	29	1	0	4	31	1	0	2	0	4	0	0	0	2	74	314	0	0	0	0
3:00 PM	0	0	29	0	0	9	31	0	0	1	0	3	0	1	0	0	74	317	0	0	0	0
3:15 PM	0	1	34	0	0	1	36	0	0	1	0	2	0	1	0	1	77	331	0	0	0	0

3:30 PM	0	0	21	1	0	9	55	2	0	0	0	0	0	1	0	0	89	331	0	0	0	0
3:45 PM	0	1	25	0	0	6	42	0	0	0	0	3	0	0	0	0	77	323	0	0	0	0
4:00 PM	0	0	32	2	0	3	45	1	0	2	0	3	0	0	0	0	88	325	0	0	0	0
4:15 PM	0	0	24	3	0	3	40	2	0	0	0	3	0	2	0	0	77	347	0	0	0	0
4:30 PM	0	2	28	2	0	1	38	2	0	1	0	5	0	1	0	1	81	357	0	0	0	0
4:45 PM	0	1	33	0	0	5	34	2	0	0	0	2	0	0	0	2	79	373	0	0	0	0
5:00 PM	0	2	35	0	0	3	61	1	0	1	0	4	0	0	0	3	110	371	0	0	0	0
5:15 PM	0	0	30	1	0	6	46	0	0	1	0	2	0	0	0	1	87	360	0	0	0	0
5:30 PM	0	0	36	0	0	4	50	0	0	0	0	7	0	0	0	0	97	341	0	0	0	0
5:45 PM	0	0	21	1	0	3	42	1	0	0	1	6	0	2	0	0	77	318	0	0	0	0
6:00 PM	0	0	43	1	0	1	48	1	0	0	0	3	0	1	0	1	99	307	0	0	0	0
6:15 PM	0	0	24	0	0	3	36	0	0	1	0	3	0	1	0	0	68		0	0	0	0
6:30 PM	0	1	35	1	0	1	31	2	0	0	0	2	0	0	0	1	74		0	0	0	0
6:45 PM	0	1	22	1	0	2	35	1	0	1	0	2	0	1	0	0	66		0	0	0	0
Count Total	0	16	1,458	51	0	172	1,492	30	0	56	1	166	0	25	0	23	3,490		0	5	0	1
Peak Hour	0	3	134	1	0	18	191	3	0	2	0	15	0	0	0	6	373		0	0	0	0



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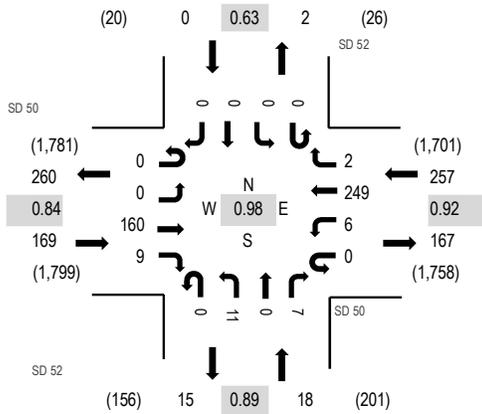
Location: 3 SD 52 & SD 50 AM

Date: Tuesday, September 20, 2022

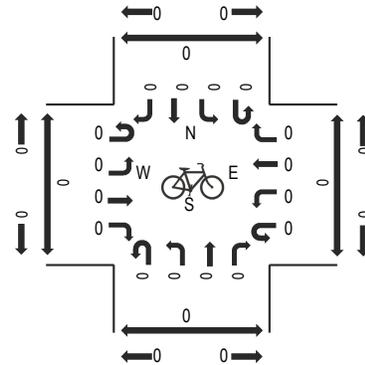
Peak Hour: 04:30 PM - 05:30 PM

Peak 15-Minutes: 05:00 PM - 05:15 PM

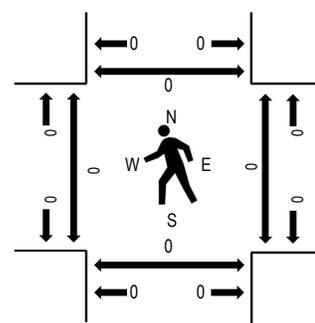
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	SD 50 Eastbound				SD 50 Westbound				SD 52 Northbound				SD 52 Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	36	2	0	1	23	0	0	2	0	0	0	0	0	0	64	351	0	0	0	0
7:15 AM	0	0	51	3	0	0	29	0	0	6	0	1	0	0	0	0	90	368	0	0	0	0
7:30 AM	0	0	60	2	0	1	37	0	0	4	0	2	0	0	0	0	106	346	0	0	0	0
7:45 AM	0	0	67	1	0	0	16	0	0	5	0	2	0	0	0	0	91	315	0	0	0	0
8:00 AM	0	0	44	1	0	1	29	1	0	1	0	3	0	1	0	0	81	293	0	0	0	0
8:15 AM	0	0	38	0	0	0	27	1	0	1	1	0	0	0	0	0	68	266	0	0	0	0
8:30 AM	0	0	30	3	0	1	35	0	0	6	0	0	0	0	0	0	75	281	0	0	0	0
8:45 AM	0	0	22	2	0	1	38	1	0	5	0	0	0	0	0	0	69	276	0	0	0	0
9:00 AM	0	0	30	1	0	2	19	0	0	0	0	1	0	1	0	0	54	260	0	0	0	0
9:15 AM	0	1	42	3	0	2	32	0	0	2	0	0	0	1	0	0	83	278	0	0	0	0
9:30 AM	0	0	35	0	0	1	28	0	0	4	0	2	0	0	0	0	70	259	0	0	0	0
9:45 AM	0	0	35	0	0	0	15	0	0	2	0	1	0	0	0	0	53	260	0	0	0	0
10:00 AM	0	0	39	1	0	1	28	1	0	2	0	0	0	0	0	0	72	260	0	0	0	0
10:15 AM	0	0	30	0	0	0	30	0	0	3	0	1	0	0	0	0	64	244	0	0	0	0
10:30 AM	0	0	28	2	0	0	36	0	0	4	0	1	0	0	0	0	71	240	0	0	0	0
10:45 AM	0	1	25	0	0	1	21	0	0	1	0	3	0	1	0	0	53	223	0	0	0	0
11:00 AM	0	0	26	1	0	1	23	0	0	3	0	0	0	1	0	1	56	245	0	0	0	0
11:15 AM	0	0	26	1	0	1	27	0	0	2	0	3	0	0	0	0	60	250	0	0	0	0
11:30 AM	0	1	30	1	0	1	18	0	0	2	0	0	0	0	0	1	54	248	0	0	0	0
11:45 AM	0	0	44	0	0	1	29	0	0	1	0	0	0	0	0	0	75	255	0	0	0	0
12:00 PM	0	0	20	1	0	2	32	2	0	2	0	1	0	1	0	0	61	255	0	0	0	0
12:15 PM	0	0	29	1	0	1	20	1	0	3	0	1	0	2	0	0	58	260	0	0	0	0
12:30 PM	0	0	28	4	0	0	21	0	0	6	0	1	0	0	0	1	61	276	0	0	0	0
12:45 PM	0	1	35	2	0	1	30	0	0	1	0	4	0	0	1	0	75	302	0	0	0	0
1:00 PM	0	0	32	4	0	0	27	0	0	1	0	1	0	1	0	0	66	300	0	0	0	0
1:15 PM	0	0	43	5	0	0	24	0	0	0	0	2	0	0	0	0	74	296	0	0	0	0
1:30 PM	0	0	45	4	0	2	32	1	0	1	0	2	0	0	0	0	87	308	0	0	0	0
1:45 PM	0	0	39	5	0	0	27	0	0	1	0	1	0	0	0	0	73	316	0	0	0	0
2:00 PM	0	0	22	5	0	1	26	1	0	6	0	1	0	0	0	0	62	307	0	0	0	0
2:15 PM	0	0	33	8	0	1	39	0	0	3	1	1	0	0	0	0	86	320	0	0	0	0
2:30 PM	0	0	40	2	1	0	44	0	0	6	0	1	0	1	0	0	95	325	0	0	0	0
2:45 PM	0	0	25	3	0	0	30	0	0	4	0	2	0	0	0	0	64	313	0	0	0	0
3:00 PM	0	0	32	2	0	2	36	0	0	2	0	1	0	0	0	0	75	340	0	0	0	0
3:15 PM	0	0	37	1	0	2	48	1	0	1	1	0	0	0	0	0	91	354	0	0	0	0

3:30 PM	0	0	27	1	0	1	47	0	0	6	0	1	0	0	0	0	83	355	0	0	0	0
3:45 PM	0	0	27	0	0	1	55	1	0	5	1	1	0	0	0	0	91	384	0	0	0	0
4:00 PM	0	0	40	2	0	2	41	0	0	2	0	1	0	1	0	0	89	401	0	0	0	0
4:15 PM	0	0	43	4	0	1	38	0	0	3	0	2	0	1	0	0	92	425	0	0	0	0
4:30 PM	0	0	48	2	0	0	58	1	0	3	0	0	0	0	0	0	112	444	0	0	0	0
4:45 PM	0	0	42	2	0	3	56	0	0	1	0	4	0	0	0	0	108	423	0	0	0	0
5:00 PM	0	0	37	2	0	2	67	1	0	3	0	1	0	0	0	0	113	406	0	0	0	0
5:15 PM	0	0	33	3	0	1	68	0	0	4	0	2	0	0	0	0	111	396	0	0	0	0
5:30 PM	0	0	37	1	0	1	49	0	0	2	0	0	0	1	0	0	91	356	0	0	0	0
5:45 PM	0	0	39	6	0	1	38	1	0	4	0	1	0	0	0	1	91	333	0	0	0	0
6:00 PM	0	0	36	4	0	1	50	1	0	9	0	0	0	2	0	0	103	303	0	0	0	0
6:15 PM	0	0	32	4	0	2	26	0	0	5	0	2	0	0	0	0	71		0	0	0	0
6:30 PM	0	0	28	2	0	1	32	2	0	1	0	2	0	0	0	0	68		0	0	0	0
6:45 PM	0	1	19	4	0	2	35	0	0	0	0	0	0	0	0	0	61		0	0	0	0
Count Total	0	5	1,686	108	1	47	1,636	17	0	141	4	56	0	15	1	4	3,721		0	0	0	0
Peak Hour	0	0	160	9	0	6	249	2	0	11	0	7	0	0	0	0	444		0	0	0	0



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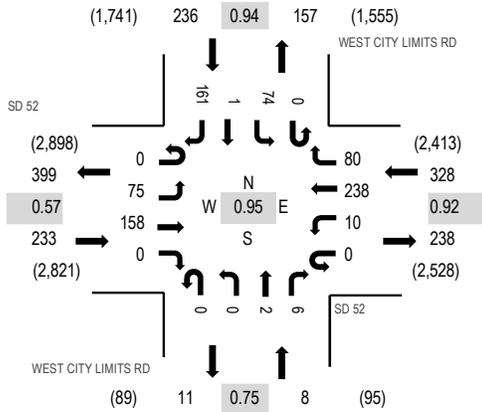
Location: 4 WEST CITY LIMITS RD & SD 52 AM

Date: Tuesday, September 20, 2022

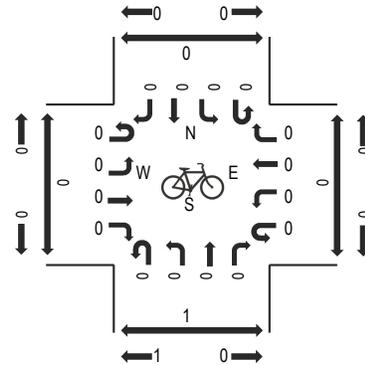
Peak Hour: 03:15 PM - 04:15 PM

Peak 15-Minutes: 03:30 PM - 03:45 PM

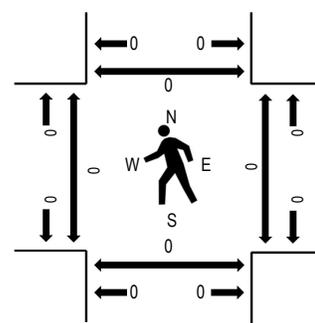
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



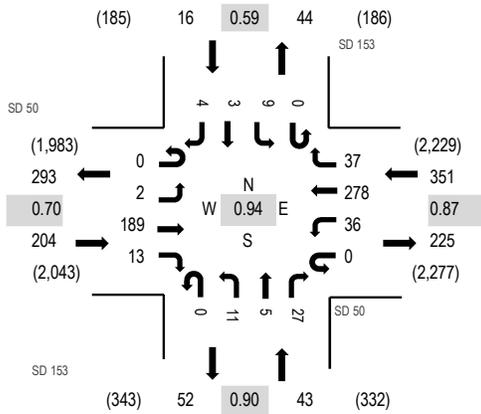
Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

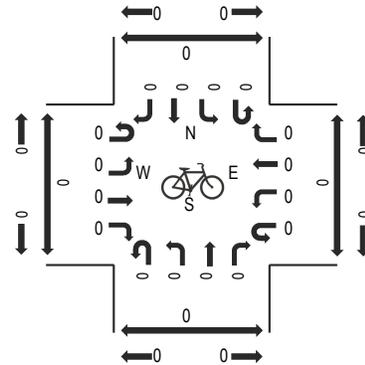
Interval Start Time	SD 52 Eastbound				SD 52 Westbound				WEST CITY LIMITS RD Northbound				WEST CITY LIMITS RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
	7:00 AM	0	19	30	0	0	0	10	7	0	0	0	2	0	13	0			13	94	620	0
7:15 AM	0	22	43	0	0	0	17	11	0	0	1	1	0	15	0	8	118	677	0	0	0	0
7:30 AM	0	39	57	0	0	0	18	14	0	0	1	2	0	17	0	11	159	705	0	0	0	0
7:45 AM	0	70	115	0	0	0	25	15	0	0	2	0	0	11	0	11	249	675	0	0	0	0
8:00 AM	0	26	47	0	0	1	24	14	0	0	3	1	0	16	0	19	151	540	0	0	0	0
8:15 AM	0	15	46	0	0	2	34	14	0	0	0	3	0	12	0	20	146	490	0	0	0	0
8:30 AM	0	23	41	0	0	4	20	16	0	0	0	3	0	11	2	9	129	467	0	0	0	0
8:45 AM	0	23	39	0	0	0	20	6	0	0	0	1	0	13	1	11	114	467	0	0	0	0
9:00 AM	0	17	32	0	0	2	19	5	0	0	1	1	0	10	0	14	101	455	0	0	0	0
9:15 AM	0	19	26	0	0	0	30	7	0	0	1	2	0	15	1	22	123	466	0	0	0	0
9:30 AM	0	19	38	0	0	0	29	15	0	0	0	1	0	14	3	10	129	449	0	0	0	0
9:45 AM	0	17	25	1	0	1	25	9	0	0	1	0	0	10	0	13	102	422	0	0	0	0
10:00 AM	0	14	26	0	0	0	30	12	0	0	1	2	0	8	0	19	112	434	0	0	0	0
10:15 AM	0	14	37	0	0	0	18	13	0	0	2	0	0	5	0	17	106	436	0	0	0	0
10:30 AM	0	16	33	0	0	1	23	13	0	0	0	1	0	4	0	11	102	471	0	0	0	0
10:45 AM	0	15	33	0	0	0	25	16	0	0	0	1	0	11	0	13	114	492	0	0	0	0
11:00 AM	0	16	26	0	0	2	31	10	0	0	1	1	0	9	0	18	114	536	0	0	0	0
11:15 AM	0	20	37	0	0	1	39	7	0	0	0	0	0	14	0	23	141	578	0	0	0	0
11:30 AM	0	15	33	0	0	0	39	4	0	1	1	0	0	7	1	22	123	568	0	0	0	0
11:45 AM	0	13	45	0	0	1	36	12	0	0	1	1	0	17	2	30	158	589	0	0	0	0
12:00 PM	0	13	31	0	0	4	43	16	0	0	0	1	0	15	0	33	156	604	0	0	0	0
12:15 PM	0	19	34	0	0	0	39	15	0	0	1	1	0	9	0	13	131	578	0	0	0	0
12:30 PM	0	21	37	0	0	1	38	6	0	0	1	1	0	12	0	27	144	588	0	0	0	0
12:45 PM	0	21	59	0	0	0	38	7	0	0	2	2	0	17	0	27	173	577	0	0	0	0
1:00 PM	0	20	29	0	0	3	33	9	0	0	0	1	0	11	0	24	130	544	0	0	0	0
1:15 PM	0	15	47	0	0	0	29	9	0	0	2	2	0	17	0	20	141	534	0	0	1	0
1:30 PM	0	17	23	0	0	0	37	21	0	0	0	2	0	14	0	19	133	518	0	0	0	0
1:45 PM	0	15	43	0	0	0	34	11	0	0	0	1	0	12	3	21	140	516	0	0	0	0
2:00 PM	0	14	33	0	0	0	22	10	0	0	0	0	0	13	2	26	120	516	0	0	0	0
2:15 PM	0	15	39	0	0	0	38	10	0	0	1	0	0	5	2	15	125	560	0	0	0	0
2:30 PM	0	19	39	0	0	0	27	11	0	0	1	0	0	9	0	25	131	632	0	0	0	0
2:45 PM	0	19	37	1	0	3	42	10	0	0	0	2	0	9	0	17	140	712	0	0	0	0
3:00 PM	0	14	48	0	0	2	38	24	0	0	2	0	0	11	0	25	164	779	0	0	0	0
3:15 PM	0	16	40	0	0	2	58	19	0	0	0	1	0	19	1	41	197	805	0	0	0	0

3:30 PM	0	16	41	0	0	3	65	21	0	0	1	2	0	21	0	41	211	785	0	0	0	0
3:45 PM	0	19	45	0	0	2	54	22	0	0	1	1	0	27	0	36	207	736	0	0	0	0
4:00 PM	0	24	32	0	0	3	61	18	0	0	0	2	0	7	0	43	190	697	0	0	0	0
4:15 PM	0	25	27	0	0	3	52	16	0	1	1	0	0	14	1	37	177	736	0	0	0	0
4:30 PM	0	17	33	0	0	1	50	11	0	0	0	1	0	13	0	36	162	755	0	0	0	0
4:45 PM	0	16	37	1	0	2	51	16	0	0	0	3	0	7	1	34	168	774	0	0	0	0
5:00 PM	0	19	50	0	0	4	70	24	0	0	0	2	0	14	0	46	229	775	0	0	0	0
5:15 PM	0	18	52	0	0	1	58	14	0	0	2	1	0	14	1	35	196	699	0	0	0	0
5:30 PM	0	13	46	0	0	1	65	9	0	0	0	0	0	3	0	44	181	644	0	0	0	0
5:45 PM	0	19	36	0	0	2	47	7	0	0	1	3	0	12	1	41	169	604	0	0	0	0
6:00 PM	0	20	37	1	0	5	45	8	0	1	0	1	0	10	1	24	153	570	0	0	0	0
6:15 PM	0	20	35	0	0	1	34	12	0	0	1	1	0	7	1	29	141		0	0	0	0
6:30 PM	0	19	35	0	0	2	36	12	0	0	0	3	0	13	0	21	141		0	0	0	0
6:45 PM	0	13	35	0	0	1	42	6	0	0	0	2	0	13	0	23	135		0	0	0	0
Count Total	0	928	1,889	4	0	61	1,758	594	0	3	33	59	0	580	24	1,137	7,070		0	0	1	0
Peak Hour	0	75	158	0	0	10	238	80	0	0	2	6	0	74	1	161	805		0	0	0	0

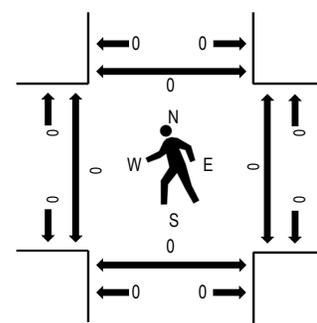
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	SD 50 Eastbound				SD 50 Westbound				SD 153 Northbound				SD 153 Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	1	40	1	0	1	19	1	0	3	1	2	0	4	1	0	74	472	0	0	0	0
7:15 AM	0	0	64	0	0	2	33	3	0	1	0	4	0	7	1	0	115	504	0	0	0	0
7:30 AM	0	0	71	2	0	2	34	1	0	3	0	7	0	16	1	0	137	488	0	0	0	0
7:45 AM	0	0	104	3	0	1	21	2	0	0	0	6	0	7	2	0	146	439	0	0	0	0
8:00 AM	0	0	53	1	0	4	28	0	0	2	0	12	0	5	1	0	106	376	0	0	0	0
8:15 AM	0	2	42	4	0	6	36	1	0	1	1	3	0	2	1	0	99	332	0	0	0	0
8:30 AM	0	0	37	1	0	2	38	0	0	2	0	3	0	3	2	0	88	334	0	0	0	0
8:45 AM	0	2	28	1	0	1	35	3	0	1	1	7	0	3	1	0	83	337	0	0	0	0
9:00 AM	0	1	31	0	0	2	16	1	0	3	1	2	0	4	1	0	62	312	0	0	0	0
9:15 AM	0	1	43	2	0	4	38	2	0	2	1	3	0	4	0	1	101	342	0	0	0	0
9:30 AM	0	0	46	2	0	4	30	1	0	2	2	2	0	2	0	0	91	320	0	0	0	0
9:45 AM	0	0	29	1	0	4	17	1	0	0	0	4	0	1	1	0	58	316	0	0	0	0
10:00 AM	0	0	41	3	0	5	30	0	0	3	1	4	0	3	1	1	92	322	0	0	0	0
10:15 AM	0	0	32	0	0	3	30	2	0	1	1	6	0	4	0	0	79	300	0	0	0	0
10:30 AM	0	0	34	4	0	3	33	3	0	0	2	4	0	1	1	2	87	305	0	0	0	0
10:45 AM	0	0	28	1	0	2	23	2	0	2	0	5	0	1	0	0	64	291	0	0	0	0
11:00 AM	0	0	30	1	0	4	27	1	0	1	1	3	0	1	1	0	70	336	0	0	0	0
11:15 AM	0	1	32	2	0	1	36	0	0	1	0	5	0	5	0	1	84	357	0	0	0	0
11:30 AM	0	1	38	1	0	8	20	1	0	0	0	3	0	0	1	0	73	336	0	0	0	0
11:45 AM	0	1	44	1	0	7	46	4	0	1	0	3	0	2	0	0	109	341	0	0	0	0
12:00 PM	0	1	30	2	0	5	37	4	0	1	0	8	0	3	0	0	91	334	0	0	0	0
12:15 PM	0	0	25	0	0	8	24	0	0	2	0	1	0	2	1	0	63	328	0	0	0	0
12:30 PM	0	0	41	0	0	4	26	2	0	1	1	3	0	0	0	0	78	361	0	0	0	0
12:45 PM	0	0	40	5	0	3	42	2	0	0	2	5	0	2	1	0	102	378	0	0	0	0
1:00 PM	0	0	38	0	0	7	28	3	0	2	0	7	0	0	0	0	85	367	0	0	0	0
1:15 PM	0	1	50	0	0	4	30	2	0	1	1	4	0	2	1	0	96	361	0	0	0	0
1:30 PM	0	0	44	1	0	3	32	1	0	4	1	5	0	4	0	0	95	369	0	0	0	0
1:45 PM	0	0	43	0	0	2	32	3	0	2	1	5	0	2	1	0	91	369	0	0	0	0
2:00 PM	0	0	30	1	0	10	33	1	0	0	0	1	0	2	1	0	79	346	0	0	0	0
2:15 PM	0	0	39	0	0	4	50	5	0	2	0	0	0	2	2	0	104	371	0	0	0	0
2:30 PM	0	1	35	2	0	4	38	1	0	6	0	5	0	0	2	1	95	382	0	0	0	0
2:45 PM	0	0	27	1	0	4	31	0	0	0	0	3	0	2	0	0	68	408	0	0	0	0
3:00 PM	0	0	40	2	0	5	43	2	0	3	2	4	0	2	0	1	104	461	0	0	0	0
3:15 PM	0	0	39	1	0	7	52	4	0	1	1	4	0	4	2	0	115	461	0	0	0	0

3:30 PM	0	0	33	1	0	8	59	2	0	3	2	7	0	3	2	1	121	460	0	0	0	0
3:45 PM	0	0	34	2	0	2	66	4	0	3	0	6	0	2	1	1	121	501	0	0	0	0
4:00 PM	0	0	36	2	0	3	47	7	0	2	2	4	0	0	1	0	104	532	0	0	0	0
4:15 PM	0	1	44	2	0	10	47	1	0	1	1	1	0	4	1	1	114	592	0	0	0	0
4:30 PM	0	0	57	3	0	10	65	10	0	1	1	8	0	6	0	1	162	614	0	0	0	0
4:45 PM	0	0	51	7	0	6	67	7	0	4	0	5	0	2	0	3	152	572	0	0	0	0
5:00 PM	0	1	47	1	0	10	78	13	0	3	2	7	0	1	1	0	164	543	0	0	0	0
5:15 PM	0	1	34	2	0	10	68	7	0	3	2	7	0	0	2	0	136	496	0	0	0	0
5:30 PM	0	0	39	3	0	6	56	6	0	0	1	6	0	2	1	0	120	450	0	0	0	0
5:45 PM	0	0	39	9	0	6	56	3	0	4	2	3	0	0	1	0	123	424	0	0	0	0
6:00 PM	0	1	45	2	0	5	51	2	0	5	1	3	0	0	1	1	117	388	0	0	0	0
6:15 PM	0	0	36	2	0	2	37	3	0	3	0	4	0	3	0	0	90		0	0	0	0
6:30 PM	0	1	27	1	0	4	46	6	0	1	0	4	0	1	0	3	94		0	0	0	0
6:45 PM	0	1	29	2	0	2	46	2	0	1	0	1	0	3	0	0	87		0	0	0	0
Count Total	0	19	1,939	85	0	220	1,877	132	0	88	35	209	0	129	38	18	4,789		0	0	0	0
Peak Hour	0	2	189	13	0	36	278	37	0	11	5	27	0	9	3	4	614		0	0	0	0



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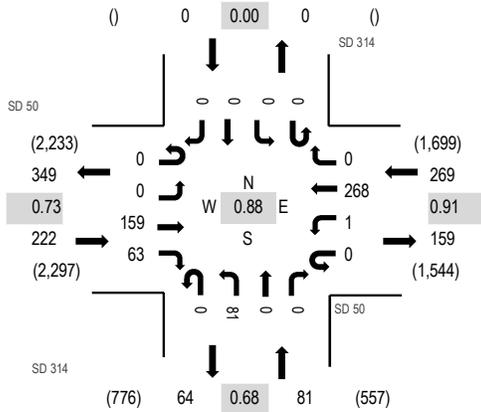
Location: 6 SD 314 & SD 50 AM

Date: Tuesday, September 20, 2022

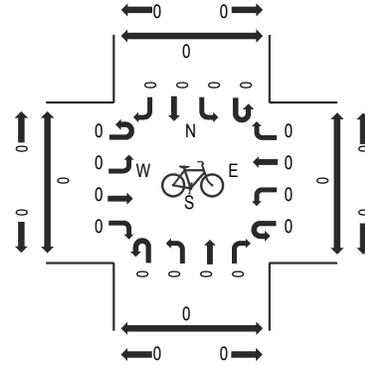
Peak Hour: 04:30 PM - 05:30 PM

Peak 15-Minutes: 05:00 PM - 05:15 PM

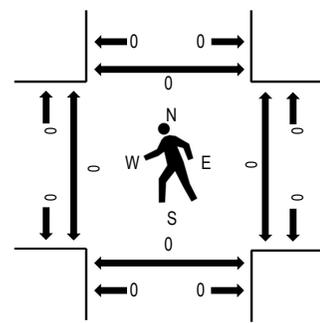
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	SD 50 Eastbound				SD 50 Westbound				SD 314 Northbound				SD 314 Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	30	13	0	0	13	0	0	12	0	0	0	0	0	0	68	451	0	0	0	0
7:15 AM	0	0	37	35	0	1	26	0	0	12	0	1	0	0	0	0	112	482	0	0	0	0
7:30 AM	0	0	49	44	0	0	24	0	0	8	0	2	0	0	0	0	127	463	0	0	0	0
7:45 AM	0	0	72	49	0	0	13	0	0	10	0	0	0	0	0	0	144	416	0	0	0	0
8:00 AM	0	0	37	30	0	0	25	0	0	7	0	0	0	0	0	0	99	353	0	0	0	0
8:15 AM	0	0	27	23	0	0	33	0	0	10	0	0	0	0	0	0	93	313	0	0	0	0
8:30 AM	0	0	26	15	0	0	23	0	0	16	0	0	0	0	0	0	80	319	0	0	0	0
8:45 AM	0	0	18	23	0	0	28	0	0	12	0	0	0	0	0	0	81	320	0	0	0	0
9:00 AM	0	0	25	16	0	0	12	0	0	6	0	0	0	0	0	0	59	303	0	0	0	0
9:15 AM	0	0	42	10	0	0	40	0	0	7	0	0	0	0	0	0	99	326	0	0	0	0
9:30 AM	0	0	26	22	0	0	24	0	0	9	0	0	0	0	0	0	81	307	0	0	0	0
9:45 AM	0	0	30	10	0	1	18	0	0	5	0	0	0	0	0	0	64	301	0	0	0	0
10:00 AM	0	0	34	13	0	0	20	0	0	15	0	0	0	0	0	0	82	301	0	0	0	0
10:15 AM	0	0	27	14	0	0	24	0	0	15	0	0	0	0	0	0	80	290	0	0	0	0
10:30 AM	0	0	26	11	0	1	27	0	0	10	0	0	0	0	0	0	75	284	0	0	0	0
10:45 AM	0	0	26	11	0	0	17	0	0	10	0	0	0	0	0	0	64	281	0	0	0	0
11:00 AM	0	0	29	8	0	1	28	0	0	5	0	0	0	0	0	0	71	325	0	0	0	0
11:15 AM	0	0	29	11	0	0	26	0	0	8	0	0	0	0	0	0	74	340	0	0	0	0
11:30 AM	0	0	29	12	0	0	27	0	0	4	0	0	0	0	0	0	72	332	0	0	0	0
11:45 AM	0	0	36	14	0	0	47	0	0	11	0	0	0	0	0	0	108	335	0	0	0	0
12:00 PM	0	0	33	9	0	0	30	0	0	14	0	0	0	0	0	0	86	317	0	0	0	0
12:15 PM	0	0	18	13	0	1	29	0	0	5	0	0	0	0	0	0	66	316	0	0	0	0
12:30 PM	0	0	28	17	0	0	23	0	0	7	0	0	0	0	0	0	75	341	0	0	0	0
12:45 PM	0	0	34	10	0	0	37	0	0	9	0	0	0	0	0	0	90	363	0	0	0	0
1:00 PM	0	0	32	10	0	1	33	0	0	8	0	1	0	0	0	0	85	359	0	0	0	0
1:15 PM	0	0	39	20	0	0	22	0	0	10	0	0	0	0	0	0	91	355	0	0	0	0
1:30 PM	0	0	40	16	0	3	26	0	0	12	0	0	0	0	0	0	97	362	0	0	0	0
1:45 PM	0	0	35	16	0	0	25	0	0	10	0	0	0	0	0	0	86	350	0	0	0	0
2:00 PM	0	0	22	9	0	1	43	0	0	4	0	2	0	0	0	0	81	333	0	0	0	0
2:15 PM	0	0	27	14	0	0	46	0	0	11	0	0	0	0	0	0	98	351	0	0	0	0
2:30 PM	0	0	26	16	0	0	29	0	0	14	0	0	0	0	0	0	85	362	0	0	0	0
2:45 PM	0	0	19	12	0	1	29	0	0	7	0	1	0	0	0	0	69	390	0	0	0	0
3:00 PM	0	0	34	13	0	0	41	0	0	11	0	0	0	0	0	0	99	434	0	0	0	0
3:15 PM	0	0	28	19	0	0	42	0	0	20	0	0	0	0	0	0	109	431	0	0	0	0

3:30 PM	0	0	31	12	0	0	59	0	0	11	0	0	0	0	0	113	437	0	0	0	0
3:45 PM	0	0	28	14	0	0	49	0	0	22	0	0	0	0	0	113	480	0	0	0	0
4:00 PM	0	0	25	15	0	0	40	0	0	16	0	0	0	0	0	96	499	0	0	0	0
4:15 PM	0	0	40	12	0	1	48	0	0	13	0	1	0	0	0	115	566	0	0	0	0
4:30 PM	0	0	49	21	0	0	70	0	0	16	0	0	0	0	0	156	572	0	0	0	0
4:45 PM	0	0	38	17	0	0	64	0	0	13	0	0	0	0	0	132	539	0	0	0	0
5:00 PM	0	0	41	17	0	0	74	0	0	31	0	0	0	0	0	163	515	0	0	0	0
5:15 PM	0	0	31	8	0	1	60	0	0	21	0	0	0	0	0	121	456	0	0	0	0
5:30 PM	0	0	39	11	0	0	54	0	0	18	0	1	0	0	0	123	427	0	0	0	0
5:45 PM	0	0	33	11	0	1	52	0	0	11	0	0	0	0	0	108	387	0	0	0	0
6:00 PM	0	0	32	15	0	0	44	0	0	13	0	0	0	0	0	104	363	0	0	0	0
6:15 PM	0	0	28	16	0	0	37	0	0	11	0	0	0	0	0	92		0	0	0	0
6:30 PM	0	0	23	9	0	0	39	0	0	12	0	0	0	0	0	83		0	0	0	0
6:45 PM	0	0	27	6	0	0	45	0	0	6	0	0	0	0	0	84		0	0	0	0
Count Total	0	0	1,535	762	0	14	1,685	0	0	548	0	9	0	0	0	4,553		0	0	0	0
Peak Hour	0	0	159	63	0	1	268	0	0	81	0	0	0	0	0	572		0	0	0	0



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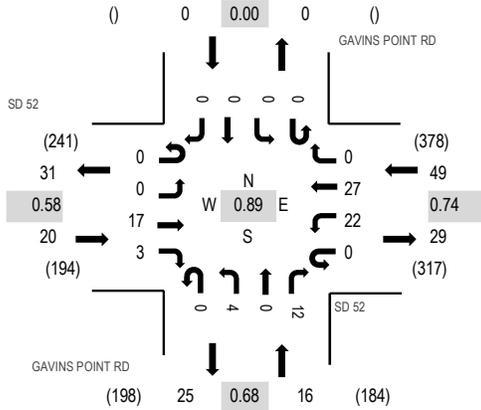
Location: 7 GAVINS POINT RD & SD 52 AM

Date: Tuesday, September 20, 2022

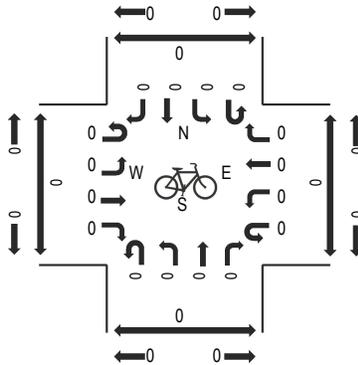
Peak Hour: 05:30 PM - 06:30 PM

Peak 15-Minutes: 05:45 PM - 06:00 PM

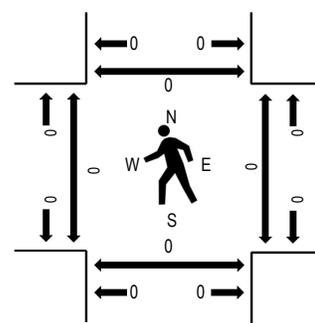
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	SD 52 Eastbound				SD 52 Westbound				GAVINS POINT RD Northbound				GAVINS POINT RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
	7:00 AM	0	0	7	0	0	6	1	0	0	3	0	1	0	0	0			0	18	81	0
7:15 AM	0	0	4	2	0	6	3	0	0	4	0	4	0	0	0	0	23	77	0	0	0	0
7:30 AM	0	0	12	0	0	1	3	0	0	1	0	8	0	0	0	0	25	69	0	0	0	0
7:45 AM	0	0	3	0	0	2	7	0	0	0	0	3	0	0	0	0	15	63	0	0	0	0
8:00 AM	0	0	2	1	0	4	2	0	0	0	0	5	0	0	0	0	14	72	0	0	0	0
8:15 AM	0	0	2	0	0	4	3	0	0	1	0	5	0	0	0	0	15	69	0	0	0	0
8:30 AM	0	0	3	1	0	4	3	0	0	2	0	6	0	0	0	0	19	62	0	0	0	0
8:45 AM	0	0	5	0	0	3	5	0	0	2	0	9	0	0	0	0	24	56	0	0	0	0
9:00 AM	0	0	2	1	0	4	0	0	0	0	0	4	0	0	0	0	11	40	0	0	0	0
9:15 AM	0	0	3	0	0	0	4	0	0	0	0	1	0	0	0	0	8	40	0	0	0	0
9:30 AM	0	0	1	1	0	3	5	0	0	1	0	2	0	0	0	0	13	43	0	1	0	0
9:45 AM	0	0	3	0	0	1	2	0	0	0	0	2	0	0	0	0	8	38	0	0	0	0
10:00 AM	0	0	2	0	0	4	2	0	0	0	0	3	0	0	0	0	11	40	0	0	0	0
10:15 AM	0	0	1	1	0	0	3	0	0	1	0	5	0	0	0	0	11	40	0	0	0	0
10:30 AM	0	0	3	0	0	1	2	0	0	1	0	1	0	0	0	0	8	41	0	0	0	0
10:45 AM	0	0	4	0	0	4	1	0	0	0	0	1	0	0	0	0	10	42	0	0	0	0
11:00 AM	0	0	0	0	0	3	4	0	0	0	0	4	0	0	0	0	11	43	0	0	0	0
11:15 AM	0	0	2	0	0	4	3	0	0	2	0	1	0	0	0	0	12	43	0	0	0	0
11:30 AM	0	0	2	0	0	2	3	0	0	1	0	1	0	0	0	0	9	41	0	0	0	0
11:45 AM	0	0	1	0	0	6	3	0	0	0	0	1	0	0	0	0	11	43	0	0	0	0
12:00 PM	0	0	2	0	0	1	5	0	0	0	0	3	0	0	0	0	11	41	0	0	0	0
12:15 PM	0	0	4	0	0	0	5	0	0	0	0	1	0	0	0	0	10	39	0	0	0	0
12:30 PM	0	0	2	0	0	0	6	0	0	0	0	3	0	0	0	0	11	48	0	0	0	0
12:45 PM	0	0	3	1	0	1	1	0	0	1	0	2	0	0	0	0	9	52	0	0	0	0
1:00 PM	0	0	3	1	0	2	2	0	0	0	0	1	0	0	0	0	9	64	0	0	0	0
1:15 PM	0	0	6	3	0	7	2	0	0	0	0	1	0	0	0	0	19	72	0	0	0	0
1:30 PM	0	0	4	1	0	3	4	0	0	0	0	3	0	0	0	0	15	79	0	0	0	0
1:45 PM	0	0	5	1	0	4	4	0	0	1	0	6	0	0	0	0	21	82	0	0	0	0
2:00 PM	0	0	6	1	0	3	4	0	0	0	0	3	0	0	0	0	17	83	0	0	0	0
2:15 PM	0	0	7	1	0	3	11	0	0	0	0	4	0	0	0	0	26	82	0	0	0	0
2:30 PM	0	0	4	1	0	4	4	0	0	1	0	4	0	0	0	0	18	71	0	0	0	0
2:45 PM	0	0	5	0	0	4	8	0	0	0	0	5	0	0	0	0	22	78	0	0	0	0
3:00 PM	0	0	4	0	0	8	3	0	0	1	0	0	0	0	0	0	16	73	0	0	0	0
3:15 PM	0	0	2	0	0	7	3	0	0	1	0	2	0	0	0	0	15	76	0	0	0	0

3:30 PM	0	0	1	2	0	6	11	0	0	2	0	3	0	0	0	0	25	78	0	0	0	0
3:45 PM	0	0	3	0	0	4	4	0	0	0	0	6	0	0	0	0	17	71	0	0	0	0
4:00 PM	0	0	1	0	0	4	5	0	0	1	0	8	0	0	0	0	19	74	0	0	0	0
4:15 PM	0	0	5	1	0	3	5	0	0	0	0	3	0	0	0	0	17	66	0	0	0	0
4:30 PM	0	0	0	1	0	6	7	0	0	1	0	3	0	0	0	0	18	65	0	0	0	0
4:45 PM	0	0	5	0	0	6	9	0	0	0	0	0	0	0	0	0	20	68	0	0	0	0
5:00 PM	0	0	4	0	0	2	3	0	0	0	0	2	0	0	0	0	11	72	0	0	0	0
5:15 PM	0	0	3	2	0	5	6	0	0	0	0	0	0	0	0	0	16	79	0	0	0	0
5:30 PM	0	0	5	0	0	8	6	0	0	0	0	2	0	0	0	0	21	85	0	0	0	0
5:45 PM	0	0	3	1	0	5	11	0	0	2	0	2	0	0	0	0	24	84	0	0	0	0
6:00 PM	0	0	6	1	0	4	4	0	0	2	0	1	0	0	0	0	18	73	0	0	0	0
6:15 PM	0	0	3	1	0	5	6	0	0	0	0	7	0	0	0	0	22		0	0	0	0
6:30 PM	0	0	7	0	0	1	5	0	0	1	0	6	0	0	0	0	20		0	0	0	0
6:45 PM	0	0	2	1	0	3	4	0	0	1	0	2	0	0	0	0	13		0	0	0	0
Count Total	0	0	167	27	0	171	207	0	0	34	0	150	0	0	0	0	756		0	1	0	0
Peak Hour	0	0	17	3	0	22	27	0	0	4	0	12	0	0	0	0	85		0	0	0	0

Intersection												
Int Delay, s/veh	1.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	0	292	6	9	116	6	6	0	29	35	5	0
Future Vol, veh/h	0	292	6	9	116	6	6	0	29	35	5	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									
Storage Length	100	-	-	115	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	5	17	0	19	17	0	0	0	0	0	0
Mvmt Flow	0	417	9	9	116	6	6	0	29	35	5	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	122	0	0	426	0	0	562	562	422	573	563	119
Stage 1	-	-	-	-	-	-	422	422	-	137	137	-
Stage 2	-	-	-	-	-	-	140	140	-	436	426	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1478	-	-	1144	-	-	441	439	636	433	438	938
Stage 1	-	-	-	-	-	-	613	592	-	871	787	-
Stage 2	-	-	-	-	-	-	868	785	-	603	589	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1478	-	-	1144	-	-	434	435	636	411	434	938
Mov Cap-2 Maneuver	-	-	-	-	-	-	434	435	-	411	434	-
Stage 1	-	-	-	-	-	-	613	592	-	871	781	-
Stage 2	-	-	-	-	-	-	856	779	-	576	589	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.6			11.5			14.6		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	589	1478	-	-	1144	-	-	414
HCM Lane V/C Ratio	0.059	-	-	-	0.008	-	-	0.097
HCM Control Delay (s)	11.5	0	-	-	8.2	-	-	14.6
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.3

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	13	86	2	14	45	11	1	0	5	43	1	2
Future Vol, veh/h	13	86	2	14	45	11	1	0	5	43	1	2
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									
Storage Length	125	-	-	125	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	88	88	88	50	50	50	72	72	72
Heavy Vehicles, %	0	1	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	16	109	3	16	51	13	2	0	10	60	1	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	64	0	0	112	0	0	201	239	56	177	234	32
Stage 1	-	-	-	-	-	-	143	143	-	90	90	-
Stage 2	-	-	-	-	-	-	58	96	-	87	144	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1551	-	-	1490	-	-	745	666	1005	774	670	1041
Stage 1	-	-	-	-	-	-	851	782	-	913	824	-
Stage 2	-	-	-	-	-	-	953	819	-	917	782	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1551	-	-	1490	-	-	730	652	1005	754	656	1041
Mov Cap-2 Maneuver	-	-	-	-	-	-	730	652	-	754	656	-
Stage 1	-	-	-	-	-	-	842	774	-	904	815	-
Stage 2	-	-	-	-	-	-	939	810	-	899	774	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.9			1.5			8.9			10.2		
HCM LOS							A			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	946	1551	-	-	1490	-	-	761
HCM Lane V/C Ratio	0.013	0.011	-	-	0.011	-	-	0.084
HCM Control Delay (s)	8.9	7.3	-	-	7.4	-	-	10.2
HCM Lane LOS	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.3

Intersection												
Int Delay, s/veh	5.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	150	265	0	3	101	57	0	6	6	56	0	61
Future Vol, veh/h	150	265	0	3	101	57	0	6	6	56	0	61
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	-	-	Yield
Storage Length	100	-	-	100	-	-	-	-	-	-	-	125
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	56	56	56	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	1	2	0	5	16	0	0	0	11	0	5
Mvmt Flow	268	473	0	3	101	57	0	6	6	56	0	61

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	158	0	0	473	0	0	1145	1173	473	1151	1145	130
Stage 1	-	-	-	-	-	-	1009	1009	-	136	136	-
Stage 2	-	-	-	-	-	-	136	164	-	1015	1009	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.21	6.5	6.25
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.21	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.21	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.599	4	3.345
Pot Cap-1 Maneuver	1434	-	-	1099	-	-	178	194	595	168	201	912
Stage 1	-	-	-	-	-	-	292	320	-	846	788	-
Stage 2	-	-	-	-	-	-	872	766	-	276	320	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1434	-	-	1099	-	-	142	157	595	138	163	912
Mov Cap-2 Maneuver	-	-	-	-	-	-	142	157	-	138	163	-
Stage 1	-	-	-	-	-	-	237	260	-	688	786	-
Stage 2	-	-	-	-	-	-	811	764	-	217	260	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	2.9		0.2		20.3		27.7	
HCM LOS					C		D	

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	248	1434	-	-	1099	-	-	138	912
HCM Lane V/C Ratio	0.048	0.187	-	-	0.003	-	-	0.406	0.067
HCM Control Delay (s)	20.3	8.1	-	-	8.3	-	-	47.9	9.2
HCM Lane LOS		C	A	-	-	A	-	E	A
HCM 95th %tile Q(veh)	0.2	0.7	-	-	0	-	-	1.8	0.2

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	0	222	7	2	111	1	16	0	8	1	0	0
Future Vol, veh/h	0	222	7	2	111	1	16	0	8	1	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									
Storage Length	115	-	-	120	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	75	75	75	86	86	86	25	25	25
Heavy Vehicles, %	0	6	0	0	19	0	0	0	13	0	0	0
Mvmt Flow	0	264	8	3	148	1	19	0	9	4	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	149	0	0	272	0	0	423	423	268	428	427	149
Stage 1	-	-	-	-	-	-	268	268	-	155	155	-
Stage 2	-	-	-	-	-	-	155	155	-	273	272	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.33	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.417	3.5	4	3.3
Pot Cap-1 Maneuver	1445	-	-	1303	-	-	545	526	745	541	523	903
Stage 1	-	-	-	-	-	-	742	691	-	852	773	-
Stage 2	-	-	-	-	-	-	852	773	-	737	688	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1445	-	-	1303	-	-	544	525	745	533	522	903
Mov Cap-2 Maneuver	-	-	-	-	-	-	544	525	-	533	522	-
Stage 1	-	-	-	-	-	-	742	691	-	852	771	-
Stage 2	-	-	-	-	-	-	850	771	-	728	688	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.1			11.3			11.8		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	598	1445	-	-	1303	-	-	533
HCM Lane V/C Ratio	0.047	-	-	-	0.002	-	-	0.008
HCM Control Delay (s)	11.3	0	-	-	7.8	-	-	11.8
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection						
Int Delay, s/veh	1.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑		↘	↑	↘	
Traffic Vol, veh/h	195	0	1	88	37	3
Future Vol, veh/h	195	0	1	88	37	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	120	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	73	73	82	82	77	77
Heavy Vehicles, %	6	0	0	2	19	0
Mvmt Flow	267	0	1	107	48	4

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	-	267	0	376
Stage 1	-	-	-	-	267
Stage 2	-	-	-	-	109
Critical Hdwy	-	-	4.1	-	6.59
Critical Hdwy Stg 1	-	-	-	-	5.59
Critical Hdwy Stg 2	-	-	-	-	5.59
Follow-up Hdwy	-	-	2.2	-	3.671
Pot Cap-1 Maneuver	-	0	1308	-	593
Stage 1	-	0	-	-	740
Stage 2	-	0	-	-	875
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1308	-	592
Mov Cap-2 Maneuver	-	-	-	-	592
Stage 1	-	-	-	-	740
Stage 2	-	-	-	-	874

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	11.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	WBL	WBT
Capacity (veh/h)	603	-	1308	-
HCM Lane V/C Ratio	0.086	-	0.001	-
HCM Control Delay (s)	11.5	-	7.8	-
HCM Lane LOS	B	-	A	-
HCM 95th %tile Q(veh)	0.3	-	0	-

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕			↕	
Traffic Vol, veh/h	0	183	7	9	74	0	4	0	7	2	0	1
Future Vol, veh/h	0	183	7	9	74	0	4	0	7	2	0	1
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									
Storage Length	50	-	-	125	-	-	90	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	83	83	83	69	69	69	75	75	75
Heavy Vehicles, %	0	0	14	11	4	0	25	0	0	0	0	0
Mvmt Flow	0	229	9	11	89	0	6	0	10	3	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	89	0	0	238	0	0	301	345	119	226	349	45
Stage 1	-	-	-	-	-	-	234	234	-	111	111	-
Stage 2	-	-	-	-	-	-	67	111	-	115	238	-
Critical Hdwy	4.1	-	-	4.32	-	-	8	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	7	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.31	-	-	3.75	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1519	-	-	1263	-	-	573	581	917	715	578	1022
Stage 1	-	-	-	-	-	-	686	715	-	888	807	-
Stage 2	-	-	-	-	-	-	872	807	-	883	712	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1519	-	-	1263	-	-	568	576	917	702	573	1022
Mov Cap-2 Maneuver	-	-	-	-	-	-	568	576	-	702	573	-
Stage 1	-	-	-	-	-	-	686	715	-	888	800	-
Stage 2	-	-	-	-	-	-	863	800	-	873	712	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.9	9.9	9.6
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	568	917	1519	-	-	1263	-	-	784
HCM Lane V/C Ratio	0.01	0.011	-	-	-	0.009	-	-	0.005
HCM Control Delay (s)	11.4	9	0	-	-	7.9	-	-	9.6
HCM Lane LOS	B	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	0	-	-	0	-	-	0

Intersection												
Int Delay, s/veh	4.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	150	12	36	77	4	9	2	123	4	1	3
Future Vol, veh/h	7	150	12	36	77	4	9	2	123	4	1	3
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									
Storage Length	100	-	-	100	-	-	60	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	94	94	94	70	70	70	50	50	50
Heavy Vehicles, %	0	1	8	3	1	0	0	0	0	25	0	0
Mvmt Flow	9	192	15	38	82	4	13	3	176	8	2	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	86	0	0	207	0	0	336	380	104	276	385	43
Stage 1	-	-	-	-	-	-	218	218	-	160	160	-
Stage 2	-	-	-	-	-	-	118	162	-	116	225	-
Critical Hdwy	4.1	-	-	4.16	-	-	7.5	6.5	6.9	8	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	7	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	7	5.5	-
Follow-up Hdwy	2.2	-	-	2.23	-	-	3.5	4	3.3	3.75	4	3.3
Pot Cap-1 Maneuver	1523	-	-	1354	-	-	599	556	937	598	552	1025
Stage 1	-	-	-	-	-	-	770	726	-	764	769	-
Stage 2	-	-	-	-	-	-	880	768	-	813	721	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1523	-	-	1354	-	-	579	537	937	471	533	1025
Mov Cap-2 Maneuver	-	-	-	-	-	-	579	537	-	471	533	-
Stage 1	-	-	-	-	-	-	765	722	-	759	747	-
Stage 2	-	-	-	-	-	-	848	746	-	654	717	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	2.4	9.8	11.1
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	571	937	1523	-	-	1354	-	-	602
HCM Lane V/C Ratio	0.028	0.188	0.006	-	-	0.028	-	-	0.027
HCM Control Delay (s)	11.5	9.7	7.4	-	-	7.7	-	-	11.1
HCM Lane LOS	B	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.7	0	-	-	0.1	-	-	0.1

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕↗		↵	↕↗			↕↗			↕↗	
Traffic Vol, veh/h	0	371	3	6	156	3	4	0	24	2	0	1
Future Vol, veh/h	0	371	3	6	156	3	4	0	24	2	0	1
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									
Storage Length	50	-	-	110	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	60	60	60	78	78	78	58	58	58	38	38	38
Heavy Vehicles, %	0	1	0	0	4	0	25	0	0	0	0	0
Mvmt Flow	0	618	5	8	200	4	7	0	41	5	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	204	0	0	623	0	0	737	841	312	527	841	102
Stage 1	-	-	-	-	-	-	621	621	-	218	218	-
Stage 2	-	-	-	-	-	-	116	220	-	309	623	-
Critical Hdwy	4.1	-	-	4.1	-	-	8	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	7	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.75	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1380	-	-	968	-	-	267	303	690	438	303	940
Stage 1	-	-	-	-	-	-	390	482	-	770	726	-
Stage 2	-	-	-	-	-	-	813	725	-	682	481	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1380	-	-	968	-	-	265	301	690	409	301	940
Mov Cap-2 Maneuver	-	-	-	-	-	-	265	301	-	409	301	-
Stage 1	-	-	-	-	-	-	390	482	-	770	720	-
Stage 2	-	-	-	-	-	-	804	719	-	641	481	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.3			12			12.3		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	561	1380	-	-	968	-	-	504
HCM Lane V/C Ratio	0.086	-	-	-	0.008	-	-	0.016
HCM Control Delay (s)	12	0	-	-	8.7	-	-	12.3
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0

Intersection						
Int Delay, s/veh	3.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	19	1	11	15	2	21
Future Vol, veh/h	19	1	11	15	2	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	42	42	72	72	64	64
Heavy Vehicles, %	0	0	0	0	0	5
Mvmt Flow	45	2	15	21	3	33

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	47	0	97 46
Stage 1	-	-	-	-	46 -
Stage 2	-	-	-	-	51 -
Critical Hdwy	-	-	4.1	-	6.4 6.25
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	-	-	2.2	-	3.5 3.345
Pot Cap-1 Maneuver	-	-	1573	-	907 1015
Stage 1	-	-	-	-	982 -
Stage 2	-	-	-	-	977 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1573	-	898 1015
Mov Cap-2 Maneuver	-	-	-	-	854 -
Stage 1	-	-	-	-	982 -
Stage 2	-	-	-	-	967 -

Approach	EB	WB	NB
HCM Control Delay, s	0	3.1	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	999	-	-	1573	-
HCM Lane V/C Ratio	0.036	-	-	0.01	-
HCM Control Delay (s)	8.7	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↖	↖	
Traffic Vol, veh/h	0	158	0	40	1	0
Future Vol, veh/h	0	158	0	40	1	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	-	0	-	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	73	73	77	77	82	82
Heavy Vehicles, %	0	3	0	20	0	0
Mvmt Flow	0	216	0	52	1	0

Major/Minor	Major1	Minor2
Conflicting Flow All	-	0 52 -
Stage 1	-	- 0 -
Stage 2	-	- 52 -
Critical Hdwy	-	- 6.5 -
Critical Hdwy Stg 1	-	- - -
Critical Hdwy Stg 2	-	- 5.5 -
Follow-up Hdwy	-	- 4 -
Pot Cap-1 Maneuver	0	- 843 0
Stage 1	0	- - 0
Stage 2	0	- 856 0
Platoon blocked, %		-
Mov Cap-1 Maneuver	-	- 0 -
Mov Cap-2 Maneuver	-	- 0 -
Stage 1	-	- 0 -
Stage 2	-	- 0 -

Approach	NB	SB
HCM Control Delay, s	0	
HCM LOS		-

Minor Lane/Major Mvmt	NBT	SBLn1
Capacity (veh/h)	-	-
HCM Lane V/C Ratio	-	-
HCM Control Delay (s)	-	-
HCM Lane LOS	-	-
HCM 95th %tile Q(veh)	-	-

Intersection												
Int Delay, s/veh	1.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	0	292	6	9	116	6	6	0	29	35	5	0
Future Vol, veh/h	0	292	6	9	116	6	6	0	29	35	5	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									
Storage Length	100	-	-	115	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	5	17	0	19	17	0	0	0	0	0	0
Mvmt Flow	0	417	9	9	116	6	6	0	29	35	5	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	122	0	0	426	0	0	562	562	422	573	563	119
Stage 1	-	-	-	-	-	-	422	422	-	137	137	-
Stage 2	-	-	-	-	-	-	140	140	-	436	426	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1478	-	-	1144	-	-	441	439	636	433	438	938
Stage 1	-	-	-	-	-	-	613	592	-	871	787	-
Stage 2	-	-	-	-	-	-	868	785	-	603	589	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1478	-	-	1144	-	-	434	435	636	411	434	938
Mov Cap-2 Maneuver	-	-	-	-	-	-	434	435	-	411	434	-
Stage 1	-	-	-	-	-	-	613	592	-	871	781	-
Stage 2	-	-	-	-	-	-	856	779	-	576	589	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.6			11.5			14.6		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	589	1478	-	-	1144	-	-	414
HCM Lane V/C Ratio	0.059	-	-	-	0.008	-	-	0.097
HCM Control Delay (s)	11.5	0	-	-	8.2	-	-	14.6
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.3

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	13	86	2	14	45	11	1	0	5	43	1	2
Future Vol, veh/h	13	86	2	14	45	11	1	0	5	43	1	2
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									
Storage Length	125	-	-	125	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	88	88	88	50	50	50	72	72	72
Heavy Vehicles, %	0	1	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	16	109	3	16	51	13	2	0	10	60	1	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	64	0	0	112	0	0	201	239	56	177	234	32
Stage 1	-	-	-	-	-	-	143	143	-	90	90	-
Stage 2	-	-	-	-	-	-	58	96	-	87	144	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1551	-	-	1490	-	-	745	666	1005	774	670	1041
Stage 1	-	-	-	-	-	-	851	782	-	913	824	-
Stage 2	-	-	-	-	-	-	953	819	-	917	782	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1551	-	-	1490	-	-	730	652	1005	754	656	1041
Mov Cap-2 Maneuver	-	-	-	-	-	-	730	652	-	754	656	-
Stage 1	-	-	-	-	-	-	842	774	-	904	815	-
Stage 2	-	-	-	-	-	-	939	810	-	899	774	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.9			1.5			8.9			10.2		
HCM LOS							A			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	946	1551	-	-	1490	-	-	761
HCM Lane V/C Ratio	0.013	0.011	-	-	0.011	-	-	0.084
HCM Control Delay (s)	8.9	7.3	-	-	7.4	-	-	10.2
HCM Lane LOS	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.3

Intersection												
Int Delay, s/veh	5.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	150	265	0	3	101	57	0	6	6	56	0	61
Future Vol, veh/h	150	265	0	3	101	57	0	6	6	56	0	61
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	-	-	Yield
Storage Length	100	-	-	100	-	-	-	-	-	-	-	125
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	56	56	56	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	1	2	0	5	16	0	0	0	11	0	5
Mvmt Flow	268	473	0	3	101	57	0	6	6	56	0	61

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	158	0	0	473	0	0	1145	1173	473	1151	1145	130
Stage 1	-	-	-	-	-	-	1009	1009	-	136	136	-
Stage 2	-	-	-	-	-	-	136	164	-	1015	1009	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.21	6.5	6.25
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.21	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.21	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.599	4	3.345
Pot Cap-1 Maneuver	1434	-	-	1099	-	-	178	194	595	168	201	912
Stage 1	-	-	-	-	-	-	292	320	-	846	788	-
Stage 2	-	-	-	-	-	-	872	766	-	276	320	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1434	-	-	1099	-	-	142	157	595	138	163	912
Mov Cap-2 Maneuver	-	-	-	-	-	-	142	157	-	138	163	-
Stage 1	-	-	-	-	-	-	237	260	-	688	786	-
Stage 2	-	-	-	-	-	-	811	764	-	217	260	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	2.9		0.2		20.3		27.7	
HCM LOS					C		D	

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	248	1434	-	-	1099	-	-	138	912
HCM Lane V/C Ratio	0.048	0.187	-	-	0.003	-	-	0.406	0.067
HCM Control Delay (s)	20.3	8.1	-	-	8.3	-	-	47.9	9.2
HCM Lane LOS		C	A	-	-	A	-	E	A
HCM 95th %tile Q(veh)	0.2	0.7	-	-	0	-	-	1.8	0.2

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	0	222	7	2	111	1	16	0	8	1	0	0
Future Vol, veh/h	0	222	7	2	111	1	16	0	8	1	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									
Storage Length	115	-	-	120	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	75	75	75	86	86	86	25	25	25
Heavy Vehicles, %	0	6	0	0	19	0	0	0	13	0	0	0
Mvmt Flow	0	264	8	3	148	1	19	0	9	4	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	149	0	0	272	0	0	423	423	268	428	427	149
Stage 1	-	-	-	-	-	-	268	268	-	155	155	-
Stage 2	-	-	-	-	-	-	155	155	-	273	272	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.33	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.417	3.5	4	3.3
Pot Cap-1 Maneuver	1445	-	-	1303	-	-	545	526	745	541	523	903
Stage 1	-	-	-	-	-	-	742	691	-	852	773	-
Stage 2	-	-	-	-	-	-	852	773	-	737	688	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1445	-	-	1303	-	-	544	525	745	533	522	903
Mov Cap-2 Maneuver	-	-	-	-	-	-	544	525	-	533	522	-
Stage 1	-	-	-	-	-	-	742	691	-	852	771	-
Stage 2	-	-	-	-	-	-	850	771	-	728	688	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.1			11.3			11.8		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	598	1445	-	-	1303	-	-	533
HCM Lane V/C Ratio	0.047	-	-	-	0.002	-	-	0.008
HCM Control Delay (s)	11.3	0	-	-	7.8	-	-	11.8
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection						
Int Delay, s/veh	1.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑		↘	↑	↘	
Traffic Vol, veh/h	195	0	1	88	37	3
Future Vol, veh/h	195	0	1	88	37	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	120	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	73	73	82	82	77	77
Heavy Vehicles, %	6	0	0	2	19	0
Mvmt Flow	267	0	1	107	48	4

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	-	267	0	376
Stage 1	-	-	-	-	267
Stage 2	-	-	-	-	109
Critical Hdwy	-	-	4.1	-	6.59
Critical Hdwy Stg 1	-	-	-	-	5.59
Critical Hdwy Stg 2	-	-	-	-	5.59
Follow-up Hdwy	-	-	2.2	-	3.671
Pot Cap-1 Maneuver	-	0	1308	-	593
Stage 1	-	0	-	-	740
Stage 2	-	0	-	-	875
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1308	-	592
Mov Cap-2 Maneuver	-	-	-	-	592
Stage 1	-	-	-	-	740
Stage 2	-	-	-	-	874

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	11.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	WBL	WBT
Capacity (veh/h)	603	-	1308	-
HCM Lane V/C Ratio	0.086	-	0.001	-
HCM Control Delay (s)	11.5	-	7.8	-
HCM Lane LOS	B	-	A	-
HCM 95th %tile Q(veh)	0.3	-	0	-

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕		↔	↕			↕	
Traffic Vol, veh/h	0	183	7	9	74	0	4	0	7	2	0	1
Future Vol, veh/h	0	183	7	9	74	0	4	0	7	2	0	1
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									
Storage Length	50	-	-	125	-	-	90	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	83	83	83	69	69	69	75	75	75
Heavy Vehicles, %	0	0	14	11	4	0	25	0	0	0	0	0
Mvmt Flow	0	229	9	11	89	0	6	0	10	3	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	89	0	0	238	0	0	301	345	119	226	349	45
Stage 1	-	-	-	-	-	-	234	234	-	111	111	-
Stage 2	-	-	-	-	-	-	67	111	-	115	238	-
Critical Hdwy	4.1	-	-	4.32	-	-	8	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	7	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.31	-	-	3.75	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1519	-	-	1263	-	-	573	581	917	715	578	1022
Stage 1	-	-	-	-	-	-	686	715	-	888	807	-
Stage 2	-	-	-	-	-	-	872	807	-	883	712	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1519	-	-	1263	-	-	568	576	917	702	573	1022
Mov Cap-2 Maneuver	-	-	-	-	-	-	568	576	-	702	573	-
Stage 1	-	-	-	-	-	-	686	715	-	888	800	-
Stage 2	-	-	-	-	-	-	863	800	-	873	712	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.9	9.9	9.6
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	568	917	1519	-	-	1263	-	-	784
HCM Lane V/C Ratio	0.01	0.011	-	-	-	0.009	-	-	0.005
HCM Control Delay (s)	11.4	9	0	-	-	7.9	-	-	9.6
HCM Lane LOS	B	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	0	-	-	0	-	-	0

Intersection												
Int Delay, s/veh	4.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	150	12	36	77	4	9	2	123	4	1	3
Future Vol, veh/h	7	150	12	36	77	4	9	2	123	4	1	3
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									
Storage Length	100	-	-	100	-	-	60	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	94	94	94	70	70	70	50	50	50
Heavy Vehicles, %	0	1	8	3	1	0	0	0	0	25	0	0
Mvmt Flow	9	192	15	38	82	4	13	3	176	8	2	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	86	0	0	207	0	0	336	380	104	276	385	43
Stage 1	-	-	-	-	-	-	218	218	-	160	160	-
Stage 2	-	-	-	-	-	-	118	162	-	116	225	-
Critical Hdwy	4.1	-	-	4.16	-	-	7.5	6.5	6.9	8	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	7	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	7	5.5	-
Follow-up Hdwy	2.2	-	-	2.23	-	-	3.5	4	3.3	3.75	4	3.3
Pot Cap-1 Maneuver	1523	-	-	1354	-	-	599	556	937	598	552	1025
Stage 1	-	-	-	-	-	-	770	726	-	764	769	-
Stage 2	-	-	-	-	-	-	880	768	-	813	721	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1523	-	-	1354	-	-	579	537	937	471	533	1025
Mov Cap-2 Maneuver	-	-	-	-	-	-	579	537	-	471	533	-
Stage 1	-	-	-	-	-	-	765	722	-	759	747	-
Stage 2	-	-	-	-	-	-	848	746	-	654	717	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	2.4	9.8	11.1
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	571	937	1523	-	-	1354	-	-	602
HCM Lane V/C Ratio	0.028	0.188	0.006	-	-	0.028	-	-	0.027
HCM Control Delay (s)	11.5	9.7	7.4	-	-	7.7	-	-	11.1
HCM Lane LOS	B	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.7	0	-	-	0.1	-	-	0.1

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Traffic Vol, veh/h	0	371	3	6	156	3	4	0	24	2	0	1
Future Vol, veh/h	0	371	3	6	156	3	4	0	24	2	0	1
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									
Storage Length	50	-	-	110	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	60	60	60	78	78	78	58	58	58	38	38	38
Heavy Vehicles, %	0	1	0	0	4	0	25	0	0	0	0	0
Mvmt Flow	0	618	5	8	200	4	7	0	41	5	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	204	0	0	623	0	0	737	841	312	527	841	102
Stage 1	-	-	-	-	-	-	621	621	-	218	218	-
Stage 2	-	-	-	-	-	-	116	220	-	309	623	-
Critical Hdwy	4.1	-	-	4.1	-	-	8	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	7	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.75	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1380	-	-	968	-	-	267	303	690	438	303	940
Stage 1	-	-	-	-	-	-	390	482	-	770	726	-
Stage 2	-	-	-	-	-	-	813	725	-	682	481	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1380	-	-	968	-	-	265	301	690	409	301	940
Mov Cap-2 Maneuver	-	-	-	-	-	-	265	301	-	409	301	-
Stage 1	-	-	-	-	-	-	390	482	-	770	720	-
Stage 2	-	-	-	-	-	-	804	719	-	641	481	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.3			12			12.3		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	561	1380	-	-	968	-	-	504
HCM Lane V/C Ratio	0.086	-	-	-	0.008	-	-	0.016
HCM Control Delay (s)	12	0	-	-	8.7	-	-	12.3
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0

Intersection						
Int Delay, s/veh	3.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	19	1	11	15	2	21
Future Vol, veh/h	19	1	11	15	2	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	42	42	72	72	64	64
Heavy Vehicles, %	0	0	0	0	0	5
Mvmt Flow	45	2	15	21	3	33

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	47	0	97 46
Stage 1	-	-	-	-	46 -
Stage 2	-	-	-	-	51 -
Critical Hdwy	-	-	4.1	-	6.4 6.25
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	-	-	2.2	-	3.5 3.345
Pot Cap-1 Maneuver	-	-	1573	-	907 1015
Stage 1	-	-	-	-	982 -
Stage 2	-	-	-	-	977 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1573	-	898 1015
Mov Cap-2 Maneuver	-	-	-	-	854 -
Stage 1	-	-	-	-	982 -
Stage 2	-	-	-	-	967 -

Approach	EB	WB	NB
HCM Control Delay, s	0	3.1	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	999	-	-	1573	-
HCM Lane V/C Ratio	0.036	-	-	0.01	-
HCM Control Delay (s)	8.7	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↖	↖	
Traffic Vol, veh/h	0	158	0	40	1	0
Future Vol, veh/h	0	158	0	40	1	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	-	0	-	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	73	73	77	77	82	82
Heavy Vehicles, %	0	3	0	20	0	0
Mvmt Flow	0	216	0	52	1	0

Major/Minor	Major1	Minor2
Conflicting Flow All	-	0 52 -
Stage 1	-	- 0 -
Stage 2	-	- 52 -
Critical Hdwy	-	- 6.5 -
Critical Hdwy Stg 1	-	- - -
Critical Hdwy Stg 2	-	- 5.5 -
Follow-up Hdwy	-	- 4 -
Pot Cap-1 Maneuver	0	- 843 0
Stage 1	0	- - 0
Stage 2	0	- 856 0
Platoon blocked, %		-
Mov Cap-1 Maneuver	-	- 0 -
Mov Cap-2 Maneuver	-	- 0 -
Stage 1	-	- 0 -
Stage 2	-	- 0 -

Approach	NB	SB
HCM Control Delay, s	0	
HCM LOS		-

Minor Lane/Major Mvmt	NBT	SBLn1
Capacity (veh/h)	-	-
HCM Lane V/C Ratio	-	-
HCM Control Delay (s)	-	-
HCM Lane LOS	-	-
HCM 95th %tile Q(veh)	-	-

West Yankton County Subarea Study
Peak Summer PM Conditions

10/12/2023
3: SD 153 & SD 50

Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	1	183	17	55	283	16	22	7	25	8	11	3
Future Vol, veh/h	1	183	17	55	283	16	22	7	25	8	11	3
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									
Storage Length	100	-	-	115	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	72	72	72	78	78	78	90	90	90	100	100	100
Heavy Vehicles, %	0	5	0	4	3	0	0	0	0	13	0	0
Mvmt Flow	1	254	24	71	363	21	24	8	28	8	11	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	384	0	0	278	0	0	791	794	266	802	796	374
Stage 1	-	-	-	-	-	-	268	268	-	516	516	-
Stage 2	-	-	-	-	-	-	523	526	-	286	280	-
Critical Hdwy	4.1	-	-	4.14	-	-	7.1	6.5	6.2	7.23	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.23	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.23	5.5	-
Follow-up Hdwy	2.2	-	-	2.236	-	-	3.5	4	3.3	3.617	4	3.3
Pot Cap-1 Maneuver	1186	-	-	1273	-	-	310	323	778	290	322	677
Stage 1	-	-	-	-	-	-	742	691	-	522	538	-
Stage 2	-	-	-	-	-	-	541	532	-	698	683	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1186	-	-	1273	-	-	287	305	778	262	304	677
Mov Cap-2 Maneuver	-	-	-	-	-	-	287	305	-	262	304	-
Stage 1	-	-	-	-	-	-	741	690	-	521	508	-
Stage 2	-	-	-	-	-	-	498	502	-	665	682	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			1.2			15.3			17.5		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	410	1186	-	-	1273	-	-	309
HCM Lane V/C Ratio	0.146	0.001	-	-	0.055	-	-	0.071
HCM Control Delay (s)	15.3	8	-	-	8	-	-	17.5
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.5	0	-	-	0.2	-	-	0.2

West Yankton County Subarea Study
Peak Summer PM Conditions

10/12/2023
6: Shore Dr/SD 153 & SD 52

Intersection												
Int Delay, s/veh	4.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗			↔			↔	
Traffic Vol, veh/h	13	139	13	57	166	55	8	10	33	44	5	29
Future Vol, veh/h	13	139	13	57	166	55	8	10	33	44	5	29
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									
Storage Length	125	-	-	125	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	91	91	91	75	75	75	75	75	75
Heavy Vehicles, %	0	1	0	2	0	4	0	0	0	0	0	3
Mvmt Flow	13	139	13	63	182	60	11	13	44	59	7	39

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	242	0	0	152	0	0	393	540	76	440	516	121
Stage 1	-	-	-	-	-	-	172	172	-	338	338	-
Stage 2	-	-	-	-	-	-	221	368	-	102	178	-
Critical Hdwy	4.1	-	-	4.14	-	-	7.5	6.5	6.9	7.5	6.5	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.22	-	-	3.5	4	3.3	3.5	4	3.33
Pot Cap-1 Maneuver	1336	-	-	1426	-	-	546	451	976	505	466	904
Stage 1	-	-	-	-	-	-	819	760	-	656	644	-
Stage 2	-	-	-	-	-	-	767	625	-	899	756	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1336	-	-	1426	-	-	496	427	976	451	441	904
Mov Cap-2 Maneuver	-	-	-	-	-	-	496	427	-	451	441	-
Stage 1	-	-	-	-	-	-	811	752	-	649	616	-
Stage 2	-	-	-	-	-	-	694	598	-	835	748	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.6			1.6			10.7			13		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	695	1336	-	-	1426	-	-	553
HCM Lane V/C Ratio	0.098	0.01	-	-	0.044	-	-	0.188
HCM Control Delay (s)	10.7	7.7	-	-	7.6	-	-	13
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	0.7

Intersection												
Int Delay, s/veh	5.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↖	↗
Traffic Vol, veh/h	102	270	0	12	337	54	0	3	10	43	2	233
Future Vol, veh/h	102	270	0	12	337	54	0	3	10	43	2	233
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	-	-	Yield
Storage Length	100	-	-	100	-	-	-	-	-	-	-	125
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	95	95	95	63	63	63	95	95	95
Heavy Vehicles, %	0	1	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	110	290	0	13	355	57	0	5	16	45	2	245

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	412	0	0	290	0	0	921	948	290	931	920	384
Stage 1	-	-	-	-	-	-	510	510	-	410	410	-
Stage 2	-	-	-	-	-	-	411	438	-	521	510	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1158	-	-	1283	-	-	253	263	754	249	273	668
Stage 1	-	-	-	-	-	-	550	541	-	623	599	-
Stage 2	-	-	-	-	-	-	622	582	-	542	541	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1158	-	-	1283	-	-	146	236	754	221	245	668
Mov Cap-2 Maneuver	-	-	-	-	-	-	146	236	-	221	245	-
Stage 1	-	-	-	-	-	-	498	490	-	564	593	-
Stage 2	-	-	-	-	-	-	388	576	-	476	490	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.3			0.2			12.5			15.5		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	500	1158	-	-	1283	-	-	222	668
HCM Lane V/C Ratio	0.041	0.095	-	-	0.01	-	-	0.213	0.367
HCM Control Delay (s)	12.5	8.4	-	-	7.8	-	-	25.6	13.5
HCM Lane LOS	B	A	-	-	A	-	-	D	B
HCM 95th %tile Q(veh)	0.1	0.3	-	-	0	-	-	0.8	1.7

West Yankton County Subarea Study
Peak Summer PM Conditions

10/12/2023
9: SD 52 & SD 50

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	1	164	22	5	260	1	26	0	8	0	1	0
Future Vol, veh/h	1	164	22	5	260	1	26	0	8	0	1	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									
Storage Length	115	-	-	120	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	90	90	90	85	85	85	25	25	25
Heavy Vehicles, %	0	7	0	0	3	0	0	0	0	0	0	0
Mvmt Flow	1	202	27	6	289	1	31	0	9	0	4	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	290	0	0	229	0	0	522	520	216	524	533	290
Stage 1	-	-	-	-	-	-	218	218	-	302	302	-
Stage 2	-	-	-	-	-	-	304	302	-	222	231	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1283	-	-	1351	-	-	468	463	829	467	456	754
Stage 1	-	-	-	-	-	-	789	726	-	712	668	-
Stage 2	-	-	-	-	-	-	710	668	-	785	717	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1283	-	-	1351	-	-	463	461	829	460	454	754
Mov Cap-2 Maneuver	-	-	-	-	-	-	463	461	-	460	454	-
Stage 1	-	-	-	-	-	-	788	725	-	711	665	-
Stage 2	-	-	-	-	-	-	703	665	-	775	716	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.1			12.5			13		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	517	1283	-	-	1351	-	-	454
HCM Lane V/C Ratio	0.077	0.001	-	-	0.004	-	-	0.009
HCM Control Delay (s)	12.5	7.8	-	-	7.7	-	-	13
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0

West Yankton County Subarea Study
 Peak Summer PM Conditions

10/12/2023
 11: SD 314 & SD 50

Intersection						
Int Delay, s/veh	3.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑		↘	↑	↘	
Traffic Vol, veh/h	146	0	3	252	104	1
Future Vol, veh/h	146	0	3	252	104	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	120	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	77	77	80	80	77	77
Heavy Vehicles, %	4	2	3	0	1	2
Mvmt Flow	190	0	4	315	135	1

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	-	190	0	513 190
Stage 1	-	-	-	-	190 -
Stage 2	-	-	-	-	323 -
Critical Hdwy	-	-	4.13	-	6.41 6.22
Critical Hdwy Stg 1	-	-	-	-	5.41 -
Critical Hdwy Stg 2	-	-	-	-	5.41 -
Follow-up Hdwy	-	-	2.227	-	3.509 3.318
Pot Cap-1 Maneuver	-	0	1378	-	523 852
Stage 1	-	0	-	-	845 -
Stage 2	-	0	-	-	736 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1378	-	521 852
Mov Cap-2 Maneuver	-	-	-	-	521 -
Stage 1	-	-	-	-	845 -
Stage 2	-	-	-	-	734 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	14.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	WBL	WBT
Capacity (veh/h)	523	-	1378	-
HCM Lane V/C Ratio	0.261	-	0.003	-
HCM Control Delay (s)	14.3	-	7.6	-
HCM Lane LOS	B	-	A	-
HCM 95th %tile Q(veh)	1	-	0	-

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕			↕	
Traffic Vol, veh/h	0	232	20	73	342	3	16	1	39	5	0	1
Future Vol, veh/h	0	232	20	73	342	3	16	1	39	5	0	1
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									
Storage Length	50	-	-	125	-	-	90	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	93	93	93	70	70	70	75	75	75
Heavy Vehicles, %	0	0	0	1	0	0	0	0	0	0	0	0
Mvmt Flow	0	232	20	78	368	3	23	1	56	7	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	371	0	0	252	0	0	582	769	126	643	778	186
Stage 1	-	-	-	-	-	-	242	242	-	526	526	-
Stage 2	-	-	-	-	-	-	340	527	-	117	252	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.21	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1199	-	-	1318	-	-	401	334	907	362	330	831
Stage 1	-	-	-	-	-	-	746	709	-	508	532	-
Stage 2	-	-	-	-	-	-	654	532	-	881	702	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1199	-	-	1318	-	-	382	314	907	323	311	831
Mov Cap-2 Maneuver	-	-	-	-	-	-	382	314	-	323	311	-
Stage 1	-	-	-	-	-	-	746	709	-	508	501	-
Stage 2	-	-	-	-	-	-	614	501	-	825	702	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			1.4			11.1			15.2		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	382	866	1199	-	-	1318	-	-	360
HCM Lane V/C Ratio	0.06	0.066	-	-	-	0.06	-	-	0.022
HCM Control Delay (s)	15	9.5	0	-	-	7.9	-	-	15.2
HCM Lane LOS	C	A	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.2	0.2	0	-	-	0.2	-	-	0.1

West Yankton County Subarea Study
Peak Summer PM Conditions

10/12/2023
16: Deer Blvd & SD 52

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↖	↗		↔	
Traffic Vol, veh/h	7	214	41	150	375	6	48	4	83	1	2	12
Future Vol, veh/h	7	214	41	150	375	6	48	4	83	1	2	12
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									
Storage Length	100	-	-	100	-	-	60	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	95	95	95	97	97	97	54	54	54
Heavy Vehicles, %	0	0	2	1	3	0	8	0	1	0	0	0
Mvmt Flow	7	221	42	158	395	6	49	4	86	2	4	22

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	401	0	0	263	0	0	772	973	132	841	991	201
Stage 1	-	-	-	-	-	-	256	256	-	714	714	-
Stage 2	-	-	-	-	-	-	516	717	-	127	277	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.66	6.5	6.92	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.66	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.66	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.21	-	-	3.58	4	3.31	3.5	4	3.3
Pot Cap-1 Maneuver	1169	-	-	1306	-	-	279	254	896	261	248	813
Stage 1	-	-	-	-	-	-	709	699	-	393	438	-
Stage 2	-	-	-	-	-	-	495	437	-	869	685	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1169	-	-	1306	-	-	242	222	896	210	217	813
Mov Cap-2 Maneuver	-	-	-	-	-	-	242	222	-	210	217	-
Stage 1	-	-	-	-	-	-	705	695	-	391	385	-
Stage 2	-	-	-	-	-	-	419	384	-	777	681	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			2.3			15.1			12.3		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	240	896	1169	-	-	1306	-	-	522
HCM Lane V/C Ratio	0.223	0.095	0.006	-	-	0.121	-	-	0.053
HCM Control Delay (s)	24.3	9.4	8.1	-	-	8.1	-	-	12.3
HCM Lane LOS	C	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.8	0.3	0	-	-	0.4	-	-	0.2

West Yankton County Subarea Study
Peak Summer PM Conditions

10/12/2023
19: Timberland Park Rd & SD 52

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Traffic Vol, veh/h	3	358	11	21	539	2	14	0	20	0	0	0
Future Vol, veh/h	3	358	11	21	539	2	14	0	20	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									
Storage Length	50	-	-	110	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	91	91	91	77	77	77	75	75	75
Heavy Vehicles, %	0	1	0	0	0	0	0	0	5	0	0	0
Mvmt Flow	3	389	12	23	592	2	18	0	26	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	594	0	0	401	0	0	743	1041	201	840	1046	297
Stage 1	-	-	-	-	-	-	401	401	-	639	639	-
Stage 2	-	-	-	-	-	-	342	640	-	201	407	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	7	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.35	3.5	4	3.3
Pot Cap-1 Maneuver	992	-	-	1169	-	-	307	232	797	262	230	705
Stage 1	-	-	-	-	-	-	602	604	-	436	474	-
Stage 2	-	-	-	-	-	-	652	473	-	788	601	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	992	-	-	1169	-	-	302	227	797	249	225	705
Mov Cap-2 Maneuver	-	-	-	-	-	-	302	227	-	249	225	-
Stage 1	-	-	-	-	-	-	600	602	-	435	465	-
Stage 2	-	-	-	-	-	-	639	464	-	760	599	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.3			13.3			0		
HCM LOS							B			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	476	992	-	-	1169	-	-	-
HCM Lane V/C Ratio	0.093	0.003	-	-	0.02	-	-	-
HCM Control Delay (s)	13.3	8.6	-	-	8.1	-	-	0
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	-

Intersection						
Int Delay, s/veh	3.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	33	0	38	40	2	28
Future Vol, veh/h	33	0	38	40	2	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	69	69	93	93	75	75
Heavy Vehicles, %	3	2	2	3	0	2
Mvmt Flow	48	0	41	43	3	37

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	48	0	173 48
Stage 1	-	-	-	-	48 -
Stage 2	-	-	-	-	125 -
Critical Hdwy	-	-	4.12	-	6.4 6.22
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	-	-	2.218	-	3.5 3.318
Pot Cap-1 Maneuver	-	-	1559	-	822 1021
Stage 1	-	-	-	-	980 -
Stage 2	-	-	-	-	906 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1559	-	800 1021
Mov Cap-2 Maneuver	-	-	-	-	782 -
Stage 1	-	-	-	-	980 -
Stage 2	-	-	-	-	882 -

Approach	EB	WB	NB
HCM Control Delay, s	0	3.6	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1001	-	-	1559	-
HCM Lane V/C Ratio	0.04	-	-	0.026	-
HCM Control Delay (s)	8.7	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↖	↖	
Traffic Vol, veh/h	0	65	0	105	3	0
Future Vol, veh/h	0	65	0	105	3	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	-	0	-	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	77	77	77	77	80	80
Heavy Vehicles, %	2	3	2	0	3	2
Mvmt Flow	0	84	0	136	4	0

Major/Minor	Major1	Minor2
Conflicting Flow All	-	0 136 -
Stage 1	-	- 0 -
Stage 2	-	- 136 -
Critical Hdwy	-	- 6.53 -
Critical Hdwy Stg 1	-	- - -
Critical Hdwy Stg 2	-	- 5.53 -
Follow-up Hdwy	-	- 4.027 -
Pot Cap-1 Maneuver	0	- 753 0
Stage 1	0	- - 0
Stage 2	0	- 782 0
Platoon blocked, %		-
Mov Cap-1 Maneuver	-	- 0 -
Mov Cap-2 Maneuver	-	- 0 -
Stage 1	-	- 0 -
Stage 2	-	- 0 -

Approach	NB	SB
HCM Control Delay, s	0	
HCM LOS		-

Minor Lane/Major Mvmt	NBT	SBLn1
Capacity (veh/h)	-	-
HCM Lane V/C Ratio	-	-
HCM Control Delay (s)	-	-
HCM Lane LOS	-	-
HCM 95th %tile Q(veh)	-	-

Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↕			↕	
Traffic Vol, veh/h	0	382	8	12	152	8	8	0	38	46	7	0
Future Vol, veh/h	0	382	8	12	152	8	8	0	38	46	7	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									
Storage Length	100	-	-	115	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	5	17	0	19	17	0	0	0	0	0	0
Mvmt Flow	0	424	9	13	169	9	9	0	42	51	8	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	178	0	0	433	0	0	633	633	429	650	633	174
Stage 1	-	-	-	-	-	-	429	429	-	200	200	-
Stage 2	-	-	-	-	-	-	204	204	-	450	433	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1410	-	-	1137	-	-	395	400	630	385	400	875
Stage 1	-	-	-	-	-	-	608	587	-	806	739	-
Stage 2	-	-	-	-	-	-	803	737	-	592	585	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1410	-	-	1137	-	-	386	396	630	356	396	875
Mov Cap-2 Maneuver	-	-	-	-	-	-	386	396	-	356	396	-
Stage 1	-	-	-	-	-	-	608	587	-	806	731	-
Stage 2	-	-	-	-	-	-	785	729	-	552	585	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.6			12			16.9		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	568	1410	-	-	1137	-	-	361
HCM Lane V/C Ratio	0.09	-	-	-	0.012	-	-	0.163
HCM Control Delay (s)	12	0	-	-	8.2	-	-	16.9
HCM Lane LOS	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.6

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	17	112	3	18	59	14	1	0	7	56	1	3
Future Vol, veh/h	17	112	3	18	59	14	1	0	7	56	1	3
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									
Storage Length	125	-	-	125	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	1	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	19	124	3	20	66	16	1	0	8	62	1	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	82	0	0	127	0	0	238	286	64	214	279	41
Stage 1	-	-	-	-	-	-	164	164	-	114	114	-
Stage 2	-	-	-	-	-	-	74	122	-	100	165	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1528	-	-	1472	-	-	702	627	994	729	632	1028
Stage 1	-	-	-	-	-	-	828	766	-	884	805	-
Stage 2	-	-	-	-	-	-	933	799	-	901	766	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1528	-	-	1472	-	-	685	611	994	709	616	1028
Mov Cap-2 Maneuver	-	-	-	-	-	-	685	611	-	709	616	-
Stage 1	-	-	-	-	-	-	818	757	-	873	794	-
Stage 2	-	-	-	-	-	-	916	788	-	883	757	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1			1.5			8.9			10.5		
HCM LOS							A			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	941	1528	-	-	1472	-	-	718
HCM Lane V/C Ratio	0.009	0.012	-	-	0.014	-	-	0.093
HCM Control Delay (s)	8.9	7.4	-	-	7.5	-	-	10.5
HCM Lane LOS	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.3

Intersection												
Int Delay, s/veh	6.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↖	↗
Traffic Vol, veh/h	196	347	0	4	132	75	0	8	8	73	0	80
Future Vol, veh/h	196	347	0	4	132	75	0	8	8	73	0	80
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	-	-	Yield
Storage Length	100	-	-	100	-	-	-	-	-	-	-	125
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	1	2	0	5	16	0	0	0	11	0	5
Mvmt Flow	218	386	0	4	147	83	0	9	9	81	0	89

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	230	0	0	386	0	0	1019	1060	386	1028	1019	189
Stage 1	-	-	-	-	-	-	822	822	-	197	197	-
Stage 2	-	-	-	-	-	-	197	238	-	831	822	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.21	6.5	6.25
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.21	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.21	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.599	4	3.345
Pot Cap-1 Maneuver	1350	-	-	1184	-	-	217	226	666	204	239	845
Stage 1	-	-	-	-	-	-	371	391	-	785	742	-
Stage 2	-	-	-	-	-	-	809	712	-	351	391	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1350	-	-	1184	-	-	170	189	666	170	200	845
Mov Cap-2 Maneuver	-	-	-	-	-	-	170	189	-	170	200	-
Stage 1	-	-	-	-	-	-	311	328	-	659	740	-
Stage 2	-	-	-	-	-	-	721	710	-	283	328	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	3		0.2		18		26.2	
HCM LOS					C		D	

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	294	1350	-	-	1184	-	-	170	845
HCM Lane V/C Ratio	0.06	0.161	-	-	0.004	-	-	0.477	0.105
HCM Control Delay (s)	18	8.2	-	-	8.1	-	-	44.1	9.8
HCM Lane LOS		C	A	-	-	A	-	E	A
HCM 95th %tile Q(veh)	0.2	0.6	-	-	0	-	-	2.3	0.4

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	0	290	9	3	145	1	21	0	10	1	0	0
Future Vol, veh/h	0	290	9	3	145	1	21	0	10	1	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									
Storage Length	115	-	-	120	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	6	0	0	19	0	0	0	13	0	0	0
Mvmt Flow	0	322	10	3	161	1	23	0	11	1	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	162	0	0	332	0	0	495	495	327	501	500	162
Stage 1	-	-	-	-	-	-	327	327	-	168	168	-
Stage 2	-	-	-	-	-	-	168	168	-	333	332	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.33	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.417	3.5	4	3.3
Pot Cap-1 Maneuver	1429	-	-	1239	-	-	488	479	690	484	476	888
Stage 1	-	-	-	-	-	-	690	651	-	839	763	-
Stage 2	-	-	-	-	-	-	839	763	-	685	648	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1429	-	-	1239	-	-	487	478	690	475	475	888
Mov Cap-2 Maneuver	-	-	-	-	-	-	487	478	-	475	475	-
Stage 1	-	-	-	-	-	-	690	651	-	839	761	-
Stage 2	-	-	-	-	-	-	837	761	-	674	648	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.2			12.1			12.6		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	538	1429	-	-	1239	-	-	475
HCM Lane V/C Ratio	0.064	-	-	-	0.003	-	-	0.002
HCM Control Delay (s)	12.1	0	-	-	7.9	-	-	12.6
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0

Intersection						
Int Delay, s/veh	1.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑		↘	↑	↘	
Traffic Vol, veh/h	255	0	1	115	48	4
Future Vol, veh/h	255	0	1	115	48	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	120	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	6	0	0	2	19	0
Mvmt Flow	283	0	1	128	53	4

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	-	283	0	413 283
Stage 1	-	-	-	-	283 -
Stage 2	-	-	-	-	130 -
Critical Hdwy	-	-	4.1	-	6.59 6.2
Critical Hdwy Stg 1	-	-	-	-	5.59 -
Critical Hdwy Stg 2	-	-	-	-	5.59 -
Follow-up Hdwy	-	-	2.2	-	3.671 3.3
Pot Cap-1 Maneuver	-	0	1291	-	564 761
Stage 1	-	0	-	-	727 -
Stage 2	-	0	-	-	856 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1291	-	563 761
Mov Cap-2 Maneuver	-	-	-	-	563 -
Stage 1	-	-	-	-	727 -
Stage 2	-	-	-	-	855 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	12
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	WBL	WBT
Capacity (veh/h)	574	-	1291	-
HCM Lane V/C Ratio	0.101	-	0.001	-
HCM Control Delay (s)	12	-	7.8	-
HCM Lane LOS	B	-	A	-
HCM 95th %tile Q(veh)	0.3	-	0	-

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕			↕	
Traffic Vol, veh/h	0	239	9	12	97	0	5	0	9	3	0	1
Future Vol, veh/h	0	239	9	12	97	0	5	0	9	3	0	1
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									
Storage Length	50	-	-	125	-	-	90	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	14	11	4	0	25	0	0	0	0	0
Mvmt Flow	0	266	10	13	108	0	6	0	10	3	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	108	0	0	276	0	0	351	405	138	267	410	54
Stage 1	-	-	-	-	-	-	271	271	-	134	134	-
Stage 2	-	-	-	-	-	-	80	134	-	133	276	-
Critical Hdwy	4.1	-	-	4.32	-	-	8	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	7	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.31	-	-	3.75	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1495	-	-	1221	-	-	525	538	891	670	534	1008
Stage 1	-	-	-	-	-	-	651	689	-	861	789	-
Stage 2	-	-	-	-	-	-	856	789	-	862	685	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1495	-	-	1221	-	-	520	532	891	657	528	1008
Mov Cap-2 Maneuver	-	-	-	-	-	-	520	532	-	657	528	-
Stage 1	-	-	-	-	-	-	651	689	-	861	780	-
Stage 2	-	-	-	-	-	-	846	780	-	852	685	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.9			10.1			10		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	520	891	1495	-	-	1221	-	-	720
HCM Lane V/C Ratio	0.011	0.011	-	-	-	0.011	-	-	0.006
HCM Control Delay (s)	12	9.1	0	-	-	8	-	-	10
HCM Lane LOS	B	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0	0	-	-	0	-	-	0

Intersection												
Int Delay, s/veh	4.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↖	↗		↔	
Traffic Vol, veh/h	9	184	24	56	90	5	14	3	183	5	1	4
Future Vol, veh/h	9	184	24	56	90	5	14	3	183	5	1	4
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									
Storage Length	100	-	-	100	-	-	60	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	1	8	3	1	0	0	0	0	25	0	0
Mvmt Flow	10	204	27	62	100	6	16	3	203	6	1	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	106	0	0	231	0	0	413	468	116	351	478	53
Stage 1	-	-	-	-	-	-	238	238	-	227	227	-
Stage 2	-	-	-	-	-	-	175	230	-	124	251	-
Critical Hdwy	4.1	-	-	4.16	-	-	7.5	6.5	6.9	8	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	7	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	7	5.5	-
Follow-up Hdwy	2.2	-	-	2.23	-	-	3.5	4	3.3	3.75	4	3.3
Pot Cap-1 Maneuver	1498	-	-	1327	-	-	528	496	921	525	489	1010
Stage 1	-	-	-	-	-	-	750	712	-	693	720	-
Stage 2	-	-	-	-	-	-	816	718	-	804	703	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1498	-	-	1327	-	-	503	469	921	391	463	1010
Mov Cap-2 Maneuver	-	-	-	-	-	-	503	469	-	391	463	-
Stage 1	-	-	-	-	-	-	745	707	-	688	686	-
Stage 2	-	-	-	-	-	-	773	684	-	619	698	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			2.9			10.2			12		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	497	921	1498	-	-	1327	-	-	529
HCM Lane V/C Ratio	0.038	0.221	0.007	-	-	0.047	-	-	0.021
HCM Control Delay (s)	12.5	10	7.4	-	-	7.8	-	-	12
HCM Lane LOS	B	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.8	0	-	-	0.1	-	-	0.1

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Traffic Vol, veh/h	0	388	14	34	171	4	12	0	118	3	0	1
Future Vol, veh/h	0	388	14	34	171	4	12	0	118	3	0	1
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									
Storage Length	50	-	-	110	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	1	0	0	4	0	25	0	0	0	0	0
Mvmt Flow	0	431	16	38	190	4	13	0	131	3	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	194	0	0	447	0	0	610	709	224	484	715	97
Stage 1	-	-	-	-	-	-	439	439	-	268	268	-
Stage 2	-	-	-	-	-	-	171	270	-	216	447	-
Critical Hdwy	4.1	-	-	4.1	-	-	8	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	7	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.75	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1391	-	-	1124	-	-	334	362	786	470	359	947
Stage 1	-	-	-	-	-	-	509	582	-	720	691	-
Stage 2	-	-	-	-	-	-	752	690	-	772	577	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1391	-	-	1124	-	-	325	350	786	382	347	947
Mov Cap-2 Maneuver	-	-	-	-	-	-	325	350	-	382	347	-
Stage 1	-	-	-	-	-	-	509	582	-	720	668	-
Stage 2	-	-	-	-	-	-	726	667	-	643	577	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			1.4			11.5			13.1		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	695	1391	-	-	1124	-	-	449
HCM Lane V/C Ratio	0.208	-	-	-	0.034	-	-	0.01
HCM Control Delay (s)	11.5	0	-	-	8.3	-	-	13.1
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.8	0	-	-	0.1	-	-	0

Intersection						
Int Delay, s/veh	4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	25	1	14	20	3	27
Future Vol, veh/h	25	1	14	20	3	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	5
Mvmt Flow	28	1	16	22	3	30

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	29	0	83 29
Stage 1	-	-	-	-	29 -
Stage 2	-	-	-	-	54 -
Critical Hdwy	-	-	4.1	-	6.4 6.25
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	-	-	2.2	-	3.5 3.345
Pot Cap-1 Maneuver	-	-	1597	-	924 1037
Stage 1	-	-	-	-	999 -
Stage 2	-	-	-	-	974 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1597	-	915 1037
Mov Cap-2 Maneuver	-	-	-	-	863 -
Stage 1	-	-	-	-	999 -
Stage 2	-	-	-	-	964 -

Approach	EB	WB	NB
HCM Control Delay, s	0	3	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1017	-	-	1597	-
HCM Lane V/C Ratio	0.033	-	-	0.01	-
HCM Control Delay (s)	8.7	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↖	↖	
Traffic Vol, veh/h	0	207	0	52	1	0
Future Vol, veh/h	0	207	0	52	1	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	-	0	-	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	3	0	20	0	0
Mvmt Flow	0	230	0	58	1	0

Major/Minor	Major1	Minor2
Conflicting Flow All	-	0 58 -
Stage 1	-	- 0 -
Stage 2	-	- 58 -
Critical Hdwy	-	- 6.5 -
Critical Hdwy Stg 1	-	- - -
Critical Hdwy Stg 2	-	- 5.5 -
Follow-up Hdwy	-	- 4 -
Pot Cap-1 Maneuver	0	- 837 0
Stage 1	0	- - 0
Stage 2	0	- 851 0
Platoon blocked, %		-
Mov Cap-1 Maneuver	-	- 0 -
Mov Cap-2 Maneuver	-	- 0 -
Stage 1	-	- 0 -
Stage 2	-	- 0 -

Approach	NB	SB
HCM Control Delay, s	0	
HCM LOS		-

Minor Lane/Major Mvmt	NBT	SBLn1
Capacity (veh/h)	-	-
HCM Lane V/C Ratio	-	-
HCM Control Delay (s)	-	-
HCM Lane LOS	-	-
HCM 95th %tile Q(veh)	-	-

Intersection												
Int Delay, s/veh	2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	3	247	17	47	364	48	14	7	35	12	4	5
Future Vol, veh/h	3	247	17	47	364	48	14	7	35	12	4	5
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									
Storage Length	100	-	-	115	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	8	0	0	3	0	0	0	0	11	33	0
Mvmt Flow	3	274	19	52	404	53	16	8	39	13	4	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	457	0	0	293	0	0	830	851	284	848	834	431
Stage 1	-	-	-	-	-	-	290	290	-	535	535	-
Stage 2	-	-	-	-	-	-	540	561	-	313	299	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.21	6.83	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.21	5.83	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.21	5.83	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.599	4.297	3.3
Pot Cap-1 Maneuver	1114	-	-	1280	-	-	292	299	760	271	272	629
Stage 1	-	-	-	-	-	-	722	676	-	513	477	-
Stage 2	-	-	-	-	-	-	530	513	-	679	614	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1114	-	-	1280	-	-	276	286	760	244	260	629
Mov Cap-2 Maneuver	-	-	-	-	-	-	276	286	-	244	260	-
Stage 1	-	-	-	-	-	-	720	674	-	511	457	-
Stage 2	-	-	-	-	-	-	499	492	-	635	612	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.8			14			18.5		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	462	1114	-	-	1280	-	-	290
HCM Lane V/C Ratio	0.135	0.003	-	-	0.041	-	-	0.08
HCM Control Delay (s)	14	8.2	-	-	7.9	-	-	18.5
HCM Lane LOS	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.5	0	-	-	0.1	-	-	0.3

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	10	146	7	24	158	43	8	7	22	47	3	17
Future Vol, veh/h	10	146	7	24	158	43	8	7	22	47	3	17
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									
Storage Length	125	-	-	125	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	2	20	0	3	3	0	0	0	3	0	0
Mvmt Flow	11	162	8	27	176	48	9	8	24	52	3	19

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	224	0	0	170	0	0	332	466	85	361	446	112
Stage 1	-	-	-	-	-	-	188	188	-	254	254	-
Stage 2	-	-	-	-	-	-	144	278	-	107	192	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.56	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.56	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.56	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.53	4	3.3
Pot Cap-1 Maneuver	1357	-	-	1420	-	-	603	497	963	567	510	926
Stage 1	-	-	-	-	-	-	801	748	-	725	701	-
Stage 2	-	-	-	-	-	-	850	684	-	884	745	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1357	-	-	1420	-	-	576	484	963	535	496	926
Mov Cap-2 Maneuver	-	-	-	-	-	-	576	484	-	535	496	-
Stage 1	-	-	-	-	-	-	795	742	-	719	688	-
Stage 2	-	-	-	-	-	-	813	671	-	846	739	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0.8			10.3			11.9		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	723	1357	-	-	1420	-	-	597
HCM Lane V/C Ratio	0.057	0.008	-	-	0.019	-	-	0.125
HCM Control Delay (s)	10.3	7.7	-	-	7.6	-	-	11.9
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0.4

Intersection												
Int Delay, s/veh	5.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	90	241	0	10	314	71	0	4	8	56	3	217
Future Vol, veh/h	90	241	0	10	314	71	0	4	8	56	3	217
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	-	-	Yield
Storage Length	100	-	-	100	-	-	-	-	-	-	-	125
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	3	0	0	2	4	0	0	0	7	0	3
Mvmt Flow	100	268	0	11	349	79	0	4	9	62	3	241

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	428	0	0	268	0	0	880	918	268	886	879	389
Stage 1	-	-	-	-	-	-	468	468	-	411	411	-
Stage 2	-	-	-	-	-	-	412	450	-	475	468	-
Critical Hdwy	4.12	-	-	4.1	-	-	7.1	6.5	6.2	7.17	6.5	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.17	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.17	5.5	-
Follow-up Hdwy	2.218	-	-	2.2	-	-	3.5	4	3.3	3.563	4	3.327
Pot Cap-1 Maneuver	1131	-	-	1307	-	-	270	274	776	260	288	657
Stage 1	-	-	-	-	-	-	579	565	-	608	598	-
Stage 2	-	-	-	-	-	-	621	575	-	561	565	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1131	-	-	1307	-	-	157	248	776	235	261	657
Mov Cap-2 Maneuver	-	-	-	-	-	-	157	248	-	235	261	-
Stage 1	-	-	-	-	-	-	528	515	-	554	593	-
Stage 2	-	-	-	-	-	-	388	570	-	501	515	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	2.3		0.2		13.2		16.3	
HCM LOS					B		C	

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	454	1131	-	-	1307	-	-	236	657
HCM Lane V/C Ratio	0.029	0.088	-	-	0.009	-	-	0.278	0.367
HCM Control Delay (s)	13.2	8.5	-	-	7.8	-	-	26	13.6
HCM Lane LOS	B	A	-	-	A	-	-	D	B
HCM 95th %tile Q(veh)	0.1	0.3	-	-	0	-	-	1.1	1.7

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↕			↕	
Traffic Vol, veh/h	0	209	12	8	326	3	14	0	9	0	0	0
Future Vol, veh/h	0	209	12	8	326	3	14	0	9	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									
Storage Length	115	-	-	120	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	9	0	0	3	50	9	0	0	0	0	0
Mvmt Flow	0	232	13	9	362	3	16	0	10	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	365	0	0	245	0	0	621	622	239	626	627	364
Stage 1	-	-	-	-	-	-	239	239	-	382	382	-
Stage 2	-	-	-	-	-	-	382	383	-	244	245	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.19	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.19	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.19	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.581	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1205	-	-	1333	-	-	390	405	805	400	403	685
Stage 1	-	-	-	-	-	-	749	711	-	645	616	-
Stage 2	-	-	-	-	-	-	627	616	-	764	707	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1205	-	-	1333	-	-	388	402	805	393	400	685
Mov Cap-2 Maneuver	-	-	-	-	-	-	388	402	-	393	400	-
Stage 1	-	-	-	-	-	-	749	711	-	645	612	-
Stage 2	-	-	-	-	-	-	623	612	-	755	707	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.2			12.8			0		
HCM LOS							B			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	487	1205	-	-	1333	-	-	-
HCM Lane V/C Ratio	0.052	-	-	-	0.007	-	-	-
HCM Control Delay (s)	12.8	0	-	-	7.7	-	-	0
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	-

Intersection						
Int Delay, s/veh	2.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑		↘	↑	↘	
Traffic Vol, veh/h	208	0	1	350	106	0
Future Vol, veh/h	208	0	1	350	106	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	-	-	120	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	4	2	3	3	1	0
Mvmt Flow	231	0	1	389	118	0

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	-	231	0	622 231
Stage 1	-	-	-	-	231 -
Stage 2	-	-	-	-	391 -
Critical Hdwy	-	-	4.13	-	6.41 6.2
Critical Hdwy Stg 1	-	-	-	-	5.41 -
Critical Hdwy Stg 2	-	-	-	-	5.41 -
Follow-up Hdwy	-	-	2.227	-	3.509 3.3
Pot Cap-1 Maneuver	-	0	1331	-	452 813
Stage 1	-	0	-	-	810 -
Stage 2	-	0	-	-	686 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1331	-	452 813
Mov Cap-2 Maneuver	-	-	-	-	452 -
Stage 1	-	-	-	-	810 -
Stage 2	-	-	-	-	685 -

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

Minor Lane/Major Mvmt	NBLn1	EBT	WBL	WBT
Capacity (veh/h)	452	-	1331	-
HCM Lane V/C Ratio	0.261	-	0.001	-
HCM Control Delay (s)	15.7	-	7.7	-
HCM Lane LOS	C	-	A	-
HCM 95th %tile Q(veh)	1	-	0	-

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↗		↖	↕↗		↖	↗			↕↗	
Traffic Vol, veh/h	3	160	3	21	260	3	3	1	25	3	0	5
Future Vol, veh/h	3	160	3	21	260	3	3	1	25	3	0	5
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									
Storage Length	50	-	-	125	-	-	90	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	3	178	3	23	289	3	3	1	28	3	0	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	292	0	0	181	0	0	377	524	91	433	524	146
Stage 1	-	-	-	-	-	-	186	186	-	337	337	-
Stage 2	-	-	-	-	-	-	191	338	-	96	187	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1281	-	-	1407	-	-	560	461	955	511	461	881
Stage 1	-	-	-	-	-	-	804	750	-	656	645	-
Stage 2	-	-	-	-	-	-	798	644	-	906	749	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1281	-	-	1407	-	-	549	453	955	488	453	881
Mov Cap-2 Maneuver	-	-	-	-	-	-	549	453	-	488	453	-
Stage 1	-	-	-	-	-	-	802	749	-	655	635	-
Stage 2	-	-	-	-	-	-	780	634	-	876	748	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.6			9.4			10.4		
HCM LOS							A			B		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	549	916	1281	-	-	1407	-	-	677
HCM Lane V/C Ratio	0.006	0.032	0.003	-	-	0.017	-	-	0.013
HCM Control Delay (s)	11.6	9.1	7.8	-	-	7.6	-	-	10.4
HCM Lane LOS	B	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0.1	0	-	-	0.1	-	-	0

Intersection												
Int Delay, s/veh	4.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕	↖		↕	
Traffic Vol, veh/h	7	210	51	229	282	7	28	5	107	1	8	7
Future Vol, veh/h	7	210	51	229	282	7	28	5	107	1	8	7
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									
Storage Length	100	-	-	100	-	-	60	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	2	3	0	4	20	12	0	0	0	0	0
Mvmt Flow	8	233	57	254	313	8	31	6	119	1	9	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	321	0	0	290	0	0	947	1107	145	961	1131	161
Stage 1	-	-	-	-	-	-	278	278	-	825	825	-
Stage 2	-	-	-	-	-	-	669	829	-	136	306	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.74	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.74	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.74	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.62	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1250	-	-	1283	-	-	201	212	882	214	205	862
Stage 1	-	-	-	-	-	-	677	684	-	337	390	-
Stage 2	-	-	-	-	-	-	390	388	-	859	665	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1250	-	-	1283	-	-	161	169	882	152	163	862
Mov Cap-2 Maneuver	-	-	-	-	-	-	161	169	-	152	163	-
Stage 1	-	-	-	-	-	-	673	680	-	335	313	-
Stage 2	-	-	-	-	-	-	301	311	-	732	661	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			3.8			15.3			20.4		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	162	882	1250	-	-	1283	-	-	251
HCM Lane V/C Ratio	0.226	0.135	0.006	-	-	0.198	-	-	0.071
HCM Control Delay (s)	33.6	9.7	7.9	-	-	8.5	-	-	20.4
HCM Lane LOS	D	A	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.8	0.5	0	-	-	0.7	-	-	0.2

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Traffic Vol, veh/h	1	217	37	94	414	5	17	0	77	0	0	0
Future Vol, veh/h	1	217	37	94	414	5	17	0	77	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									
Storage Length	50	-	-	110	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	241	41	104	460	6	19	0	86	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	466	0	0	282	0	0	702	938	141	794	955	233
Stage 1	-	-	-	-	-	-	264	264	-	671	671	-
Stage 2	-	-	-	-	-	-	438	674	-	123	284	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1106	-	-	1292	-	-	329	266	888	282	260	775
Stage 1	-	-	-	-	-	-	724	694	-	417	458	-
Stage 2	-	-	-	-	-	-	573	457	-	874	680	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1106	-	-	1292	-	-	309	244	888	239	239	775
Mov Cap-2 Maneuver	-	-	-	-	-	-	309	244	-	239	239	-
Stage 1	-	-	-	-	-	-	723	693	-	417	421	-
Stage 2	-	-	-	-	-	-	527	420	-	789	679	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			1.5			11.4			0		
HCM LOS							B			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	663	1106	-	-	1292	-	-	-
HCM Lane V/C Ratio	0.158	0.001	-	-	0.081	-	-	-
HCM Control Delay (s)	11.4	8.3	-	-	8	-	-	0
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.6	0	-	-	0.3	-	-	-

Intersection

Int Delay, s/veh 3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	20	4	26	34	3	8
Future Vol, veh/h	20	4	26	34	3	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	22	4	29	38	3	9

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	0	0	26	120
Stage 1	-	-	-	24
Stage 2	-	-	-	96
Critical Hdwy	-	-	4.1	6.4
Critical Hdwy Stg 1	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	3.5
Pot Cap-1 Maneuver	-	-	1601	880
Stage 1	-	-	-	1004
Stage 2	-	-	-	933
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	1601	863
Mov Cap-2 Maneuver	-	-	-	822
Stage 1	-	-	-	1004
Stage 2	-	-	-	915

Approach	EB	WB	NB
HCM Control Delay, s	0	3.2	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	981	-	-	1601	-
HCM Lane V/C Ratio	0.012	-	-	0.018	-
HCM Control Delay (s)	8.7	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0.1	-

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↖	↖	
Traffic Vol, veh/h	0	82	0	106	1	0
Future Vol, veh/h	0	82	0	106	1	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	-	0	-	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	8	8	2	1	3	2
Mvmt Flow	0	91	0	118	1	0

Major/Minor	Major1	Minor2
Conflicting Flow All	-	0 118 -
Stage 1	-	- 0 -
Stage 2	-	- 118 -
Critical Hdwy	-	- 6.53 -
Critical Hdwy Stg 1	-	- - -
Critical Hdwy Stg 2	-	- 5.53 -
Follow-up Hdwy	-	- 4.027 -
Pot Cap-1 Maneuver	0	- 770 0
Stage 1	0	- - 0
Stage 2	0	- 796 0
Platoon blocked, %		-
Mov Cap-1 Maneuver	-	- 0 -
Mov Cap-2 Maneuver	-	- 0 -
Stage 1	-	- 0 -
Stage 2	-	- 0 -

Approach	NB	SB
HCM Control Delay, s	0	
HCM LOS		-

Minor Lane/Major Mvmt	NBT	SBLn1
Capacity (veh/h)	-	-
HCM Lane V/C Ratio	-	-
HCM Control Delay (s)	-	-
HCM Lane LOS	-	-
HCM 95th %tile Q(veh)	-	-

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	1	239	22	72	370	21	29	9	33	10	14	4
Future Vol, veh/h	1	239	22	72	370	21	29	9	33	10	14	4
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									
Storage Length	100	-	-	115	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	5	0	4	3	0	0	0	0	13	0	0
Mvmt Flow	1	266	24	80	411	23	32	10	37	11	16	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	434	0	0	290	0	0	873	874	278	887	875	423
Stage 1	-	-	-	-	-	-	280	280	-	583	583	-
Stage 2	-	-	-	-	-	-	593	594	-	304	292	-
Critical Hdwy	4.1	-	-	4.14	-	-	7.1	6.5	6.2	7.23	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.23	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.23	5.5	-
Follow-up Hdwy	2.2	-	-	2.236	-	-	3.5	4	3.3	3.617	4	3.3
Pot Cap-1 Maneuver	1136	-	-	1260	-	-	273	290	766	253	290	635
Stage 1	-	-	-	-	-	-	731	683	-	480	502	-
Stage 2	-	-	-	-	-	-	496	496	-	683	675	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1136	-	-	1260	-	-	247	271	766	223	271	635
Mov Cap-2 Maneuver	-	-	-	-	-	-	247	271	-	223	271	-
Stage 1	-	-	-	-	-	-	730	682	-	480	470	-
Stage 2	-	-	-	-	-	-	446	465	-	640	674	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			1.3			17.5			19.9		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	367	1136	-	-	1260	-	-	272
HCM Lane V/C Ratio	0.215	0.001	-	-	0.063	-	-	0.114
HCM Control Delay (s)	17.5	8.2	-	-	8.1	-	-	19.9
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.8	0	-	-	0.2	-	-	0.4

Intersection												
Int Delay, s/veh	4.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Traffic Vol, veh/h	17	182	17	75	217	72	10	13	43	58	7	38
Future Vol, veh/h	17	182	17	75	217	72	10	13	43	58	7	38
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									
Storage Length	125	-	-	125	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	1	0	2	0	4	0	0	0	0	0	3
Mvmt Flow	19	202	19	83	241	80	11	14	48	64	8	42

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	321	0	0	221	0	0	541	737	111	593	706	161
Stage 1	-	-	-	-	-	-	250	250	-	447	447	-
Stage 2	-	-	-	-	-	-	291	487	-	146	259	-
Critical Hdwy	4.1	-	-	4.14	-	-	7.5	6.5	6.9	7.5	6.5	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.22	-	-	3.5	4	3.3	3.5	4	3.33
Pot Cap-1 Maneuver	1250	-	-	1345	-	-	429	348	927	393	363	852
Stage 1	-	-	-	-	-	-	738	704	-	566	577	-
Stage 2	-	-	-	-	-	-	698	554	-	848	697	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1250	-	-	1345	-	-	378	322	927	339	335	852
Mov Cap-2 Maneuver	-	-	-	-	-	-	378	322	-	339	335	-
Stage 1	-	-	-	-	-	-	727	693	-	558	541	-
Stage 2	-	-	-	-	-	-	614	520	-	776	687	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.6			1.6			12.1			16.2		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	583	1250	-	-	1345	-	-	435
HCM Lane V/C Ratio	0.126	0.015	-	-	0.062	-	-	0.263
HCM Control Delay (s)	12.1	7.9	-	-	7.9	-	-	16.2
HCM Lane LOS	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.4	0	-	-	0.2	-	-	1

Intersection												
Int Delay, s/veh	8.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	133	353	0	16	441	71	0	4	13	56	3	305
Future Vol, veh/h	133	353	0	16	441	71	0	4	13	56	3	305
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	-	-	Yield
Storage Length	100	-	-	100	-	-	-	-	-	-	-	125
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	1	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	148	392	0	18	490	79	0	4	14	62	3	339

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	569	0	0	392	0	0	1255	1293	392	1263	1254	530
Stage 1	-	-	-	-	-	-	688	688	-	566	566	-
Stage 2	-	-	-	-	-	-	567	605	-	697	688	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1013	-	-	1178	-	-	150	164	661	148	173	553
Stage 1	-	-	-	-	-	-	440	450	-	513	511	-
Stage 2	-	-	-	-	-	-	512	491	-	435	450	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1013	-	-	1178	-	-	50	138	661	124	145	553
Mov Cap-2 Maneuver	-	-	-	-	-	-	50	138	-	124	145	-
Stage 1	-	-	-	-	-	-	376	384	-	438	503	-
Stage 2	-	-	-	-	-	-	194	484	-	359	384	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	2.5		0.2		15.9		27.9	
HCM LOS					C		D	

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	349	1013	-	-	1178	-	-	125	553
HCM Lane V/C Ratio	0.054	0.146	-	-	0.015	-	-	0.524	0.613
HCM Control Delay (s)	15.9	9.2	-	-	8.1	-	-	61.9	21.3
HCM Lane LOS	C	A	-	-	A	-	-	F	C
HCM 95th %tile Q(veh)	0.2	0.5	-	-	0	-	-	2.5	4.1

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	1	214	29	7	340	1	34	0	10	0	1	0
Future Vol, veh/h	1	214	29	7	340	1	34	0	10	0	1	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									
Storage Length	115	-	-	120	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	7	0	0	3	0	0	0	0	0	0	0
Mvmt Flow	1	238	32	8	378	1	38	0	11	0	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	379	0	0	270	0	0	651	651	254	657	667	379
Stage 1	-	-	-	-	-	-	256	256	-	395	395	-
Stage 2	-	-	-	-	-	-	395	395	-	262	272	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1191	-	-	1305	-	-	384	390	790	381	382	672
Stage 1	-	-	-	-	-	-	753	699	-	634	608	-
Stage 2	-	-	-	-	-	-	634	608	-	747	688	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1191	-	-	1305	-	-	381	387	790	374	379	672
Mov Cap-2 Maneuver	-	-	-	-	-	-	381	387	-	374	379	-
Stage 1	-	-	-	-	-	-	752	698	-	633	604	-
Stage 2	-	-	-	-	-	-	629	604	-	736	687	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.2			14.4			14.5		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	432	1191	-	-	1305	-	-	379
HCM Lane V/C Ratio	0.113	0.001	-	-	0.006	-	-	0.003
HCM Control Delay (s)	14.4	8	-	-	7.8	-	-	14.5
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.4	0	-	-	0	-	-	0

Intersection						
Int Delay, s/veh	3.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑		↘	↑	↘	
Traffic Vol, veh/h	191	0	4	330	136	1
Future Vol, veh/h	191	0	4	330	136	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	120	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	4	2	3	0	1	2
Mvmt Flow	212	0	4	367	151	1

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	-	212	0	587 212
Stage 1	-	-	-	-	212 -
Stage 2	-	-	-	-	375 -
Critical Hdwy	-	-	4.13	-	6.41 6.22
Critical Hdwy Stg 1	-	-	-	-	5.41 -
Critical Hdwy Stg 2	-	-	-	-	5.41 -
Follow-up Hdwy	-	-	2.227	-	3.509 3.318
Pot Cap-1 Maneuver	-	0	1352	-	474 828
Stage 1	-	0	-	-	826 -
Stage 2	-	0	-	-	697 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1352	-	473 828
Mov Cap-2 Maneuver	-	-	-	-	473 -
Stage 1	-	-	-	-	826 -
Stage 2	-	-	-	-	695 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	16.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	WBL	WBT
Capacity (veh/h)	474	-	1352	-
HCM Lane V/C Ratio	0.321	-	0.003	-
HCM Control Delay (s)	16.1	-	7.7	-
HCM Lane LOS	C	-	A	-
HCM 95th %tile Q(veh)	1.4	-	0	-

Intersection												
Int Delay, s/veh	2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗		↖	↗			↔	
Traffic Vol, veh/h	0	303	26	95	447	4	21	1	51	7	0	1
Future Vol, veh/h	0	303	26	95	447	4	21	1	51	7	0	1
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									
Storage Length	50	-	-	125	-	-	90	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	1	0	0	0	0	0	0	0	0
Mvmt Flow	0	337	29	106	497	4	23	1	57	8	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	501	0	0	366	0	0	813	1065	183	880	1077	251
Stage 1	-	-	-	-	-	-	352	352	-	711	711	-
Stage 2	-	-	-	-	-	-	461	713	-	169	366	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.21	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1074	-	-	1196	-	-	274	224	834	245	221	755
Stage 1	-	-	-	-	-	-	643	635	-	395	439	-
Stage 2	-	-	-	-	-	-	555	438	-	822	626	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1074	-	-	1196	-	-	255	204	834	212	201	755
Mov Cap-2 Maneuver	-	-	-	-	-	-	255	204	-	212	201	-
Stage 1	-	-	-	-	-	-	643	635	-	395	400	-
Stage 2	-	-	-	-	-	-	505	399	-	765	626	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			1.4			12.9			21.1		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	255	787	1074	-	-	1196	-	-	233
HCM Lane V/C Ratio	0.092	0.073	-	-	-	0.088	-	-	0.038
HCM Control Delay (s)	20.5	9.9	0	-	-	8.3	-	-	21.1
HCM Lane LOS	C	A	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.3	0.2	0	-	-	0.3	-	-	0.1

Intersection												
Int Delay, s/veh	8.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕↗		↵	↕↗			↕↗	↕↗		↕↗	
Traffic Vol, veh/h	9	263	64	235	441	8	73	5	126	1	3	16
Future Vol, veh/h	9	263	64	235	441	8	73	5	126	1	3	16
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									
Storage Length	100	-	-	100	-	-	60	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	2	1	3	0	8	0	1	0	0	0
Mvmt Flow	10	292	71	261	490	9	81	6	140	1	3	18

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	499	0	0	363	0	0	1117	1369	182	1186	1400	250
Stage 1	-	-	-	-	-	-	348	348	-	1017	1017	-
Stage 2	-	-	-	-	-	-	769	1021	-	169	383	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.66	6.5	6.92	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.66	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.66	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.21	-	-	3.58	4	3.31	3.5	4	3.3
Pot Cap-1 Maneuver	1075	-	-	1199	-	-	155	148	832	146	142	756
Stage 1	-	-	-	-	-	-	625	638	-	258	318	-
Stage 2	-	-	-	-	-	-	347	316	-	822	616	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1075	-	-	1199	-	-	122	115	832	97	110	756
Mov Cap-2 Maneuver	-	-	-	-	-	-	122	115	-	97	110	-
Stage 1	-	-	-	-	-	-	619	632	-	256	249	-
Stage 2	-	-	-	-	-	-	262	247	-	671	610	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	3	39.3	16.3
HCM LOS			E	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	122	832	1075	-	-	1199	-	-	340
HCM Lane V/C Ratio	0.71	0.168	0.009	-	-	0.218	-	-	0.065
HCM Control Delay (s)	86.3	10.2	8.4	-	-	8.8	-	-	16.3
HCM Lane LOS	F	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	3.9	0.6	0	-	-	0.8	-	-	0.2

Intersection												
Int Delay, s/veh	4.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Traffic Vol, veh/h	4	337	62	117	592	3	66	0	109	0	0	0
Future Vol, veh/h	4	337	62	117	592	3	66	0	109	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									
Storage Length	50	-	-	110	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	1	0	0	0	0	0	0	5	0	0	0
Mvmt Flow	4	374	69	130	658	3	73	0	121	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	661	0	0	443	0	0	1006	1338	222	1115	1371	331
Stage 1	-	-	-	-	-	-	417	417	-	920	920	-
Stage 2	-	-	-	-	-	-	589	921	-	195	451	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	7	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.35	3.5	4	3.3
Pot Cap-1 Maneuver	937	-	-	1128	-	-	198	154	772	165	147	671
Stage 1	-	-	-	-	-	-	589	595	-	296	352	-
Stage 2	-	-	-	-	-	-	466	352	-	794	574	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	937	-	-	1128	-	-	180	136	772	126	130	671
Mov Cap-2 Maneuver	-	-	-	-	-	-	180	136	-	126	130	-
Stage 1	-	-	-	-	-	-	587	593	-	295	312	-
Stage 2	-	-	-	-	-	-	412	312	-	667	572	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			1.4			28.1			0		
HCM LOS							D			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	345	937	-	-	1128	-	-	-
HCM Lane V/C Ratio	0.564	0.005	-	-	0.115	-	-	-
HCM Control Delay (s)	28.1	8.9	-	-	8.6	-	-	0
HCM Lane LOS	D	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	3.3	0	-	-	0.4	-	-	-

Intersection						
Int Delay, s/veh	3.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	43	0	50	52	3	37
Future Vol, veh/h	43	0	50	52	3	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	2	2	3	0	2
Mvmt Flow	48	0	56	58	3	41

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	48	0	218 48
Stage 1	-	-	-	-	48 -
Stage 2	-	-	-	-	170 -
Critical Hdwy	-	-	4.12	-	6.4 6.22
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	-	-	2.218	-	3.5 3.318
Pot Cap-1 Maneuver	-	-	1559	-	775 1021
Stage 1	-	-	-	-	980 -
Stage 2	-	-	-	-	865 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1559	-	746 1021
Mov Cap-2 Maneuver	-	-	-	-	739 -
Stage 1	-	-	-	-	980 -
Stage 2	-	-	-	-	833 -

Approach	EB	WB	NB
HCM Control Delay, s	0	3.6	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	993	-	-	1559	-
HCM Lane V/C Ratio	0.045	-	-	0.036	-
HCM Control Delay (s)	8.8	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑	↑	
Traffic Vol, veh/h	0	85	0	137	4	0
Future Vol, veh/h	0	85	0	137	4	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	-	0	-	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	3	2	0	3	2
Mvmt Flow	0	94	0	152	4	0

Major/Minor	Major1	Minor2
Conflicting Flow All	-	0 152 -
Stage 1	-	- 0 -
Stage 2	-	- 152 -
Critical Hdwy	-	- 6.53 -
Critical Hdwy Stg 1	-	- - -
Critical Hdwy Stg 2	-	- 5.53 -
Follow-up Hdwy	-	- 4.027 -
Pot Cap-1 Maneuver	0	- 738 0
Stage 1	0	- - 0
Stage 2	0	- 770 0
Platoon blocked, %		-
Mov Cap-1 Maneuver	-	- 0 -
Mov Cap-2 Maneuver	-	- 0 -
Stage 1	-	- 0 -
Stage 2	-	- 0 -

Approach	NB	SB
HCM Control Delay, s	0	
HCM LOS		-

Minor Lane/Major Mvmt	NBT	SBLn1
Capacity (veh/h)	-	-
HCM Lane V/C Ratio	-	-
HCM Control Delay (s)	-	-
HCM Lane LOS	-	-
HCM 95th %tile Q(veh)	-	-

Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	0	503	10	16	200	10	10	0	50	60	9	0
Future Vol, veh/h	0	503	10	16	200	10	10	0	50	60	9	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									
Storage Length	100	-	-	115	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	5	17	0	19	17	0	0	0	0	0	0
Mvmt Flow	0	559	11	18	222	11	11	0	56	67	10	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	233	0	0	570	0	0	834	834	565	857	834	228
Stage 1	-	-	-	-	-	-	565	565	-	264	264	-
Stage 2	-	-	-	-	-	-	269	269	-	593	570	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1346	-	-	1013	-	-	290	306	528	280	306	816
Stage 1	-	-	-	-	-	-	513	511	-	746	694	-
Stage 2	-	-	-	-	-	-	741	690	-	496	509	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1346	-	-	1013	-	-	279	300	528	247	300	816
Mov Cap-2 Maneuver	-	-	-	-	-	-	279	300	-	247	300	-
Stage 1	-	-	-	-	-	-	513	511	-	746	682	-
Stage 2	-	-	-	-	-	-	717	678	-	444	509	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.6			14.1			25.3		
HCM LOS							B			D		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	460	1346	-	-	1013	-	-	253
HCM Lane V/C Ratio	0.145	-	-	-	0.018	-	-	0.303
HCM Control Delay (s)	14.1	0	-	-	8.6	-	-	25.3
HCM Lane LOS	B	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.5	0	-	-	0.1	-	-	1.2

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	22	148	3	24	78	19	2	0	9	74	2	3
Future Vol, veh/h	22	148	3	24	78	19	2	0	9	74	2	3
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									
Storage Length	125	-	-	125	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	1	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	24	164	3	27	87	21	2	0	10	82	2	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	108	0	0	167	0	0	313	376	84	282	367	54
Stage 1	-	-	-	-	-	-	214	214	-	152	152	-
Stage 2	-	-	-	-	-	-	99	162	-	130	215	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1495	-	-	1423	-	-	622	558	965	654	565	1008
Stage 1	-	-	-	-	-	-	774	729	-	841	775	-
Stage 2	-	-	-	-	-	-	902	768	-	866	729	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1495	-	-	1423	-	-	601	538	965	630	545	1008
Mov Cap-2 Maneuver	-	-	-	-	-	-	601	538	-	630	545	-
Stage 1	-	-	-	-	-	-	762	717	-	828	760	-
Stage 2	-	-	-	-	-	-	879	753	-	843	717	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.9			1.5			9.2			11.6		
HCM LOS							A			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	869	1495	-	-	1423	-	-	637
HCM Lane V/C Ratio	0.014	0.016	-	-	0.019	-	-	0.138
HCM Control Delay (s)	9.2	7.4	-	-	7.6	-	-	11.6
HCM Lane LOS	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0.1	-	-	0.1	-	-	0.5

Intersection												
Int Delay, s/veh	22.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↖	↗
Traffic Vol, veh/h	259	457	0	5	174	98	0	10	10	97	0	105
Future Vol, veh/h	259	457	0	5	174	98	0	10	10	97	0	105
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	-	-	Yield
Storage Length	100	-	-	100	-	-	-	-	-	-	-	125
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	1	2	0	5	16	0	0	0	11	0	5
Mvmt Flow	288	508	0	6	193	109	0	11	11	108	0	117

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	302	0	0	508	0	0	1344	1398	508	1355	1344	248
Stage 1	-	-	-	-	-	-	1084	1084	-	260	260	-
Stage 2	-	-	-	-	-	-	260	314	-	1095	1084	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.21	6.5	6.25
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.21	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.21	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.599	4	3.345
Pot Cap-1 Maneuver	1270	-	-	1067	-	-	130	142	569	121	153	783
Stage 1	-	-	-	-	-	-	265	296	-	725	697	-
Stage 2	-	-	-	-	-	-	749	660	-	249	296	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	1270	-	-	1067	-	-	91	109	569	~ 90	118	783
Mov Cap-2 Maneuver	-	-	-	-	-	-	91	109	-	~ 90	118	-
Stage 1	-	-	-	-	-	-	205	229	-	560	693	-
Stage 2	-	-	-	-	-	-	634	656	-	180	229	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	3.1		0.2		27.4		122	
HCM LOS					D		F	

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	183	1270	-	-	1067	-	-	90	783
HCM Lane V/C Ratio	0.121	0.227	-	-	0.005	-	-	1.198	0.149
HCM Control Delay (s)	27.4	8.7	-	-	8.4	-	-	242.8	10.4
HCM Lane LOS		D	A	-	A	-	-	F	B
HCM 95th %tile Q(veh)	0.4	0.9	-	-	0	-	-	7.6	0.5

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	0	383	12	3	191	2	28	0	14	2	0	0
Future Vol, veh/h	0	383	12	3	191	2	28	0	14	2	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									
Storage Length	115	-	-	120	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	6	0	0	19	0	0	0	13	0	0	0
Mvmt Flow	0	426	13	3	212	2	31	0	16	2	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	214	0	0	439	0	0	652	653	433	660	658	213
Stage 1	-	-	-	-	-	-	433	433	-	219	219	-
Stage 2	-	-	-	-	-	-	219	220	-	441	439	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.33	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.417	3.5	4	3.3
Pot Cap-1 Maneuver	1368	-	-	1132	-	-	384	389	600	379	387	832
Stage 1	-	-	-	-	-	-	605	585	-	788	726	-
Stage 2	-	-	-	-	-	-	788	725	-	599	582	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1368	-	-	1132	-	-	383	388	600	368	386	832
Mov Cap-2 Maneuver	-	-	-	-	-	-	383	388	-	368	386	-
Stage 1	-	-	-	-	-	-	605	585	-	788	724	-
Stage 2	-	-	-	-	-	-	786	723	-	583	582	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.1			14.2			14.8		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	436	1368	-	-	1132	-	-	368
HCM Lane V/C Ratio	0.107	-	-	-	0.003	-	-	0.006
HCM Control Delay (s)	14.2	0	-	-	8.2	-	-	14.8
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.4	0	-	-	0	-	-	0

Intersection						
Int Delay, s/veh	1.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑		↘	↑	↘	
Traffic Vol, veh/h	336	0	2	152	64	5
Future Vol, veh/h	336	0	2	152	64	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	-	-	120	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	6	0	0	2	19	0
Mvmt Flow	373	0	2	169	71	6

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	-	373	0	546	373
Stage 1	-	-	-	-	373	-
Stage 2	-	-	-	-	173	-
Critical Hdwy	-	-	4.1	-	6.59	6.2
Critical Hdwy Stg 1	-	-	-	-	5.59	-
Critical Hdwy Stg 2	-	-	-	-	5.59	-
Follow-up Hdwy	-	-	2.2	-	3.671	3.3
Pot Cap-1 Maneuver	-	0	1197	-	471	678
Stage 1	-	0	-	-	661	-
Stage 2	-	0	-	-	818	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1197	-	470	678
Mov Cap-2 Maneuver	-	-	-	-	470	-
Stage 1	-	-	-	-	661	-
Stage 2	-	-	-	-	816	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	13.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	WBL	WBT
Capacity (veh/h)	481	-	1197	-
HCM Lane V/C Ratio	0.159	-	0.002	-
HCM Control Delay (s)	13.9	-	8	-
HCM Lane LOS	B	-	A	-
HCM 95th %tile Q(veh)	0.6	-	0	-

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕			↕	
Traffic Vol, veh/h	0	315	12	16	128	0	7	0	12	3	0	2
Future Vol, veh/h	0	315	12	16	128	0	7	0	12	3	0	2
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									
Storage Length	50	-	-	125	-	-	90	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	14	11	4	0	25	0	0	0	0	0
Mvmt Flow	0	350	13	18	142	0	8	0	13	3	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	142	0	0	363	0	0	464	535	182	353	541	71
Stage 1	-	-	-	-	-	-	357	357	-	178	178	-
Stage 2	-	-	-	-	-	-	107	178	-	175	363	-
Critical Hdwy	4.1	-	-	4.32	-	-	8	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	7	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.31	-	-	3.75	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1453	-	-	1130	-	-	432	454	836	582	451	983
Stage 1	-	-	-	-	-	-	574	632	-	812	756	-
Stage 2	-	-	-	-	-	-	824	756	-	816	628	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1453	-	-	1130	-	-	426	447	836	566	444	983
Mov Cap-2 Maneuver	-	-	-	-	-	-	426	447	-	566	444	-
Stage 1	-	-	-	-	-	-	574	632	-	812	744	-
Stage 2	-	-	-	-	-	-	809	744	-	803	628	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.9			10.9			10.3		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	426	836	1453	-	-	1130	-	-	682
HCM Lane V/C Ratio	0.018	0.016	-	-	-	0.016	-	-	0.008
HCM Control Delay (s)	13.6	9.4	0	-	-	8.2	-	-	10.3
HCM Lane LOS	B	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	0	-	-	0	-	-	0

Intersection												
Int Delay, s/veh	5.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗			↖	↖		↖↗	
Traffic Vol, veh/h	12	244	30	76	121	7	23	3	238	7	2	5
Future Vol, veh/h	12	244	30	76	121	7	23	3	238	7	2	5
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									
Storage Length	100	-	-	100	-	-	60	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	1	8	3	1	0	0	0	0	25	0	0
Mvmt Flow	13	271	33	84	134	8	26	3	264	8	2	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	142	0	0	304	0	0	550	624	152	469	636	71
Stage 1	-	-	-	-	-	-	314	314	-	306	306	-
Stage 2	-	-	-	-	-	-	236	310	-	163	330	-
Critical Hdwy	4.1	-	-	4.16	-	-	7.5	6.5	6.9	8	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	7	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	7	5.5	-
Follow-up Hdwy	2.2	-	-	2.23	-	-	3.5	4	3.3	3.75	4	3.3
Pot Cap-1 Maneuver	1453	-	-	1246	-	-	422	404	873	428	398	983
Stage 1	-	-	-	-	-	-	677	660	-	618	665	-
Stage 2	-	-	-	-	-	-	752	663	-	760	649	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1453	-	-	1246	-	-	393	374	873	279	368	983
Mov Cap-2 Maneuver	-	-	-	-	-	-	393	374	-	279	368	-
Stage 1	-	-	-	-	-	-	671	654	-	612	620	-
Stage 2	-	-	-	-	-	-	695	619	-	522	643	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	3	11.3	14.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	391	873	1453	-	-	1246	-	-	393
HCM Lane V/C Ratio	0.074	0.303	0.009	-	-	0.068	-	-	0.04
HCM Control Delay (s)	14.9	10.9	7.5	-	-	8.1	-	-	14.5
HCM Lane LOS	B	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	1.3	0	-	-	0.2	-	-	0.1

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Traffic Vol, veh/h	0	511	18	45	225	5	16	0	156	3	0	2
Future Vol, veh/h	0	511	18	45	225	5	16	0	156	3	0	2
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									
Storage Length	50	-	-	110	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	1	0	0	4	0	25	0	0	0	0	0
Mvmt Flow	0	568	20	50	250	6	18	0	173	3	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	256	0	0	588	0	0	803	934	294	637	941	128
Stage 1	-	-	-	-	-	-	578	578	-	353	353	-
Stage 2	-	-	-	-	-	-	225	356	-	284	588	-
Critical Hdwy	4.1	-	-	4.1	-	-	8	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	7	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.75	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1321	-	-	997	-	-	238	268	708	366	265	905
Stage 1	-	-	-	-	-	-	415	504	-	642	634	-
Stage 2	-	-	-	-	-	-	695	633	-	705	499	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1321	-	-	997	-	-	228	255	708	266	252	905
Mov Cap-2 Maneuver	-	-	-	-	-	-	228	255	-	266	252	-
Stage 1	-	-	-	-	-	-	415	504	-	642	602	-
Stage 2	-	-	-	-	-	-	659	601	-	532	499	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			1.4			14			14.9		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	592	1321	-	-	997	-	-	371
HCM Lane V/C Ratio	0.323	-	-	-	0.05	-	-	0.015
HCM Control Delay (s)	14	0	-	-	8.8	-	-	14.9
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1.4	0	-	-	0.2	-	-	0

Intersection						
Int Delay, s/veh	4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	33	2	19	26	3	36
Future Vol, veh/h	33	2	19	26	3	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	5
Mvmt Flow	37	2	21	29	3	40

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	39	0	109 38
Stage 1	-	-	-	-	38 -
Stage 2	-	-	-	-	71 -
Critical Hdwy	-	-	4.1	-	6.4 6.25
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	-	-	2.2	-	3.5 3.345
Pot Cap-1 Maneuver	-	-	1584	-	893 1025
Stage 1	-	-	-	-	990 -
Stage 2	-	-	-	-	957 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1584	-	881 1025
Mov Cap-2 Maneuver	-	-	-	-	841 -
Stage 1	-	-	-	-	990 -
Stage 2	-	-	-	-	945 -

Approach	EB	WB	NB
HCM Control Delay, s	0	3.1	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1008	-	-	1584	-
HCM Lane V/C Ratio	0.043	-	-	0.013	-
HCM Control Delay (s)	8.7	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↖	↖	
Traffic Vol, veh/h	0	272	0	69	2	0
Future Vol, veh/h	0	272	0	69	2	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	-	0	-	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	3	0	20	0	0
Mvmt Flow	0	302	0	77	2	0

Major/Minor	Major1	Minor2
Conflicting Flow All	-	0 77 -
Stage 1	-	- 0 -
Stage 2	-	- 77 -
Critical Hdwy	-	- 6.5 -
Critical Hdwy Stg 1	-	- - -
Critical Hdwy Stg 2	-	- 5.5 -
Follow-up Hdwy	-	- 4 -
Pot Cap-1 Maneuver	0	- 817 0
Stage 1	0	- - 0
Stage 2	0	- 835 0
Platoon blocked, %		-
Mov Cap-1 Maneuver	-	- 0 -
Mov Cap-2 Maneuver	-	- 0 -
Stage 1	-	- 0 -
Stage 2	-	- 0 -

Approach	NB	SB
HCM Control Delay, s	0	
HCM LOS		-

Minor Lane/Major Mvmt	NBT	SBLn1
Capacity (veh/h)	-	-
HCM Lane V/C Ratio	-	-
HCM Control Delay (s)	-	-
HCM Lane LOS	-	-
HCM 95th %tile Q(veh)	-	-

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	3	326	22	62	479	64	19	9	47	16	5	7
Future Vol, veh/h	3	326	22	62	479	64	19	9	47	16	5	7
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									
Storage Length	100	-	-	115	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	8	0	0	3	0	0	0	0	11	33	0
Mvmt Flow	3	362	24	69	532	71	21	10	52	18	6	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	603	0	0	386	0	0	1093	1121	374	1117	1098	568
Stage 1	-	-	-	-	-	-	380	380	-	706	706	-
Stage 2	-	-	-	-	-	-	713	741	-	411	392	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.21	6.83	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.21	5.83	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.21	5.83	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.599	4.297	3.3
Pot Cap-1 Maneuver	984	-	-	1184	-	-	193	208	677	177	187	526
Stage 1	-	-	-	-	-	-	646	617	-	413	395	-
Stage 2	-	-	-	-	-	-	426	426	-	600	556	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	984	-	-	1184	-	-	177	195	677	150	176	526
Mov Cap-2 Maneuver	-	-	-	-	-	-	177	195	-	150	176	-
Stage 1	-	-	-	-	-	-	644	615	-	412	372	-
Stage 2	-	-	-	-	-	-	389	401	-	543	554	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.8			19.2			27.8		
HCM LOS							C			D		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	336	984	-	-	1184	-	-	189
HCM Lane V/C Ratio	0.248	0.003	-	-	0.058	-	-	0.165
HCM Control Delay (s)	19.2	8.7	-	-	8.2	-	-	27.8
HCM Lane LOS	C	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	1	0	-	-	0.2	-	-	0.6

Intersection												
Int Delay, s/veh	3.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↔			↔	
Traffic Vol, veh/h	14	193	9	31	209	57	10	9	29	62	3	22
Future Vol, veh/h	14	193	9	31	209	57	10	9	29	62	3	22
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									
Storage Length	125	-	-	125	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	2	20	0	3	3	0	0	0	3	0	0
Mvmt Flow	16	214	10	34	232	63	11	10	32	69	3	24

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	295	0	0	224	0	0	437	614	112	476	588	148
Stage 1	-	-	-	-	-	-	251	251	-	332	332	-
Stage 2	-	-	-	-	-	-	186	363	-	144	256	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.56	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.56	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.56	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.53	4	3.3
Pot Cap-1 Maneuver	1278	-	-	1357	-	-	508	410	926	470	424	878
Stage 1	-	-	-	-	-	-	737	703	-	652	648	-
Stage 2	-	-	-	-	-	-	804	628	-	841	699	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1278	-	-	1357	-	-	477	394	926	432	408	878
Mov Cap-2 Maneuver	-	-	-	-	-	-	477	394	-	432	408	-
Stage 1	-	-	-	-	-	-	727	694	-	644	632	-
Stage 2	-	-	-	-	-	-	758	612	-	790	690	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0.8			11.1			14		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	639	1278	-	-	1357	-	-	495
HCM Lane V/C Ratio	0.083	0.012	-	-	0.025	-	-	0.195
HCM Control Delay (s)	11.1	7.9	-	-	7.7	-	-	14
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	0.7

Intersection												
Int Delay, s/veh	8.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	119	317	0	14	414	93	0	5	10	74	3	286
Future Vol, veh/h	119	317	0	14	414	93	0	5	10	74	3	286
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	-	-	Yield
Storage Length	100	-	-	100	-	-	-	-	-	-	-	125
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	3	0	0	2	4	0	0	0	7	0	3
Mvmt Flow	132	352	0	16	460	103	0	6	11	82	3	318

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	563	0	0	352	0	0	1161	1211	352	1169	1160	512
Stage 1	-	-	-	-	-	-	616	616	-	544	544	-
Stage 2	-	-	-	-	-	-	545	595	-	625	616	-
Critical Hdwy	4.12	-	-	4.1	-	-	7.1	6.5	6.2	7.17	6.5	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.17	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.17	5.5	-
Follow-up Hdwy	2.218	-	-	2.2	-	-	3.5	4	3.3	3.563	4	3.327
Pot Cap-1 Maneuver	1008	-	-	1218	-	-	174	184	696	166	197	560
Stage 1	-	-	-	-	-	-	481	485	-	514	522	-
Stage 2	-	-	-	-	-	-	526	496	-	464	485	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1008	-	-	1218	-	-	66	158	696	142	169	560
Mov Cap-2 Maneuver	-	-	-	-	-	-	66	158	-	142	169	-
Stage 1	-	-	-	-	-	-	418	421	-	447	515	-
Stage 2	-	-	-	-	-	-	223	490	-	392	421	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.5			0.2			16.6			28.5		
HCM LOS							C			D		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	326	1008	-	-	1218	-	-	143	560
HCM Lane V/C Ratio	0.051	0.131	-	-	0.013	-	-	0.598	0.567
HCM Control Delay (s)	16.6	9.1	-	-	8	-	-	62	19.5
HCM Lane LOS	C	A	-	-	A	-	-	F	C
HCM 95th %tile Q(veh)	0.2	0.5	-	-	0	-	-	3.1	3.5

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	0	276	16	10	429	3	19	0	12	0	0	0
Future Vol, veh/h	0	276	16	10	429	3	19	0	12	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									
Storage Length	115	-	-	120	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	9	0	0	3	50	9	0	0	0	0	0
Mvmt Flow	0	307	18	11	477	3	21	0	13	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	480	0	0	325	0	0	817	818	316	824	826	479
Stage 1	-	-	-	-	-	-	316	316	-	501	501	-
Stage 2	-	-	-	-	-	-	501	502	-	323	325	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.19	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.19	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.19	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.581	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1093	-	-	1246	-	-	287	313	729	294	310	591
Stage 1	-	-	-	-	-	-	680	659	-	556	546	-
Stage 2	-	-	-	-	-	-	539	545	-	693	653	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1093	-	-	1246	-	-	285	310	729	287	307	591
Mov Cap-2 Maneuver	-	-	-	-	-	-	285	310	-	287	307	-
Stage 1	-	-	-	-	-	-	680	659	-	556	541	-
Stage 2	-	-	-	-	-	-	534	540	-	680	653	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.2			15.6			0		
HCM LOS							C			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	373	1093	-	-	1246	-	-	-
HCM Lane V/C Ratio	0.092	-	-	-	0.009	-	-	-
HCM Control Delay (s)	15.6	0	-	-	7.9	-	-	0
HCM Lane LOS	C	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	-

Intersection						
Int Delay, s/veh	3.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑		↘	↑	↘	
Traffic Vol, veh/h	274	0	2	462	140	0
Future Vol, veh/h	274	0	2	462	140	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	-	-	120	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	4	2	3	3	1	0
Mvmt Flow	304	0	2	513	156	0

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	-	304	0	821
Stage 1	-	-	-	-	304
Stage 2	-	-	-	-	517
Critical Hdwy	-	-	4.13	-	6.41
Critical Hdwy Stg 1	-	-	-	-	5.41
Critical Hdwy Stg 2	-	-	-	-	5.41
Follow-up Hdwy	-	-	2.227	-	3.509
Pot Cap-1 Maneuver	-	0	1251	-	346
Stage 1	-	0	-	-	751
Stage 2	-	0	-	-	601
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1251	-	345
Mov Cap-2 Maneuver	-	-	-	-	345
Stage 1	-	-	-	-	751
Stage 2	-	-	-	-	600

Approach	EB	WB	NB
HCM Control Delay, s	0	0	23.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	WBL	WBT
Capacity (veh/h)	345	-	1251	-
HCM Lane V/C Ratio	0.451	-	0.002	-
HCM Control Delay (s)	23.7	-	7.9	-
HCM Lane LOS	C	-	A	-
HCM 95th %tile Q(veh)	2.2	-	0	-

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕			↕	
Traffic Vol, veh/h	3	210	3	28	343	3	3	2	33	3	0	7
Future Vol, veh/h	3	210	3	28	343	3	3	2	33	3	0	7
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									
Storage Length	50	-	-	125	-	-	90	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	3	233	3	31	381	3	3	2	37	3	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	384	0	0	236	0	0	494	687	118	569	687	192
Stage 1	-	-	-	-	-	-	241	241	-	445	445	-
Stage 2	-	-	-	-	-	-	253	446	-	124	242	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1186	-	-	1343	-	-	463	372	918	409	372	823
Stage 1	-	-	-	-	-	-	747	710	-	567	578	-
Stage 2	-	-	-	-	-	-	735	577	-	873	709	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1186	-	-	1343	-	-	450	362	918	383	362	823
Mov Cap-2 Maneuver	-	-	-	-	-	-	450	362	-	383	362	-
Stage 1	-	-	-	-	-	-	745	708	-	565	565	-
Stage 2	-	-	-	-	-	-	711	564	-	833	707	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.6	9.8	11
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	450	844	1186	-	-	1343	-	-	612
HCM Lane V/C Ratio	0.007	0.046	0.003	-	-	0.023	-	-	0.018
HCM Control Delay (s)	13.1	9.5	8	-	-	7.7	-	-	11
HCM Lane LOS	B	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0.1	0	-	-	0.1	-	-	0.1

Intersection												
Int Delay, s/veh	7.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕↔		↔	↕↔			↕	↕		↕↔	
Traffic Vol, veh/h	9	260	70	302	355	9	38	5	143	2	10	9
Future Vol, veh/h	9	260	70	302	355	9	38	5	143	2	10	9
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									
Storage Length	100	-	-	100	-	-	60	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	2	3	0	4	20	12	0	0	0	0	0
Mvmt Flow	10	289	78	336	394	10	42	6	159	2	11	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	404	0	0	367	0	0	1223	1424	184	1239	1458	202
Stage 1	-	-	-	-	-	-	348	348	-	1071	1071	-
Stage 2	-	-	-	-	-	-	875	1076	-	168	387	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.74	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.74	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.74	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.62	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1166	-	-	1203	-	-	125	137	833	134	131	811
Stage 1	-	-	-	-	-	-	614	638	-	239	300	-
Stage 2	-	-	-	-	-	-	291	298	-	823	613	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1166	-	-	1203	-	-	88	98	833	81	94	811
Mov Cap-2 Maneuver	-	-	-	-	-	-	88	98	-	81	94	-
Stage 1	-	-	-	-	-	-	608	632	-	237	216	-
Stage 2	-	-	-	-	-	-	196	215	-	655	607	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			4.1			27.5			33.8		
HCM LOS							D			D		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	89	833	1166	-	-	1203	-	-	148
HCM Lane V/C Ratio	0.537	0.191	0.009	-	-	0.279	-	-	0.158
HCM Control Delay (s)	84.9	10.3	8.1	-	-	9.1	-	-	33.8
HCM Lane LOS	F	B	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	2.4	0.7	0	-	-	1.1	-	-	0.5

Intersection												
Int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	2	294	45	123	547	7	21	0	96	0	0	0
Future Vol, veh/h	2	294	45	123	547	7	21	0	96	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									
Storage Length	50	-	-	110	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	2	327	50	137	608	8	23	0	107	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	616	0	0	377	0	0	934	1246	189	1054	1267	308
Stage 1	-	-	-	-	-	-	356	356	-	886	886	-
Stage 2	-	-	-	-	-	-	578	890	-	168	381	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	974	-	-	1193	-	-	224	175	827	183	170	694
Stage 1	-	-	-	-	-	-	640	633	-	310	365	-
Stage 2	-	-	-	-	-	-	474	364	-	823	617	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	974	-	-	1193	-	-	204	155	827	145	150	694
Mov Cap-2 Maneuver	-	-	-	-	-	-	204	155	-	145	150	-
Stage 1	-	-	-	-	-	-	639	632	-	309	323	-
Stage 2	-	-	-	-	-	-	420	322	-	715	616	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			1.5			13.9			0		
HCM LOS							B			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	534	974	-	-	1193	-	-	-
HCM Lane V/C Ratio	0.243	0.002	-	-	0.115	-	-	-
HCM Control Delay (s)	13.9	8.7	-	-	8.4	-	-	0
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.9	0	-	-	0.4	-	-	-

Intersection						
Int Delay, s/veh	3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	26	5	34	45	3	10
Future Vol, veh/h	26	5	34	45	3	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	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	29	6	38	50	3	11

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	35	0	158 32
Stage 1	-	-	-	-	32 -
Stage 2	-	-	-	-	126 -
Critical Hdwy	-	-	4.1	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	-	-	2.2	-	3.5 3.3
Pot Cap-1 Maneuver	-	-	1589	-	838 1048
Stage 1	-	-	-	-	996 -
Stage 2	-	-	-	-	905 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1589	-	817 1048
Mov Cap-2 Maneuver	-	-	-	-	789 -
Stage 1	-	-	-	-	996 -
Stage 2	-	-	-	-	882 -

Approach	EB	WB	NB
HCM Control Delay, s	0	3.2	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	974	-	-	1589	-
HCM Lane V/C Ratio	0.015	-	-	0.024	-
HCM Control Delay (s)	8.8	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0.1	-

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↖	↖	
Traffic Vol, veh/h	0	109	0	140	2	0
Future Vol, veh/h	0	109	0	140	2	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	-	0	-	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	8	8	2	1	3	2
Mvmt Flow	0	121	0	156	2	0

Major/Minor	Major1	Minor2
Conflicting Flow All	-	0 156
Stage 1	-	- 0
Stage 2	-	- 156
Critical Hdwy	-	- 6.53
Critical Hdwy Stg 1	-	- -
Critical Hdwy Stg 2	-	- 5.53
Follow-up Hdwy	-	- 4.027
Pot Cap-1 Maneuver	0	- 734
Stage 1	0	- - 0
Stage 2	0	- 767
Platoon blocked, %		-
Mov Cap-1 Maneuver	-	- 0
Mov Cap-2 Maneuver	-	- 0
Stage 1	-	- 0
Stage 2	-	- 0

Approach	NB	SB
HCM Control Delay, s	0	
HCM LOS		-

Minor Lane/Major Mvmt	NBT	SBLn1
Capacity (veh/h)	-	-
HCM Lane V/C Ratio	-	-
HCM Control Delay (s)	-	-
HCM Lane LOS	-	-
HCM 95th %tile Q(veh)	-	-

Intersection												
Int Delay, s/veh	4.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	2	315	29	95	488	28	38	12	43	14	19	5
Future Vol, veh/h	2	315	29	95	488	28	38	12	43	14	19	5
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									
Storage Length	100	-	-	115	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	5	0	4	3	0	0	0	0	13	0	0
Mvmt Flow	2	350	32	106	542	31	42	13	48	16	21	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	573	0	0	382	0	0	1153	1155	366	1171	1156	558
Stage 1	-	-	-	-	-	-	370	370	-	770	770	-
Stage 2	-	-	-	-	-	-	783	785	-	401	386	-
Critical Hdwy	4.1	-	-	4.14	-	-	7.1	6.5	6.2	7.23	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.23	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.23	5.5	-
Follow-up Hdwy	2.2	-	-	2.236	-	-	3.5	4	3.3	3.617	4	3.3
Pot Cap-1 Maneuver	1010	-	-	1166	-	-	176	199	684	161	198	533
Stage 1	-	-	-	-	-	-	654	624	-	377	413	-
Stage 2	-	-	-	-	-	-	390	407	-	604	614	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1010	-	-	1166	-	-	147	180	684	131	180	533
Mov Cap-2 Maneuver	-	-	-	-	-	-	147	180	-	131	180	-
Stage 1	-	-	-	-	-	-	653	623	-	376	375	-
Stage 2	-	-	-	-	-	-	331	370	-	549	613	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			1.3			30.9			32.8		
HCM LOS							D			D		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	240	1010	-	-	1166	-	-	171
HCM Lane V/C Ratio	0.431	0.002	-	-	0.091	-	-	0.247
HCM Control Delay (s)	30.9	8.6	-	-	8.4	-	-	32.8
HCM Lane LOS	D	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	2	0	-	-	0.3	-	-	0.9

Intersection												
Int Delay, s/veh	6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Traffic Vol, veh/h	22	240	22	98	286	95	14	17	57	76	9	50
Future Vol, veh/h	22	240	22	98	286	95	14	17	57	76	9	50
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									
Storage Length	125	-	-	125	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	1	0	2	0	4	0	0	0	0	0	3
Mvmt Flow	24	267	24	109	318	106	16	19	63	84	10	56

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	424	0	0	291	0	0	709	969	146	780	928	212
Stage 1	-	-	-	-	-	-	327	327	-	589	589	-
Stage 2	-	-	-	-	-	-	382	642	-	191	339	-
Critical Hdwy	4.1	-	-	4.14	-	-	7.5	6.5	6.9	7.5	6.5	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.22	-	-	3.5	4	3.3	3.5	4	3.33
Pot Cap-1 Maneuver	1146	-	-	1268	-	-	325	256	881	289	270	790
Stage 1	-	-	-	-	-	-	665	651	-	466	499	-
Stage 2	-	-	-	-	-	-	618	472	-	798	643	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1146	-	-	1268	-	-	269	229	881	231	242	790
Mov Cap-2 Maneuver	-	-	-	-	-	-	269	229	-	231	242	-
Stage 1	-	-	-	-	-	-	651	637	-	456	456	-
Stage 2	-	-	-	-	-	-	514	431	-	704	629	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	1.7	14.9	26.5
HCM LOS			B	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	461	1146	-	-	1268	-	-	314
HCM Lane V/C Ratio	0.212	0.021	-	-	0.086	-	-	0.478
HCM Control Delay (s)	14.9	8.2	-	-	8.1	-	-	26.5
HCM Lane LOS	B	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.8	0.1	-	-	0.3	-	-	2.5

Intersection												
Int Delay, s/veh	33.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↖	↗
Traffic Vol, veh/h	176	465	0	21	581	93	0	5	17	74	3	402
Future Vol, veh/h	176	465	0	21	581	93	0	5	17	74	3	402
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	-	-	Yield
Storage Length	100	-	-	100	-	-	-	-	-	-	-	125
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	1	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	196	517	0	23	646	103	0	6	19	82	3	447

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	749	0	0	517	0	0	1654	1704	517	1666	1653	698
Stage 1	-	-	-	-	-	-	909	909	-	744	744	-
Stage 2	-	-	-	-	-	-	745	795	-	922	909	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	869	-	-	1059	-	-	79	93	562	~ 78	99	~ 444
Stage 1	-	-	-	-	-	-	332	357	-	410	424	-
Stage 2	-	-	-	-	-	-	409	402	-	327	357	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	869	-	-	1059	-	-	70	562	~ 58	75	~ 444	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	70	-	~ 58	75	-	-
Stage 1	-	-	-	-	-	-	257	276	-	317	415	-
Stage 2	-	-	-	-	-	-	393	-	240	276	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.8	0.3		125.9
HCM LOS			-	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	869	-	-	1059	-	-	59	444
HCM Lane V/C Ratio	-	0.225	-	-	0.022	-	-	1.45	1.006
HCM Control Delay (s)	-	10.3	-	-	8.5	-	-	\$ 391.1	75.1
HCM Lane LOS	-	B	-	-	A	-	-	F	F
HCM 95th %tile Q(veh)	-	0.9	-	-	0.1	-	-	7.6	13.1

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	2	283	38	9	448	2	45	0	14	0	2	0
Future Vol, veh/h	2	283	38	9	448	2	45	0	14	0	2	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									
Storage Length	115	-	-	120	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	7	0	0	3	0	0	0	0	0	0	0
Mvmt Flow	2	314	42	10	498	2	50	0	16	0	2	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	500	0	0	356	0	0	859	859	335	866	879	499
Stage 1	-	-	-	-	-	-	339	339	-	519	519	-
Stage 2	-	-	-	-	-	-	520	520	-	347	360	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1075	-	-	1214	-	-	279	296	712	276	288	576
Stage 1	-	-	-	-	-	-	680	643	-	544	536	-
Stage 2	-	-	-	-	-	-	543	535	-	673	630	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1075	-	-	1214	-	-	275	293	712	268	285	576
Mov Cap-2 Maneuver	-	-	-	-	-	-	275	293	-	268	285	-
Stage 1	-	-	-	-	-	-	679	642	-	543	532	-
Stage 2	-	-	-	-	-	-	536	531	-	657	629	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.2			19			17.7		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	322	1075	-	-	1214	-	-	285
HCM Lane V/C Ratio	0.204	0.002	-	-	0.008	-	-	0.008
HCM Control Delay (s)	19	8.4	-	-	8	-	-	17.7
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.7	0	-	-	0	-	-	0

Intersection						
Int Delay, s/veh	5.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑		↘	↑	↘	
Traffic Vol, veh/h	252	0	5	434	179	2
Future Vol, veh/h	252	0	5	434	179	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	120	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	4	2	3	0	1	2
Mvmt Flow	280	0	6	482	199	2

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	-	280	0	774 280
Stage 1	-	-	-	-	280 -
Stage 2	-	-	-	-	494 -
Critical Hdwy	-	-	4.13	-	6.41 6.22
Critical Hdwy Stg 1	-	-	-	-	5.41 -
Critical Hdwy Stg 2	-	-	-	-	5.41 -
Follow-up Hdwy	-	-	2.227	-	3.509 3.318
Pot Cap-1 Maneuver	-	0	1277	-	368 759
Stage 1	-	0	-	-	770 -
Stage 2	-	0	-	-	615 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1277	-	366 759
Mov Cap-2 Maneuver	-	-	-	-	366 -
Stage 1	-	-	-	-	770 -
Stage 2	-	-	-	-	612 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	26
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	WBL	WBT
Capacity (veh/h)	368	-	1277	-
HCM Lane V/C Ratio	0.546	-	0.004	-
HCM Control Delay (s)	26	-	7.8	-
HCM Lane LOS	D	-	A	-
HCM 95th %tile Q(veh)	3.1	-	0	-

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕			↕	
Traffic Vol, veh/h	0	400	34	126	589	5	28	2	67	9	0	2
Future Vol, veh/h	0	400	34	126	589	5	28	2	67	9	0	2
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									
Storage Length	50	-	-	125	-	-	90	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	1	0	0	0	0	0	0	0	0
Mvmt Flow	0	444	38	140	654	6	31	2	74	10	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	660	0	0	482	0	0	1070	1403	241	1160	1419	330
Stage 1	-	-	-	-	-	-	463	463	-	937	937	-
Stage 2	-	-	-	-	-	-	607	940	-	223	482	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.21	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	938	-	-	1084	-	-	178	141	766	153	138	672
Stage 1	-	-	-	-	-	-	554	568	-	289	346	-
Stage 2	-	-	-	-	-	-	455	345	-	765	557	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	938	-	-	1084	-	-	160	123	766	123	120	672
Mov Cap-2 Maneuver	-	-	-	-	-	-	160	123	-	123	120	-
Stage 1	-	-	-	-	-	-	554	568	-	289	301	-
Stage 2	-	-	-	-	-	-	395	300	-	688	557	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			1.5			17.4			32.3		
HCM LOS							C			D		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	160	665	938	-	-	1084	-	-	144
HCM Lane V/C Ratio	0.194	0.115	-	-	-	0.129	-	-	0.085
HCM Control Delay (s)	32.9	11.1	0	-	-	8.8	-	-	32.3
HCM Lane LOS	D	B	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.7	0.4	0	-	-	0.4	-	-	0.3

Intersection												
Int Delay, s/veh	50.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕	↖		↕	
Traffic Vol, veh/h	15	349	88	307	591	10	97	11	166	5	5	25
Future Vol, veh/h	15	349	88	307	591	10	97	11	166	5	5	25
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									
Storage Length	100	-	-	100	-	-	60	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	2	1	3	0	8	0	1	0	0	0
Mvmt Flow	17	388	98	341	657	11	108	12	184	6	6	28

Major/Minor	Major1		Major2		Minor1			Minor2				
Conflicting Flow All	668	0	0	486	0	0	1485	1821	243	1579	1865	334
Stage 1	-	-	-	-	-	-	471	471	-	1345	1345	-
Stage 2	-	-	-	-	-	-	1014	1350	-	234	520	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.66	6.5	6.92	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.66	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.66	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.21	-	-	3.58	4	3.31	3.5	4	3.3
Pot Cap-1 Maneuver	931	-	-	1080	-	-	~ 82	78	761	75	74	668
Stage 1	-	-	-	-	-	-	527	563	-	163	222	-
Stage 2	-	-	-	-	-	-	245	221	-	754	535	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	931	-	-	1080	-	-	~ 54	52	761	35	50	668
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 54	52	-	35	50	-
Stage 1	-	-	-	-	-	-	518	553	-	160	152	-
Stage 2	-	-	-	-	-	-	155	151	-	548	525	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	3.3	292.1	46.3
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	54	761	931	-	-	1080	-	-	125
HCM Lane V/C Ratio	2.222	0.242	0.018	-	-	0.316	-	-	0.311
HCM Control Delay (s)	\$ 723.9	11.2	8.9	-	-	9.9	-	-	46.3
HCM Lane LOS	F	B	A	-	-	A	-	-	E
HCM 95th %tile Q(veh)	12	0.9	0.1	-	-	1.4	-	-	1.2

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	18.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	5	444	75	149	781	5	80	0	145	0	0	0
Future Vol, veh/h	5	444	75	149	781	5	80	0	145	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									
Storage Length	50	-	-	110	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	1	0	0	0	0	0	0	5	0	0	0
Mvmt Flow	6	493	83	166	868	6	89	0	161	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	874	0	0	576	0	0	1313	1753	288	1462	1791	437
Stage 1	-	-	-	-	-	-	547	547	-	1203	1203	-
Stage 2	-	-	-	-	-	-	766	1206	-	259	588	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	7	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.35	3.5	4	3.3
Pot Cap-1 Maneuver	781	-	-	1007	-	-	118	86	700	92	82	573
Stage 1	-	-	-	-	-	-	494	521	-	199	260	-
Stage 2	-	-	-	-	-	-	366	259	-	729	499	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	781	-	-	1007	-	-	102	71	700	62	68	573
Mov Cap-2 Maneuver	-	-	-	-	-	-	102	71	-	62	68	-
Stage 1	-	-	-	-	-	-	490	517	-	197	217	-
Stage 2	-	-	-	-	-	-	306	216	-	557	495	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			1.5			135.2			0		
HCM LOS							F			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	227	781	-	-	1007	-	-	-
HCM Lane V/C Ratio	1.101	0.007	-	-	0.164	-	-	-
HCM Control Delay (s)	135.2	9.6	-	-	9.3	-	-	0
HCM Lane LOS	F	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	11.2	0	-	-	0.6	-	-	-

Intersection						
Int Delay, s/veh	3.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	57	0	65	69	3	48
Future Vol, veh/h	57	0	65	69	3	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	2	2	3	0	2
Mvmt Flow	63	0	72	77	3	53

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	63	0	284 63
Stage 1	-	-	-	-	63 -
Stage 2	-	-	-	-	221 -
Critical Hdwy	-	-	4.12	-	6.4 6.22
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	-	-	2.218	-	3.5 3.318
Pot Cap-1 Maneuver	-	-	1540	-	710 1002
Stage 1	-	-	-	-	965 -
Stage 2	-	-	-	-	821 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1540	-	675 1002
Mov Cap-2 Maneuver	-	-	-	-	687 -
Stage 1	-	-	-	-	965 -
Stage 2	-	-	-	-	781 -

Approach	EB	WB	NB
HCM Control Delay, s	0	3.6	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	976	-	-	1540	-
HCM Lane V/C Ratio	0.058	-	-	0.047	-
HCM Control Delay (s)	8.9	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↖	↖	
Traffic Vol, veh/h	0	112	0	181	5	0
Future Vol, veh/h	0	112	0	181	5	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	-	0	-	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	3	2	0	3	2
Mvmt Flow	0	124	0	201	6	0

Major/Minor	Major1	Minor2
Conflicting Flow All	-	0 201 -
Stage 1	-	- 0 -
Stage 2	-	- 201 -
Critical Hdwy	-	- 6.53 -
Critical Hdwy Stg 1	-	- - -
Critical Hdwy Stg 2	-	- 5.53 -
Follow-up Hdwy	-	- 4.027 -
Pot Cap-1 Maneuver	0	- 693 0
Stage 1	0	- - 0
Stage 2	0	- 733 0
Platoon blocked, %		-
Mov Cap-1 Maneuver	-	- 0 -
Mov Cap-2 Maneuver	-	- 0 -
Stage 1	-	- 0 -
Stage 2	-	- 0 -

Approach	NB	SB
HCM Control Delay, s	0	
HCM LOS		-

Minor Lane/Major Mvmt	NBT	SBLn1
Capacity (veh/h)	-	-
HCM Lane V/C Ratio	-	-
HCM Control Delay (s)	-	-
HCM Lane LOS	-	-
HCM 95th %tile Q(veh)	-	-

HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2022
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 50 btw SD 52 & SD 153 - Fall AM	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	65	Access Point Density, pts/mi	7.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	373	Opposing Demand Flow Rate, veh/h	156
Peak Hour Factor	0.80	Total Trucks, %	10.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.22

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	72.0
Speed Slope Coefficient	4.19160	Speed Power Coefficient	0.55262
PF Slope Coefficient	-1.12764	PF Power Coefficient	0.84866
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	70.0

Vehicle Results

Average Speed, mi/h	70.0	Percent Followers, %	38.6
Segment Travel Time, minutes	0.86	Follower Density, followers/mi/ln	2.1
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	372	Bicycle Effective Width, ft	24
Bicycle LOS Score	5.53	Bicycle Effective Speed Factor	5.07
Bicycle LOS	F		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	2.1	B

HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
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Project Description	16002 - SD 50 btw SD 52 & SD 153 - Fall PM	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	65	Access Point Density, pts/mi	7.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	255	Opposing Demand Flow Rate, veh/h	366
Peak Hour Factor	0.80	Total Trucks, %	6.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.15

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	72.2
Speed Slope Coefficient	4.26762	Speed Power Coefficient	0.50255
PF Slope Coefficient	-1.16120	PF Power Coefficient	0.83254
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	70.5

Vehicle Results

Average Speed, mi/h	70.5	Percent Followers, %	31.1
Segment Travel Time, minutes	0.85	Follower Density, followers/mi/ln	1.1
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	255	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.80	Bicycle Effective Speed Factor	5.07
Bicycle LOS	D		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	1.1	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2022
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 50 btw SD 52 & SD 153 - Summer	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	65	Access Point Density, pts/mi	7.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	385	Opposing Demand Flow Rate, veh/h	251
Peak Hour Factor	0.80	Total Trucks, %	6.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.23

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	72.2
Speed Slope Coefficient	4.23355	Speed Power Coefficient	0.52602
PF Slope Coefficient	-1.14594	PF Power Coefficient	0.84016
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	70.0

Vehicle Results

Average Speed, mi/h	70.0	Percent Followers, %	40.2
Segment Travel Time, minutes	0.86	Follower Density, followers/mi/ln	2.2
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	385	Bicycle Effective Width, ft	24
Bicycle LOS Score	4.01	Bicycle Effective Speed Factor	5.07
Bicycle LOS	D		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	2.2	B

HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2022
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 50 btw SD 153 & SD 314 - Fall AM	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	2880
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	65	Access Point Density, pts/mi	8.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	475	Opposing Demand Flow Rate, veh/h	175
Peak Hour Factor	0.75	Total Trucks, %	10.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.28

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	71.8
Speed Slope Coefficient	4.15857	Speed Power Coefficient	0.54671
PF Slope Coefficient	-1.16448	PF Power Coefficient	0.83790
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2880	-	-	69.3

Vehicle Results

Average Speed, mi/h	69.3	Percent Followers, %	46.4
Segment Travel Time, minutes	0.47	Follower Density, followers/mi/ln	3.2
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	475	Bicycle Effective Width, ft	24
Bicycle LOS Score	5.66	Bicycle Effective Speed Factor	5.07
Bicycle LOS	F		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	3.2	B

HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2022
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 50 btw SD 153 & SD 314 - Fall PM	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	2880
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	65	Access Point Density, pts/mi	8.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	468	Opposing Demand Flow Rate, veh/h	300
Peak Hour Factor	0.75	Total Trucks, %	8.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.28

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	71.8
Speed Slope Coefficient	4.20472	Speed Power Coefficient	0.51520
PF Slope Coefficient	-1.18677	PF Power Coefficient	0.82832
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2880	-	-	69.3

Vehicle Results

Average Speed, mi/h	69.3	Percent Followers, %	46.9
Segment Travel Time, minutes	0.47	Follower Density, followers/mi/ln	3.2
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	468	Bicycle Effective Width, ft	24
Bicycle LOS Score	4.83	Bicycle Effective Speed Factor	5.07
Bicycle LOS	E		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	3.2	B

HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2022
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 50 btw SD 153 & SD 314 - Summer	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	65	Access Point Density, pts/mi	6.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	445	Opposing Demand Flow Rate, veh/h	264
Peak Hour Factor	0.80	Total Trucks, %	4.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.26

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	72.5
Speed Slope Coefficient	4.25475	Speed Power Coefficient	0.52310
PF Slope Coefficient	-1.14577	PF Power Coefficient	0.83978
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	70.0

Vehicle Results

Average Speed, mi/h	70.0	Percent Followers, %	44.0
Segment Travel Time, minutes	0.86	Follower Density, followers/mi/ln	2.8
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	445	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.44	Bicycle Effective Speed Factor	5.07
Bicycle LOS	C		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	2.8	B

HCS7 Multilane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2022
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 52 btw Deer Blvd & West City Limits Rd - Fall AM	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	8.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	53.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	169	Heavy Vehicle Adjustment Factor (fhv)	0.990
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	95
Total Trucks, %	1.00	Capacity (c), pc/h/ln	2060
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2060
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.05

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	53.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	1.8
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	2.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL),veh/h	94	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	1.75
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

Direction 2 Geometric Data			
Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	7.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	53.3		
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume(V) veh/h	89	Heavy Vehicle Adjustment Factor (fhv)	0.990
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	50
Total Trucks, %	1.00	Capacity (c), pc/h/ln	2064
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2064
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.02
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	53.2
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	0.9
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	1.8		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (VOL),veh/h	94	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	1.75
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

HCS7 Multilane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2022
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 52 btw Deer Blvd & West City Limits Rd - Fall PM	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	8.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	53.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	209	Heavy Vehicle Adjustment Factor (fhv)	0.990
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	118
Total Trucks, %	1.00	Capacity (c), pc/h/ln	2060
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2060
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.06

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	53.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.2
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	2.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL),veh/h	116	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	1.86
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

Direction 2 Geometric Data			
Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	7.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	53.3		
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume(V) veh/h	262	Heavy Vehicle Adjustment Factor (fhv)	0.990
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	147
Total Trucks, %	1.00	Capacity (c), pc/h/ln	2064
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2064
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.07
Direction 2 Speed and Density			
Lane Width Adjustment (flw)	0.0	Average Speed (S), mi/h	53.2
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.8
Median Type Adjustment (fm)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fa)	1.8		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (VOL),veh/h	116	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	1.86
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

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Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	8.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	53.0		

Direction 1 Adjustment Factors

Driver Population	Mostly Unfamiliar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	0.913	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	0.898		

Direction 1 Demand and Capacity

Volume(V) veh/h	298	Heavy Vehicle Adjustment Factor (fhv)	0.990
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	167
Total Trucks, %	1.00	Capacity (c), pc/h/ln	2060
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2060
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.08

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	53.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.2
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	2.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL),veh/h	166	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.04
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

Direction 2 Geometric Data			
Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	7.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	53.3		
Direction 2 Adjustment Factors			
Driver Population	Mostly Unfamiliar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	0.913	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	0.898		
Direction 2 Demand and Capacity			
Volume(V) veh/h	531	Heavy Vehicle Adjustment Factor (fhv)	0.990
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	298
Total Trucks, %	1.00	Capacity (c), pc/h/ln	2064
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2064
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.14
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	53.2
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	5.6
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	1.8		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (VOL),veh/h	166	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.04
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

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Project Information

Analyst	SRF Consulting	Date	10/13/2022
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Project Description	16002 - SD 52 btw Gavin's Point Rd & SD 153 - Fall AM	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	8.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	48.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	101	Heavy Vehicle Adjustment Factor (fhv)	1.000
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	56
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1960
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1960
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.03

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	48.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	1.2
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	2.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL),veh/h	56	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	25	Bicycle LOS Score (BLOS)	0.01
Average Effective Width (We), ft	30	Bicycle Level of Service (LOS)	A

Direction 2 Geometric Data			
Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	2.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	49.5		
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume(V) veh/h	48	Heavy Vehicle Adjustment Factor (fHV)	1.000
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	26
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1990
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1990
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.01
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	49.5
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	0.5
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.5		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (VOL),veh/h	56	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	25	Bicycle LOS Score (BLOS)	0.01
Average Effective Width (We), ft	30	Bicycle Level of Service (LOS)	A

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Project Description	16002 - SD 52 btw Gavin's Point Rd & SD 153 - Fall PM	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	8.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLT	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	48.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	125	Heavy Vehicle Adjustment Factor (fhv)	1.000
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	70
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1960
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1960
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.04

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	48.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	1.5
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	2.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL),veh/h	69	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	23	Bicycle LOS Score (BLOS)	0.70
Average Effective Width (We), ft	28	Bicycle Level of Service (LOS)	A

Direction 2 Geometric Data			
Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	2.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	49.5		
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume(V) veh/h	140	Heavy Vehicle Adjustment Factor (fhv)	1.000
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	78
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1990
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1990
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.04
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	49.5
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	1.6
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.5		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (VOL),veh/h	69	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	23	Bicycle LOS Score (BLOS)	0.70
Average Effective Width (We), ft	28	Bicycle Level of Service (LOS)	A

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Project Information

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Jurisdiction		Time Analyzed	
Project Description	16002 - SD 52 btw Gavin's Point Rd & SD 153 - Summer	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	8.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	48.0		

Direction 1 Adjustment Factors

Driver Population	Mostly Unfamiliar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	0.913	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	0.898		

Direction 1 Demand and Capacity

Volume(V) veh/h	165	Heavy Vehicle Adjustment Factor (fhv)	1.000
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	92
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1960
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1960
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.05

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	48.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	1.9
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	2.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL),veh/h	92	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	17	Bicycle LOS Score (BLOS)	2.34
Average Effective Width (We), ft	22	Bicycle Level of Service (LOS)	B

Direction 2 Geometric Data			
Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	2.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	49.5		
Direction 2 Adjustment Factors			
Driver Population	Mostly Unfamiliar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	0.913	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	0.898		
Direction 2 Demand and Capacity			
Volume(V) veh/h	203	Heavy Vehicle Adjustment Factor (fHV)	1.000
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	113
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1990
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1990
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.06
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	49.5
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.3
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.5		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (VOL),veh/h	92	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	17	Bicycle LOS Score (BLOS)	2.34
Average Effective Width (We), ft	22	Bicycle Level of Service (LOS)	B

HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
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Project Description	16002 SD 52 btw SD 50 & Gavin's Point Rd - Fall AM	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	18480
Lane Width, ft	12	Shoulder Width, ft	5
Speed Limit, mi/h	55	Access Point Density, pts/mi	7.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	28	Opposing Demand Flow Rate, veh/h	11
Peak Hour Factor	0.85	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	60.3
Speed Slope Coefficient	3.50060	Speed Power Coefficient	0.64008
PF Slope Coefficient	-1.13041	PF Power Coefficient	0.80928
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	18480	-	-	60.3

Vehicle Results

Average Speed, mi/h	60.3	Percent Followers, %	6.1
Segment Travel Time, minutes	3.49	Follower Density, followers/mi/ln	0.0
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	3
Flow Rate Outside Lane, veh/h	28	Bicycle Effective Width, ft	37
Bicycle LOS Score	0.00	Bicycle Effective Speed Factor	4.79
Bicycle LOS	A		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	0.0	A

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Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	18480
Lane Width, ft	12	Shoulder Width, ft	5
Speed Limit, mi/h	55	Access Point Density, pts/mi	7.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	24	Opposing Demand Flow Rate, veh/h	20
Peak Hour Factor	0.85	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.01

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	60.3
Speed Slope Coefficient	3.51323	Speed Power Coefficient	0.62737
PF Slope Coefficient	-1.14136	PF Power Coefficient	0.80591
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	18480	-	-	60.3

Vehicle Results

Average Speed, mi/h	60.3	Percent Followers, %	5.4
Segment Travel Time, minutes	3.49	Follower Density, followers/mi/ln	0.0
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	3
Flow Rate Outside Lane, veh/h	24	Bicycle Effective Width, ft	37
Bicycle LOS Score	0.00	Bicycle Effective Speed Factor	4.79
Bicycle LOS	A		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	0.0	A

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Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	18480
Lane Width, ft	12	Shoulder Width, ft	5
Speed Limit, mi/h	55	Access Point Density, pts/mi	7.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	40	Opposing Demand Flow Rate, veh/h	33
Peak Hour Factor	0.85	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	60.3
Speed Slope Coefficient	3.52637	Speed Power Coefficient	0.61454
PF Slope Coefficient	-1.15246	PF Power Coefficient	0.80250
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	18480	-	-	60.3

Vehicle Results

Average Speed, mi/h	60.3	Percent Followers, %	8.3
Segment Travel Time, minutes	3.49	Follower Density, followers/mi/ln	0.1
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	3
Flow Rate Outside Lane, veh/h	40	Bicycle Effective Width, ft	36
Bicycle LOS Score	0.00	Bicycle Effective Speed Factor	4.79
Bicycle LOS	A		

Facility Results

T	Follower Density, followers/mi/ln	LOS
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Project Description	16002 - SD 52 btw SD 153 & Deer Blvd - Fall AM	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLT	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	51.3		

Direction 1 Adjustment Factors

Driver Population	Balanced Mix	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	0.950	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	0.939		

Direction 1 Demand and Capacity

Volume(V) veh/h	134	Heavy Vehicle Adjustment Factor (fHV)	1.000
Peak Hour Factor	0.80	Flow Rate (Vp), pc/h/ln	84
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2024
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2024
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.04

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	51.2
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	1.6
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL),veh/h	84	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	24	Bicycle LOS Score (BLOS)	0.00
Average Effective Width (We), ft	30	Bicycle Level of Service (LOS)	A

Direction 2 Geometric Data			
Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	3.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	54.3		
Direction 2 Adjustment Factors			
Driver Population	Balanced Mix	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	0.950	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	0.939		
Direction 2 Demand and Capacity			
Volume(V) veh/h	70	Heavy Vehicle Adjustment Factor (fhv)	1.000
Peak Hour Factor	0.80	Flow Rate (Vp), pc/h/ln	44
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2084
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2084
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.02
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	54.2
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	0.8
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.8		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (VOL),veh/h	84	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	24	Bicycle LOS Score (BLOS)	0.00
Average Effective Width (We), ft	30	Bicycle Level of Service (LOS)	A

HCS7 Multilane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2022
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 52 btw SD 153 & Deer Blvd - Fall PM	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLT	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	51.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	165	Heavy Vehicle Adjustment Factor (fHV)	1.000
Peak Hour Factor	0.80	Flow Rate (Vp), pc/h/ln	103
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2024
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2024
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.05

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	51.2
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.0
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL),veh/h	103	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	1.59
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

Direction 2 Geometric Data			
Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	3.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	54.3		
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume(V) veh/h	172	Heavy Vehicle Adjustment Factor (fhv)	1.000
Peak Hour Factor	0.80	Flow Rate (Vp), pc/h/ln	108
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2084
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2084
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.05
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	54.2
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.0
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.8		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (VOL),veh/h	103	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	1.59
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

HCS7 Multilane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2022
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 52 btw SD 153 & Deer Blvd - Summer	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLT	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	51.3		

Direction 1 Adjustment Factors

Driver Population	Balanced Mix	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	0.950	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	0.939		

Direction 1 Demand and Capacity

Volume(V) veh/h	216	Heavy Vehicle Adjustment Factor (fHV)	1.000
Peak Hour Factor	0.80	Flow Rate (Vp), pc/h/ln	135
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2024
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2024
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.07

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	51.2
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.6
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL),veh/h	135	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	1.73
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

Direction 2 Geometric Data			
Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	3.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	54.3		
Direction 2 Adjustment Factors			
Driver Population	Balanced Mix	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	0.950	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	0.939		
Direction 2 Demand and Capacity			
Volume(V) veh/h	278	Heavy Vehicle Adjustment Factor (fhv)	1.000
Peak Hour Factor	0.80	Flow Rate (Vp), pc/h/ln	174
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2084
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2084
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.08
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	54.2
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.2
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.8		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (VOL),veh/h	135	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	1.73
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2022
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 153 btw SD 52 & SD 50 - Fall AM	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	12460
Lane Width, ft	11	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	9.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	44	Opposing Demand Flow Rate, veh/h	25
Peak Hour Factor	0.80	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	56.4
Speed Slope Coefficient	3.30732	Speed Power Coefficient	0.62198
PF Slope Coefficient	-1.16026	PF Power Coefficient	0.79277
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	12460	-	-	56.4

Vehicle Results

Average Speed, mi/h	56.4	Percent Followers, %	9.3
Segment Travel Time, minutes	2.51	Follower Density, followers/mi/ln	0.1
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	3
Flow Rate Outside Lane, veh/h	44	Bicycle Effective Width, ft	22
Bicycle LOS Score	2.00	Bicycle Effective Speed Factor	4.79
Bicycle LOS	B		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	0.1	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2022
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 153 btw SD 52 & SD 50 - Fall PM	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	12460
Lane Width, ft	11	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	9.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	58	Opposing Demand Flow Rate, veh/h	48
Peak Hour Factor	0.90	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	56.4
Speed Slope Coefficient	3.32714	Speed Power Coefficient	0.60301
PF Slope Coefficient	-1.17711	PF Power Coefficient	0.78787
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	12460	-	-	56.4

Vehicle Results

Average Speed, mi/h	56.4	Percent Followers, %	11.7
Segment Travel Time, minutes	2.51	Follower Density, followers/mi/ln	0.1
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	3
Flow Rate Outside Lane, veh/h	58	Bicycle Effective Width, ft	21
Bicycle LOS Score	2.36	Bicycle Effective Speed Factor	4.79
Bicycle LOS	B		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	0.1	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2022
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 153 btw SD 52 & SD 50 - Summer	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	12460
Lane Width, ft	11	Shoulder Width, ft	1
Speed Limit, mi/h	50	Access Point Density, pts/mi	9.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	92	Opposing Demand Flow Rate, veh/h	60
Peak Hour Factor	0.90	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.05

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.7
Speed Slope Coefficient	3.02685	Speed Power Coefficient	0.59501
PF Slope Coefficient	-1.19791	PF Power Coefficient	0.76805
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	12460	-	-	50.7

Vehicle Results

Average Speed, mi/h	50.7	Percent Followers, %	17.5
Segment Travel Time, minutes	2.80	Follower Density, followers/mi/ln	0.3
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	3
Flow Rate Outside Lane, veh/h	92	Bicycle Effective Width, ft	19
Bicycle LOS Score	2.96	Bicycle Effective Speed Factor	4.62
Bicycle LOS	C		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	0.3	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2022
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 314 btw SD 50 & West City Limits Rd - Fall AM	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	22070
Lane Width, ft	11	Shoulder Width, ft	3
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	198	Opposing Demand Flow Rate, veh/h	50
Peak Hour Factor	0.80	Total Trucks, %	15.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.12

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	57.5
Speed Slope Coefficient	3.39115	Speed Power Coefficient	0.60147
PF Slope Coefficient	-1.17295	PF Power Coefficient	0.79321
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	22070	-	-	56.7

Vehicle Results

Average Speed, mi/h	56.7	Percent Followers, %	27.7
Segment Travel Time, minutes	4.43	Follower Density, followers/mi/ln	1.0
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	198	Bicycle Effective Width, ft	17
Bicycle LOS Score	8.70	Bicycle Effective Speed Factor	4.79
Bicycle LOS	F		

Facility Results

T	Follower Density, followers/mi/ln	LOS
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HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2022
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 314 btw SD 50 & West City Limits Rd - Fall PM	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	22070
Lane Width, ft	11	Shoulder Width, ft	3
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	84	Opposing Demand Flow Rate, veh/h	108
Peak Hour Factor	0.75	Total Trucks, %	8.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.05

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	57.7
Speed Slope Coefficient	3.43821	Speed Power Coefficient	0.57074
PF Slope Coefficient	-1.20014	PF Power Coefficient	0.78479
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	22070	-	-	57.7

Vehicle Results

Average Speed, mi/h	57.7	Percent Followers, %	15.8
Segment Travel Time, minutes	4.34	Follower Density, followers/mi/ln	0.2
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	84	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.78	Bicycle Effective Speed Factor	4.79
Bicycle LOS	D		

Facility Results

T	Follower Density, followers/mi/ln	LOS
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1	0.2	A
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HCS7 Two-Lane Highway Report

Project Information

Analyst		Date	10/14/2022
Agency		Analysis Year	2022
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 314 btw SD 50 & West City Limits Rd - Summer	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	22070
Lane Width, ft	11	Shoulder Width, ft	3
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	131	Opposing Demand Flow Rate, veh/h	81
Peak Hour Factor	0.80	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.08

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	58.0
Speed Slope Coefficient	3.43836	Speed Power Coefficient	0.58317
PF Slope Coefficient	-1.18896	PF Power Coefficient	0.78763
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	22070	-	-	57.5

Vehicle Results

Average Speed, mi/h	57.5	Percent Followers, %	21.4
Segment Travel Time, minutes	4.36	Follower Density, followers/mi/ln	0.5
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	131	Bicycle Effective Width, ft	21
Bicycle LOS Score	2.43	Bicycle Effective Speed Factor	4.79
Bicycle LOS	B		

Facility Results

T	Follower Density, followers/mi/ln	LOS
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1	0.5	A
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HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2035
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 50 btw SD 52 & SD 153 - Fall AM	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	5280
Measured FFS	Measured	Free-Flow Speed, mi/h	60.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	334	Opposing Demand Flow Rate, veh/h	166
Peak Hour Factor	0.90	Total Trucks, %	10.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.20

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	60.0
Speed Slope Coefficient	4.35708	Speed Power Coefficient	0.54958
PF Slope Coefficient	-1.20138	PF Power Coefficient	0.81440
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	58.0

Vehicle Results

Average Speed, mi/h	58.0	Percent Followers, %	38.9
Segment Travel Time, minutes	1.03	Follower Density, followers/mi/ln	2.2
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	334	Bicycle Effective Width, ft	24
Bicycle LOS Score	5.48	Bicycle Effective Speed Factor	5.07
Bicycle LOS	E		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	2.2	B

HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2035
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 50 btw SD 52 & SD 153 - Fall PM	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	65	Access Point Density, pts/mi	7.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	246	Opposing Demand Flow Rate, veh/h	374
Peak Hour Factor	0.90	Total Trucks, %	6.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.14

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	72.2
Speed Slope Coefficient	4.26983	Speed Power Coefficient	0.50112
PF Slope Coefficient	-1.16208	PF Power Coefficient	0.83206
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	70.5

Vehicle Results

Average Speed, mi/h	70.5	Percent Followers, %	30.3
Segment Travel Time, minutes	0.85	Follower Density, followers/mi/ln	1.1
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	246	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.78	Bicycle Effective Speed Factor	5.07
Bicycle LOS	D		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	1.1	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2035
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 50 btw SD 52 & SD 153 - Summer	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	65	Access Point Density, pts/mi	7.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	387	Opposing Demand Flow Rate, veh/h	249
Peak Hour Factor	0.90	Total Trucks, %	6.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.23

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	72.2
Speed Slope Coefficient	4.23278	Speed Power Coefficient	0.52658
PF Slope Coefficient	-1.14555	PF Power Coefficient	0.84034
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	70.0

Vehicle Results

Average Speed, mi/h	70.0	Percent Followers, %	40.3
Segment Travel Time, minutes	0.86	Follower Density, followers/mi/ln	2.2
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	387	Bicycle Effective Width, ft	24
Bicycle LOS Score	4.01	Bicycle Effective Speed Factor	5.07
Bicycle LOS	D		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	2.2	B

HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2035
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 50 btw SD 153 & SD 314 - Fall AM	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	2880
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	65	Access Point Density, pts/mi	8.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	518	Opposing Demand Flow Rate, veh/h	191
Peak Hour Factor	0.90	Total Trucks, %	10.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.30

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	71.8
Speed Slope Coefficient	4.16487	Speed Power Coefficient	0.54178
PF Slope Coefficient	-1.16814	PF Power Coefficient	0.83646
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2880	-	-	69.2

Vehicle Results

Average Speed, mi/h	69.2	Percent Followers, %	49.0
Segment Travel Time, minutes	0.47	Follower Density, followers/mi/ln	3.7
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	518	Bicycle Effective Width, ft	24
Bicycle LOS Score	5.70	Bicycle Effective Speed Factor	5.07
Bicycle LOS	F		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	3.7	B

HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
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Jurisdiction		Time Analyzed	
Project Description	16002 - SD 50 btw SD 153 & SD 314 - Fall PM	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	2880
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	65	Access Point Density, pts/mi	8.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	510	Opposing Demand Flow Rate, veh/h	327
Peak Hour Factor	0.90	Total Trucks, %	8.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.30

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	71.8
Speed Slope Coefficient	4.21253	Speed Power Coefficient	0.50986
PF Slope Coefficient	-1.19036	PF Power Coefficient	0.82665
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2880	-	-	69.2

Vehicle Results

Average Speed, mi/h	69.2	Percent Followers, %	49.5
Segment Travel Time, minutes	0.47	Follower Density, followers/mi/ln	3.6
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	510	Bicycle Effective Width, ft	24
Bicycle LOS Score	4.88	Bicycle Effective Speed Factor	5.07
Bicycle LOS	E		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	3.6	B

HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2035
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 50 btw SD 153 & SD 314 - Summer	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	65	Access Point Density, pts/mi	6.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	514	Opposing Demand Flow Rate, veh/h	313
Peak Hour Factor	0.90	Total Trucks, %	4.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.30

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	72.5
Speed Slope Coefficient	4.26989	Speed Power Coefficient	0.51249
PF Slope Coefficient	-1.15273	PF Power Coefficient	0.83636
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	69.7

Vehicle Results

Average Speed, mi/h	69.7	Percent Followers, %	48.4
Segment Travel Time, minutes	0.86	Follower Density, followers/mi/ln	3.6
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	514	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.52	Bicycle Effective Speed Factor	5.07
Bicycle LOS	D		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	3.6	B

HCS7 Multilane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2035
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 52 btw Deer Blvd & West City Limits Rd - Fall AM	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	8.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	53.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	362	Heavy Vehicle Adjustment Factor (fhv)	0.990
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	203
Total Trucks, %	1.00	Capacity (c), pc/h/ln	2060
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2060
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.10

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	53.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.8
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	2.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL),veh/h	201	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.14
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

Direction 2 Geometric Data			
Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	7.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	53.3		
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume(V) veh/h	153	Heavy Vehicle Adjustment Factor (fHV)	0.990
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	86
Total Trucks, %	1.00	Capacity (c), pc/h/ln	2064
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2064
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.04
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	53.2
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	1.6
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	1.8		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (VOL),veh/h	201	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.14
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

HCS7 Multilane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
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Jurisdiction		Time Analyzed	
Project Description	16002 - SD 52 btw Deer Blvd & West City Limits Rd - Fall PM	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	8.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	53.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	318	Heavy Vehicle Adjustment Factor (fhv)	0.990
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	178
Total Trucks, %	1.00	Capacity (c), pc/h/ln	2060
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2060
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.09

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	53.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.4
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	2.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL),veh/h	177	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.07
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

Direction 2 Geometric Data			
Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	7.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	53.3		
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume(V) veh/h	524	Heavy Vehicle Adjustment Factor (fHV)	0.990
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	294
Total Trucks, %	1.00	Capacity (c), pc/h/ln	2064
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2064
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.14
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	53.2
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	5.5
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	1.8		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (VOL),veh/h	177	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.07
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

HCS7 Multilane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
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Jurisdiction		Time Analyzed	
Project Description	16002 - SD 52 btw Deer Blvd & West City Limits Rd - Summer	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	-	Access Point Density, pts/mi	-
Lane Width, ft	-	Left-Side Lateral Clearance (LCR), ft	-
Median Type	-	Total Lateral Clearance (TLC), ft	-
Free-Flow Speed (FFS), mi/h	55.0		

Direction 1 Adjustment Factors

Driver Population	Mostly Unfamiliar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	0.913	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	0.898		

Direction 1 Demand and Capacity

Volume(V) veh/h	486	Heavy Vehicle Adjustment Factor (fhv)	0.990
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	272
Total Trucks, %	1.00	Capacity (c), pc/h/ln	2100
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2100
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.13

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	55.0
Total Lateral Clearance Adj. (fLLC)	-	Density (D), pc/mi/ln	4.9
Median Type Adjustment (fM)	-	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	-		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL),veh/h	270	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.29
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

Direction 2 Geometric Data			
Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	7.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	53.3		
Direction 2 Adjustment Factors			
Driver Population	Mostly Unfamiliar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	0.913	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	0.898		
Direction 2 Demand and Capacity			
Volume(V) veh/h	746	Heavy Vehicle Adjustment Factor (fhv)	0.990
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	418
Total Trucks, %	1.00	Capacity (c), pc/h/ln	2064
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2064
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.20
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	53.2
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	7.9
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	1.8		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL),veh/h	270	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.29
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

HCS7 Multilane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/13/2022
Agency		Analysis Year	2035
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 52 btw Gavin's Point Rd & SD 153 - Fall AM	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	8.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLT	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	48.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	132	Heavy Vehicle Adjustment Factor (fhv)	1.000
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	74
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1960
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1960
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.04

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	48.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	1.5
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	2.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL),veh/h	73	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	23	Bicycle LOS Score (BLOS)	0.72
Average Effective Width (We), ft	28	Bicycle Level of Service (LOS)	A

Direction 2 Geometric Data			
Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	2.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	49.5		
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume(V) veh/h	63	Heavy Vehicle Adjustment Factor (fhv)	1.000
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	35
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1990
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1990
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.02
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	49.5
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	0.7
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.5		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (VOL),veh/h	73	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	23	Bicycle LOS Score (BLOS)	0.72
Average Effective Width (We), ft	28	Bicycle Level of Service (LOS)	A

HCS7 Multilane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/13/2022
Agency		Analysis Year	2035
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 52 btw Gavin's Point Rd & SD 153 - Fall PM	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	8.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	48.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	153	Heavy Vehicle Adjustment Factor (fhv)	1.000
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	85
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1960
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1960
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.04

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	48.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	1.8
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	2.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL),veh/h	85	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	21	Bicycle LOS Score (BLOS)	1.34
Average Effective Width (We), ft	26	Bicycle Level of Service (LOS)	A

Direction 2 Geometric Data			
Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	2.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	49.5		
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume(V) veh/h	183	Heavy Vehicle Adjustment Factor (fhv)	1.000
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	102
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1990
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1990
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.05
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	49.5
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.1
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.5		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (VOL),veh/h	85	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	21	Bicycle LOS Score (BLOS)	1.34
Average Effective Width (We), ft	26	Bicycle Level of Service (LOS)	A

HCS7 Multilane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/13/2022
Agency		Analysis Year	2035
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 52 btw Gavin's Point Rd & SD 153 - Summer	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	8.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLT	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	48.0		

Direction 1 Adjustment Factors

Driver Population	Mostly Unfamiliar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	0.913	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	0.898		

Direction 1 Demand and Capacity

Volume(V) veh/h	216	Heavy Vehicle Adjustment Factor (fhv)	1.000
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	120
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1960
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1960
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.06

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	48.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.5
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	2.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL),veh/h	120	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	17	Bicycle LOS Score (BLOS)	2.48
Average Effective Width (We), ft	22	Bicycle Level of Service (LOS)	B

Direction 2 Geometric Data			
Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	2.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	49.5		
Direction 2 Adjustment Factors			
Driver Population	Mostly Unfamiliar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	0.913	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	0.898		
Direction 2 Demand and Capacity			
Volume(V) veh/h	265	Heavy Vehicle Adjustment Factor (fhv)	1.000
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	147
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1990
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1990
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.07
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	49.5
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.0
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.5		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (VOL),veh/h	120	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	17	Bicycle LOS Score (BLOS)	2.48
Average Effective Width (We), ft	22	Bicycle Level of Service (LOS)	B

HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2035
Jurisdiction		Time Analyzed	
Project Description	16002 SD 52 btw SD 50 & Gavin's Point Rd - Fall AM	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	18480
Lane Width, ft	12	Shoulder Width, ft	5
Speed Limit, mi/h	55	Access Point Density, pts/mi	7.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	34	Opposing Demand Flow Rate, veh/h	13
Peak Hour Factor	0.90	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	60.3
Speed Slope Coefficient	3.50472	Speed Power Coefficient	0.63589
PF Slope Coefficient	-1.13401	PF Power Coefficient	0.80817
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	18480	-	-	60.3

Vehicle Results

Average Speed, mi/h	60.3	Percent Followers, %	7.2
Segment Travel Time, minutes	3.49	Follower Density, followers/mi/ln	0.0
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	3
Flow Rate Outside Lane, veh/h	34	Bicycle Effective Width, ft	36
Bicycle LOS Score	0.00	Bicycle Effective Speed Factor	4.79
Bicycle LOS	A		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	0.0	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
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Project Description	16002 SD 52 btw SD 50 & Gavin's Point Rd - Fall PM	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	18480
Lane Width, ft	12	Shoulder Width, ft	5
Speed Limit, mi/h	55	Access Point Density, pts/mi	7.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	26	Opposing Demand Flow Rate, veh/h	22
Peak Hour Factor	0.90	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	60.3
Speed Slope Coefficient	3.51574	Speed Power Coefficient	0.62490
PF Slope Coefficient	-1.14350	PF Power Coefficient	0.80525
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	18480	-	-	60.3

Vehicle Results

Average Speed, mi/h	60.3	Percent Followers, %	5.8
Segment Travel Time, minutes	3.49	Follower Density, followers/mi/ln	0.0
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	3
Flow Rate Outside Lane, veh/h	26	Bicycle Effective Width, ft	37
Bicycle LOS Score	0.00	Bicycle Effective Speed Factor	4.79
Bicycle LOS	A		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	0.0	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2035
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 52 btw SD 50 & Gavin's Point Rd - Summer	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	18480
Lane Width, ft	12	Shoulder Width, ft	5
Speed Limit, mi/h	55	Access Point Density, pts/mi	7.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	49	Opposing Demand Flow Rate, veh/h	41
Peak Hour Factor	0.90	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	60.3
Speed Slope Coefficient	3.53334	Speed Power Coefficient	0.60789
PF Slope Coefficient	-1.15823	PF Power Coefficient	0.80074
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	18480	-	-	60.3

Vehicle Results

Average Speed, mi/h	60.3	Percent Followers, %	9.8
Segment Travel Time, minutes	3.49	Follower Density, followers/mi/ln	0.1
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	3
Flow Rate Outside Lane, veh/h	49	Bicycle Effective Width, ft	35
Bicycle LOS Score	0.00	Bicycle Effective Speed Factor	4.79
Bicycle LOS	A		

Facility Results

T	Follower Density, followers/mi/ln	LOS
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1	0.1	A
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HCS7 Multilane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2035
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 52 btw SD 153 & Deer Blvd - Fall AM	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLT	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	51.3		

Direction 1 Adjustment Factors

Driver Population	Balanced Mix	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	0.950	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	0.939		

Direction 1 Demand and Capacity

Volume(V) veh/h	175	Heavy Vehicle Adjustment Factor (fHV)	1.000
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	97
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2024
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2024
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.05

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	51.2
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	1.9
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL),veh/h	97	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	1.56
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

Direction 2 Geometric Data			
Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	3.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	54.3		
Direction 2 Adjustment Factors			
Driver Population	Balanced Mix	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	0.950	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	0.939		
Direction 2 Demand and Capacity			
Volume(V) veh/h	91	Heavy Vehicle Adjustment Factor (fhv)	1.000
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	50
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2084
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2084
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.02
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	54.2
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	0.9
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.8		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (VOL),veh/h	97	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	1.56
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

HCS7 Multilane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
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Jurisdiction		Time Analyzed	
Project Description	16002 - SD 52 btw SD 153 & Deer Blvd - Fall PM	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLT	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	51.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	215	Heavy Vehicle Adjustment Factor (fHV)	1.000
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	120
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2024
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2024
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.06

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	51.2
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.3
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL),veh/h	119	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	1.67
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

Direction 2 Geometric Data			
Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	3.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	54.3		
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume(V) veh/h	225	Heavy Vehicle Adjustment Factor (fHV)	1.000
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	125
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2084
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2084
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.06
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	54.2
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.3
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.8		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (VOL),veh/h	119	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	1.67
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

HCS7 Multilane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
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Jurisdiction		Time Analyzed	
Project Description	16002 - SD 52 btw SD 153 & Deer Blvd - Summer	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLT	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	51.3		

Direction 1 Adjustment Factors

Driver Population	Balanced Mix	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	0.950	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	0.939		

Direction 1 Demand and Capacity

Volume(V) veh/h	283	Heavy Vehicle Adjustment Factor (fHV)	1.000
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	157
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2024
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2024
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.08

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	51.2
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.1
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL),veh/h	157	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	1.81
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

Direction 2 Geometric Data			
Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	3.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	54.3		
Direction 2 Adjustment Factors			
Driver Population	Balanced Mix	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	0.950	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	0.939		
Direction 2 Demand and Capacity			
Volume(V) veh/h	364	Heavy Vehicle Adjustment Factor (fhv)	1.000
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	202
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2084
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2084
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.10
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	54.2
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.7
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.8		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (VOL),veh/h	157	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	1.81
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

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Project Information

Analyst	SRF Consulting	Date	10/14/2022
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Project Description	16002 - SD 153 btw SD 52 & SD 50 - Fall AM	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	12460
Lane Width, ft	11	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	9.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	67	Opposing Demand Flow Rate, veh/h	34
Peak Hour Factor	0.90	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	56.4
Speed Slope Coefficient	3.31633	Speed Power Coefficient	0.61325
PF Slope Coefficient	-1.16800	PF Power Coefficient	0.79052
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	12460	-	-	56.4

Vehicle Results

Average Speed, mi/h	56.4	Percent Followers, %	12.8
Segment Travel Time, minutes	2.51	Follower Density, followers/mi/ln	0.2
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	3
Flow Rate Outside Lane, veh/h	67	Bicycle Effective Width, ft	20
Bicycle LOS Score	2.63	Bicycle Effective Speed Factor	4.79
Bicycle LOS	C		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	0.2	A

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Project Information

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Project Description	16002 - SD 153 btw SD 52 & SD 50 - Fall PM	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	12460
Lane Width, ft	11	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	9.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	67	Opposing Demand Flow Rate, veh/h	74
Peak Hour Factor	0.90	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	56.4
Speed Slope Coefficient	3.34493	Speed Power Coefficient	0.58673
PF Slope Coefficient	-1.19167	PF Power Coefficient	0.78366
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	12460	-	-	56.4

Vehicle Results

Average Speed, mi/h	56.4	Percent Followers, %	13.3
Segment Travel Time, minutes	2.51	Follower Density, followers/mi/ln	0.2
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	3
Flow Rate Outside Lane, veh/h	67	Bicycle Effective Width, ft	20
Bicycle LOS Score	2.63	Bicycle Effective Speed Factor	4.79
Bicycle LOS	C		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	0.2	A

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Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2035
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 153 btw SD 52 & SD 50 - Summer	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	12460
Lane Width, ft	11	Shoulder Width, ft	1
Speed Limit, mi/h	50	Access Point Density, pts/mi	9.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	113	Opposing Demand Flow Rate, veh/h	114
Peak Hour Factor	0.90	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.07

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.7
Speed Slope Coefficient	3.05745	Speed Power Coefficient	0.56805
PF Slope Coefficient	-1.22314	PF Power Coefficient	0.76116
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	12460	-	-	50.4

Vehicle Results

Average Speed, mi/h	50.4	Percent Followers, %	20.8
Segment Travel Time, minutes	2.81	Follower Density, followers/mi/ln	0.5
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	3
Flow Rate Outside Lane, veh/h	113	Bicycle Effective Width, ft	18
Bicycle LOS Score	3.25	Bicycle Effective Speed Factor	4.62
Bicycle LOS	C		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	0.5	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2035
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 314 btw SD 50 & West City Limits Rd - Fall AM	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	22070
Lane Width, ft	11	Shoulder Width, ft	3
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	230	Opposing Demand Flow Rate, veh/h	58
Peak Hour Factor	0.90	Total Trucks, %	15.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.14

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	57.5
Speed Slope Coefficient	3.39664	Speed Power Coefficient	0.59639
PF Slope Coefficient	-1.17745	PF Power Coefficient	0.79189
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	22070	-	-	56.5

Vehicle Results

Average Speed, mi/h	56.5	Percent Followers, %	30.8
Segment Travel Time, minutes	4.44	Follower Density, followers/mi/ln	1.3
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	230	Bicycle Effective Width, ft	14
Bicycle LOS Score	9.24	Bicycle Effective Speed Factor	4.79
Bicycle LOS	F		

Facility Results

T	Follower Density, followers/mi/ln	LOS
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1	1.3	A
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HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2035
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 314 btw SD 50 & West City Limits Rd - Fall PM	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	22070
Lane Width, ft	11	Shoulder Width, ft	3
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	91	Opposing Demand Flow Rate, veh/h	118
Peak Hour Factor	0.90	Total Trucks, %	8.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.05

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	57.7
Speed Slope Coefficient	3.44298	Speed Power Coefficient	0.56669
PF Slope Coefficient	-1.20375	PF Power Coefficient	0.78371
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	22070	-	-	57.7

Vehicle Results

Average Speed, mi/h	57.7	Percent Followers, %	16.8
Segment Travel Time, minutes	4.34	Follower Density, followers/mi/ln	0.3
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	91	Bicycle Effective Width, ft	22
Bicycle LOS Score	4.28	Bicycle Effective Speed Factor	4.79
Bicycle LOS	D		

Facility Results

T	Follower Density, followers/mi/ln	LOS
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1	0.3	A
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HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2035
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 314 btw SD 50 & West City Limits Rd - Summer	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	22070
Lane Width, ft	11	Shoulder Width, ft	3
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	152	Opposing Demand Flow Rate, veh/h	94
Peak Hour Factor	0.90	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.09

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	58.0
Speed Slope Coefficient	3.44566	Speed Power Coefficient	0.57676
PF Slope Coefficient	-1.19464	PF Power Coefficient	0.78595
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	22070	-	-	57.4

Vehicle Results

Average Speed, mi/h	57.4	Percent Followers, %	23.8
Segment Travel Time, minutes	4.37	Follower Density, followers/mi/ln	0.6
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	152	Bicycle Effective Width, ft	18
Bicycle LOS Score	3.09	Bicycle Effective Speed Factor	4.79
Bicycle LOS	C		

Facility Results

T	Follower Density, followers/mi/ln	LOS
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1	0.6	A
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HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2050
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 50 btw SD 52 & SD 153 - Fall AM	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	65	Access Point Density, pts/mi	7.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	443	Opposing Demand Flow Rate, veh/h	218
Peak Hour Factor	0.90	Total Trucks, %	10.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.26

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	72.0
Speed Slope Coefficient	4.21499	Speed Power Coefficient	0.53440
PF Slope Coefficient	-1.14070	PF Power Coefficient	0.84305
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	69.6

Vehicle Results

Average Speed, mi/h	69.6	Percent Followers, %	43.7
Segment Travel Time, minutes	0.86	Follower Density, followers/mi/ln	2.8
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	443	Bicycle Effective Width, ft	24
Bicycle LOS Score	5.62	Bicycle Effective Speed Factor	5.07
Bicycle LOS	F		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	2.8	B

HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2050
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 50 btw SD 52 & SD 153 - Fall PM	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	65	Access Point Density, pts/mi	7.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	320	Opposing Demand Flow Rate, veh/h	491
Peak Hour Factor	0.90	Total Trucks, %	6.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.19

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	72.2
Speed Slope Coefficient	4.29896	Speed Power Coefficient	0.48327
PF Slope Coefficient	-1.17231	PF Power Coefficient	0.82586
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	70.1

Vehicle Results

Average Speed, mi/h	70.1	Percent Followers, %	36.7
Segment Travel Time, minutes	0.86	Follower Density, followers/mi/ln	1.7
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	320	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.92	Bicycle Effective Speed Factor	5.07
Bicycle LOS	D		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	1.7	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2050
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 50 btw SD 52 & SD 153 - Summer	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	65	Access Point Density, pts/mi	7.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	510	Opposing Demand Flow Rate, veh/h	330
Peak Hour Factor	0.90	Total Trucks, %	6.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.30

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	72.2
Speed Slope Coefficient	4.25755	Speed Power Coefficient	0.50922
PF Slope Coefficient	-1.15703	PF Power Coefficient	0.83475
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	69.4

Vehicle Results

Average Speed, mi/h	69.4	Percent Followers, %	48.3
Segment Travel Time, minutes	0.86	Follower Density, followers/mi/ln	3.5
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	510	Bicycle Effective Width, ft	24
Bicycle LOS Score	4.15	Bicycle Effective Speed Factor	5.07
Bicycle LOS	D		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	3.5	B

HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2050
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 50 btw SD 153 & SD 314 - Fall AM	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	2880
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	65	Access Point Density, pts/mi	8.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	681	Opposing Demand Flow Rate, veh/h	251
Peak Hour Factor	0.90	Total Trucks, %	10.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.40

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	71.8
Speed Slope Coefficient	4.18583	Speed Power Coefficient	0.52605
PF Slope Coefficient	-1.17954	PF Power Coefficient	0.83178
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	5.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2880	-	-	68.6

Vehicle Results

Average Speed, mi/h	68.6	Percent Followers, %	57.6
Segment Travel Time, minutes	0.48	Follower Density, followers/mi/ln	5.7
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	681	Bicycle Effective Width, ft	24
Bicycle LOS Score	5.84	Bicycle Effective Speed Factor	5.07
Bicycle LOS	F		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	5.7	C

HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2050
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 50 btw SD 153 & SD 314 - Fall PM	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	2880
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	65	Access Point Density, pts/mi	8.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	672	Opposing Demand Flow Rate, veh/h	432
Peak Hour Factor	0.90	Total Trucks, %	8.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.40

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	71.8
Speed Slope Coefficient	4.24069	Speed Power Coefficient	0.49174
PF Slope Coefficient	-1.20181	PF Power Coefficient	0.82077
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	5.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2880	-	-	68.6

Vehicle Results

Average Speed, mi/h	68.6	Percent Followers, %	58.0
Segment Travel Time, minutes	0.48	Follower Density, followers/mi/ln	5.7
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	672	Bicycle Effective Width, ft	24
Bicycle LOS Score	5.02	Bicycle Effective Speed Factor	5.07
Bicycle LOS	E		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	5.7	C

HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2050
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 50 btw SD 153 & SD 314 - Summer	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	65	Access Point Density, pts/mi	6.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	679	Opposing Demand Flow Rate, veh/h	413
Peak Hour Factor	0.90	Total Trucks, %	4.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.40

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	72.5
Speed Slope Coefficient	4.29715	Speed Power Coefficient	0.49468
PF Slope Coefficient	-1.16363	PF Power Coefficient	0.83040
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	5.6
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	69.2

Vehicle Results

Average Speed, mi/h	69.2	Percent Followers, %	57.0
Segment Travel Time, minutes	0.87	Follower Density, followers/mi/ln	5.6
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	679	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.66	Bicycle Effective Speed Factor	5.07
Bicycle LOS	D		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	5.6	C

HCS7 Multilane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2050
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 52 btw Deer Blvd & West City Limits Rd - Fall AM	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	8.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	53.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	716	Heavy Vehicle Adjustment Factor (fhv)	0.990
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	402
Total Trucks, %	1.00	Capacity (c), pc/h/ln	2060
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2060
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.20

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	53.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	7.6
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	2.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL),veh/h	398	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.48
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

Direction 2 Geometric Data			
Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	7.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	53.3		
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume(V) veh/h	284	Heavy Vehicle Adjustment Factor (fHV)	0.990
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	160
Total Trucks, %	1.00	Capacity (c), pc/h/ln	2064
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2064
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.08
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	53.2
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.0
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	1.8		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (VOL),veh/h	398	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.48
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

HCS7 Multilane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2035
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 52 btw Deer Blvd & West City Limits Rd - Fall PM	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	8.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	53.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	407	Heavy Vehicle Adjustment Factor (fhv)	0.990
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	228
Total Trucks, %	1.00	Capacity (c), pc/h/ln	2060
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2060
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.11

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	53.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	4.3
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	2.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL),veh/h	226	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.20
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

Direction 2 Geometric Data			
Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	7.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	53.3		
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume(V) veh/h	698	Heavy Vehicle Adjustment Factor (fHV)	0.990
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	392
Total Trucks, %	1.00	Capacity (c), pc/h/ln	2064
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2064
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.19
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	53.2
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	7.4
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	1.8		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (VOL),veh/h	226	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.20
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

HCS7 Multilane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2050
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 52 btw Deer Blvd & West City Limits Rd - Summer	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	8.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	53.0		

Direction 1 Adjustment Factors

Driver Population	Mostly Unfamiliar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	0.913	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	0.898		

Direction 1 Demand and Capacity

Volume(V) veh/h	641	Heavy Vehicle Adjustment Factor (fhv)	0.990
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	360
Total Trucks, %	1.00	Capacity (c), pc/h/ln	2060
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2060
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.17

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	53.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	6.8
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	2.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL),veh/h	356	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.43
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

Direction 2 Geometric Data			
Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	7.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	53.3		
Direction 2 Adjustment Factors			
Driver Population	Mostly Unfamiliar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	0.913	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	0.898		
Direction 2 Demand and Capacity			
Volume(V) veh/h	968	Heavy Vehicle Adjustment Factor (fhv)	0.990
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	543
Total Trucks, %	1.00	Capacity (c), pc/h/ln	2064
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2064
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.26
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	53.2
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	10.2
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	1.8		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (VOL),veh/h	356	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.43
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

HCS7 Multilane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/13/2022
Agency		Analysis Year	2050
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 52 btw Gavin's Point Rd & SD 153 - Fall AM	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	8.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	48.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	173	Heavy Vehicle Adjustment Factor (fhv)	1.000
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	96
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1960
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1960
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.05

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	48.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.0
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	2.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL),veh/h	96	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	17	Bicycle LOS Score (BLOS)	2.36
Average Effective Width (We), ft	22	Bicycle Level of Service (LOS)	B

Direction 2 Geometric Data			
Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	2.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	49.5		
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume(V) veh/h	83	Heavy Vehicle Adjustment Factor (fHV)	1.000
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	46
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1990
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1990
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.02
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	49.5
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	0.9
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.5		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (VOL),veh/h	96	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	17	Bicycle LOS Score (BLOS)	2.36
Average Effective Width (We), ft	22	Bicycle Level of Service (LOS)	B

HCS7 Multilane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/13/2022
Agency		Analysis Year	2050
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 52 btw Gavin's Point Rd & SD 153 - Fall PM	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	8.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	48.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	241	Heavy Vehicle Adjustment Factor (fhv)	1.000
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	134
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1960
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1960
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.07

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	48.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.8
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	2.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL),veh/h	134	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	17	Bicycle LOS Score (BLOS)	2.53
Average Effective Width (We), ft	22	Bicycle Level of Service (LOS)	C

Direction 2 Geometric Data			
Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	2.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	49.5		
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume(V) veh/h	216	Heavy Vehicle Adjustment Factor (fhv)	1.000
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	120
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1990
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1990
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.06
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	49.5
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.4
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.5		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (VOL),veh/h	134	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	17	Bicycle LOS Score (BLOS)	2.53
Average Effective Width (We), ft	22	Bicycle Level of Service (LOS)	C

HCS7 Multilane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/13/2022
Agency		Analysis Year	2050
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 52 btw Gavin's Point Rd & SD 153 - Summer	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	8.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	48.0		

Direction 1 Adjustment Factors

Driver Population	Mostly Unfamiliar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	0.913	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	0.898		

Direction 1 Demand and Capacity

Volume(V) veh/h	288	Heavy Vehicle Adjustment Factor (fhv)	1.000
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	160
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1960
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1960
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.08

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	48.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.3
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	2.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL),veh/h	160	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	17	Bicycle LOS Score (BLOS)	2.62
Average Effective Width (We), ft	22	Bicycle Level of Service (LOS)	C

Direction 2 Geometric Data			
Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	50.0	Access Point Density, pts/mi	2.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	49.5		
Direction 2 Adjustment Factors			
Driver Population	Mostly Unfamiliar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	0.913	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	0.898		
Direction 2 Demand and Capacity			
Volume(V) veh/h	350	Heavy Vehicle Adjustment Factor (fhv)	1.000
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	194
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1990
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1990
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.10
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	49.5
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.9
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.5		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (VOL),veh/h	160	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	17	Bicycle LOS Score (BLOS)	2.62
Average Effective Width (We), ft	22	Bicycle Level of Service (LOS)	C

HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2050
Jurisdiction		Time Analyzed	
Project Description	16002 SD 52 btw SD 50 & Gavin's Point Rd - Fall AM	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	18480
Lane Width, ft	12	Shoulder Width, ft	5
Speed Limit, mi/h	55	Access Point Density, pts/mi	7.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	47	Opposing Demand Flow Rate, veh/h	17
Peak Hour Factor	0.90	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	60.3
Speed Slope Coefficient	3.50919	Speed Power Coefficient	0.63140
PF Slope Coefficient	-1.13788	PF Power Coefficient	0.80697
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	18480	-	-	60.3

Vehicle Results

Average Speed, mi/h	60.3	Percent Followers, %	9.1
Segment Travel Time, minutes	3.49	Follower Density, followers/mi/ln	0.1
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	3
Flow Rate Outside Lane, veh/h	47	Bicycle Effective Width, ft	35
Bicycle LOS Score	0.00	Bicycle Effective Speed Factor	4.79
Bicycle LOS	A		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	0.1	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2050
Jurisdiction		Time Analyzed	
Project Description	16002 SD 52 btw SD 50 & Gavin's Point Rd - Fall PM	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	18480
Lane Width, ft	12	Shoulder Width, ft	5
Speed Limit, mi/h	55	Access Point Density, pts/mi	7.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	34	Opposing Demand Flow Rate, veh/h	29
Peak Hour Factor	0.90	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	60.3
Speed Slope Coefficient	3.52259	Speed Power Coefficient	0.61819
PF Slope Coefficient	-1.14930	PF Power Coefficient	0.80347
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	18480	-	-	60.3

Vehicle Results

Average Speed, mi/h	60.3	Percent Followers, %	7.4
Segment Travel Time, minutes	3.49	Follower Density, followers/mi/ln	0.0
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	3
Flow Rate Outside Lane, veh/h	34	Bicycle Effective Width, ft	36
Bicycle LOS Score	0.00	Bicycle Effective Speed Factor	4.79
Bicycle LOS	A		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	0.0	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2050
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 52 btw SD 50 & Gavin's Point Rd - Summer	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	18480
Lane Width, ft	12	Shoulder Width, ft	5
Speed Limit, mi/h	55	Access Point Density, pts/mi	7.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	66	Opposing Demand Flow Rate, veh/h	43
Peak Hour Factor	0.90	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	60.3
Speed Slope Coefficient	3.53511	Speed Power Coefficient	0.60621
PF Slope Coefficient	-1.15968	PF Power Coefficient	0.80030
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	18480	-	-	60.3

Vehicle Results

Average Speed, mi/h	60.3	Percent Followers, %	12.3
Segment Travel Time, minutes	3.49	Follower Density, followers/mi/ln	0.1
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	3
Flow Rate Outside Lane, veh/h	66	Bicycle Effective Width, ft	34
Bicycle LOS Score	0.00	Bicycle Effective Speed Factor	4.79
Bicycle LOS	A		

Facility Results

T	Follower Density, followers/mi/ln	LOS
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1	0.1	A
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HCS7 Multilane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2050
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 52 btw SD 153 & Deer Blvd - Fall AM	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLT	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	51.3		

Direction 1 Adjustment Factors

Driver Population	Balanced Mix	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	0.950	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	0.939		

Direction 1 Demand and Capacity

Volume(V) veh/h	327	Heavy Vehicle Adjustment Factor (fHV)	1.000
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	182
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2024
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2024
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.09

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	51.2
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.6
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL),veh/h	182	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	1.88
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

Direction 2 Geometric Data			
Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	3.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	54.3		
Direction 2 Adjustment Factors			
Driver Population	Balanced Mix	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	0.950	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	0.939		
Direction 2 Demand and Capacity			
Volume(V) veh/h	144	Heavy Vehicle Adjustment Factor (fhv)	1.000
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	80
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2084
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2084
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.04
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	54.2
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	1.5
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.8		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (VOL),veh/h	182	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	1.88
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

HCS7 Multilane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2050
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 52 btw SD 153 & Deer Blvd - Fall PM	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLT	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	51.3		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	236	Heavy Vehicle Adjustment Factor (fHV)	1.000
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	131
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2024
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2024
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.06

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	51.2
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.6
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL),veh/h	131	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	1.72
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

Direction 2 Geometric Data			
Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	3.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	54.3		
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume(V) veh/h	374	Heavy Vehicle Adjustment Factor (fHV)	1.000
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	208
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2084
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2084
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.10
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	54.2
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.8
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.8		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (VOL),veh/h	131	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	1.72
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

HCS7 Multilane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2050
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 52 btw SD 153 & Deer Blvd - Summer	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	15.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLT	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	51.3		

Direction 1 Adjustment Factors

Driver Population	Balanced Mix	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	0.950	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	0.939		

Direction 1 Demand and Capacity

Volume(V) veh/h	373	Heavy Vehicle Adjustment Factor (fHV)	1.000
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	207
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2024
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2024
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.10

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	51.2
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	4.0
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	3.8		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL),veh/h	207	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	1.95
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

Direction 2 Geometric Data			
Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	3.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	TWLTL	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	54.3		
Direction 2 Adjustment Factors			
Driver Population	Balanced Mix	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	0.950	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	0.939		
Direction 2 Demand and Capacity			
Volume(V) veh/h	479	Heavy Vehicle Adjustment Factor (fhv)	1.000
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	266
Total Trucks, %	0.00	Capacity (c), pc/h/ln	2084
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2084
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.13
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	54.2
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	4.9
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.8		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (VOL),veh/h	207	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	1.95
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2050
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 153 btw SD 52 & SD 50 - Fall AM	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	12460
Lane Width, ft	11	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	9.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	88	Opposing Demand Flow Rate, veh/h	46
Peak Hour Factor	0.90	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.05

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	56.4
Speed Slope Coefficient	3.32546	Speed Power Coefficient	0.60459
PF Slope Coefficient	-1.17570	PF Power Coefficient	0.78828
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	12460	-	-	56.4

Vehicle Results

Average Speed, mi/h	56.4	Percent Followers, %	15.9
Segment Travel Time, minutes	2.51	Follower Density, followers/mi/ln	0.2
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	3
Flow Rate Outside Lane, veh/h	88	Bicycle Effective Width, ft	19
Bicycle LOS Score	2.97	Bicycle Effective Speed Factor	4.79
Bicycle LOS	C		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	0.2	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2050
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 153 btw SD 52 & SD 50 - Fall PM	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	12460
Lane Width, ft	11	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	9.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	89	Opposing Demand Flow Rate, veh/h	99
Peak Hour Factor	0.90	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.05

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	56.4
Speed Slope Coefficient	3.35857	Speed Power Coefficient	0.57473
PF Slope Coefficient	-1.20247	PF Power Coefficient	0.78053
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	12460	-	-	56.4

Vehicle Results

Average Speed, mi/h	56.4	Percent Followers, %	16.6
Segment Travel Time, minutes	2.51	Follower Density, followers/mi/ln	0.3
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	3
Flow Rate Outside Lane, veh/h	89	Bicycle Effective Width, ft	19
Bicycle LOS Score	2.97	Bicycle Effective Speed Factor	4.79
Bicycle LOS	C		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	0.3	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2050
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 153 btw SD 52 & SD 50 - Summer	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	12460
Lane Width, ft	11	Shoulder Width, ft	1
Speed Limit, mi/h	50	Access Point Density, pts/mi	9.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	149	Opposing Demand Flow Rate, veh/h	150
Peak Hour Factor	0.90	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.09

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.7
Speed Slope Coefficient	3.07351	Speed Power Coefficient	0.55474
PF Slope Coefficient	-1.23580	PF Power Coefficient	0.75772
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	12460	-	-	50.1

Vehicle Results

Average Speed, mi/h	50.1	Percent Followers, %	25.3
Segment Travel Time, minutes	2.83	Follower Density, followers/mi/ln	0.8
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	3
Flow Rate Outside Lane, veh/h	149	Bicycle Effective Width, ft	16
Bicycle LOS Score	3.73	Bicycle Effective Speed Factor	4.62
Bicycle LOS	D		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	0.8	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2050
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 314 btw SD 50 & West City Limits Rd - Fall AM	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	22070
Lane Width, ft	11	Shoulder Width, ft	3
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	302	Opposing Demand Flow Rate, veh/h	77
Peak Hour Factor	0.90	Total Trucks, %	15.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.18

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	57.5
Speed Slope Coefficient	3.40861	Speed Power Coefficient	0.58555
PF Slope Coefficient	-1.18707	PF Power Coefficient	0.78905
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	22070	-	-	56.2

Vehicle Results

Average Speed, mi/h	56.2	Percent Followers, %	37.0
Segment Travel Time, minutes	4.47	Follower Density, followers/mi/ln	2.0
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	302	Bicycle Effective Width, ft	14
Bicycle LOS Score	9.38	Bicycle Effective Speed Factor	4.79
Bicycle LOS	F		

Facility Results

T	Follower Density, followers/mi/ln	LOS
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HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2050
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 314 btw SD 50 & West City Limits Rd - Fall PM	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	22070
Lane Width, ft	11	Shoulder Width, ft	3
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	121	Opposing Demand Flow Rate, veh/h	156
Peak Hour Factor	0.90	Total Trucks, %	8.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.07

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	57.7
Speed Slope Coefficient	3.45977	Speed Power Coefficient	0.55285
PF Slope Coefficient	-1.21608	PF Power Coefficient	0.78002
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	22070	-	-	57.3

Vehicle Results

Average Speed, mi/h	57.3	Percent Followers, %	20.9
Segment Travel Time, minutes	4.38	Follower Density, followers/mi/ln	0.4
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	121	Bicycle Effective Width, ft	20
Bicycle LOS Score	4.84	Bicycle Effective Speed Factor	4.79
Bicycle LOS	E		

Facility Results

T	Follower Density, followers/mi/ln	LOS
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1	0.4	A
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HCS7 Two-Lane Highway Report

Project Information

Analyst	SRF Consulting	Date	10/14/2022
Agency		Analysis Year	2050
Jurisdiction		Time Analyzed	
Project Description	16002 - SD 314 btw SD 50 & West City Limits Rd - Summer	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	22070
Measured FFS	Measured	Free-Flow Speed, mi/h	60.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	201	Opposing Demand Flow Rate, veh/h	124
Peak Hour Factor	0.90	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.12

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	60.0
Speed Slope Coefficient	4.38196	Speed Power Coefficient	0.56406
PF Slope Coefficient	-1.19745	PF Power Coefficient	0.78836
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	22070	-	-	58.8

Vehicle Results

Average Speed, mi/h	58.8	Percent Followers, %	28.7
Segment Travel Time, minutes	4.27	Follower Density, followers/mi/ln	1.0
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	201	Bicycle Effective Width, ft	14
Bicycle LOS Score	3.87	Bicycle Effective Speed Factor	4.79
Bicycle LOS	D		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	1.0	A

Organization Title Goes Here

Signal Warrants - Summary

Major Street Approaches

Eastbound: SD-52

Number of Lanes: 2
85% Speed > 40 MPH.
Total Approach Volume: **2,059**

Westbound: SD-52

Number of Lanes: 2
85% Speed > 40 MPH.
Total Approach Volume: **2,763**

Minor Street Approaches

Northbound: DEER BLVD

Number of Lanes: 1

Total Approach Volume: **1,132**

Southbound: DEER BLVD

Number of Lanes: 1

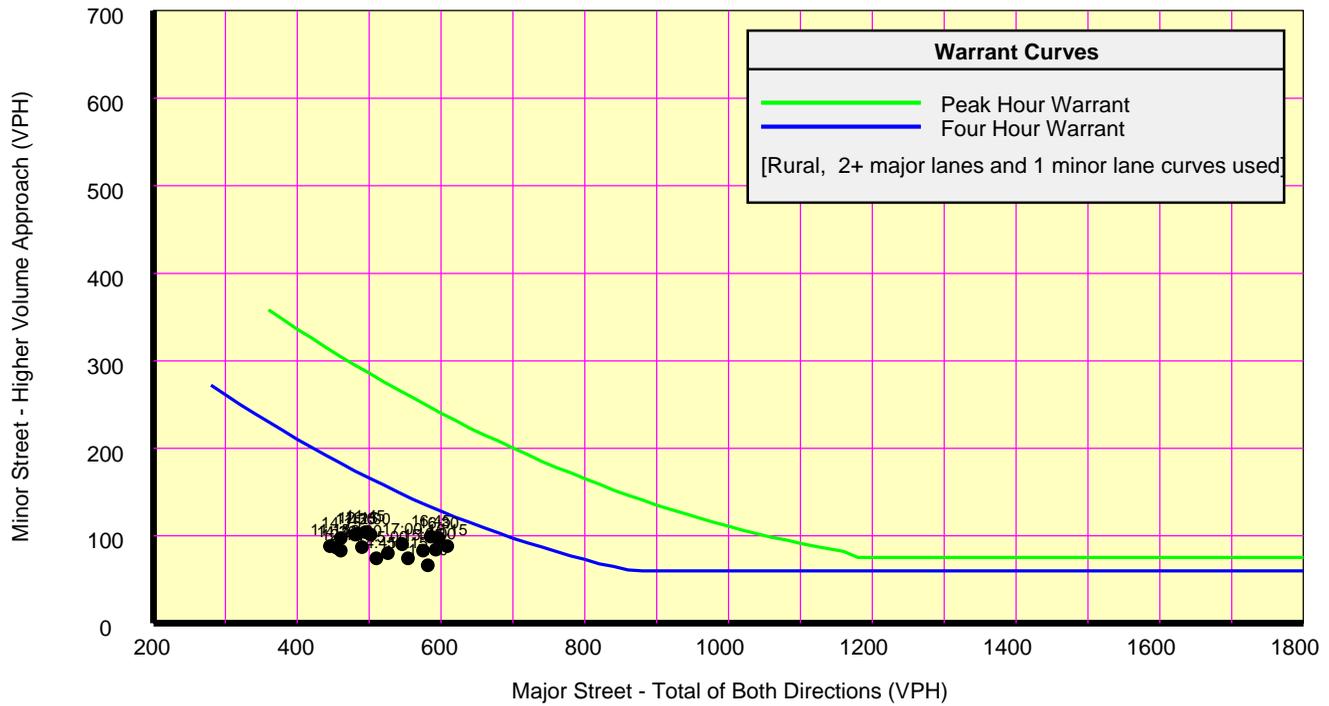
Total Approach Volume: **107**

Warrant Summary (Rural values apply.)

Warrant 1 - Eight Hour Vehicular Volumes	Not Satisfied
Warrant 1A - Minimum Vehicular Volume Not Satisfied	
Required volumes reached for 0 hours, 8 are needed	
Warrant 1B - Interruption of Continuous Traffic	Not Satisfied
Required volumes reached for 0 hours, 8 are needed	
Warrant 1C - Combination of Warrants	Not Satisfied
Required 1A volumes reached for 7 hours, 8 are needed	
Required 1B volumes reached for 3 hours, 8 are needed	
Warrant 2 - Four Hour Volumes	Not Satisfied
Number of hours (0) volumes exceed minimum < minimum required (4).	
Warrant 3 - Peak Hour	Not Evaluated
Warrant 3A - Peak Hour Delay	Not Evaluated
Warrant 3B - Peak Hour Volumes	Not Evaluated
Warrant 4 - Pedestrian Volumes	Not Evaluated
Warrant 5 - School Crossing	Not Evaluated
Warrant 6 - Coordinated Signal System	Not Evaluated
Warrant 7 - Crash Experience	Not Evaluated
Warrant 8 - Roadway Network	Not Evaluated
Warrant 9 - Intersection Near a Grade Crossing	Not Evaluated

Organization Title Goes Here

Signal Warrants - Summary



Analysis of 8-Hour Volume Warrants:

War 1A-Minimum Volume

War 1B-Interruption of Traffic

War 1C-Combination of Warrants

Hour Begin	Major Total	Minor Vol	Dir	Maj 420	Min 105	Hour Begin	Major Total	Minor Vol	Dir	Maj 630	Min 53	Hour Begin	Major Total	Minor Vol	Dir	1A Met	1B Met
16:15	609	88	NB	Yes	No	16:15	609	88	NB	No	Yes	16:00	593	84	NB	Yes	-
16:30	597	97	NB	Yes	No	16:30	597	97	NB	No	Yes	16:45	586	99	NB	-	Yes
16:00	593	84	NB	Yes	No	16:00	593	84	NB	No	Yes	15:45	575	83	NB	No	Yes
16:45	586	99	NB	Yes	No	16:45	586	99	NB	No	Yes	17:00	546	90	NB	Yes	-
15:30	582	66	NB	Yes	No	15:30	582	66	NB	No	Yes	14:45	510	74	NB	-	Yes
15:45	575	83	NB	Yes	No	15:45	575	83	NB	No	Yes	12:30	490	87	NB	Yes	No
15:15	554	74	NB	Yes	No	15:15	554	74	NB	No	Yes	11:30	481	101	NB	Yes	No
17:00	546	90	NB	Yes	No	17:00	546	90	NB	No	Yes	14:30	455	86	NB	Yes	No
15:00	526	80	NB	Yes	No	15:00	526	80	NB	No	Yes	13:30	417	108	NB	Yes	No
14:45	510	74	NB	Yes	No	14:45	510	74	NB	No	Yes	10:30	382	84	NB	Yes	No
12:00	502	101	NB	Yes	No	12:00	502	101	NB	No	Yes	09:30	343	89	NB	Yes	No
11:45	495	104	NB	Yes	No	11:45	495	104	NB	No	Yes	15:30	582	66	NB	No	-
12:30	490	87	NB	Yes	No	12:30	490	87	NB	No	Yes	12:00	502	101	NB	-	No
12:15	484	102	NB	Yes	No	12:15	484	102	NB	No	Yes	11:45	495	104	NB	-	No
11:30	481	101	NB	Yes	No	11:30	481	101	NB	No	Yes	12:15	484	102	NB	-	No
14:15	461	97	NB	Yes	No	14:15	461	97	NB	No	Yes	14:15	461	97	NB	-	No
12:45	461	83	NB	Yes	No	12:45	461	83	NB	No	Yes	12:45	461	83	NB	-	No
14:30	455	86	NB	Yes	No	14:30	455	86	NB	No	Yes	11:15	446	88	NB	-	No
11:15	446	88	NB	Yes	No	11:15	446	88	NB	No	Yes	14:00	439	100	NB	-	No
14:00	439	100	NB	Yes	No	14:00	439	100	NB	No	Yes	13:00	436	85	NB	-	No
13:00	436	85	NB	Yes	No	13:00	436	85	NB	No	Yes	13:15	426	88	NB	-	No
13:15	426	88	NB	Yes	No	13:15	426	88	NB	No	Yes	11:00	421	91	NB	-	No
11:00	421	91	NB	Yes	No	11:00	421	91	NB	No	Yes	13:45	418	109	NB	-	No
13:45	418	109	NB	No	Yes	13:45	418	109	NB	No	Yes	10:45	407	82	NB	-	No

Organization Title Goes Here

Signal Warrants - Summary

Major Street Approaches

Eastbound: SD-52

Number of Lanes: 2
85% Speed > 40 MPH.
Total Approach Volume: 2,397

Westbound: SD-52

Number of Lanes: 2
85% Speed > 40 MPH.
Total Approach Volume: 3,379

Minor Street Approaches

Northbound: DEER BLVD

Number of Lanes: 1

Total Approach Volume: 1,323

Southbound: DEER BLVD

Number of Lanes: 1

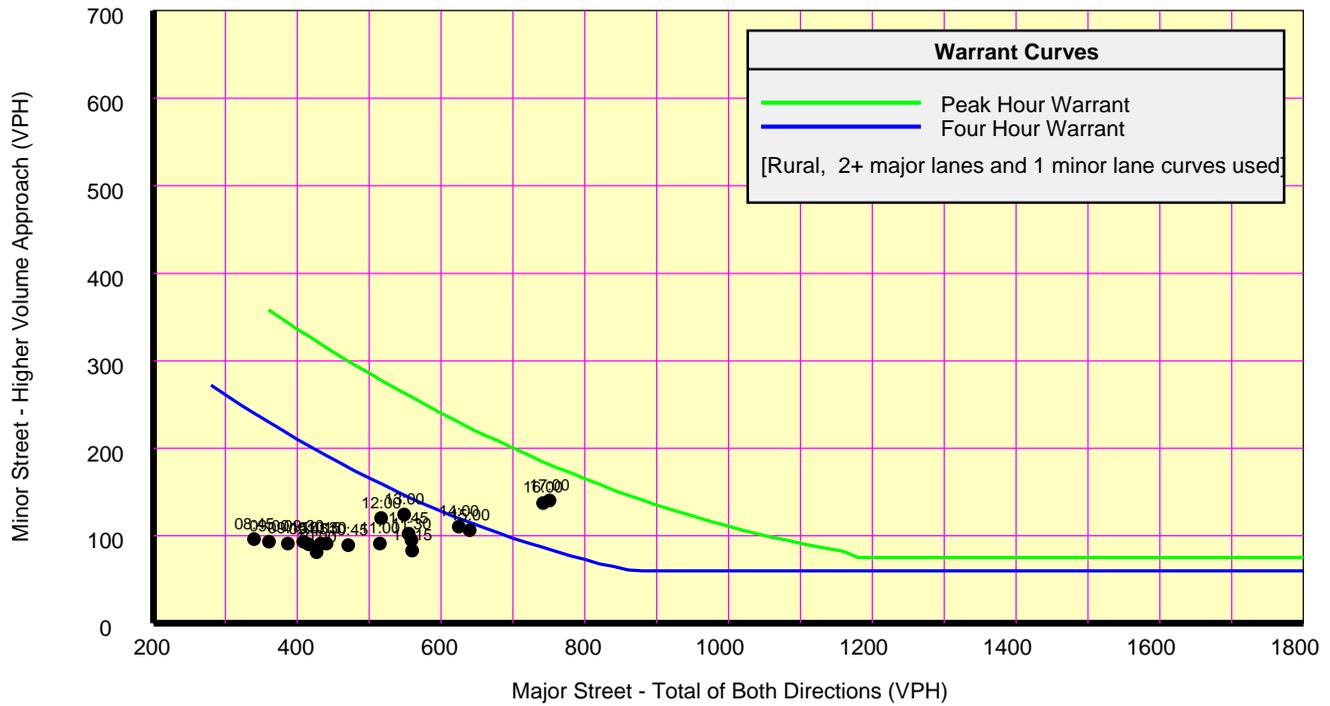
Total Approach Volume: 140

Warrant Summary (Rural values apply.)

Warrant 1 - Eight Hour Vehicular Volumes	Not Satisfied
Warrant 1A - Minimum Vehicular Volume Not Satisfied	
Required volumes reached for 6 hours, 8 are needed	
Warrant 1B - Interruption of Continuous Traffic Not Satisfied	
Required volumes reached for 3 hours, 8 are needed	
Warrant 1C - Combination of Warrants Not Satisfied	
Required 1A volumes reached for 8 hours, 8 are needed	
Required 1B volumes reached for 7 hours, 8 are needed	
Warrant 2 - Four Hour Volumes	Not Satisfied
Number of hours (3) volumes exceed minimum < minimum required (4).	
Warrant 3 - Peak Hour	Not Evaluated
Warrant 3A - Peak Hour Delay Not Evaluated	
Warrant 3B - Peak Hour Volumes Not Evaluated	
Warrant 4 - Pedestrian Volumes	Not Evaluated
Warrant 5 - School Crossing	Not Evaluated
Warrant 6 - Coordinated Signal System	Not Evaluated
Warrant 7 - Crash Experience	Not Evaluated
Warrant 8 - Roadway Network	Not Evaluated
Warrant 9 - Intersection Near a Grade Crossing	Not Evaluated

Organization Title Goes Here

Signal Warrants - Summary



Analysis of 8-Hour Volume Warrants:

War 1A-Minimum Volume

War 1B-Interruption of Traffic

War 1C-Combination of Warrants

Hour Begin	Major Total	Minor Vol	Dir	Maj 420	Min 105	Hour Begin	Major Total	Minor Vol	Dir	Maj 630	Min 53	Hour Begin	Major Total	Minor Vol	Dir	1A Met	1B Met
17:00	751	140	NB	Yes	Yes	17:00	751	140	NB	Yes	Yes	16:45	793	136	NB	Yes	-
16:00	742	137	NB	Yes	Yes	16:00	742	137	NB	Yes	Yes	17:00	751	140	NB	-	Yes
15:00	640	106	NB	Yes	Yes	15:00	640	106	NB	Yes	Yes	16:00	742	137	NB	-	Yes
14:00	625	110	NB	Yes	Yes	14:15	626	109	NB	No	Yes	15:45	733	122	NB	Yes	-
13:00	549	124	NB	Yes	Yes	14:00	625	110	NB	No	Yes	15:00	640	106	NB	-	Yes
12:00	517	120	NB	Yes	Yes	14:45	617	123	NB	No	Yes	14:00	625	110	NB	-	Yes
11:15	560	83	NB	Yes	No	14:30	595	119	NB	No	Yes	14:45	617	123	NB	Yes	-
11:30	559	95	NB	Yes	No	13:45	595	108	NB	No	Yes	13:45	595	108	NB	Yes	-
11:45	555	102	NB	Yes	No	13:30	576	104	NB	No	Yes	11:45	555	102	NB	Yes	-
11:00	515	91	NB	Yes	No	11:15	560	83	NB	No	Yes	13:00	549	124	NB	-	Yes
10:45	471	89	NB	Yes	No	11:30	559	95	NB	No	Yes	12:45	527	129	NB	Yes	-
10:30	441	91	NB	Yes	No	11:45	555	102	NB	No	Yes	12:00	517	120	NB	-	Yes
10:15	433	91	NB	Yes	No	13:15	552	110	NB	No	Yes	11:00	515	91	NB	-	Yes
10:00	427	81	NB	Yes	No	13:00	549	124	NB	No	Yes	10:45	471	89	NB	Yes	No
09:45	416	90	NB	No	No	12:30	531	133	NB	No	Yes	09:45	416	90	NB	Yes	No
09:30	409	93	NB	No	No	12:45	527	129	NB	No	Yes	08:45	340	96	NB	Yes	No
09:15	387	91	NB	No	No	12:00	517	120	NB	No	Yes	10:30	441	91	NB	-	No
09:00	361	93	NB	No	No	11:00	515	91	NB	No	Yes	10:15	433	91	NB	-	No
08:45	340	96	NB	No	No	12:15	505	136	NB	No	Yes	10:00	427	81	NB	-	No
08:30	320	101	NB	No	No	10:45	471	89	NB	No	Yes	09:30	409	93	NB	-	No
08:15	288	104	NB	No	No	10:30	441	91	NB	No	Yes	09:15	387	91	NB	-	No
07:45	282	129	NB	No	Yes	10:15	433	91	NB	No	Yes	09:00	361	93	NB	-	No
07:15	281	124	NB	No	Yes	10:00	427	81	NB	No	Yes	08:30	320	101	NB	No	No
07:30	280	129	NB	No	Yes	09:45	416	90	NB	No	Yes	08:15	288	104	NB	No	No

Organization Title Goes Here

Signal Warrants - Summary

Major Street Approaches

Eastbound: SD-52

Number of Lanes: 2
85% Speed > 40 MPH.
Total Approach Volume: 3,386

Westbound: SD-52

Number of Lanes: 2
85% Speed > 40 MPH.
Total Approach Volume: 4,127

Minor Street Approaches

Northbound: DEER BLVD

Number of Lanes: 2

Total Approach Volume: 1,570

Southbound: DEER BLVD

Number of Lanes: 2

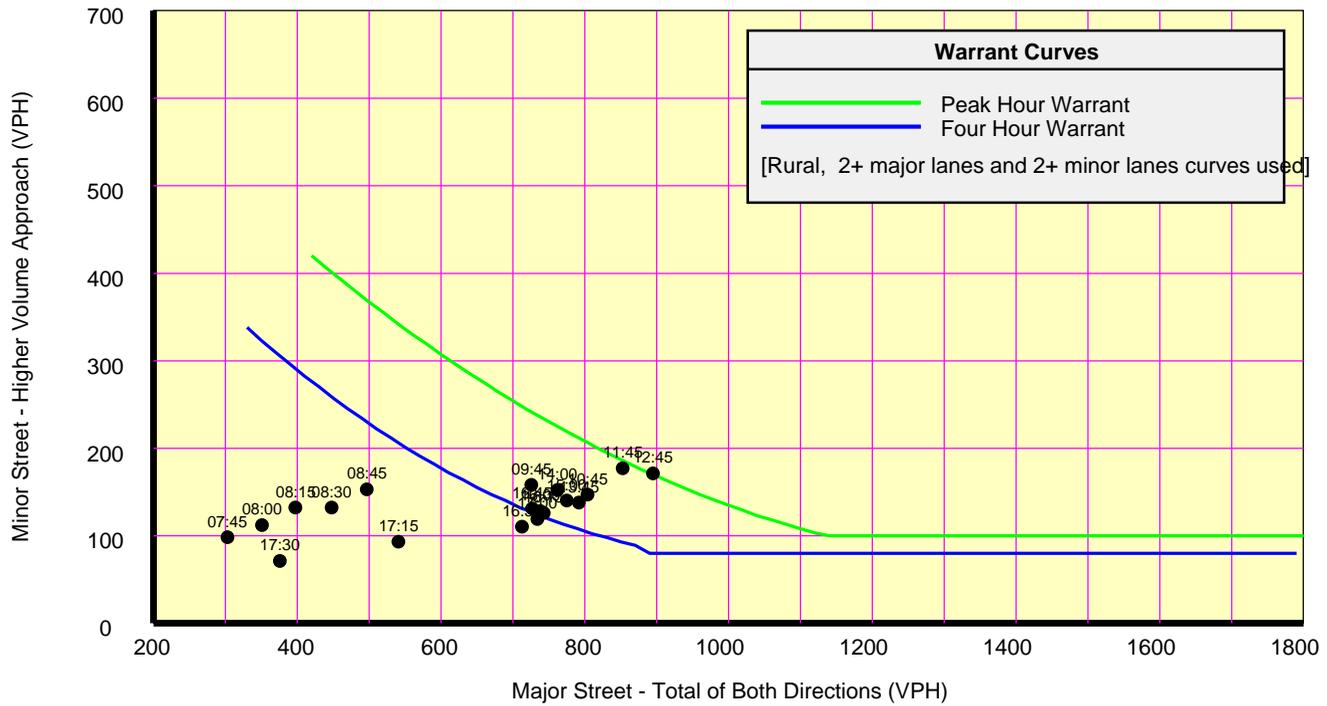
Total Approach Volume: 197

Warrant Summary (Rural values apply.)

Warrant 1 - Eight Hour Vehicular Volumes	Satisfied
Warrant 1A - Minimum Vehicular Volume Not Satisfied	
Required volumes reached for 7 hours, 8 are needed	
Warrant 1B - Interruption of Continuous Traffic	Satisfied
Required volumes reached for 8 hours, 8 are needed	
Warrant 1C - Combination of Warrants	Satisfied
Required 1A volumes reached for 10 hours, 8 are needed	
Required 1B volumes reached for 9 hours, 8 are needed	
Warrant 2 - Four Hour Volumes	Satisfied
Number of hours (8) volumes exceed minimum >= minimum required (4).	
Warrant 3 - Peak Hour	Not Evaluated
Warrant 3A - Peak Hour Delay	Not Evaluated
Warrant 3B - Peak Hour Volumes	Not Evaluated
Warrant 4 - Pedestrian Volumes	Not Evaluated
Warrant 5 - School Crossing	Not Evaluated
Warrant 6 - Coordinated Signal System	Not Evaluated
Warrant 7 - Crash Experience	Not Evaluated
Warrant 8 - Roadway Network	Not Evaluated
Warrant 9 - Intersection Near a Grade Crossing	Not Evaluated

Organization Title Goes Here

Signal Warrants - Summary



Analysis of 8-Hour Volume Warrants:

War 1A-Minimum Volume

War 1B-Interruption of Traffic

War 1C-Combination of Warrants

Hour Begin	Major Total	Minor Vol Dir	Maj 420	Min 140	Hour Begin	Major Total	Minor Vol Dir	Maj 630	Min 70	Hour Begin	Major Total	Minor Vol Dir	1A Met	1B Met
12:45	895	171 NB	Yes	Yes	12:30	884	181 NB	Yes	Yes	12:00	860	177 NB	Yes	Yes
11:45	853	177 NB	Yes	Yes	11:30	841	155 NB	Yes	Yes	13:00	853	152 NB	Yes	Yes
10:45	804	147 NB	Yes	Yes	13:30	833	150 NB	Yes	Yes	11:00	822	157 NB	Yes	Yes
15:00	775	140 NB	Yes	Yes	10:30	821	157 NB	Yes	Yes	15:00	775	140 NB	Yes	Yes
14:00	762	152 NB	Yes	Yes	15:30	779	141 NB	Yes	Yes	10:00	764	146 NB	Yes	Yes
09:45	726	158 NB	Yes	Yes	14:30	715	136 NB	Yes	Yes	14:00	762	152 NB	Yes	Yes
08:45	497	153 NB	Yes	Yes	16:30	713	110 NB	Yes	Yes	16:00	738	128 NB	Yes	Yes
13:45	792	138 NB	Yes	No	09:30	656	165 NB	Yes	Yes	17:00	734	119 NB	Yes	Yes
16:15	743	126 NB	Yes	No	09:15	609	147 NB	No	Yes	09:00	544	168 NB	Yes	Yes
16:00	738	128 NB	Yes	No	09:00	544	168 NB	No	Yes	08:00	351	112 NB	Yes	No
17:00	734	119 NB	Yes	No	08:45	497	153 NB	No	Yes	08:45	497	153 NB	-	No
16:45	727	131 NB	Yes	No	08:30	448	132 NB	No	Yes	08:30	448	132 NB	-	No
16:30	713	110 NB	Yes	No	08:15	398	132 NB	No	Yes	08:15	398	132 NB	-	No
17:15	541	93 NB	Yes	No	17:30	376	71 NB	No	Yes	07:45	303	98 NB	No	No
08:30	448	132 NB	Yes	No	08:00	351	112 NB	No	Yes	07:30	254	86 NB	No	No
08:15	398	132 NB	No	No	07:45	303	98 NB	No	Yes	07:15	222	80 NB	No	No
17:30	376	71 NB	No	No	07:30	254	86 NB	No	Yes	07:00	206	65 NB	No	No
08:00	351	112 NB	No	No	07:15	222	80 NB	No	Yes	06:45	183	65 NB	No	No
07:45	303	98 NB	No	No	07:00	206	65 NB	No	No	06:30	161	61 NB	No	No
07:30	254	86 NB	No	No	17:45	187	25 NB	No	No	06:15	141	56 NB	No	No
07:15	222	80 NB	No	No	06:45	183	65 NB	No	No	06:00	104	54 NB	No	No
07:00	206	65 NB	No	No	06:30	161	61 NB	No	No	05:45	53	36 NB	No	No
17:45	187	25 NB	No	No	06:15	141	56 NB	No	No	05:30	32	25 NB	No	No
06:45	183	65 NB	No	No	06:00	104	54 NB	No	No	05:15	12	12 NB	No	No