



Farley Huff Property
Traffic Impact Analysis
June 2025

Prepared for:

Hanover County, VA

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Farley Huff Property

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Hanover County, Virginia

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1 EXECUTIVE SUMMARY

This report presents the findings of the traffic impact analysis (TIA) prepared in support of the proposed development of the Farley Huff Property in Hanover County, Virginia.

1.1 PROJECT OVERVIEW

The project site is located east of I-95 and south of Old Ridge Road, with two (2) entrances off Old Ridge Road as shown in Figure 1-1 (all figures are located at the end of their respective chapter).

The proposed rezoning of the site from A-1 (agriculture) to M-2 (light industrial) will allow for a number of industrial type uses including data centers, warehousing, and distribution. To represent a conservative (i.e. worst case analysis), the development was assumed to consist of 1,000,000 sf of distribution, which is the highest trip generating use in the M-2 zoning district. All other uses (data centers, warehousing, etc.) will generate less traffic than the assumed distribution center.

Access to the site will be provided by two (2) proposed full-access entrances on Old Ridge Road. A site layout is shown on Figure 1-2. For the purposes of this analysis, the development was assumed to be built in one (1) phase and occupied by 2030.

When complete, at full capacity the proposed 1,000,00 sf of distribution will generate 1,810 daily trips, 150 AM peak hour trips (122 in and 28 out), and 160 PM peak hour trips (62 in and 98 out).

A traffic study analyzing the potential impact of the proposed development was performed for the 2025 existing traffic volumes, the 2030 background traffic volumes, and the 2030 total future traffic volumes, which includes site traffic generated by the proposed development.

The analysis indicates the traffic generated by the proposed development does not have a significant impact on the surrounding roadway network. No improvements are needed to accommodate the traffic beyond the 200 foot eastbound right turn taper into the western site entrance.

1.2 STUDY LIMITS

As agreed during scoping coordination, the study limits include the following one (1) existing intersection:

1. U.S. Route 1 (Washington Highway) and Old Ridge Road (unsignalized)

In addition, the study includes two (2) proposed site entrances on Old Ridge Road.

In accordance with the scoping coordination, analyses were completed for the following scenarios:

1. 2025 Existing Traffic Conditions;
2. 2030 Background Traffic Conditions (without development of the site); and
3. 2030 Future Traffic Conditions (with development of the site)

The following steps were taken to determine the potential traffic impacts associated with this project:

1. Data Collection – Existing AM (7-9 AM) and PM (4-6 PM) peak hour traffic counts were collected at the existing study intersections on Tuesday, April 29, 2025.
2. Traffic Growth – A 0.5% annual growth rate was applied to existing traffic volumes to account for development outside the study area. A review of VDOT data shows a negative growth rate for traffic on Old Ridge Road; however, a 0.5% growth rate was used to be conservative.
3. Background Developments – No background developments are expected to impact the development of the site.
4. Trip Generation – Traffic generated by the proposed development was estimated using the 11th edition of the Institute of Transportation Engineers' *Trip Generation Manual*.
5. Traffic Distributions – The distribution of trips generated by the proposed developed were based on the existing traffic volumes, the nature of the use, and local knowledge.
6. Site Traffic Projections – Future traffic volumes were determined by combining the 2030 background traffic volumes with proposed new trips generated by the site to create the 2030 total traffic volumes used in the analysis.
7. Traffic Capacity Analysis – Level of service calculations for existing, background, and future conditions were performed using SYNCHRO Version 11 with SimTraffic for unsignalized intersections.
8. Queuing Analysis – The 95th percentile queue lengths (SYNCHRO) and maximum queues (SimTraffic) were reviewed at the intersections listed above.

1.3 PRINCIPAL FINDINGS

Under 2025 Existing Conditions:

All approaches to the Route 1/Old Ridge Road operate at LOS D or better in both peak hours.

- The north and southbound lefts operate at LOS A in both peak hours with all queues contained within the available storage.
- The eastbound approach (single lane) operates at LOS B in both peak hours with maximum queues of 62 feet.
- The westbound approach (single lane) operates at LOS B in the AM peak hour and LOS D (27.6 sec/veh of delay) in the PM peak hour with maximum queues of 84 feet.

Under 2030 Background Conditions:

All approaches to the Route 1/Old Ridge Road continue to operate at LOS D or better in both peak hours.

- The north and southbound lefts will operate at LOS A in both peak hours with all queues contained within the available storage.
- The eastbound approach (single lane) will operate at LOS B in both peak hours with maximum queues of 65 feet.
- The westbound approach (single lane) will operate at LOS B in the AM peak hour and LOS D (29.3 sec/veh of delay) in the PM peak hour with maximum queues of 88 feet.

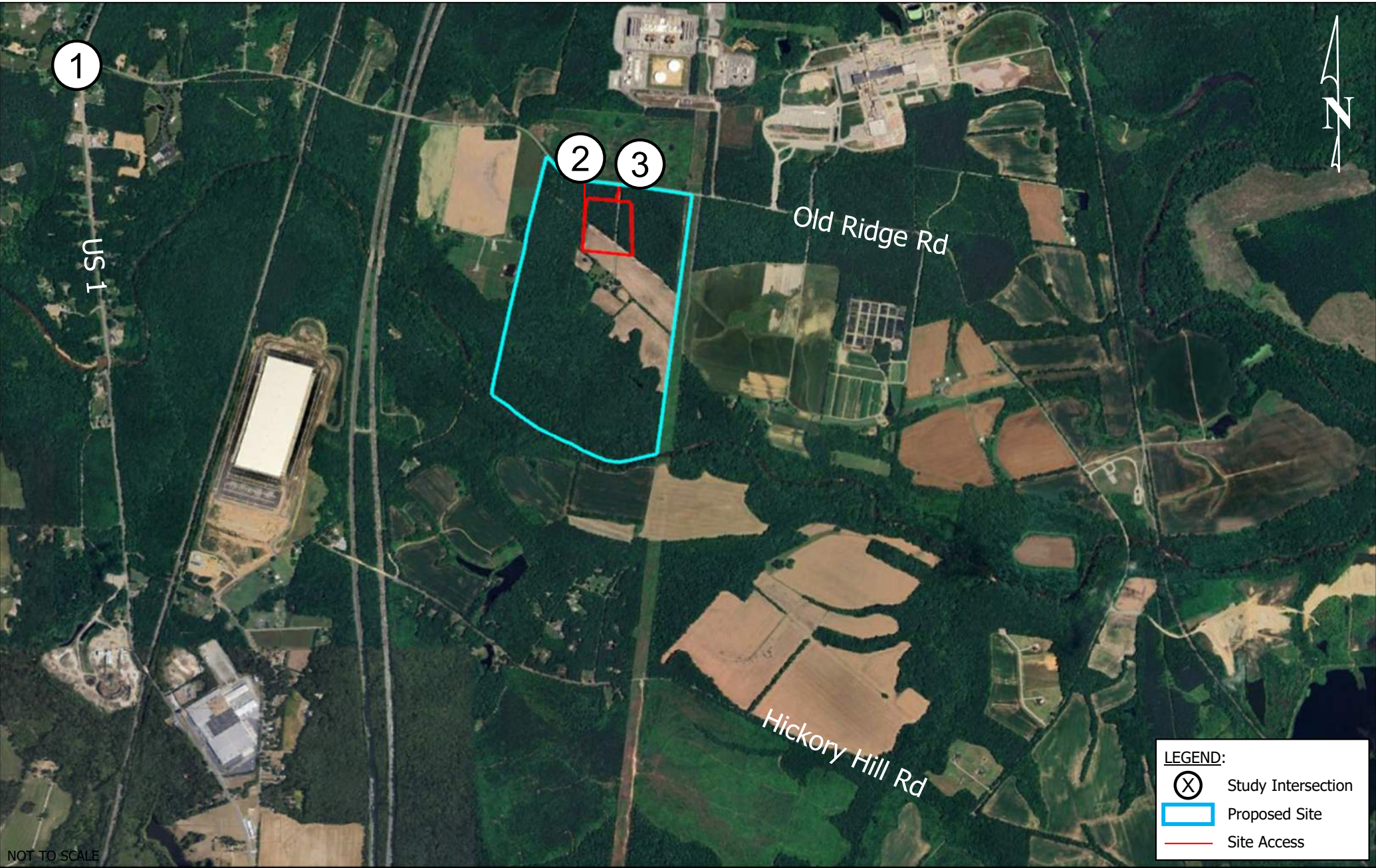
Under 2030 Total Conditions (With Development):

With the addition of the proposed development traffic volumes, under 2030 future conditions, most approaches experience similar levels of service, delay, and queueing as under background conditions. Specifically:

1. All approaches to the Route 1/Old Ridge Road continue to operate at LOS D or better in both peak hours one exception.
 - The north and southbound lefts will operate at LOS A in both peak hours with all queues contained within the available storage.
 - The eastbound approach (single lane) will operate at LOS B in both peak hours with maximum queues of 66 feet.
 - The westbound approach will operate at LOS C in the AM peak and LOS E in the PM peak with a delay of 45.3 sec/veh and a maximum queue of 145 feet (or 6 vehicles).
 - A traffic signal will not be warranted at the intersection at the MUTCD signal warrant 1 requires either 600 mainline/150 side street or 900 mainline/75 side street vehicles for each of eight hours of the day.
 - In the PM peak hour, the intersection has 899 mainline and 158 side street volumes (including all rights). If even a small portion of right turns are excluded (which is required), the warrant will not be met.
 - All other hours of the day will have less volume on all approaches and will not meet the warrants.
2. All approaches to the Old Ridge Road/Site Entrance intersections will operate at LOS B or better with minimal queueing.
3. No improvements are required at the study intersections beyond the 200 foot eastbound right turn taper into the western site entrance.

1.4 RECOMMENDATIONS

No improvements are required at the study intersections beyond the 200 foot eastbound right turn taper into the western site entrance.



Surrounding Roadway Network and Site Location
Farley/Huff Site
Hanover County, Virginia

Figure
1-1



2 BACKGROUND INFORMATION

2.1 DESCRIPTION OF ON-SITE DEVELOPMENT

The project site is located east of I-95 and south of Old Ridge Road, with two (2) entrances off Old Ridge Road as shown in Figure 1-1 (all figures are located at the end of their respective chapter).

The proposed rezoning of the site from A-1 (agriculture) to M-2 (light industrial) will allow for a number of industrial type uses including data centers, warehousing, and distribution. To represent a conservative (i.e. worst case analysis), the development was assumed to consist of 1,000,000 sf of distribution, which is the highest trip generating use in the M-2 zoning district. All other uses (data centers, warehousing, etc.) will generate less traffic than the assumed distribution center.

Access to the site will be provided by two (2) proposed full-access entrances on Old Ridge Road. A site layout is shown on Figure 1-2. For the purposes of this analysis, the development was assumed to be built in one (1) phase and occupied by 2030.

2.2 STUDY LIMITS

As agreed during scoping, the study limits include the following one (1) existing intersection:

1. U.S. Route 1 (Washington Highway) and Old Ridge Road (unsignalized)

In addition, the study includes two (2) proposed site entrances on Old Ridge Road.

2.3 EXISTING ROADWAY NETWORK

U.S. Route 1 (Washington Highway) is a four-lane, minor arterial roadway with a posted speed limit of 55 mph. According to 2023 VDOT AADT data, Route 1 services 8,900 vehicles per day in the vicinity of the Old Ridge Road intersection.

Old Ridge Road is a two-lane, undivided, major collector roadway with a posted speed limit of 45 mph. A 24-hour automated tube count was collected along Old Ridge Road in the vicinity of the site on Tuesday, April 29, 2025. The data collected includes volume, speed, and classification. The counts indicate Old Ridge Road carries 1,230 vehicles per day in the vicinity of the site with 38% heavy vehicle traffic.

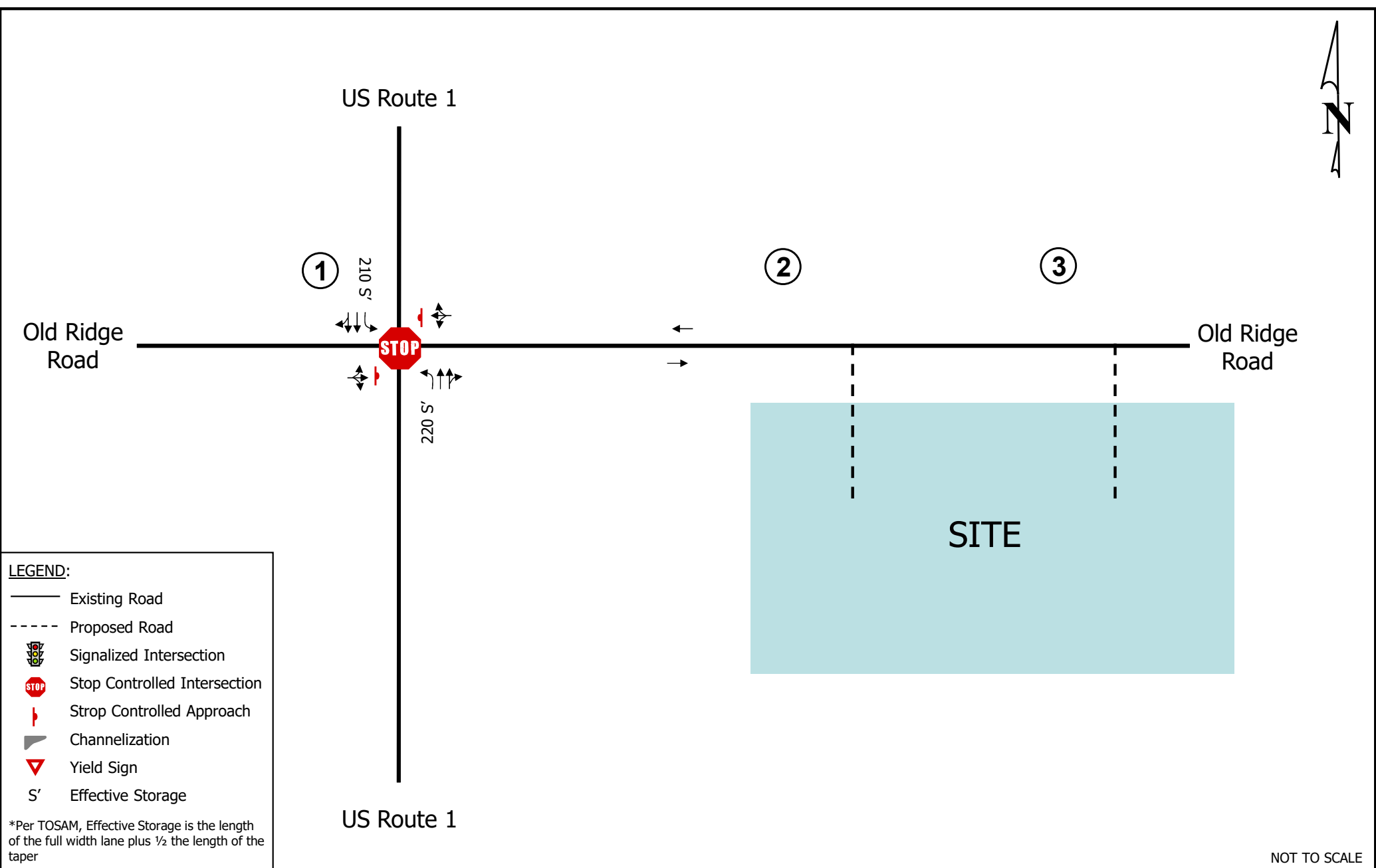
In the vicinity of the site entrance, Old Ridge Road is 22 to 24 feet wide (11-12 foot lanes) with centerline markings and a striped edge of pavement.

The intersection of U.S. Route 1 and Old Ridge Road is STOP controlled (with flashing lights) with Route 1 running free and Old Ridge Road under STOP control from both the east and westbound directions.

The existing lane use and traffic control at the study intersections is shown on Figure 2-1.

2.4 OTHER MODES OF TRANSPORTATION

There are no existing sidewalks or bike lanes on Route 1 and Old Ridge Road in the vicinity of the site. with the lack of facilities and nature of the use, to be conservative, it was assumed all site generated traffic will be vehicular based and no reductions will be applied for other modes of transportation.



3 2025 EXISTING CONDITIONS

3.1 EXISTING TRAFFIC VOLUMES

Directional turning movement counts (TMCs) were collected on Tuesday, April 29, 2025, during the morning (7:00-9:00 AM) and evening (4:00-6:00 PM) peak periods. The TMCs included heavy vehicles by movement and pedestrian/bicycles counts, where applicable.

A 24-hour automated tube count was collected along Old Ridge Road in the vicinity of the site on the same day. The data collected includes volume, speed, and classification.

A copy of the count data is included in Appendix A.

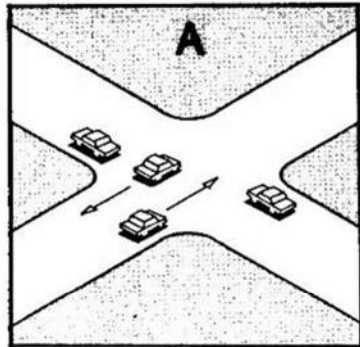
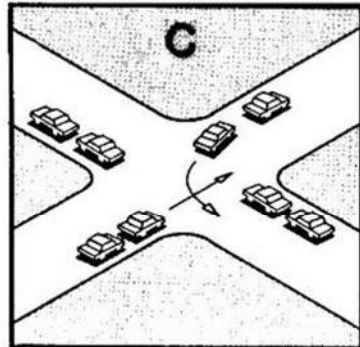
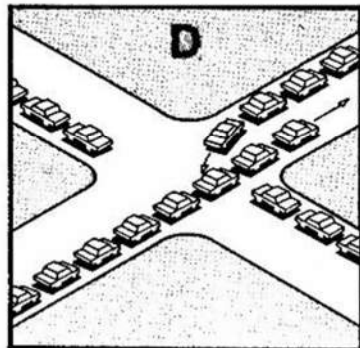
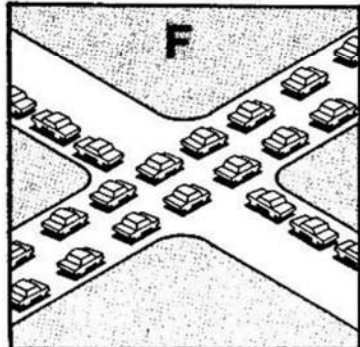
The peak hours analyzed in this report align with the highest traffic volumes of the roadway network. The morning and evening peak hours were found to be 7:00 – 8:00 AM and 4:30 – 5:30 PM.

The existing 2025 peak hour traffic volumes are shown on Figure 3-1.

3.2 CAPACITY ANALYSIS DEFINITIONS

Capacity analysis allows traffic engineers to determine the impacts of traffic on the surrounding roadway network. The Transportation Research Board's (TRB) *Highway Capacity Manual* (HCM) methodologies govern how the capacity analyses are conducted and how the results are interpreted. There are six letter grades of Levels of Service (LOS) from A to F, with LOS A representing the best operating conditions and LOS F the worst operating conditions. Table 3-1 shows in detail how each of these levels of service are interpreted.

Table 3-1: Level of Service Definitions

Level of Service	Roadway Segments or Controlled Access Highways	Intersections	
A	Free flow, low traffic density.	No vehicle waits longer than one signal indication.	
B	Delay is not unreasonable, stable traffic flow.	On a rare occasion motorists wait through more than one signal indication.	
C	Stable condition, movements somewhat restricted due to higher volumes, but not objectionable for motorists.	Intermittently drivers wait through more than one signal indication, and occasionally backups may develop behind left turning vehicles, traffic flow still stable and acceptable.	
D	Movements more restricted, queues and delays may occur during short peaks, but lower demands occur often enough to permit clearing, thus preventing excessive backups.	Delays at intersections may become extensive with some, especially left-turning vehicles waiting two or more signal indications, but enough cycles with lower demand occur to permit periodic clearance, thus preventing excessive backups.	
E	Actual capacity of the roadway involves delay to all motorists due to congestion.	Very long queues may create lengthy delays, especially for left-turning vehicles.	
F	Forced flow with demand volumes greater than capacity resulting in complete congestion. Volumes drop to zero in extreme cases.	Backups from locations downstream restrict or prevent movement of vehicles out of approach creating a storage area during part or all of an hour.	

SOURCE: "A Policy on Design of Design of Urban Highways and Arterial Streets" - AASHTO, 1973 based upon material published in "Highway Capacity Manual", National Academy of Sciences, 1965.

For signalized and unsignalized intersections, level of service is defined in terms of **delay**, a measure of driver discomfort, frustration, fuel consumption and lost travel time. Table 3-2 summarizes the delay associated with each LOS category:

Table 3-2: Signalized and Unsignalized Intersection Level of Service Criteria

Signalized Intersections		Unsignalized Intersections	
Level of Service	Control Delay per Vehicle (sec/veh)	Level of Service	Average Control Delay (sec/veh)
A	≤ 10	A	0 to 10
B	> 10 to ≤ 20	B	> 10 to ≤ 15
C	> 20 to ≤ 35	C	> 15 to ≤ 25
D	> 35 to ≤ 55	D	> 25 to ≤ 35
E	> 55 to ≤ 80	E	> 35 to ≤ 50
F	> 80	F	> 50

*Source: Exhibit 16-2 and Exhibit 17-2 from
TRB's "Highway Capacity Manual 2000"*

Capacity analyses were performed to assess existing (2025), background (2030), and future (2030) operational conditions. The unsignalized intersections were analyzed using SYNCHRO Version 11 based on HCM 6th Edition methodologies with the following assumptions per TOSAM (unless otherwise specified):

- Level terrain;
- 12-foot lane widths;
- Existing peak hour factor as determined by the traffic counts (by intersection) for existing scenario;
- The higher of the existing peak hour factor as determined by traffic counts (by intersection) or a peak hour factor of 0.92 for the background and total future scenarios; and
- Heavy vehicle percentage as determined by the traffic counts (by movement).

HCM 6th Edition methodologies were used in the analysis for all intersections. Queuing analyses were conducted using both the HCM 6th Edition methodology (as calculated by SYNCHRO) and SimTraffic simulations. The Synchro 95th percentile queue is the maximum back of queue for a particular lane within a lane group considering 95th percentile traffic volumes. The SimTraffic maximum queues are the average maximum queues after 10 runs of 60 minutes each.

Note that it is possible for the 95th percentile queue to be higher than the SimTraffic maximum queue due to the method in which each software calculates its respective value. The 95th percentile queue is based on an HCM formula while the SimTraffic maximum queue varies based on simulation results.

3.3 2025 EXISTING CONDITIONS CAPACITY ANALYSIS RESULTS

Table 3-3 summarizes the 2025 existing intersection LOS, delay, 95th percentile queue lengths (Synchro), and maximum queue lengths (SimTraffic) based on the 2025 existing intersection geometry (Figure 2-1), and the peak hour traffic volumes shown on Figure 3-1.

The corresponding SYNCHRO and SimTraffic reports are included in Appendix B. Note that the intersection numbers shown on the LOS, delay, and queue length summary tables correspond with the intersection numbers used in the SYNCHRO models and report figures.

As shown in Table 3-3, under 2025 existing conditions, the following results are reported:

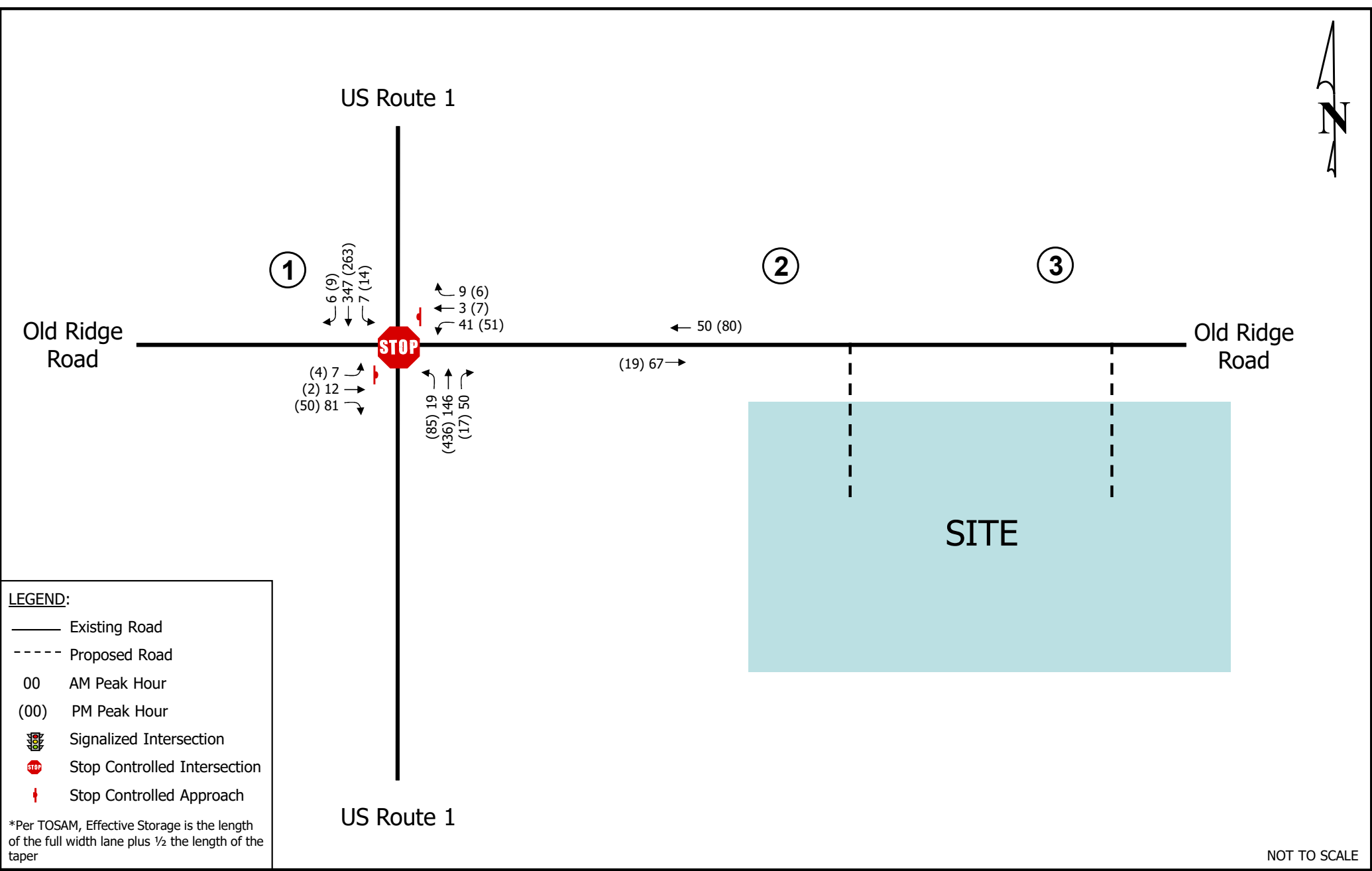
1. All approaches to the Route 1/Old Ridge Road operate at LOS D or better in both peak hours.
 - The north and southbound lefts operate at LOS A in both peak hours with all queues contained within the available storage.
 - The eastbound approach (single lane) operates at LOS B in both peak hours with maximum queues of 62 feet.
 - The westbound approach (single lane) operates at LOS B in the AM peak hour and LOS D (27.6 sec/veh of delay) in the PM peak hour with maximum queues of 84 feet.

**Table 3-3: 2025 Existing Traffic
Intersection Level of Service and Delay Summary**

Intersection and Type of Control	Movement and Approach	Turn Lane Storage (ft)	AM PEAK HOUR				PM PEAK HOUR			
			Delay ¹ (sec/veh)	LOS ¹	HCS 95th Percentile Queue Length (ft)	Simulated Maximum Queue Length (ft)	Delay ¹ (sec/veh)	LOS ¹	HCS 95th Percentile Queue Length (ft)	Simulated Maximum Queue Length (ft)
1. Route 1 (N-S) Old Ridge Road (E-W) Unsignalized	EB Left/Thru/Right		11.1	B	13	62	10.6	B	8	46
	<i>EB Approach</i>		<i>11.1</i>	<i>B</i>	-	-	<i>10.6</i>	<i>B</i>	-	-
	WB Left/Thru/Right		13.8	B	10	81	27.6	D	30	84
	<i>WB Approach</i>		<i>13.8</i>	<i>B</i>	-	-	<i>27.6</i>	<i>D</i>	-	-
	NB Left	220	8.3	A	3	36	8.0	A	5	32
	NB Thru/Right		†	†	0	3	†	†	0	2
	<i>NB Approach</i>		<i>0.7</i>	<i>A</i>	-	-	<i>1.3</i>	<i>A</i>	-	-
	SB Left	210	8.0	A	0	14	9.1	A	3	46
	SB Thru/Right		†	†	0	0	†	†	0	0
	<i>SB Approach</i>		<i>0.2</i>	<i>A</i>	-	-	<i>0.4</i>	<i>A</i>	-	-

¹ Overall intersection LOS and delay reported for signalized intersections and roundabouts only.

† SYNCHRO does not provide level of service or delay for unsignalized movements with no conflicting volumes.



NOT TO SCALE

4 2030 BACKGROUND CONDITIONS

The 2030 background volumes were analyzed assuming existing intersection geometry in conjunction with projected background traffic volumes. The background traffic volumes were developed based on a 0.5% annual growth rate.

There are no other approved developments in the area that would impact the study area.

4.1 2030 BACKGROUND TRAFFIC GROWTH

A review of the VDOT traffic counts along Old Ridge Road in the vicinity of the site indicate a stagnant to negative growth in traffic along the roadway. To be conservative, a 0.5% annual growth rate was assumed for the period from 2025 to 2030 and was applied to all movements.

The resulting 2030 background traffic volumes (existing + growth) are shown in Figure 4-1.

4.2 2030 BACKGROUND CAPACITY ANALYSIS RESULTS

Table 4-1 summarizes the 2030 background intersection LOS, delay, 95th percentile queue lengths (Synchro), and maximum queue lengths (SimTraffic) based on the 2025 existing intersection geometry (Figure 2-1), and the background peak hour traffic volumes shown on Figure 4-1.

The corresponding SYNCHRO and SimTraffic reports are included in Appendix C. Note that the intersection numbers shown on the LOS, delay, and queue length summary tables correspond with the intersection numbers used in the SYNCHRO models and report figures.

As shown in Table 4-1, under 2030 background conditions, all intersections experience similar levels of service, delay, and queueing as under existing conditions. Specifically:

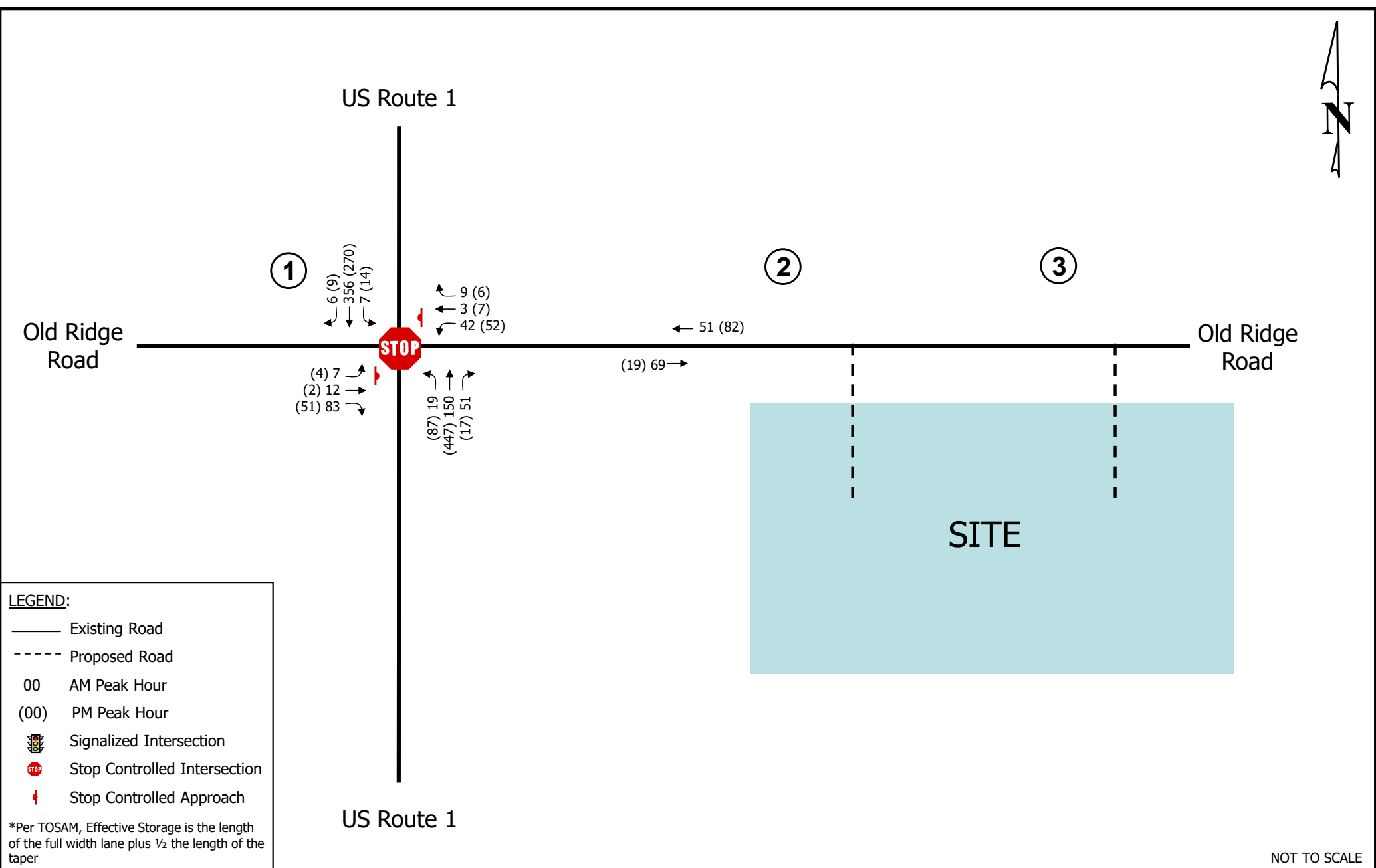
1. All approaches to the Route 1/Old Ridge Road continue to operate at LOS D or better in both peak hours.
 - The north and southbound lefts will operate at LOS A in both peak hours with all queues contained within the available storage.
 - The eastbound approach (single lane) will operate at LOS B in both peak hours with maximum queues of 65 feet.
 - The westbound approach (single lane) will operate at LOS B in the AM peak hour and LOS D (29.3 sec/veh of delay) in the PM peak hour with maximum queues of 88 feet.

**Table 4-1: 2030 Background Conditions
Intersection Level of Service and Delay Summary**

Intersection and Type of Control	Movement and Approach	Turn Lane Storage (ft)	AM PEAK HOUR				PM PEAK HOUR			
			Delay ¹ (sec/veh)	LOS ¹	HCS 95th Percentile Queue Length (ft)	Simulated Maximum Queue Length (ft)	Delay ¹ (sec/veh)	LOS ¹	HCS 95th Percentile Queue Length (ft)	Simulated Maximum Queue Length (ft)
1. Route 1 (N-S) Old Ridge Road (E-W) Unsignalized	EB Left/Thru/Right		11.2	B	13	65	10.7	B	8	48
	<i>EB Approach</i>		<i>11.2</i>	<i>B</i>	-	-	<i>10.7</i>	<i>B</i>	-	-
	WB Left/Thru/Right		14.0	B	10	76	29.3	D	33	88
	<i>WB Approach</i>		<i>14.0</i>	<i>B</i>	-	-	<i>29.3</i>	<i>D</i>	-	-
	NB Left	220	8.4	A	3	34	8.1	A	5	32
	NB Thru/Right		†	†	0	4	†	†	0	2
	<i>NB Approach</i>		<i>0.7</i>	<i>A</i>	-	-	<i>1.3</i>	<i>A</i>	-	-
	SB Left	210	8.0	A	0	14	9.1	A	3	43
	SB Thru/Right		†	†	0	0	†	†	0	0
	<i>SB Approach</i>		<i>0.2</i>	<i>A</i>	-	-	<i>0.4</i>	<i>A</i>	-	-

¹ Overall intersection LOS and delay reported for signalized intersections and roundabouts only.

† SYNCHRO does not provide level of service or delay for unsignalized movements with no conflicting volumes.



5 TRIP GENERATION

The proposed rezoning of the site from A-1 (agriculture) to M-2 (light industrial) will allow for a number of industrial type uses including data centers, warehousing, and distribution.

Access to the site will be provided by two (2) proposed full-access entrances on Old Ridge Road. A site layout is shown on Figure 1-2. For the purposes of this analysis, the development was assumed to be built in one (1) phase and occupied by 2030.

5.1 SITE TRIP GENERATION

The potential site-generated traffic volumes for different M-2 uses are shown in Table 5-1 and were estimated based on the ITE Trip Generation Manual 11th Edition or the *AWS Data Center Trip Generation Assessment* prepared by Bowman Consulting Group.

As shown in Table 5-1, the highest generating use in the M-2 district is distribution. All other uses (data centers, warehousing, etc.) will generate less traffic than the assumed distribution center.

Therefore, to represent a conservative (i.e. worst case analysis), the development was assumed to consist of 1,000,000 sf of distribution, which is the highest trip generating use in the M-2 zoning district.

When complete, at full capacity the proposed 1,000,00 sf of distribution will generate 1,810 daily trips, 150 AM peak hour trips (122 in and 28 out), and 160 PM peak hour trips (62 in and 98 out).

Table 5-1: Trip Generation Summary

Buildout				AM Peak Hour			Weekday PM Peak Hour			Average Daily Trips
Land Use	Size	Units	Land Use Code	In	Out	Total	In	Out	Total	
Potential Uses in M-2 Zoning District										
Data Center ⁽¹⁾	1,680,000	SF	N/A	83	68	151	15	35	50	1,260
Warehousing ⁽²⁾	1,000,000	SF	150	111	33	144	41	105	146	1,618
Distribution ⁽²⁾	1,000,000	SF	155	122	28	150	62	98	160	1,810
Maximum Site Trips				122	28	150	62	98	160	1,810

Notes:

Trip generation based on *AWS Data Center Trip Generation Assessment* prepared by Bowman Consulting Group, March 2023.

(1) Entering & exiting distributions taken from the ITE *Trip Generation Manual*, 11th Edition.

(2) Trips estimated from the rates/equations in the ITE *Trip Generation Manual*, 11th Edition.

5.2 SITE TRIP DISTRIBUTIONS

The distribution of trips generated by the proposed development was based on the existing traffic volumes, the nature of the use, and local knowledge. It was assumed the majority of traffic will be oriented towards Route 1 and access to I-95. The closest I-95 interchange (Exit 99 – Doswell) is located approximately 2 miles to the north on Route 1. The closest I-95 interchange to the south (Exit 92 – Ashland) is located approximately 5 miles to the south on Route 1.

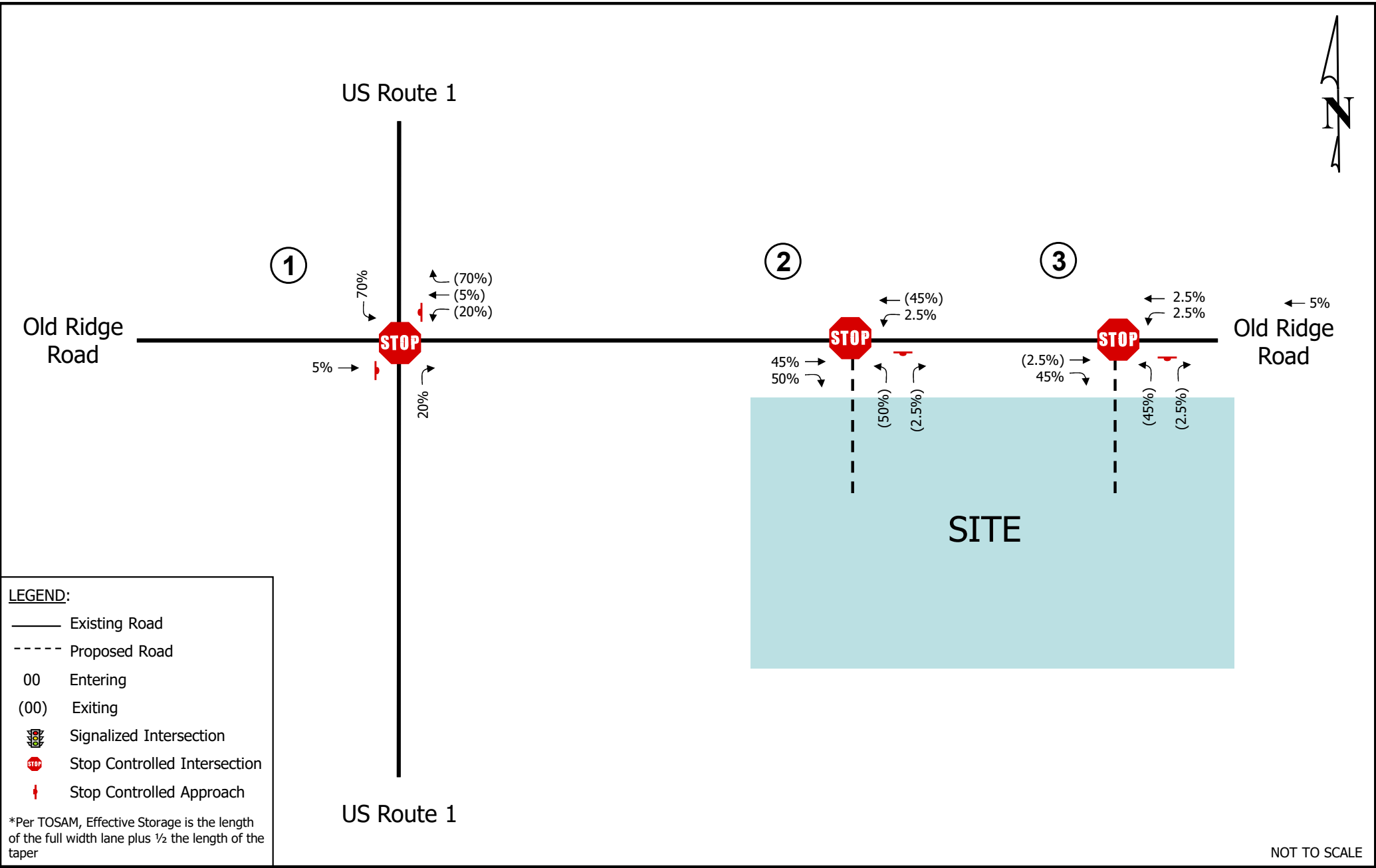
The following overall directional distributions were used for the trips to/from the site. A detailed breakdown of the trip distributions for the generated traffic is shown in Figures 5-1.

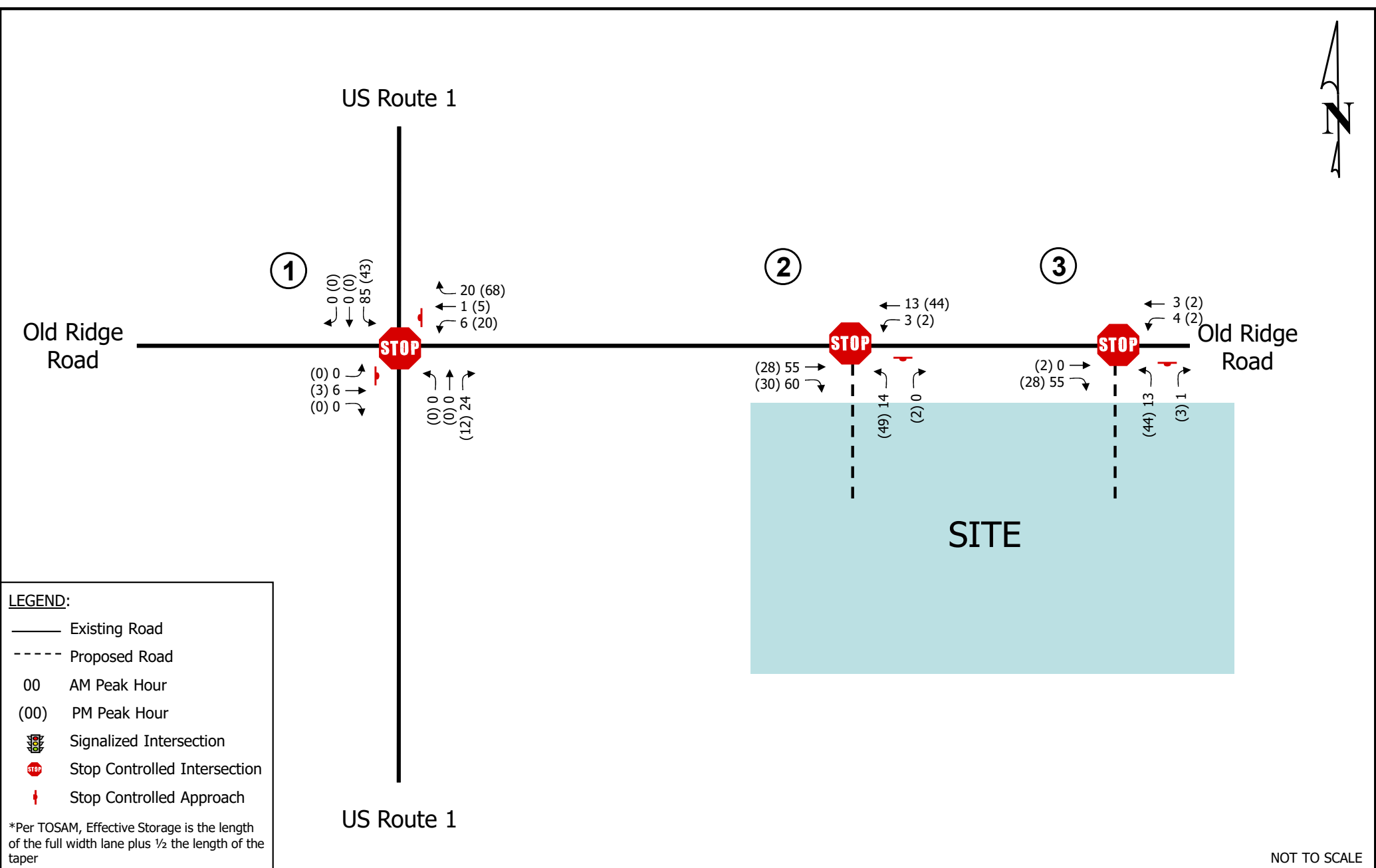
- 70% to/from the north on Route 1;
- 20% to/from the south on Route 1;
- 5% to/from the east on Old Ridge Road; and
- 5% to/from the west on Old Ridge Road.

It was assumed site traffic will be split evenly between the two entrances.

5.3 SITE TRIP ASSIGNMENT

The trip distribution percentages for the external trips from Figure 5-1 were applied to the trip generation table (Table 5-1) to assign the external trips to the surrounding roadway network. The resulting total site generated external trips are shown on Figure 5-2.





6 2030 TOTAL FUTURE CONDITIONS

To complete the analysis of 2030 total conditions (with the proposed redevelopment), the estimated site trips were added to the 2030 background traffic volumes. The projected volumes were then used to complete the capacity analysis.

6.1 TOTAL FUTURE TRAFFIC VOLUMES

The site generated trips shown on Figure 5-2 were added to the 2030 background traffic volumes on Figure 4-1 to yield the 2030 total future traffic volumes shown on Figure 6-1.

6.2 TURN LANE WARRANT ANALYSIS

To evaluate the need for right and left turn lanes on Old Ridge Road at the site entrances, the total future traffic volumes shown on Figure 6-1 were used with the appropriate nomographs from the VDOT Road Design Manual Appendix F.

The resulting turn lane warrant analyses are shown in Figures 6-2 through 6-4 and indicate the following;

At the western entrance, an eastbound right turn taper is warranted. A left turn lane is not warranted. In accordance with Figure 3-1 from Appendix F, the right turn taper should be 200 feet in length.

At the eastern entrance, no right turn or left turn treatments are warranted.

The resulting 2030 future lane use and traffic control is shown on Figure 6-6.

6.3 2030 FUTURE CONDITIONS ANALYSIS RESULTS

Table 6-1 summarizes the 2030 future intersection LOS, delay, 95th percentile queue lengths (Synchro), and maximum queue lengths (SimTraffic) based on the 2030 future intersection geometry (Figure 6-6), and the future peak hour traffic volumes shown on Figure 6-1.

Given the nature of the use, it was assumed 50% heavy vehicles were assumed for each of the site entrance movements.

The corresponding SYNCHRO and SimTraffic reports are included in Appendix D. Note that the intersection numbers shown on the LOS, delay, and queue length summary tables correspond with the intersection numbers used in the SYNCHRO models and report figures.

As shown in Table 6-1, under 2030 future conditions, most approaches experience similar levels of service, delay, and queueing as under background conditions. Specifically:

1. All approaches to the Route 1/Old Ridge Road continue to operate at LOS D or better in both peak hours one exception.
 - The north and southbound lefts will operate at LOS A in both peak hours with all queues contained within the available storage.
 - The eastbound approach (single lane) will operate at LOS B in both peak hours with maximum queues of 66 feet.
 - The westbound approach will operate at LOS C in the AM peak and LOS E in the PM peak with a delay of 45.3 sec/veh and a maximum queue of 145 feet (or 6 vehicles).

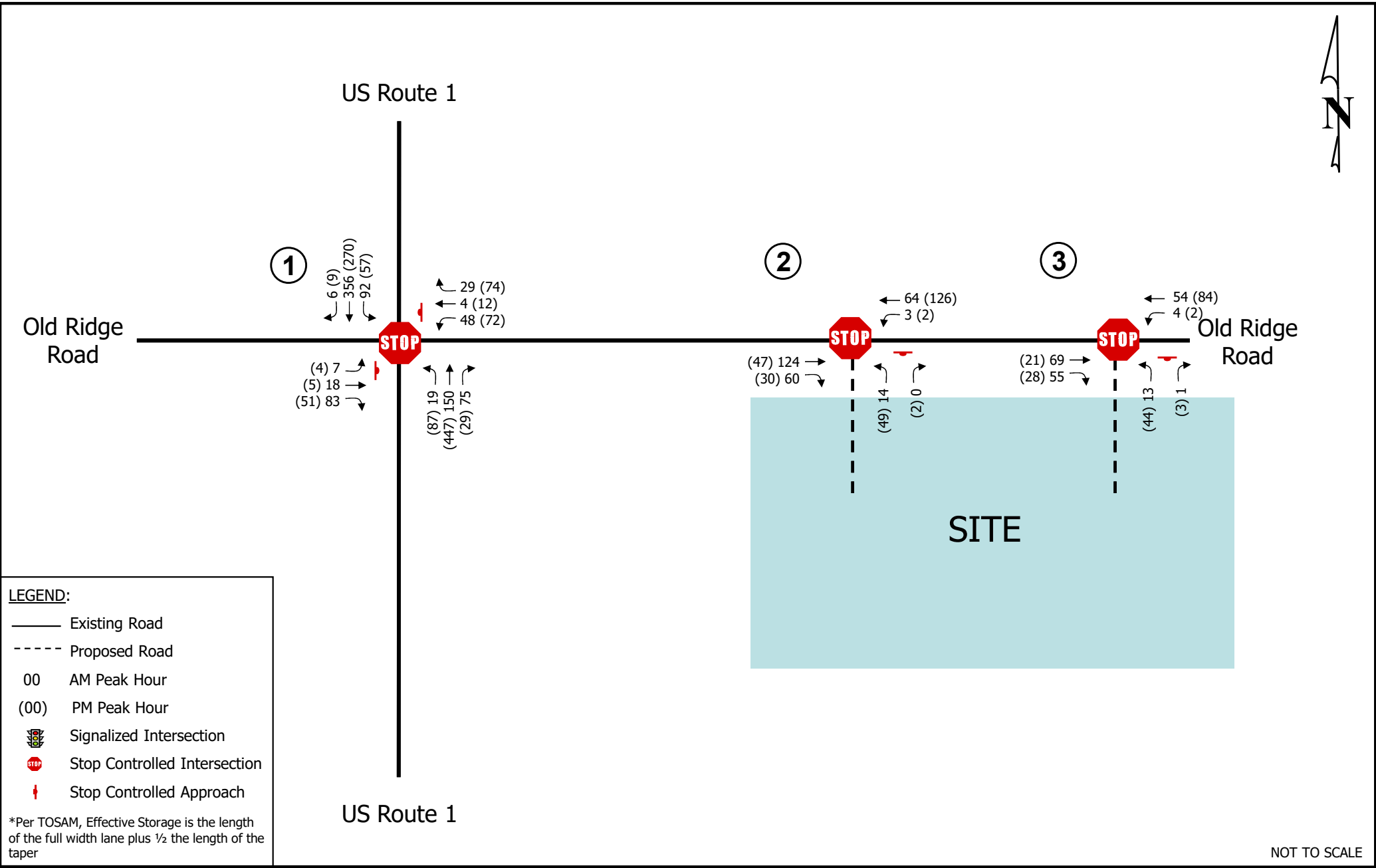
- A traffic signal will not be warranted at the intersection at the MUTCD signal warrant 1 requires either 600 mainline/150 side street or 900 mainline/75 side street vehicles for each of eight hours of the day.
 - In the PM peak hour, the intersection has 899 mainline and 158 side street volumes (including all rights). If even a small portion of right turns are excluded (which is required), the warrant will not be met.
 - All other hours of the day will have less volume on all approaches and will not meet the warrants.
- 2. All approaches to the Old Ridge Road/Site Entrance intersections will operate at LOS B or better with minimal queueing.
- 3. No improvements are required at the study intersections beyond the 200 foot eastbound right turn taper into the western site entrance.

**Table 6-1: 2030 Total Future Conditions
Intersection Level of Service and Delay Summary**

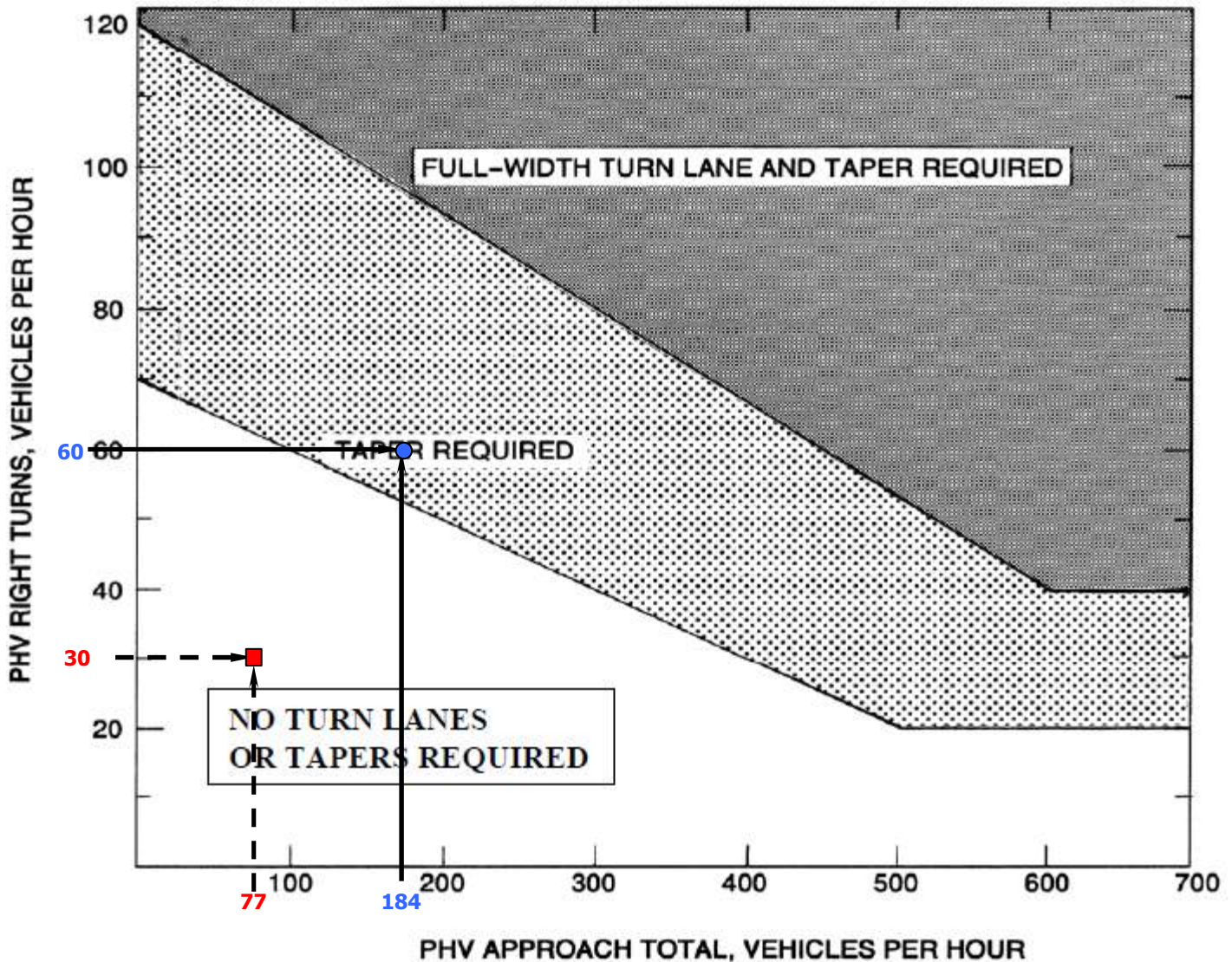
Intersection and Type of Control	Movement and Approach	Turn Lane Storage (ft)	AM PEAK HOUR				PM PEAK HOUR			
			Delay ¹ (sec/veh)	LOS ¹	HCS 95th Percentile Queue Length (ft)	Simulated Maximum Queue Length (ft)	Delay ¹ (sec/veh)	LOS ¹	HCS 95th Percentile Queue Length (ft)	Simulated Maximum Queue Length (ft)
1. Route 1 (N-S) Old Ridge Road (E-W) Unsignalized	EB Left/Thru/Right		12.9	B	18	66	12.3	B	10	48
	<i>EB Approach</i>		<i>12.9</i>	<i>B</i>	-	-	<i>12.3</i>	<i>B</i>	-	-
	WB Left/Thru/Right		17.9	C	23	102	45.3	E	110	145
	<i>WB Approach</i>		<i>17.9</i>	<i>C</i>	-	-	<i>45.3</i>	<i>E</i>	-	-
	NB Left	220	8.4	A	3	39	8.1	A	5	31
	NB Thru/Right		†	†	0	6	†	†	0	5
	<i>NB Approach</i>		<i>0.7</i>	<i>A</i>	-	-	<i>1.2</i>	<i>A</i>	-	-
	SB Left	210	8.4	A	8	66	9.4	A	3	61
	SB Thru/Right		†	†	0	0	†	†	0	0
	<i>SB Approach</i>		<i>1.7</i>	<i>A</i>	-	-	<i>1.6</i>	<i>A</i>	-	-
2. Old Ridge Road (E-W) West Site Entrance (N-S) Unsignalized	EB Thru/Right		†	†	0	0	†	†	0	4
	<i>EB Approach</i>		<i>†</i>	<i>†</i>	-	-	<i>†</i>	<i>†</i>	-	-
	WB Left/Thru		8.2	A	0	20	7.9	A	0	13
	<i>WB Approach</i>		<i>0.4</i>	<i>A</i>	-	-	<i>0.0</i>	<i>A</i>	-	-
	NB Left/Right		10.7	B	3	73	10.7	B	8	98
	<i>NB Approach</i>		<i>10.7</i>	<i>B</i>	-	-	<i>10.7</i>	<i>B</i>	-	-
3. Old Ridge Road (E-W) East Site Entrance (N-S) Unsignalized	EB Thru/Right		†	†	0	0	†	†	0	0
	<i>EB Approach</i>		<i>†</i>	<i>†</i>	-	-	<i>†</i>	<i>†</i>	-	-
	WB Left/Thru		7.9	A	0	11	7.8	A	0	5
	<i>WB Approach</i>		<i>0.5</i>	<i>A</i>	-	-	<i>0.2</i>	<i>A</i>	-	-
	NB Left/Right		10.1	B	3	71	10.0	B	3	88
	<i>NB Approach</i>		<i>10.1</i>	<i>B</i>	-	-	<i>10.0</i>	<i>B</i>	-	-

¹ Overall intersection LOS and delay reported for signalized intersections and roundabouts only.

† SYNCHRO does not provide level of service or delay for unsignalized movements with no conflicting volumes.



GUIDELINES FOR RIGHT TURN TREATMENT (2-LANE HIGHWAY)
FIGURE 3-26 VDOT ROAD DESIGN MANUAL APPENDIX F

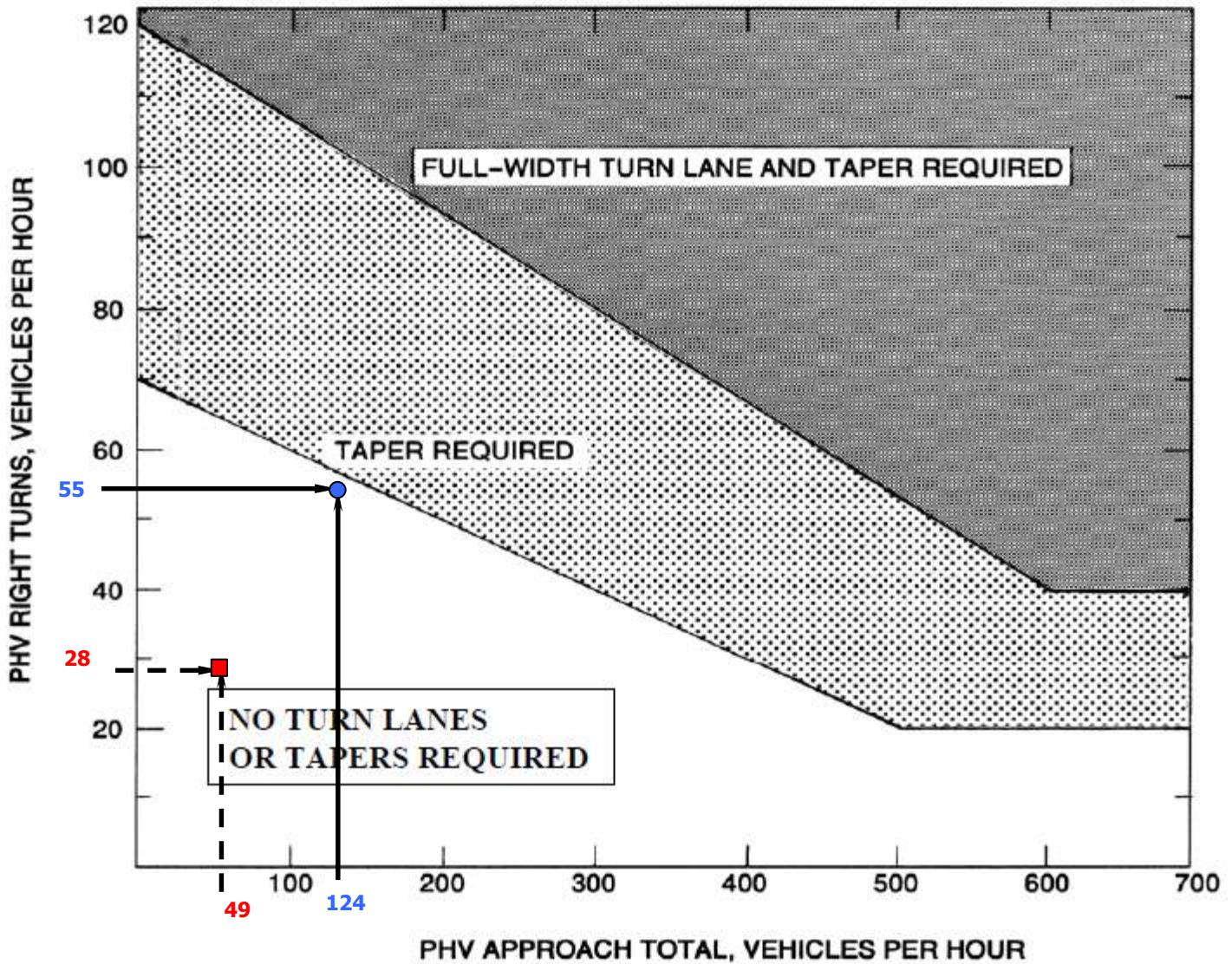


Results:
Eastbound Taper Only Warranted

LEGEND

- AM Peak Hour
- PM Peak Hour

GUIDELINES FOR RIGHT TURN TREATMENT (2-LANE HIGHWAY)
FIGURE 3-26 VDOT ROAD DESIGN MANUAL APPENDIX F

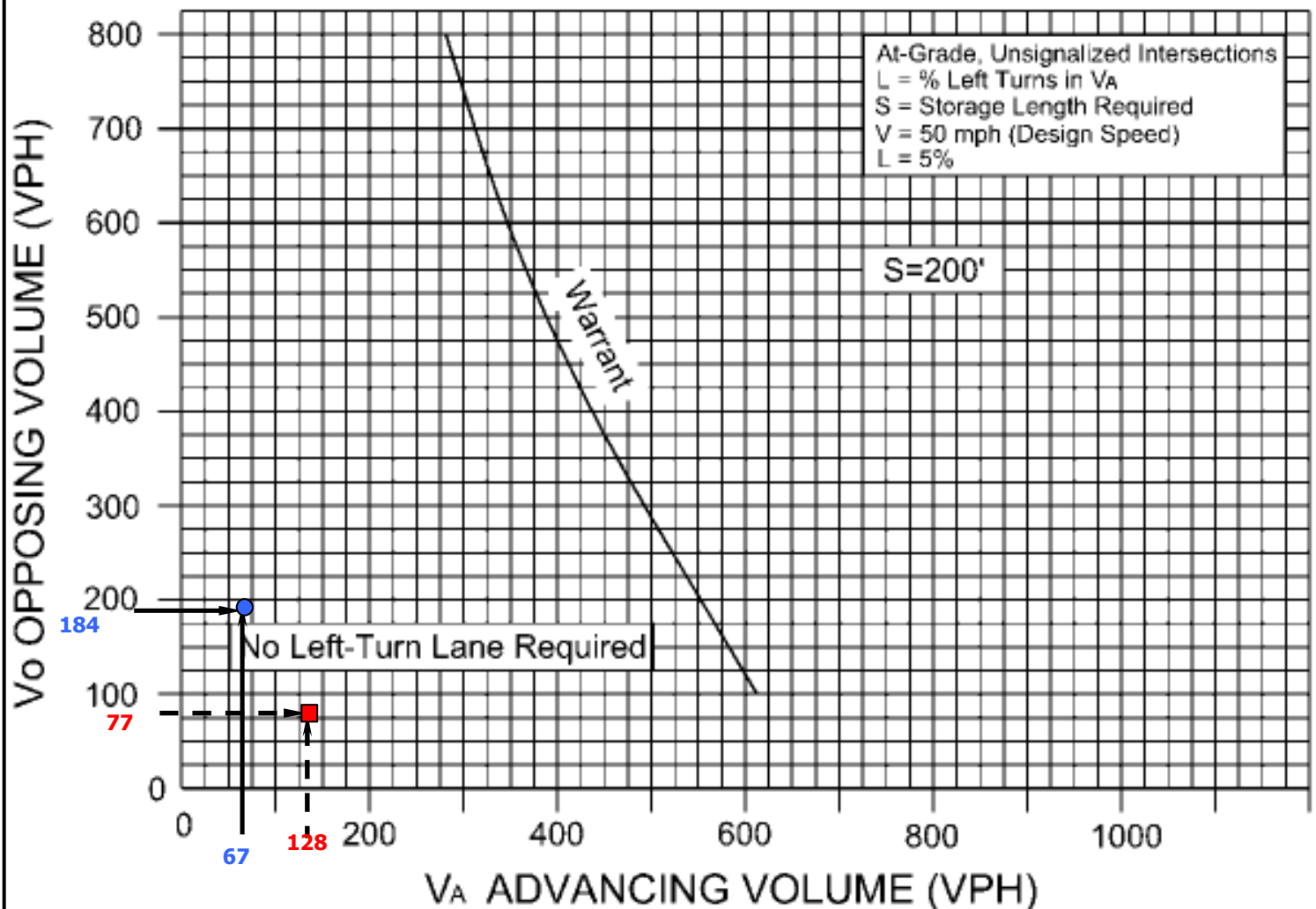


Results:
No Treatment Warranted

LEGEND

- AM Peak Hour
- PM Peak Hour

WARRANT FOR LEFT-TURN STORAGE LANES
ON TWO-LANE HIGHWAYS (40 MPH)
FIGURE 3-10 VDOT ROAD DESIGN MANUAL APPENDIX F

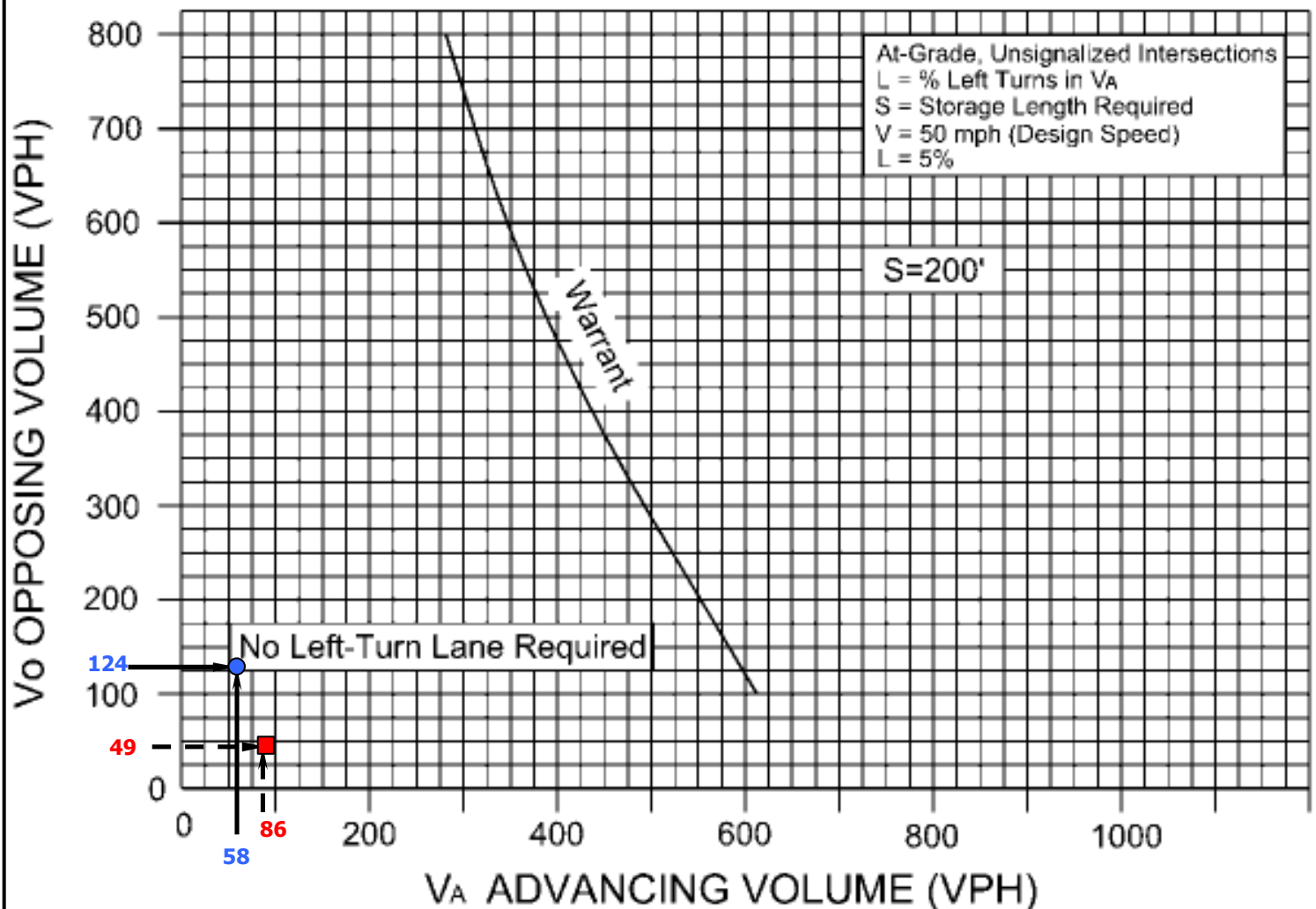


Results:
No Left Turn Lane Warranted

LEGEND

- AM Peak Hour
- PM Peak Hour

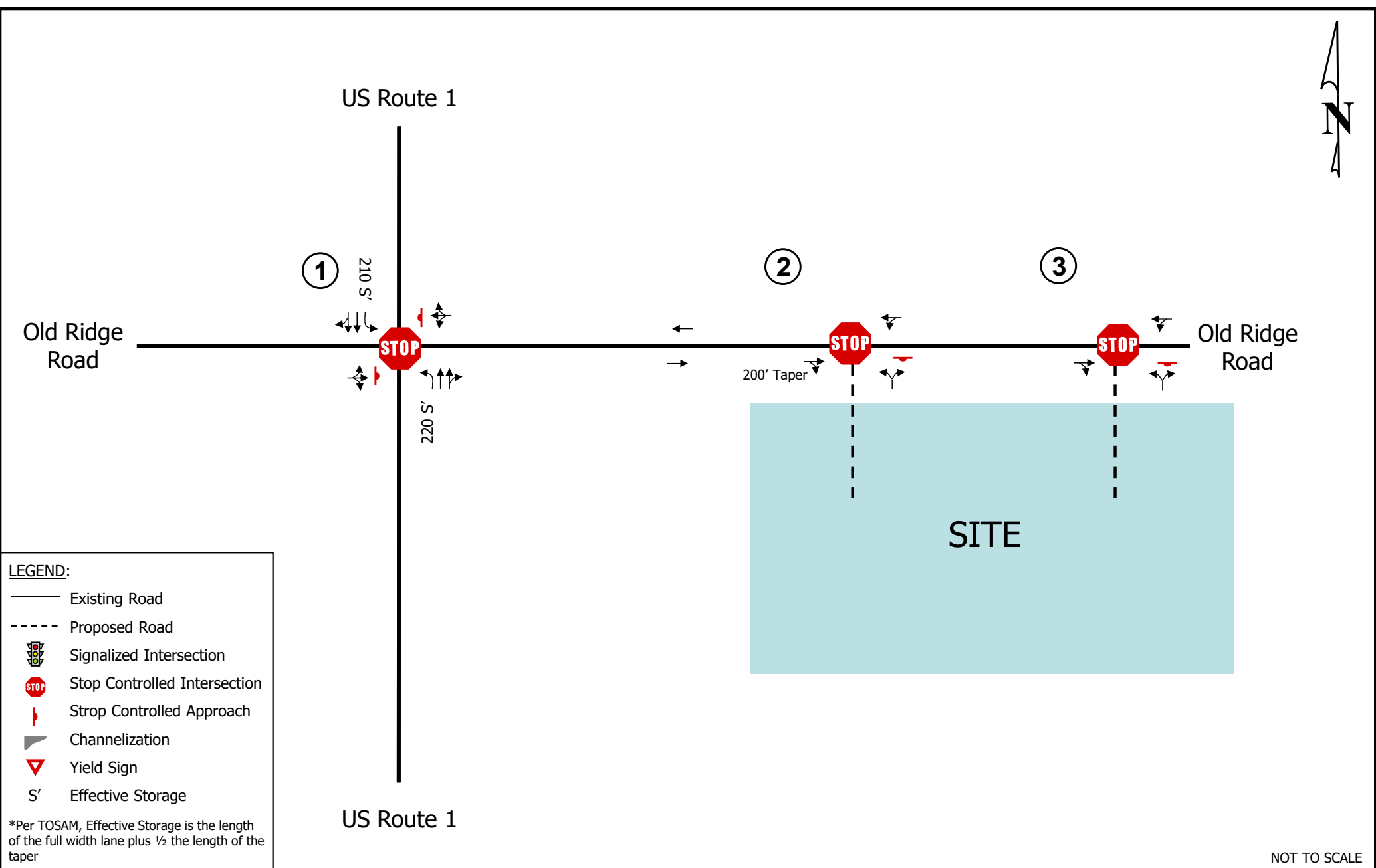
WARRANT FOR LEFT-TURN STORAGE LANES
ON TWO-LANE HIGHWAYS (40 MPH)
FIGURE 3-10 VDOT ROAD DESIGN MANUAL APPENDIX F



Results:
No Left Turn Lane Warranted

LEGEND

- AM Peak Hour
- PM Peak Hour



7 CONCLUSIONS

A traffic study analyzing the potential impact of the development of the Williamsburg Pottery Site in Hanover County, Virginia was performed for the 2025 existing volumes, the 2030 background volumes, and the 2030 total future volumes, which includes site traffic generated by the proposed development.

The traffic generated by the proposed development does not have a significant impact on the surrounding roadway network. However, as shown in 2030 background conditions, the intersection of Peters Creek Road and Shenandoah Avenue experiences capacity constraints before traffic from the proposed development is added.

The intersection of Shenandoah Avenue and the proposed site entrance does not experience significant delays or queuing issues.

7.1 PRINCIPAL FINDINGS

Under 2025 Existing Conditions:

All approaches to the Route 1/Old Ridge Road operate at LOS D or better in both peak hours.

- The north and southbound lefts operate at LOS A in both peak hours with all queues contained within the available storage.
- The eastbound approach (single lane) operates at LOS B in both peak hours with maximum queues of 62 feet.
- The westbound approach (single lane) operates at LOS B in the AM peak hour and LOS D (27.6 sec/veh of delay) in the PM peak hour with maximum queues of 84 feet.

Under 2030 Background Conditions:

All approaches to the Route 1/Old Ridge Road continue to operate at LOS D or better in both peak hours.

- The north and southbound lefts will operate at LOS A in both peak hours with all queues contained within the available storage.
- The eastbound approach (single lane) will operate at LOS B in both peak hours with maximum queues of 65 feet.
- The westbound approach (single lane) will operate at LOS B in the AM peak hour and LOS D (29.3 sec/veh of delay) in the PM peak hour with maximum queues of 88 feet.

Under 2030 Total Conditions (With Development):

With the addition of the proposed development traffic volumes, under 2030 future conditions, most approaches experience similar levels of service, delay, and queueing as under background conditions. Specifically:

4. All approaches to the Route 1/Old Ridge Road continue to operate at LOS D or better in both peak hours one exception.
 - The north and southbound lefts will operate at LOS A in both peak hours with all queues contained within the available storage.
 - The eastbound approach (single lane) will operate at LOS B in both peak hours with maximum queues of 66 feet.

- The westbound approach will operate at LOS C in the AM peak and LOS E in the PM peak with a delay of 45.3 sec/veh and a maximum queue of 145 feet (or 6 vehicles).
 - A traffic signal will not be warranted at the intersection at the MUTCD signal warrant 1 requires either 600 mainline/150 side street or 900 mainline/75 side street vehicles for each of eight hours of the day.
 - In the PM peak hour, the intersection has 899 mainline and 158 side street volumes (including all rights). If even a small portion of right turns are excluded (which is required), the warrant will not be met.
 - All other hours of the day will have less volume on all approaches and will not meet the warrants.
- 5. All approaches to the Old Ridge Road/Site Entrance intersections will operate at LOS B or better with minimal queueing.
- 6. No improvements are required at the study intersections beyond the 200 foot eastbound right turn taper into the western site entrance.

7.2 RECOMMENDATIONS

No improvements are required at the study intersections beyond the 200 foot eastbound right turn taper into the western site entrance.

Appendix A – Traffic Counts



TRAFFIC DATA COLLECTION

File Name : Hanover (US 1 and Old Ridge)
 Site Code :
 Start Date : 4/29/2025
 Page No : 1

Groups Printed- Cars + - Trucks

	US 1 Southbound					Old Ridge Road Westbound					US 1 Northbound					Old Ridge Road Eastbound					
Start Time	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	3	64	1	68	0	20	2	2	24	0	6	48	19	73	0	0	3	14	17	182
07:15 AM	0	1	99	3	103	0	7	0	1	8	0	2	35	8	45	0	3	3	23	29	185
07:30 AM	0	2	94	2	98	0	5	0	2	7	0	6	34	13	53	0	3	3	21	27	185
07:45 AM	0	1	90	0	91	0	9	1	4	14	0	5	29	10	44	0	1	3	23	27	176
Total	0	7	347	6	360	0	41	3	9	53	0	19	146	50	215	0	7	12	81	100	728
08:00 AM	0	1	77	0	78	0	6	0	2	8	0	9	40	10	59	0	1	3	24	28	173
08:15 AM	0	4	45	0	49	0	4	0	3	7	0	7	38	14	59	0	0	3	12	15	130
08:30 AM	0	5	73	2	80	0	10	0	0	10	0	10	33	5	48	0	1	0	15	16	154
08:45 AM	0	4	67	0	71	0	4	0	1	5	0	8	35	9	52	0	2	1	9	12	140
Total	0	14	262	2	278	0	24	0	6	30	0	34	146	38	218	0	4	7	60	71	597
Grand Total	0	21	609	8	638	0	65	3	15	83	0	53	292	88	433	0	11	19	141	171	1325
Apprch %	0	3.3	95.5	1.3		0	78.3	3.6	18.1		0	12.2	67.4	20.3		0	6.4	11.1	82.5		
Total %	0	1.6	46	0.6	48.2	0	4.9	0.2	1.1	6.3	0	4	22	6.6	32.7	0	0.8	1.4	10.6	12.9	
Cars +	0	13	582	5	600	0	53	3	5	61	0	49	258	77	384	0	10	18	136	164	1209
% Cars +	0	61.9	95.6	62.5	94	0	81.5	100	33.3	73.5	0	92.5	88.4	87.5	88.7	0	90.9	94.7	96.5	95.9	91.2
Trucks	0	8	27	3	38	0	12	0	10	22	0	4	34	11	49	0	1	1	5	7	116
% Trucks	0	38.1	4.4	37.5	6	0	18.5	0	66.7	26.5	0	7.5	11.6	12.5	11.3	0	9.1	5.3	3.5	4.1	8.8



TRAFFIC DATA COLLECTION

File Name : Hanover (US 1 and Old Ridge)

Site Code :

Start Date : 4/29/2025

Page No : 2

	US 1 Southbound					Old Ridge Road Westbound					US 1 Northbound					Old Ridge Road Eastbound					
Start Time	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	3	64	1	68	0	20	2	2	24	0	6	48	19	73	0	0	3	14	17	182
07:15 AM	0	1	99	3	103	0	7	0	1	8	0	2	35	8	45	0	3	3	23	29	185
07:30 AM	0	2	94	2	98	0	5	0	2	7	0	6	34	13	53	0	3	3	21	27	185
07:45 AM	0	1	90	0	91	0	9	1	4	14	0	5	29	10	44	0	1	3	23	27	176
Total Volume	0	7	347	6	360	0	41	3	9	53	0	19	146	50	215	0	7	12	81	100	728
% App. Total	0	1.9	96.4	1.7		0	77.4	5.7	17		0	8.8	67.9	23.3		0	7	12	81		
PHF	.000	.583	.876	.500	.874	.000	.513	.375	.563	.552	.000	.792	.760	.658	.736	.000	.583	1.0 0	.880	.862	.984
Cars +	0	5	333	4	342	0	35	3	4	42	0	16	135	45	196	0	7	11	79	97	677
% Cars +	0	71.4	96.0	66.7	95.0	0	85.4	100	44.4	79.2	0	84.2	92.5	90.0	91.2	0	100	91.7	97.5	97.0	93.0
Trucks	0	2	14	2	18	0	6	0	5	11	0	3	11	5	19	0	0	1	2	3	51
% Trucks	0	28.6	4.0	33.3	5.0	0	14.6	0	55.6	20.8	0	15.8	7.5	10.0	8.8	0	0	8.3	2.5	3.0	7.0



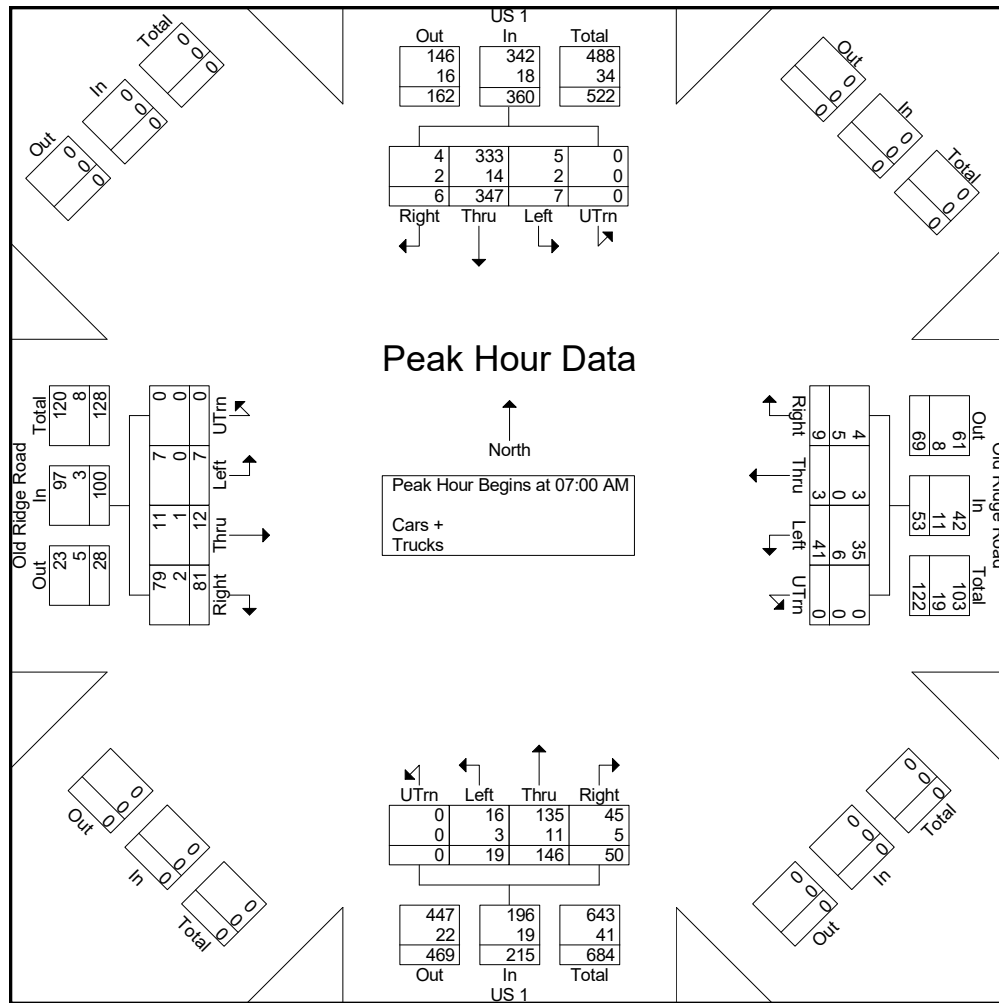
TRAFFIC DATA COLLECTION

File Name : Hanover (US 1 and Old Ridge)

Site Code :

Start Date : 4/29/2025

Page No : 3





TRAFFIC DATA COLLECTION

File Name : Hanover (US 1 and Old Ridge)

Site Code :

Start Date : 4/29/2025

Page No : 1

Groups Printed- Cars + - Trucks

	US 1 Southbound					Old Ridge Road Westbound					US 1 Northbound					Old Ridge Road Eastbound					
Start Time	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	56	2	58	0	19	4	2	25	0	20	91	4	115	0	0	1	9	10	208
04:15 PM	0	0	73	1	74	0	7	1	1	9	0	12	122	5	139	0	0	1	8	9	231
04:30 PM	0	1	79	3	83	0	17	2	1	20	1	21	111	4	137	0	2	0	13	15	255
04:45 PM	0	7	70	2	79	0	12	3	3	18	0	18	107	3	128	0	2	1	17	20	245
Total	0	8	278	8	294	0	55	10	7	72	1	71	431	16	519	0	4	3	47	54	939
05:00 PM	0	2	57	3	62	0	15	2	0	17	0	18	98	4	120	0	0	1	10	11	210
05:15 PM	0	4	57	1	62	0	7	0	2	9	0	27	120	6	153	0	0	0	10	10	234
05:30 PM	0	1	61	1	63	0	7	1	0	8	0	19	100	10	129	0	1	0	9	10	210
05:45 PM	0	2	39	3	44	0	3	1	0	4	0	17	99	6	122	0	2	0	7	9	179
Total	0	9	214	8	231	0	32	4	2	38	0	81	417	26	524	0	3	1	36	40	833
Grand Total	0	17	492	16	525	0	87	14	9	110	1	152	848	42	1043	0	7	4	83	94	1772
Apprch %	0	3.2	93.7	3		0	79.1	12.7	8.2		0.1	14.6	81.3	4		0	7.4	4.3	88.3		
Total %	0	1	27.8	0.9	29.6	0	4.9	0.8	0.5	6.2	0.1	8.6	47.9	2.4	58.9	0	0.4	0.2	4.7	5.3	
Cars +	0	13	472	16	501	0	77	14	3	94	1	152	824	35	1012	0	7	3	82	92	1699
% Cars +	0	76.5	95.9	100	95.4	0	88.5	100	33.3	85.5	100	100	97.2	83.3	97	0	100	75	98.8	97.9	95.9
Trucks	0	4	20	0	24	0	10	0	6	16	0	0	24	7	31	0	0	1	1	2	73
% Trucks	0	23.5	4.1	0	4.6	0	11.5	0	66.7	14.5	0	0	2.8	16.7	3	0	0	25	1.2	2.1	4.1



TRAFFIC DATA COLLECTION

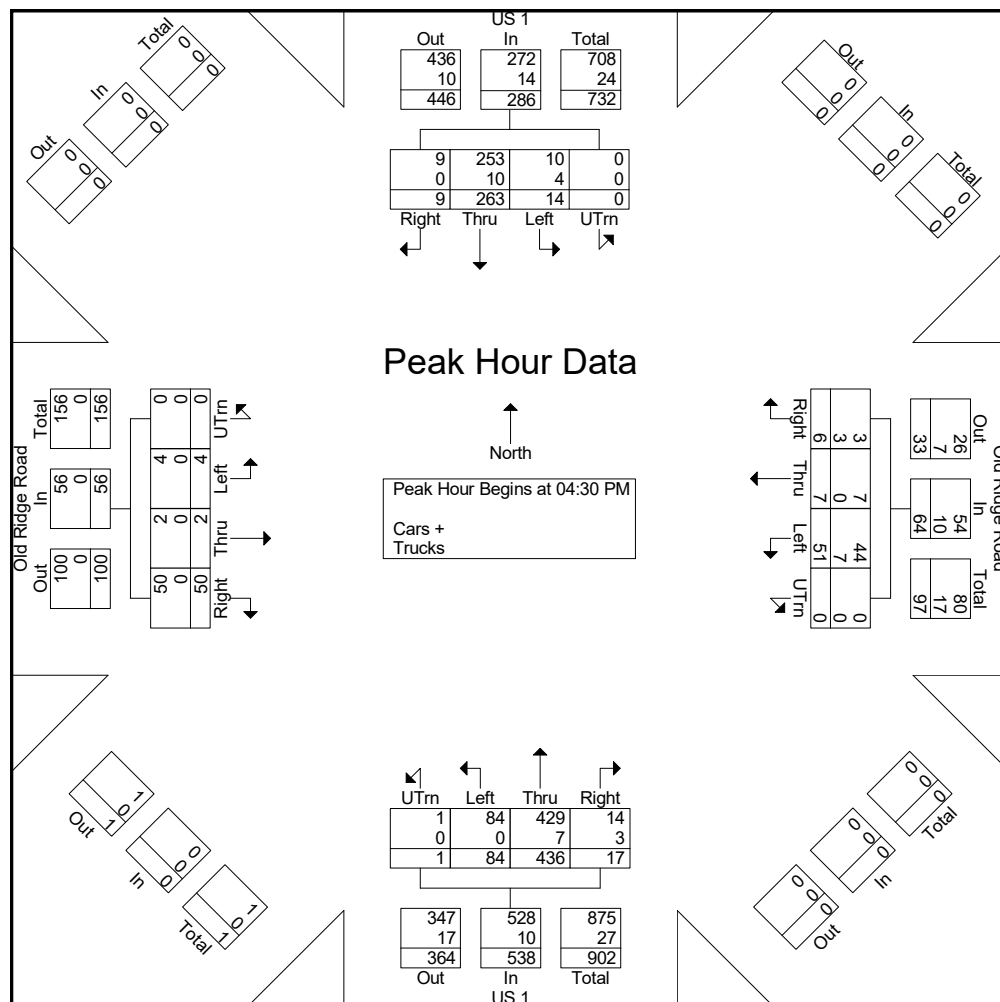
File Name : Hanover (US 1 and Old Ridge)

Site Code :

Start Date : 4/29/2025

Page No : 2

	US 1 Southbound					Old Ridge Road Westbound					US 1 Northbound					Old Ridge Road Eastbound					
Start Time	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	UTrn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	1	79	3	83	0	17	2	1	20	1	21	111	4	137	0	2	0	13	15	255
04:45 PM	0	7	70	2	79	0	12	3	3	18	0	18	107	3	128	0	2	1	17	20	245
05:00 PM	0	2	57	3	62	0	15	2	0	17	0	18	98	4	120	0	0	1	10	11	210
05:15 PM	0	4	57	1	62	0	7	0	2	9	0	27	120	6	153	0	0	0	10	10	234
Total Volume	0	14	263	9	286	0	51	7	6	64	1	84	436	17	538	0	4	2	50	56	944
% App. Total	0	4.9	92	3.1		0	79.7	10.9	9.4		0.2	15.6	81	3.2		0	7.1	3.6	89.3		
PHF	.000	.500	.832	.750	.861	.000	.750	.583	.500	.800	.250	.778	.908	.708	.879	.000	.500	.500	.735	.700	.925
Cars +	0	10	253	9	272	0	44	7	3	54	1	84	429	14	528	0	4	2	50	56	910
% Cars +	0	71.4	96.2	100	95.1	0	86.3	100	50.0	84.4	100	100	98.4	82.4	98.1	0	100	100	100	100	96.4
Trucks	0	4	10	0	14	0	7	0	3	10	0	0	7	3	10	0	0	0	0	0	34
% Trucks	0	28.6	3.8	0	4.9	0	13.7	0	50.0	15.6	0	0	1.6	17.6	1.9	0	0	0	0	0	3.6



Daily Vehicle Volume Report

Study Date: Tuesday, 04/29/2025

Unit ID: 1

Location: Old Ridge Road

	Westbound Volume	Eastbound Volume	Total Volume
00:00 - 00:59	3	3	6
01:00 - 01:59	3	1	4
02:00 - 02:59	1	0	1
03:00 - 03:59	0	1	1
04:00 - 04:59	5	7	12
05:00 - 05:59	5	34	39
06:00 - 06:59	30	151	181
07:00 - 07:59	50	67	117
08:00 - 08:59	32	41	73
09:00 - 09:59	21	31	52
10:00 - 10:59	31	30	61
11:00 - 11:59	37	26	63
12:00 - 12:59	42	42	84
13:00 - 13:59	19	35	54
14:00 - 14:59	34	22	56
15:00 - 15:59	71	20	91
16:00 - 16:59	80	19	99
17:00 - 17:59	32	22	54
18:00 - 18:59	38	46	84
19:00 - 19:59	41	5	46
20:00 - 20:59	16	7	23
21:00 - 21:59	5	6	11
22:00 - 22:59	7	3	10
23:00 - 23:59	5	3	8
Totals	608	622	1230
AM Peak Time	06:25 - 07:24	06:19 - 07:18	06:20 - 07:19
AM Peak Volume	63	160	219
PM Peak Time	15:57 - 16:56	17:47 - 18:46	18:14 - 19:13
PM Peak Volume	85	46	107

Daily Westbound Classes Report

Study Date: Tuesday, 04/29/2025

Unit ID: 1

Location: Old Ridge Road

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	Total
00:00 - 00:59	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
01:00 - 01:59	0	1	1	0	1	0	0	0	0	0	0	0	0	0	3
02:00 - 02:59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:00 - 03:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 - 04:59	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
05:00 - 05:59	0	3	0	0	1	0	0	0	1	0	0	0	0	0	5
06:00 - 06:59	1	13	3	0	11	2	0	0	0	0	0	0	0	0	30
07:00 - 07:59	0	32	8	1	4	1	1	1	1	1	0	0	0	0	50
08:00 - 08:59	2	10	4	2	7	2	0	0	5	0	0	0	0	0	32
09:00 - 09:59	1	9	0	0	5	1	0	1	4	0	0	0	0	0	21
10:00 - 10:59	0	6	6	0	8	0	0	0	11	0	0	0	0	0	31
11:00 - 11:59	2	13	8	0	10	2	0	0	2	0	0	0	0	0	37
12:00 - 12:59	1	16	4	1	14	1	0	0	5	0	0	0	0	0	42
13:00 - 13:59	0	5	2	0	5	2	0	0	5	0	0	0	0	0	19
14:00 - 14:59	0	13	4	0	10	1	0	2	4	0	0	0	0	0	34
15:00 - 15:59	2	30	14	1	14	2	0	1	7	0	0	0	0	0	71
16:00 - 16:59	0	45	4	2	22	1	0	0	6	0	0	0	0	0	80
17:00 - 17:59	1	14	5	0	6	1	0	0	5	0	0	0	0	0	32
18:00 - 18:59	0	17	6	0	14	1	0	0	0	0	0	0	0	0	38
19:00 - 19:59	0	25	6	0	9	0	0	0	1	0	0	0	0	0	41
20:00 - 20:59	0	7	2	0	3	2	0	0	2	0	0	0	0	0	16
21:00 - 21:59	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
22:00 - 22:59	0	2	0	0	0	1	0	0	4	0	0	0	0	0	7
23:00 - 23:59	0	3	0	0	0	2	0	0	0	0	0	0	0	0	5
Totals	10	278	77	7	144	22	1	5	63	1	0	0	0	0	608
Percent of Total	1.6	45.7	12.7	1.2	23.7	3.6	0.2	0.8	10.4	0.2	0.0	0.0	0.0	0.0	100
Percent of AM	2.8	44.0	13.8	1.4	21.6	3.7	0.5	0.9	11.0	0.5	0.0	0.0	0.0	0.0	100
Percent of PM	1.0	46.7	12.1	1.0	24.9	3.6	0.0	0.8	10.0	0.0	0.0	0.0	0.0	0.0	100

Truck Summary:

Total Trucks: 243

% Trucks: 40.0

AM % Trucks: 39.4

PM % Trucks: 40.3

Classification Scheme: FHWA(1) (ID: 2275065203)

#1 Motorcycles - 2 Axles
#2 Passenger Cars - 2 Axles
#3 Pickup Trucks, Vans - 2 Axles
#4 Buses
#5 Single Unit - 2 Axles, 6 Tires

#6 Single Unit Truck - 3 Axles
#7 Single Unit - 4 Axles
#8 Single Unit - 4 Axles or Less
#9 Double Unit - 5 Axles
#10 Double Unit - 6 Axles or More

#11 Multi-Unit - 5 Axles or Less
#12 Multi-Unit - 6 Axles
#13 Multi-Unit - 7 Axles or More
#14 Unclassified Vehicle

Daily Eastbound Classes Report

Study Date: Tuesday, 04/29/2025

Unit ID: 1

Location: Old Ridge Road

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	Total
00:00 - 00:59	1	1	0	0	0	1	0	0	0	0	0	0	0	0	3
01:00 - 01:59	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
02:00 - 02:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 - 03:59	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
04:00 - 04:59	0	2	2	0	1	0	0	2	0	0	0	0	0	0	7
05:00 - 05:59	0	10	10	0	12	1	0	1	0	0	0	0	0	0	34
06:00 - 06:59	0	85	33	0	16	2	0	0	15	0	0	0	0	0	151
07:00 - 07:59	1	32	12	2	14	2	0	1	3	0	0	0	0	0	67
08:00 - 08:59	0	16	11	0	6	0	0	5	3	0	0	0	0	0	41
09:00 - 09:59	1	6	4	0	14	2	0	2	2	0	0	0	0	0	31
10:00 - 10:59	0	6	11	0	8	0	0	0	4	0	0	1	0	0	30
11:00 - 11:59	1	8	5	0	9	1	0	2	0	0	0	0	0	0	26
12:00 - 12:59	0	19	6	0	13	2	0	1	1	0	0	0	0	0	42
13:00 - 13:59	0	11	4	0	9	1	0	2	7	1	0	0	0	0	35
14:00 - 14:59	0	8	3	0	3	2	0	3	3	0	0	0	0	0	22
15:00 - 15:59	0	6	3	1	3	0	0	2	5	0	0	0	0	0	20
16:00 - 16:59	1	7	1	1	4	1	0	2	2	0	0	0	0	0	19
17:00 - 17:59	0	10	5	0	4	0	0	1	2	0	0	0	0	0	22
18:00 - 18:59	0	32	8	0	3	0	0	2	1	0	0	0	0	0	46
19:00 - 19:59	0	2	1	0	0	0	0	0	2	0	0	0	0	0	5
20:00 - 20:59	0	5	1	0	0	0	0	0	1	0	0	0	0	0	7
21:00 - 21:59	0	2	0	0	0	0	0	0	4	0	0	0	0	0	6
22:00 - 22:59	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
23:00 - 23:59	0	1	1	0	0	1	0	0	0	0	0	0	0	0	3
Totals	5	271	122	4	120	16	0	26	56	1	0	1	0	0	622
Percent of Total	0.8	43.6	19.6	0.6	19.3	2.6	0.0	4.2	9.0	0.2	0.0	0.2	0.0	0.0	100
Percent of AM	1.0	42.3	22.4	0.5	20.7	2.3	0.0	3.3	7.1	0.0	0.0	0.3	0.0	0.0	100
Percent of PM	0.4	45.7	14.8	0.9	17.0	3.0	0.0	5.7	12.2	0.4	0.0	0.0	0.0	0.0	100

Truck Summary:

Total Trucks: 224

% Trucks: 36.0

AM % Trucks: 34.2

PM % Trucks: 39.1

Classification Scheme: FHWA(1) (ID: 2275065203)

#1	Motorcycles - 2 Axles	#6	Single Unit Truck - 3 Axles	#11	Multi-Unit - 5 Axles or Less
#2	Passenger Cars - 2 Axles	#7	Single Unit - 4 Axles	#12	Multi-Unit - 6 Axles
#3	Pickup Trucks, Vans - 2 Axles	#8	Single Unit - 4 Axles or Less	#13	Multi-Unit - 7 Axles or More
#4	Buses	#9	Double Unit - 5 Axles	#14	Unclassified Vehicle
#5	Single Unit - 2 Axles, 6 Tires	#10	Double Unit - 6 Axles or More		

Daily Total Classes Report

Study Date: Tuesday, 04/29/2025

Unit ID: 1

Location: Old Ridge Road

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	Total
00:00 - 00:59	1	4	0	0	0	1	0	0	0	0	0	0	0	0	6
01:00 - 01:59	0	1	1	0	2	0	0	0	0	0	0	0	0	0	4
02:00 - 02:59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:00 - 03:59	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
04:00 - 04:59	0	7	2	0	1	0	0	2	0	0	0	0	0	0	12
05:00 - 05:59	0	13	10	0	13	1	0	1	1	0	0	0	0	0	39
06:00 - 06:59	1	98	36	0	27	4	0	0	15	0	0	0	0	0	181
07:00 - 07:59	1	64	20	3	18	3	1	2	4	1	0	0	0	0	117
08:00 - 08:59	2	26	15	2	13	2	0	5	8	0	0	0	0	0	73
09:00 - 09:59	2	15	4	0	19	3	0	3	6	0	0	0	0	0	52
10:00 - 10:59	0	12	17	0	16	0	0	0	15	0	0	1	0	0	61
11:00 - 11:59	3	21	13	0	19	3	0	2	2	0	0	0	0	0	63
12:00 - 12:59	1	35	10	1	27	3	0	1	6	0	0	0	0	0	84
13:00 - 13:59	0	16	6	0	14	3	0	2	12	1	0	0	0	0	54
14:00 - 14:59	0	21	7	0	13	3	0	5	7	0	0	0	0	0	56
15:00 - 15:59	2	36	17	2	17	2	0	3	12	0	0	0	0	0	91
16:00 - 16:59	1	52	5	3	26	2	0	2	8	0	0	0	0	0	99
17:00 - 17:59	1	24	10	0	10	1	0	1	7	0	0	0	0	0	54
18:00 - 18:59	0	49	14	0	17	1	0	2	1	0	0	0	0	0	84
19:00 - 19:59	0	27	7	0	9	0	0	0	3	0	0	0	0	0	46
20:00 - 20:59	0	12	3	0	3	2	0	0	3	0	0	0	0	0	23
21:00 - 21:59	0	7	0	0	0	0	0	0	4	0	0	0	0	0	11
22:00 - 22:59	0	4	1	0	0	1	0	0	4	0	0	0	0	0	10
23:00 - 23:59	0	4	1	0	0	3	0	0	0	0	0	0	0	0	8
Totals	15	549	199	11	264	38	1	31	119	2	0	1	0	0	1230
Percent of Total	1.2	44.6	16.2	0.9	21.5	3.1	0.1	2.5	9.7	0.2	0.0	0.1	0.0	0.0	100
Percent of AM	1.6	43.0	19.3	0.8	21.0	2.8	0.2	2.5	8.5	0.2	0.0	0.2	0.0	0.0	100
Percent of PM	0.8	46.3	13.1	1.0	21.9	3.4	0.0	2.6	10.8	0.2	0.0	0.0	0.0	0.0	100

Truck Summary:

Total Trucks: 467

% Trucks: 38.0

AM % Trucks: 36.1

PM % Trucks: 39.8

Classification Scheme: FHWA(1) (ID: 2275065203)

#1	Motorcycles - 2 Axles	#6	Single Unit Truck - 3 Axles	#11	Multi-Unit - 5 Axles or Less
#2	Passenger Cars - 2 Axles	#7	Single Unit - 4 Axles	#12	Multi-Unit - 6 Axles
#3	Pickup Trucks, Vans - 2 Axles	#8	Single Unit - 4 Axles or Less	#13	Multi-Unit - 7 Axles or More
#4	Buses	#9	Double Unit - 5 Axles	#14	Unclassified Vehicle
#5	Single Unit - 2 Axles, 6 Tires	#10	Double Unit - 6 Axles or More		

Daily Westbound Speeds (MPH)

Study Date: Tuesday, 04/29/2025

Unit ID: 1

Location: Old Ridge Road

Posted Speed: 45

	0- 9.99	10- 14.99	15- 19.99	20- 24.99	25- 29.99	30- 34.99	35- 39.99	40- 44.99	45- 49.99	50- 54.99	55- 59.99	60- 64.99	65- 69.99	70- 74.99	75+	Total
00:00 - 00:59	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	3
01:00 - 01:59	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	3
02:00 - 02:59	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
03:00 - 03:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 - 04:59	0	0	0	0	0	0	1	1	2	0	0	1	0	0	0	5
05:00 - 05:59	0	1	0	0	0	1	0	2	0	1	0	0	0	0	0	5
06:00 - 06:59	0	0	0	0	0	0	3	9	9	6	2	1	0	0	0	30
07:00 - 07:59	0	0	0	0	0	2	4	13	16	10	5	0	0	0	0	50
08:00 - 08:59	1	0	0	0	0	5	6	9	5	4	2	0	0	0	0	32
09:00 - 09:59	1	0	0	0	0	1	3	5	8	3	0	0	0	0	0	21
10:00 - 10:59	0	0	0	0	0	0	6	12	7	6	0	0	0	0	0	31
11:00 - 11:59	2	0	0	0	0	1	4	12	15	2	1	0	0	0	0	37
12:00 - 12:59	1	0	0	0	0	0	5	9	20	6	1	0	0	0	0	42
13:00 - 13:59	0	0	0	0	0	2	4	4	7	1	1	0	0	0	0	19
14:00 - 14:59	0	0	0	0	1	0	4	13	11	3	2	0	0	0	0	34
15:00 - 15:59	0	0	0	0	0	2	12	17	26	11	3	0	0	0	0	71
16:00 - 16:59	0	0	0	1	1	0	7	13	37	18	3	0	0	0	0	80
17:00 - 17:59	0	0	0	1	0	0	8	2	16	4	1	0	0	0	0	32
18:00 - 18:59	0	0	0	0	0	1	2	6	8	13	7	1	0	0	0	38
19:00 - 19:59	0	0	0	0	0	0	2	10	19	7	3	0	0	0	0	41
20:00 - 20:59	0	0	0	0	0	2	2	8	1	2	0	0	1	0	0	16
21:00 - 21:59	0	0	0	0	0	0	1	0	1	2	1	0	0	0	0	5
22:00 - 22:59	0	0	0	0	0	2	4	0	1	0	0	0	0	0	0	7
23:00 - 23:59	0	0	0	0	0	0	1	1	2	0	1	0	0	0	0	5
Totals	6	1	0	3	2	19	80	147	211	100	35	3	1	0	0	608
Percent of Total	1.0	0.2	0.0	0.5	0.3	3.1	13.2	24.2	34.7	16.4	5.8	0.5	0.2	0.0	0.0	100
Percent of AM	2.3	0.5	0.0	0.5	0.0	4.6	12.8	29.4	28.4	15.1	5.5	0.9	0.0	0.0	0.0	100
Percent of PM	0.3	0.0	0.0	0.5	0.5	2.3	13.3	21.3	38.2	17.2	5.9	0.3	0.3	0.0	0.0	100

Standard Deviation: 7.7 MPH

Ten Mile Pace: 40 to 49 MPH

85th Percentile: 52.4 MPH

Mean Speed: 45.3 MPH

Percent in Ten Mile Pace: 58.9%

Median Speed: 46.1 MPH

15th Percentile: 38.7 MPH

Modal Speed: 47.5 MPH

90th Percentile: 53.9 MPH

95th Percentile: 56.2 MPH

Daily Eastbound Speeds (MPH)

Study Date: Tuesday, 04/29/2025

Unit ID: 1

Location: Old Ridge Road

Posted Speed: 45

	0- 9.99	10- 14.99	15- 19.99	20- 24.99	25- 29.99	30- 34.99	35- 39.99	40- 44.99	45- 49.99	50- 54.99	55- 59.99	60- 64.99	65- 69.99	70- 74.99	75+	Total
00:00 - 00:59	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	3
01:00 - 01:59	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
02:00 - 02:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 - 03:59	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
04:00 - 04:59	0	0	0	0	0	0	0	0	5	2	0	0	0	0	0	7
05:00 - 05:59	0	0	0	1	4	3	3	3	14	4	1	1	0	0	0	34
06:00 - 06:59	0	0	0	0	0	6	10	30	57	31	11	5	0	1	0	151
07:00 - 07:59	1	0	0	0	0	0	2	16	22	15	9	2	0	0	0	67
08:00 - 08:59	0	0	0	0	0	0	1	10	14	11	4	1	0	0	0	41
09:00 - 09:59	0	0	0	0	0	0	2	6	16	6	1	0	0	0	0	31
10:00 - 10:59	0	0	0	0	0	0	3	5	13	7	2	0	0	0	0	30
11:00 - 11:59	1	0	0	0	0	0	0	10	9	4	2	0	0	0	0	26
12:00 - 12:59	0	0	0	0	0	0	5	13	9	10	4	1	0	0	0	42
13:00 - 13:59	1	0	0	0	0	1	1	10	12	8	1	1	0	0	0	35
14:00 - 14:59	0	0	0	0	0	1	3	5	8	5	0	0	0	0	0	22
15:00 - 15:59	0	0	0	0	0	2	1	4	9	1	3	0	0	0	0	20
16:00 - 16:59	1	0	0	0	0	1	4	5	3	2	3	0	0	0	0	19
17:00 - 17:59	0	0	0	0	0	0	0	5	5	6	5	0	1	0	0	22
18:00 - 18:59	0	0	0	0	0	0	1	6	16	15	7	1	0	0	0	46
19:00 - 19:59	0	0	0	0	0	0	0	2	1	1	0	1	0	0	0	5
20:00 - 20:59	0	0	0	0	0	1	1	2	0	3	0	0	0	0	0	7
21:00 - 21:59	0	0	0	0	0	1	1	2	0	1	1	0	0	0	0	6
22:00 - 22:59	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	3
23:00 - 23:59	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	3
Totals	4	1	0	1	4	17	39	137	215	133	55	13	2	1	0	622
Percent of Total	0.6	0.2	0.0	0.2	0.6	2.7	6.3	22.0	34.6	21.4	8.8	2.1	0.3	0.2	0.0	100
Percent of AM	0.5	0.3	0.0	0.3	1.0	2.6	5.6	20.4	38.3	20.4	7.9	2.3	0.3	0.3	0.0	100
Percent of PM	0.9	0.0	0.0	0.0	0.0	3.0	7.4	24.8	28.3	23.0	10.4	1.7	0.4	0.0	0.0	100

Standard Deviation: 7.6 MPH

Ten Mile Pace: 40 to 49 MPH

85th Percentile: 54.1 MPH

Mean Speed: 47.2 MPH

Percent in Ten Mile Pace: 56.6%

Median Speed: 47.5 MPH

15th Percentile: 41.0 MPH

Modal Speed: 47.5 MPH

90th Percentile: 55.8 MPH

95th Percentile: 58.6 MPH

Daily Total Speeds (MPH)

Study Date: Tuesday, 04/29/2025

Unit ID: 1

Location: Old Ridge Road

Posted Speed: 45

	0- 9.99	10- 14.99	15- 19.99	20- 24.99	25- 29.99	30- 34.99	35- 39.99	40- 44.99	45- 49.99	50- 54.99	55- 59.99	60- 64.99	65- 69.99	70- 74.99	75+	Total
00:00 - 00:59	1	1	0	0	0	0	1	1	0	0	2	0	0	0	0	6
01:00 - 01:59	0	0	0	0	0	0	1	0	0	1	1	0	1	0	0	4
02:00 - 02:59	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
03:00 - 03:59	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
04:00 - 04:59	0	0	0	0	0	0	1	1	7	2	0	1	0	0	0	12
05:00 - 05:59	0	1	0	1	4	4	3	5	14	5	1	1	0	0	0	39
06:00 - 06:59	0	0	0	0	0	6	13	39	66	37	13	6	0	1	0	181
07:00 - 07:59	1	0	0	0	0	2	6	29	38	25	14	2	0	0	0	117
08:00 - 08:59	1	0	0	0	0	5	7	19	19	15	6	1	0	0	0	73
09:00 - 09:59	1	0	0	0	0	1	5	11	24	9	1	0	0	0	0	52
10:00 - 10:59	0	0	0	0	0	0	9	17	20	13	2	0	0	0	0	61
11:00 - 11:59	3	0	0	0	0	1	4	22	24	6	3	0	0	0	0	63
12:00 - 12:59	1	0	0	0	0	0	10	22	29	16	5	1	0	0	0	84
13:00 - 13:59	1	0	0	0	0	3	5	14	19	9	2	1	0	0	0	54
14:00 - 14:59	0	0	0	0	1	1	7	18	19	8	2	0	0	0	0	56
15:00 - 15:59	0	0	0	0	0	4	13	21	35	12	6	0	0	0	0	91
16:00 - 16:59	1	0	0	1	1	1	11	18	40	20	6	0	0	0	0	99
17:00 - 17:59	0	0	0	1	0	0	8	7	21	10	6	0	1	0	0	54
18:00 - 18:59	0	0	0	0	0	1	3	12	24	28	14	2	0	0	0	84
19:00 - 19:59	0	0	0	0	0	0	2	12	20	8	3	1	0	0	0	46
20:00 - 20:59	0	0	0	0	0	3	3	10	1	5	0	0	1	0	0	23
21:00 - 21:59	0	0	0	0	0	1	2	2	1	3	2	0	0	0	0	11
22:00 - 22:59	0	0	0	0	0	2	4	2	2	0	0	0	0	0	0	10
23:00 - 23:59	0	0	0	0	0	0	1	2	3	1	1	0	0	0	0	8
Totals	10	2	0	4	6	36	119	284	426	233	90	16	3	1	0	1230
Percent of Total	0.8	0.2	0.0	0.3	0.5	2.9	9.7	23.1	34.6	18.9	7.3	1.3	0.2	0.1	0.0	100
Percent of AM	1.1	0.3	0.0	0.3	0.7	3.3	8.2	23.6	34.8	18.5	7.0	1.8	0.2	0.2	0.0	100
Percent of PM	0.5	0.0	0.0	0.3	0.3	2.6	11.1	22.6	34.5	19.4	7.6	0.8	0.3	0.0	0.0	100

Standard Deviation: 7.7 MPH

Ten Mile Pace: 40 to 49 MPH

85th Percentile: 53.4 MPH

Mean Speed: 46.3 MPH

Percent in Ten Mile Pace: 57.7%

Median Speed: 46.8 MPH

15th Percentile: 40.1 MPH

Modal Speed: 47.5 MPH

90th Percentile: 54.7 MPH

95th Percentile: 57.7 MPH

Appendix B – Existing Analysis Worksheets

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↙	↕		↙	↕	
Traffic Vol, veh/h	7	12	81	41	3	9	19	146	50	7	347	6
Future Vol, veh/h	7	12	81	41	3	9	19	146	50	7	347	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	220	-	-	210	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	0	8	3	15	0	56	16	8	10	29	4	33
Mvmt Flow	7	12	83	42	3	9	19	149	51	7	354	6

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	485	609	180	410	587	100	360	0	0	200	0	0
Stage 1	371	371	-	213	213	-	-	-	-	-	-	-
Stage 2	114	238	-	197	374	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.66	6.96	7.8	6.5	8.02	4.42	-	-	4.68	-	-
Critical Hdwy Stg 1	6.5	5.66	-	6.8	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.66	-	6.8	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.08	3.33	3.65	4	3.86	2.36	-	-	2.49	-	-
Pot Cap-1 Maneuver	470	396	829	496	425	787	1101	-	-	1194	-	-
Stage 1	627	603	-	733	730	-	-	-	-	-	-	-
Stage 2	884	692	-	750	621	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	454	387	829	428	415	787	1101	-	-	1194	-	-
Mov Cap-2 Maneuver	454	387	-	428	415	-	-	-	-	-	-	-
Stage 1	616	599	-	721	718	-	-	-	-	-	-	-
Stage 2	855	680	-	658	617	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.1		13.8		0.7		0.2	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1101	-	-	694	463	1194	-
HCM Lane V/C Ratio	0.018	-	-	0.147	0.117	0.006	-
HCM Control Delay (s)	8.3	-	-	11.1	13.8	8	-
HCM Lane LOS	A	-	-	B	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.5	0.4	0	-

Intersection: 1: Route 1 & Old Ridge Road

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	L	TR	L
Maximum Queue (ft)	62	81	36	3	14
Average Queue (ft)	30	31	4	0	1
95th Queue (ft)	50	64	20	3	8
Link Distance (ft)	1231	1756		1306	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			220		210
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 0

2025 Existing - PM Peak
1: Route 1 & Old Ridge Road

AM Existing Peak
HCM 6th TWSC

Intersection												
Int Delay, s/veh	3.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↵	↕↵		↵	↕↵	
Traffic Vol, veh/h	4	2	50	51	7	6	85	436	17	14	263	9
Future Vol, veh/h	4	2	50	51	7	6	85	436	17	14	263	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	220	-	-	210	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	14	0	50	0	2	18	29	4	0
Mvmt Flow	4	2	54	55	8	6	91	469	18	15	283	10
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	739	987	147	833	983	244	293	0	0	487	0	0
Stage 1	318	318	-	660	660	-	-	-	-	-	-	-
Stage 2	421	669	-	173	323	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.78	6.5	7.9	4.1	-	-	4.68	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.78	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.78	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.64	4	3.8	2.2	-	-	2.49	-	-
Pot Cap-1 Maneuver	309	249	880	242	251	629	1280	-	-	904	-	-
Stage 1	673	657	-	391	463	-	-	-	-	-	-	-
Stage 2	586	459	-	778	654	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	278	227	880	211	229	629	1280	-	-	904	-	-
Mov Cap-2 Maneuver	278	227	-	211	229	-	-	-	-	-	-	-
Stage 1	625	646	-	363	430	-	-	-	-	-	-	-
Stage 2	529	426	-	716	643	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	10.6		27.6		1.3		0.4					
HCM LOS	B		D									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1280	-	-	700	227	904	-	-				
HCM Lane V/C Ratio	0.071	-	-	0.086	0.303	0.017	-	-				
HCM Control Delay (s)	8	-	-	10.6	27.6	9.1	-	-				
HCM Lane LOS	A	-	-	B	D	A	-	-				
HCM 95th %tile Q(veh)	0.2	-	-	0.3	1.2	0.1	-	-				

Intersection: 1: Route 1 & Old Ridge Road

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	L	T	L
Maximum Queue (ft)	46	84	32	2	46
Average Queue (ft)	22	35	10	0	4
95th Queue (ft)	40	69	28	2	22
Link Distance (ft)	1231	1756		1306	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			220		210
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 0

Appendix C – Background Analysis Worksheets

2030 BG - AM Peak
1: Route 1 & Old Ridge Road

AM Existing Peak
HCM 6th TWSC

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	7	12	83	42	3	9	19	150	51	7	356	6
Future Vol, veh/h	7	12	83	42	3	9	19	150	51	7	356	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	220	-	-	210	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	0	8	3	15	0	56	16	8	10	29	4	33
Mvmt Flow	7	12	85	43	3	9	19	153	52	7	363	6
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	496	623	185	419	600	103	369	0	0	205	0	0
Stage 1	380	380	-	217	217	-	-	-	-	-	-	-
Stage 2	116	243	-	202	383	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.66	6.96	7.8	6.5	8.02	4.42	-	-	4.68	-	-
Critical Hdwy Stg 1	6.5	5.66	-	6.8	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.66	-	6.8	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.08	3.33	3.65	4	3.86	2.36	-	-	2.49	-	-
Pot Cap-1 Maneuver	461	389	823	488	417	783	1092	-	-	1188	-	-
Stage 1	619	598	-	729	727	-	-	-	-	-	-	-
Stage 2	882	689	-	745	616	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	445	380	823	420	407	783	1092	-	-	1188	-	-
Mov Cap-2 Maneuver	445	380	-	420	407	-	-	-	-	-	-	-
Stage 1	608	594	-	717	715	-	-	-	-	-	-	-
Stage 2	853	677	-	651	612	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	11.2		14			0.7			0.2			
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1092	-	-	688	454	1188	-	-				
HCM Lane V/C Ratio	0.018	-	-	0.151	0.121	0.006	-	-				
HCM Control Delay (s)	8.4	-	-	11.2	14	8	-	-				
HCM Lane LOS	A	-	-	B	B	A	-	-				
HCM 95th %tile Q(veh)	0.1	-	-	0.5	0.4	0	-	-				

Intersection: 1: Route 1 & Old Ridge Road

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	L	TR	L
Maximum Queue (ft)	65	76	34	4	14
Average Queue (ft)	31	32	4	0	1
95th Queue (ft)	52	67	19	4	8
Link Distance (ft)	1231	1756		1306	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			220		210
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 0

2030 BG - PM Peak
1: Route 1 & Old Ridge Road

BG PM peak
HCM 6th TWSC

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	4	2	51	52	7	6	87	447	17	14	270	9
Future Vol, veh/h	4	2	51	52	7	6	87	447	17	14	270	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	220	-	-	210	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	14	0	50	0	2	18	29	4	0
Mvmt Flow	4	2	55	56	8	6	94	481	18	15	290	10
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	758	1012	150	854	1008	250	300	0	0	499	0	0
Stage 1	325	325	-	678	678	-	-	-	-	-	-	-
Stage 2	433	687	-	176	330	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.78	6.5	7.9	4.1	-	-	4.68	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.78	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.78	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.64	4	3.8	2.2	-	-	2.49	-	-
Pot Cap-1 Maneuver	300	241	876	233	242	623	1273	-	-	894	-	-
Stage 1	667	653	-	381	455	-	-	-	-	-	-	-
Stage 2	577	450	-	775	649	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	269	219	876	202	220	623	1273	-	-	894	-	-
Mov Cap-2 Maneuver	269	219	-	202	220	-	-	-	-	-	-	-
Stage 1	618	642	-	353	421	-	-	-	-	-	-	-
Stage 2	519	417	-	712	638	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	10.7		29.3		1.3		0.4					
HCM LOS	B		D									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1273	-	-	693	217	894	-	-				
HCM Lane V/C Ratio	0.073	-	-	0.088	0.322	0.017	-	-				
HCM Control Delay (s)	8.1	-	-	10.7	29.3	9.1	-	-				
HCM Lane LOS	A	-	-	B	D	A	-	-				
HCM 95th %tile Q(veh)	0.2	-	-	0.3	1.3	0.1	-	-				

Intersection: 1: Route 1 & Old Ridge Road

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	L	T	L
Maximum Queue (ft)	48	88	32	2	43
Average Queue (ft)	23	37	11	0	5
95th Queue (ft)	40	72	30	2	25
Link Distance (ft)	1231	1756		1306	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			220		210
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 0

Appendix D – Total Future Analysis Worksheets

2030 Total - AM Peak
1: Route 1 & Old Ridge Road

AM Total Peak
HCM 6th TWSC

Intersection												
Int Delay, s/veh	4.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↙	↕		↙	↕	
Traffic Vol, veh/h	7	18	83	48	4	29	19	150	75	92	356	6
Future Vol, veh/h	7	18	83	48	4	29	19	150	75	92	356	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	220	-	-	210	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	0	8	3	15	0	56	16	8	10	29	4	33
Mvmt Flow	7	18	85	49	4	30	19	153	77	94	363	6
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	671	822	185	609	787	115	369	0	0	230	0	0
Stage 1	554	554	-	230	230	-	-	-	-	-	-	-
Stage 2	117	268	-	379	557	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.66	6.96	7.8	6.5	8.02	4.42	-	-	4.68	-	-
Critical Hdwy Stg 1	6.5	5.66	-	6.8	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.66	-	6.8	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.08	3.33	3.65	4	3.86	2.36	-	-	2.49	-	-
Pot Cap-1 Maneuver	346	296	823	353	326	767	1092	-	-	1160	-	-
Stage 1	489	497	-	716	718	-	-	-	-	-	-	-
Stage 2	881	671	-	581	515	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	305	267	823	278	294	767	1092	-	-	1160	-	-
Mov Cap-2 Maneuver	305	267	-	278	294	-	-	-	-	-	-	-
Stage 1	481	457	-	704	706	-	-	-	-	-	-	-
Stage 2	827	660	-	460	473	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	12.9		17.9			0.7			1.7			
HCM LOS	B		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1092	-	-	565	361	1160	-	-				
HCM Lane V/C Ratio	0.018	-	-	0.195	0.229	0.081	-	-				
HCM Control Delay (s)	8.4	-	-	12.9	17.9	8.4	-	-				
HCM Lane LOS	A	-	-	B	C	A	-	-				
HCM 95th %tile Q(veh)	0.1	-	-	0.7	0.9	0.3	-	-				

2030 Total - AM Peak
2: West Site Entrance & Old Ridge Road

AM Total Peak
HCM 6th TWSC

Intersection						
Int Delay, s/veh	0.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	124	60	3	64	14	0
Future Vol, veh/h	124	60	3	64	14	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, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	34	50	50	40	50	50
Mvmt Flow	135	65	3	70	15	0
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	200	0	244	168
Stage 1	-	-	-	-	168	-
Stage 2	-	-	-	-	76	-
Critical Hdwy	-	-	4.6	-	6.9	6.7
Critical Hdwy Stg 1	-	-	-	-	5.9	-
Critical Hdwy Stg 2	-	-	-	-	5.9	-
Follow-up Hdwy	-	-	2.65	-	3.95	3.75
Pot Cap-1 Maneuver	-	-	1131	-	651	765
Stage 1	-	-	-	-	758	-
Stage 2	-	-	-	-	839	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1131	-	649	765
Mov Cap-2 Maneuver	-	-	-	-	649	-
Stage 1	-	-	-	-	758	-
Stage 2	-	-	-	-	836	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.4		10.7	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	649	-	-	1131	-	
HCM Lane V/C Ratio	0.023	-	-	0.003	-	
HCM Control Delay (s)	10.7	-	-	8.2	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.1	-	-	0	-	

2030 Total - AM Peak
3: East Site Entrance & Old Ridge Road

AM Total Peak
HCM 6th TWSC

Intersection						
Int Delay, s/veh	0.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	69	55	4	54	13	1
Future Vol, veh/h	69	55	4	54	13	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	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	36	50	40	50	50	50
Mvmt Flow	75	60	4	59	14	1
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	135	0	172	105
Stage 1	-	-	-	-	105	-
Stage 2	-	-	-	-	67	-
Critical Hdwy	-	-	4.5	-	6.9	6.7
Critical Hdwy Stg 1	-	-	-	-	5.9	-
Critical Hdwy Stg 2	-	-	-	-	5.9	-
Follow-up Hdwy	-	-	2.56	-	3.95	3.75
Pot Cap-1 Maneuver	-	-	1246	-	719	834
Stage 1	-	-	-	-	812	-
Stage 2	-	-	-	-	847	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1246	-	717	834
Mov Cap-2 Maneuver	-	-	-	-	717	-
Stage 1	-	-	-	-	812	-
Stage 2	-	-	-	-	844	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	0.5		10.1		
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	724	-	-	1246	-	
HCM Lane V/C Ratio	0.021	-	-	0.003	-	
HCM Control Delay (s)	10.1	-	-	7.9	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.1	-	-	0	-	

Intersection: 1: Route 1 & Old Ridge Road

Movement	EB	WB	NB	NB	NB	SB
Directions Served	LTR	LTR	L	T	TR	L
Maximum Queue (ft)	66	102	39	2	6	66
Average Queue (ft)	32	41	5	0	0	16
95th Queue (ft)	54	77	26	2	3	48
Link Distance (ft)	1231	1117		1306	1306	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			220			210
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: West Site Entrance & Old Ridge Road

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	20	73
Average Queue (ft)	1	17
95th Queue (ft)	11	55
Link Distance (ft)	699	829
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: East Site Entrance & Old Ridge Road

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	11	71
Average Queue (ft)	0	19
95th Queue (ft)	7	60
Link Distance (ft)	2172	631
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

2030 Total - PM Peak
1: Route 1 & Old Ridge Road

AM Total Peak
HCM 6th TWSC

Intersection												
Int Delay, s/veh	8.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↙	↕		↙	↕	
Traffic Vol, veh/h	4	5	51	72	12	74	87	447	29	57	270	9
Future Vol, veh/h	4	5	51	72	12	74	87	447	29	57	270	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	220	-	-	210	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	14	0	50	0	2	18	29	4	0
Mvmt Flow	4	5	55	77	13	80	94	481	31	61	290	10

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	852	1117	150	955	1107	256	300	0	0	512	0	0
Stage 1	417	417	-	685	685	-	-	-	-	-	-	-
Stage 2	435	700	-	270	422	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.78	6.5	7.9	4.1	-	-	4.68	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.78	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.78	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.64	4	3.8	2.2	-	-	2.49	-	-
Pot Cap-1 Maneuver	256	209	876	196	212	616	1273	-	-	882	-	-
Stage 1	589	595	-	377	451	-	-	-	-	-	-	-
Stage 2	575	444	-	680	592	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	189	180	876	161	183	616	1273	-	-	882	-	-
Mov Cap-2 Maneuver	189	180	-	161	183	-	-	-	-	-	-	-
Stage 1	545	554	-	349	418	-	-	-	-	-	-	-
Stage 2	449	411	-	588	551	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12.3		45.3		1.2		1.6	
HCM LOS	B		E					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1273	-	-	560	250	882	-
HCM Lane V/C Ratio	0.073	-	-	0.115	0.68	0.069	-
HCM Control Delay (s)	8.1	-	-	12.3	45.3	9.4	-
HCM Lane LOS	A	-	-	B	E	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.4	4.4	0.2	-

2030 Total - PM Peak
2: West Site Entrance & Old Ridge Road

AM Total Peak
HCM 6th TWSC

Intersection						
Int Delay, s/veh	2.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	47	30	2	126	49	2
Future Vol, veh/h	47	30	2	126	49	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	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	39	50	50	40	50	50
Mvmt Flow	51	33	2	137	53	2
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	84	0	209	68
Stage 1	-	-	-	-	68	-
Stage 2	-	-	-	-	141	-
Critical Hdwy	-	-	4.6	-	6.9	6.7
Critical Hdwy Stg 1	-	-	-	-	5.9	-
Critical Hdwy Stg 2	-	-	-	-	5.9	-
Follow-up Hdwy	-	-	2.65	-	3.95	3.75
Pot Cap-1 Maneuver	-	-	1258	-	683	876
Stage 1	-	-	-	-	846	-
Stage 2	-	-	-	-	781	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1258	-	682	876
Mov Cap-2 Maneuver	-	-	-	-	682	-
Stage 1	-	-	-	-	846	-
Stage 2	-	-	-	-	779	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.1		10.7	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	688	-	-	1258	-	
HCM Lane V/C Ratio	0.081	-	-	0.002	-	
HCM Control Delay (s)	10.7	-	-	7.9	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.3	-	-	0	-	

2030 Total - PM Peak
3: East Site Entrance & Old Ridge Road

AM Total Peak
HCM 6th TWSC

Intersection						
Int Delay, s/veh	2.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	21	28	2	84	44	3
Future Vol, veh/h	21	28	2	84	44	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	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	39	50	50	40	50	50
Mvmt Flow	23	30	2	91	48	3
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	53	0	133	38
Stage 1	-	-	-	-	38	-
Stage 2	-	-	-	-	95	-
Critical Hdwy	-	-	4.6	-	6.9	6.7
Critical Hdwy Stg 1	-	-	-	-	5.9	-
Critical Hdwy Stg 2	-	-	-	-	5.9	-
Follow-up Hdwy	-	-	2.65	-	3.95	3.75
Pot Cap-1 Maneuver	-	-	1294	-	759	912
Stage 1	-	-	-	-	874	-
Stage 2	-	-	-	-	821	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1294	-	757	912
Mov Cap-2 Maneuver	-	-	-	-	757	-
Stage 1	-	-	-	-	874	-
Stage 2	-	-	-	-	819	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.2		10	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	765	-	-	1294	-	
HCM Lane V/C Ratio	0.067	-	-	0.002	-	
HCM Control Delay (s)	10	-	-	7.8	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.2	-	-	0	-	

Intersection: 1: Route 1 & Old Ridge Road

Movement	EB	WB	NB	NB	NB	SB
Directions Served	LTR	LTR	L	T	TR	L
Maximum Queue (ft)	48	145	31	5	3	61
Average Queue (ft)	23	70	11	0	0	16
95th Queue (ft)	42	117	29	3	2	48
Link Distance (ft)	1231	1117		1306	1306	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			220			210
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: West Site Entrance & Old Ridge Road

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	4	13	98
Average Queue (ft)	0	0	40
95th Queue (ft)	4	8	83
Link Distance (ft)	1039	699	829
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: East Site Entrance & Old Ridge Road

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	5	88
Average Queue (ft)	0	39
95th Queue (ft)	5	79
Link Distance (ft)	2172	631
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0