DRMP

TRAFFIC IMPACT ANALYSIS

FOR

66 Lot Bay Road

LOCATED

IN

Shallotte, NC

Prepared For:

Rourk Woods Investments, LLC
1001 Military Cutoff Road, Suite 101
Wilmington, NC

AUGUST 2025

DRMP Project No. 25722

Prepared By: TS

Reviewed By: CC

DRMP

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Rourk Woods Investments, LLC

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DRMP, Inc.

License #F-1524

TRAFFIC IMPACT ANALYSIS
66 Lot Bay Road

Shallotte, North Carolina

EXECUTIVE SUMMARY

1. Development Overview

A Traffic Impact Analysis (TIA) was conducted for the proposed 66 Lot Bay Road development in accordance with the Shallotte (Town) Unified Development Ordinance (UDO) and North Carolina Department of Transportation (NCDOT) capacity analysis guidelines. The proposed 66 Lot Bay Road development is to be located along the east side of Bay Road SW in Shallotte, North Carolina. The proposed development, anticipated to be completed in 2028, is assumed to consist of 66 single family homes. Site access is proposed via one full movement intersection along Bay Road SW.

2. Existing Traffic Conditions

The study area for the TIA was determined through coordination with the North Carolina Department of Transportation (NCDOT) and the Town of Shallotte and consists of the following existing intersections:

- Village Point Road SW and Bay Road SW
- Todd Road SW and Bay Road SW
- Pigott Road SW and Bay Road SW

Existing peak hour traffic volumes were determined based on traffic counts conducted at the study intersection listed above, in July of 2025 by DRMP during a typical weekday AM (7:00 AM – 9:00 AM) and PM (4:00 PM – 6:00 PM) peak periods. Traffic volumes were balanced between study intersections, where appropriate.

3. Future Traffic Conditions

Through coordination with the NCDOT and the Town, it was determined that an annual growth rate of 1% would be used to generate 2028 projected weekday AM and PM peak hour traffic volumes. The Village Point Road, 4206 Sea Mountain Highway, 55 Leven Links

Lane, and 534 Planters Ridge Drive developments were identified to be included as an approved adjacent development in this study.

4. Site Trip Generation

Average weekday daily, AM peak hour, and PM peak hour trips for the proposed development were estimated using methodology contained within the ITE Trip Generation Manual, 11.1th Edition. Table E-1 provides a summary of the trip generation potential for the site.

Table E-1: Site Trip Generation

Land Use (ITE Code)	Intensity	Daily Traffic (vpd)	Weekday AM Peak Hour Trips (vph)		Weekday PM Peak Hour Trips (vph)	
			Enter	Exit	Enter	Exit
Single Family Detached (210)	66 Units	688	13	39	43	25

To estimate traffic conditions with the site fully built-out, the total site trips were added to the 2028 No-Build traffic volumes to determine the 2028 build traffic volumes. The study analyzes traffic conditions during the weekday AM and PM peak hours for the following scenarios:

- 2025 Existing Traffic Conditions
- 2028 No-Build Traffic Conditions
- 2028 Build Traffic Conditions

5. Capacity Analysis Summary

The analysis considered weekday AM and PM peak hour traffic for 2025 existing, 2028 No-Build, and 2028 build conditions. Refer to Section 7 of the TIA for the capacity analysis summary performed at each study intersection.

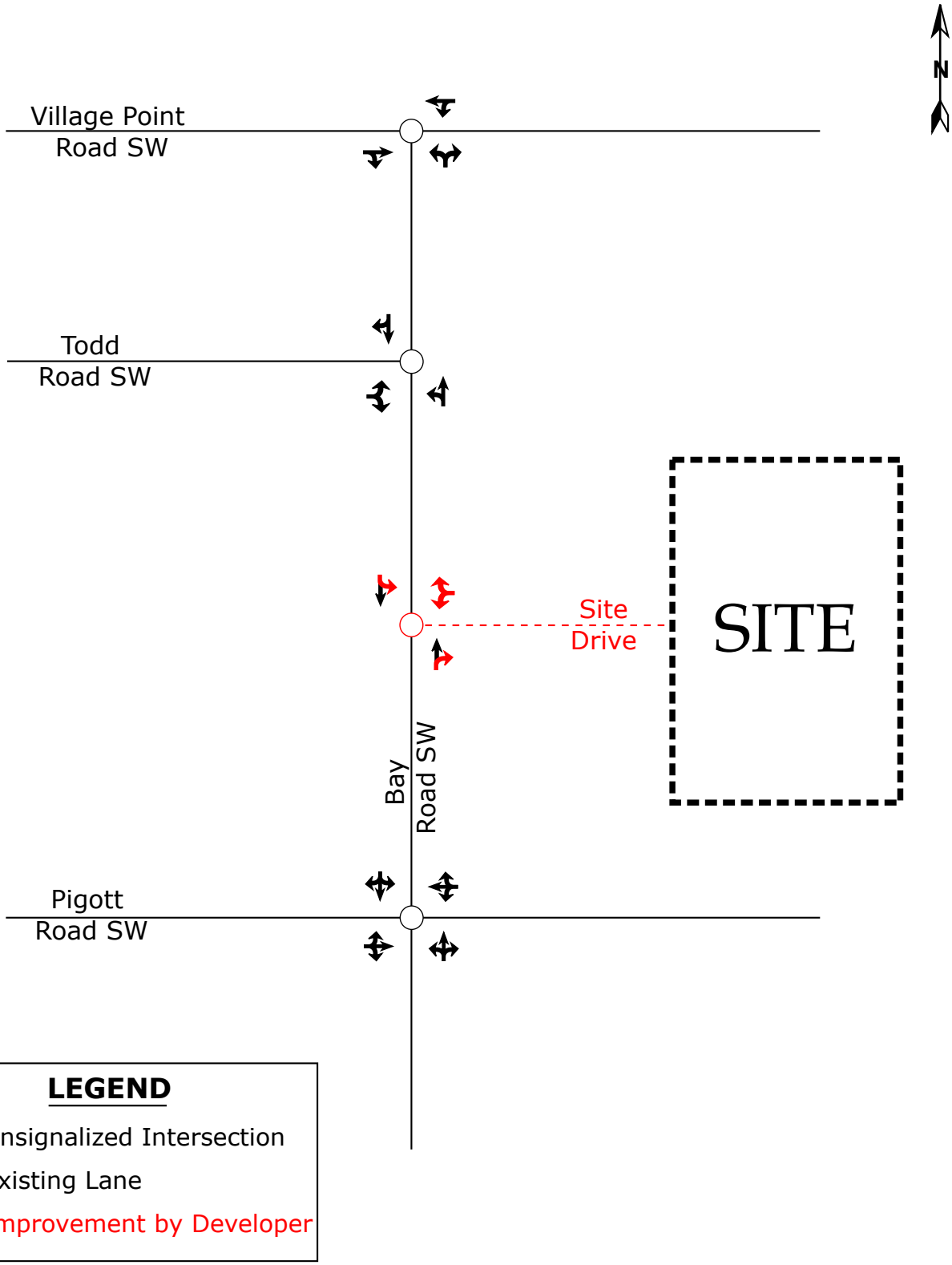
6. Recommendations

Based on the findings of this study, specific geometric and traffic control improvements have been identified at study intersections. The improvements are summarized on the following page and are illustrated in Figure E-1.

Improvements by Developer

Bay Road SW and Site Drive

- Construct Site Drive as a westbound approach with one ingress and one egress lane striped as a shared left-turn/right-turn lane.



DRMP	66 Lot Bay Road Shallotte, NC	Recommended Lane Configurations	
		Scale: Not to Scale	Figure E-1

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TRAFFIC IMPACT ANALYSIS

66 Lot Bay Road

Shallotte, North Carolina

1. INTRODUCTION

The contents of this report present the findings of the Traffic Impact Analysis (TIA) conducted for the proposed 66-lot Bay Road development, located along the east side of Bay Road SW in Shallotte, North Carolina. The purpose of this study is to evaluate the potential impacts of site-generated traffic on the surrounding transportation network and to recommend any necessary improvements to mitigate those impacts. While a TIA is not required under the current standards of the Town of Shallotte or NCDOT, this study has been prepared to support planning efforts and ensure proactive consideration of transportation needs associated with the proposed development.

The proposed development, anticipated to be completed in 2028, is assumed to consist of 66 single family homes

The study analyzes traffic conditions during the weekday AM and PM peak hours for the following scenarios:

- 2025 Existing Traffic Conditions
- 2028 No-Build Traffic Conditions
- 2028 Build Traffic Conditions

1.1. Site Location and Study Area

The development is proposed to be located in Shallotte, North Carolina. Refer to Figure 1 for the site location map.

The study area for the TIA was determined through coordination with the North Carolina Department of Transportation (NCDOT) and the Town of Shallotte (Town) and consists of the following existing intersections:

- Village Point Road SW and Bay Road SW
- Todd Road SW and Bay Road SW
- Pigott Road SW and Bay Road SW

1.2. Proposed Land Use and Site Access

The proposed development, anticipated to be completed in 2028, is assumed to consist of 66 single family homes. Site access is proposed one full movement intersection along Bay Road SW. Refer to Figure 2 for a copy of the preliminary site plan.

1.3. Adjacent Land Uses

The proposed development is located in an area consisting primarily of farms, undeveloped land, and residential development.

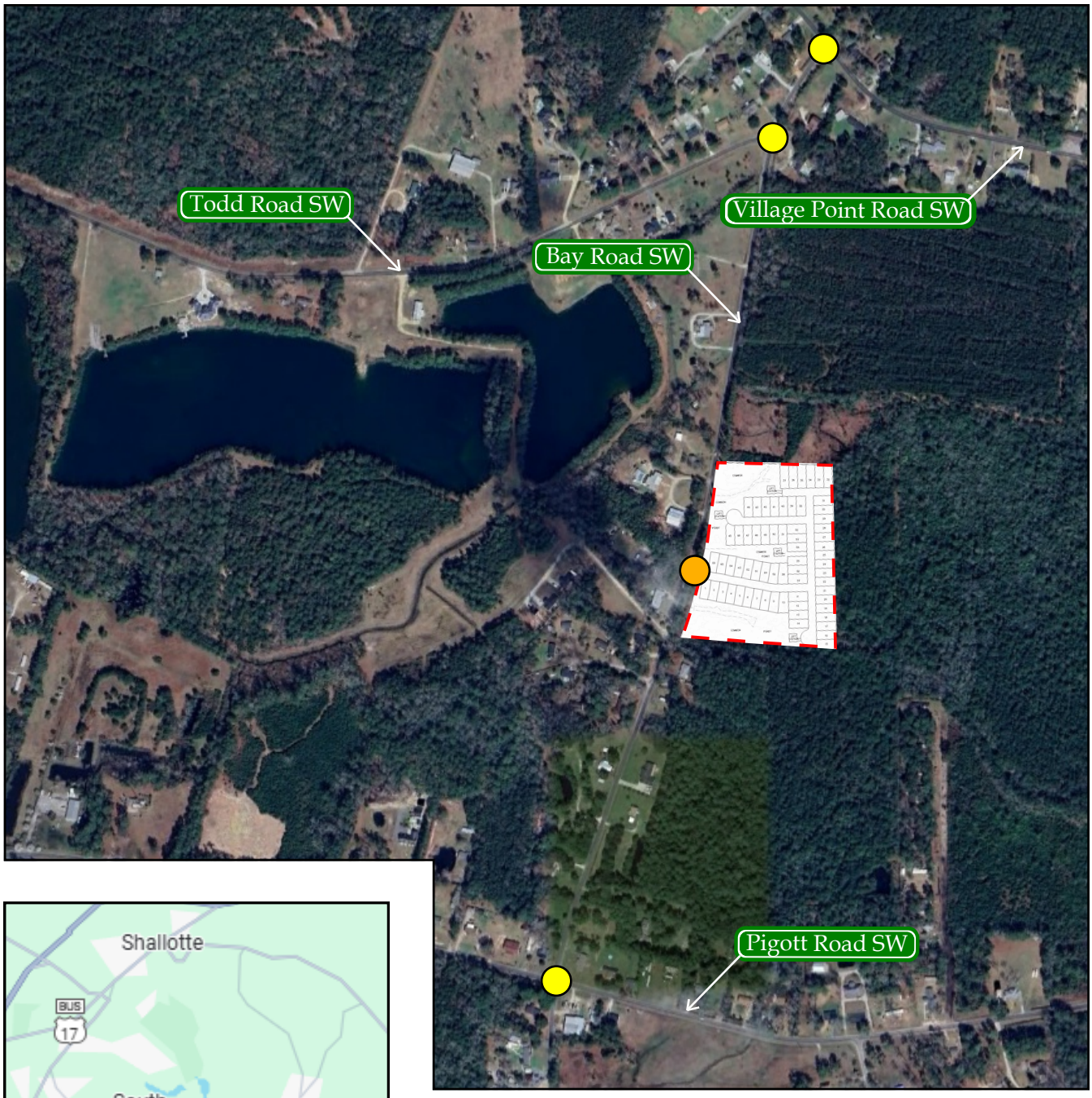
1.4. Existing Roadways

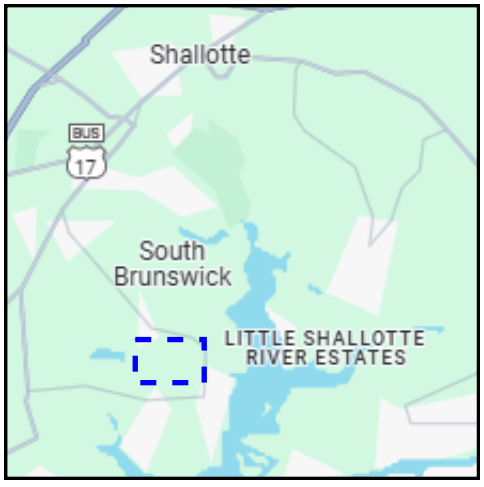
Existing lane configurations (number of traffic lanes on each intersection approach), speed limits, storage capacities, and other intersection and roadway information within the study area are shown in Figure 3. Table 1 provides a summary of this information, as well.

Table 1: Existing Roadway Inventory

Road Name	Route Number	Typical Cross Section	Speed Limit	AADT (vpd)
Village Point Road SW	SR-1145	2-lane undivided	45 mph	2,720
Todd Road SW	SR-1147	2-lane undivided	55 mph	460
Pigott Road SW	SR-1152	2-lane undivided	45 mph	1,960
Bay Road SW	SR-1151	2-lane undivided	40 mph	1,570

ADT based on the traffic counts from 2025 and assuming the weekday PM peak hour volume is 10% of the average daily traffic.





N

LEGEND

- Study Intersection
- Proposed Site Access
- Study Area

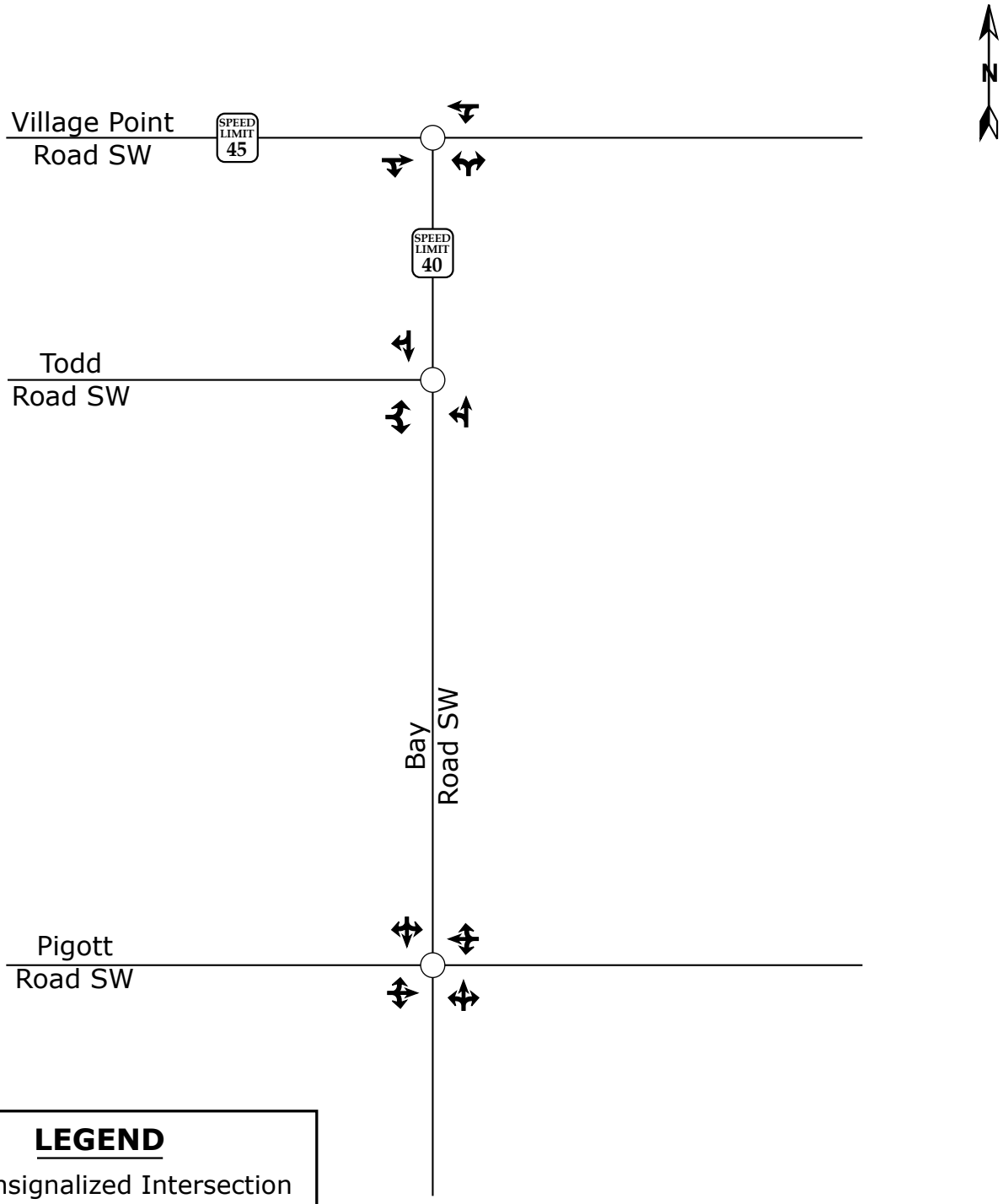
DRMP

66 Lot Bay Road
Shallotte, NC

Site Location Map

Scale: Not to Scale | Figure 1


SPACKLER LANE
50' PUBLIC R/W
BAY ROAD SW
SR 1151 60' PUBLIC R/W
WEBB DRIVE
50' PUBLIC R/W
FORESTON LOAMY FINE SAND
TORHUNTA FINE SANDY LOAM
COMMON
614'
646'
266'
262'
3.8 ACRES TO BE RETAINED BY SELLER
LIFT STATION
POND?
GRAPHIC SCALE: 1" = 100'
200
100
0
50
100



LEGEND

- Unsignalized Intersection
- Existing Lane
- SPEED LIMIT XX — Posted Speed Limit

DRMP	66 Lot Bay Road Shallotte, NC	2025 Existing Lane Configurations Scale: Not to Scale | Figure 3

2. 2025 EXISTING PEAK HOUR CONDITIONS

2.1. 2025 Existing Peak Hour Traffic Volumes

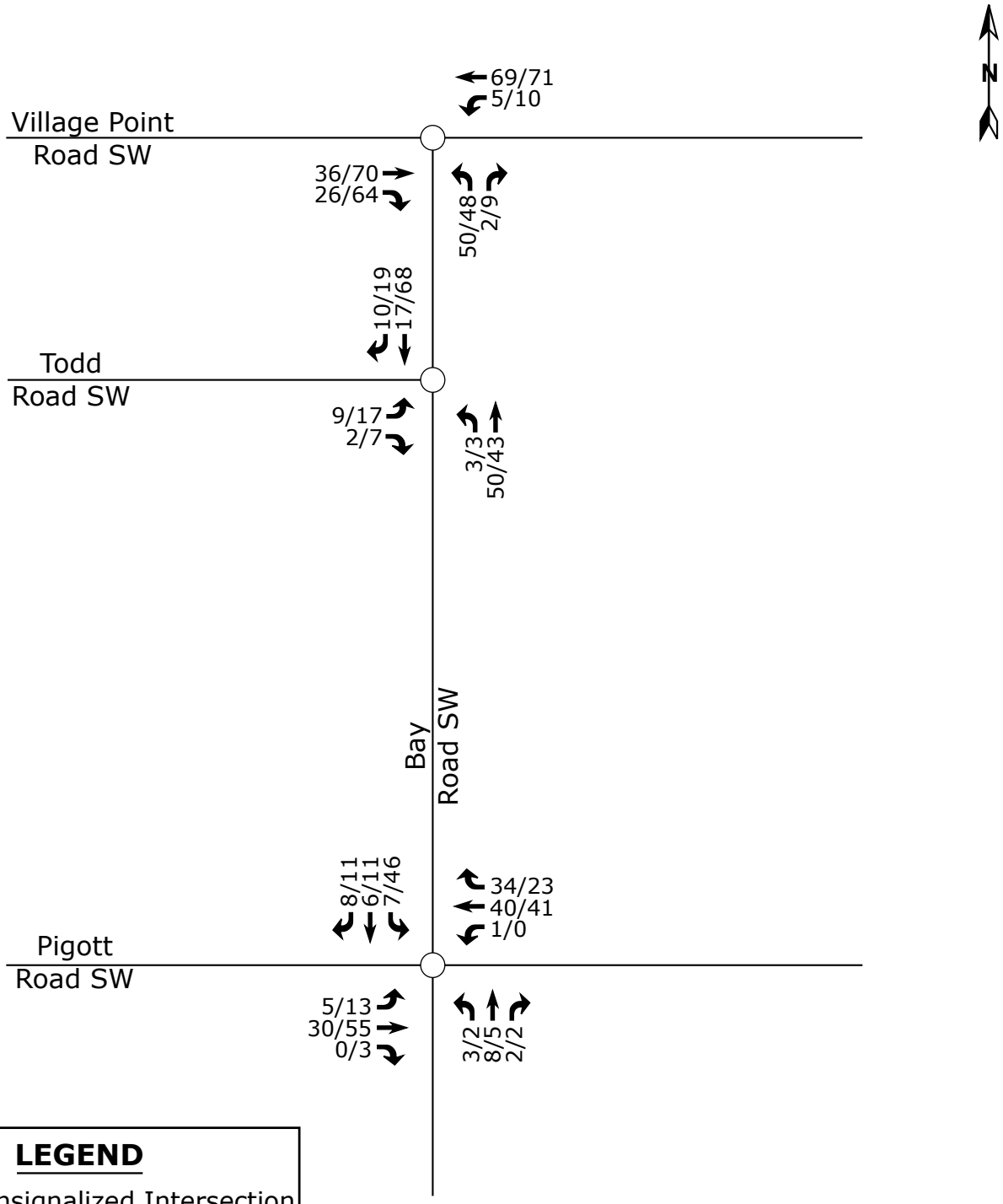
Existing peak hour traffic volumes were determined based on traffic counts conducted at the study intersections listed below, in July of 2025 by DRMP during a typical weekday AM (7:00 AM – 9:00 AM) and PM (4:00 PM – 6:00 PM) peak periods:

- Village Point Road SW and Bay Road SW
- Todd Road SW and Bay Road SW
- Pigott Road SW and Bay Road SW

Weekday AM and PM traffic volumes were balanced between study intersections, where appropriate. Refer to Figure 4 for 2025 existing weekday AM and PM peak hour traffic volumes. A copy of the count data is located in Appendix B of this report.

2.2. Analysis of 2025 Existing Peak Hour Traffic Conditions

The 2025 existing weekday AM and PM peak hour traffic volumes were analyzed to determine the current levels of service at the study intersections under existing roadway conditions. The results of the analysis are presented in Section 7 of this report.



LEGEND

◯ Unsignalized Intersection

X / Y → Weekday AM / PM Peak Hour Traffic

Note: Based on NCDOT Congestion Management guidelines, a volume of 4 vehicles per hour (vph) was analyzed for any movement with less than 4 vph.

DRMP	66 Lot Bay Road Shallotte, NC	2025 Existing Peak Hour Traffic
		Scale: Not to Scale | Figure 4

3. 2028 NO-BUILD PEAK HOUR CONDITIONS

In order to account for growth of traffic and subsequent traffic conditions at a future year, No-Build traffic projections are needed. No-Build traffic is the component of traffic due to the growth of the community and surrounding area that is anticipated to occur regardless of whether or not the proposed development is constructed. No-Build traffic is comprised of existing traffic growth within the study area and additional traffic created as a result of adjacent approved developments.

3.1. Ambient Traffic Growth

Through coordination with the NCDOT and the Town, it was determined that an annual growth rate of 1% would be used to generate 2028 projected weekday AM and PM peak hour traffic volumes. Refer to Figure 5 for 2028 projected peak hour traffic.

3.2. Adjacent Development Traffic

Through coordination with the NCDOT and the Town, the following adjacent developments below were identified to be included as an approved adjacent development in this study. Table 2 provides a summary of the adjacent development. Parcel ID numbers are also included.

Table 2: Adjacent Development Information

Development Name	Location	Build-Out Year	Land Use / Intensity	TIA Performed
Village Point Road (ID# 23000050)	Along Village Point Road, east of Bay Road SW	2028*	72 Single Family Homes	*Trips Generated and Distributed*
4206 Sea Mountain Highway (ID# 21400046)	Along Village Point Road, North of Bay Road SW	2028*	158 Single Family Homes	*Trips Generated and Distributed*
55 Leven Links Lane (ID# 23000049)	Along Village Point Road, east of Bay Road SW	2028*	39 Single Family Homes	*Trips Generated and Distributed*
534 Planters Ridge Drive (ID# 2300005602)	Along Bay Road SW, East of Todd Road SW	2028*	75 Single Family Homes	*Trips Generated and Distributed*

*Assumed to be constructed before or during construction of the 66 Lot Bay Road site.

It should be noted that the adjacent developments were approved, during scoping, by the NCDOT and the Town. Adjacent development trips are shown in Figure 6. Adjacent development information can be found in Appendix C.

3.3. Future Roadway Improvements

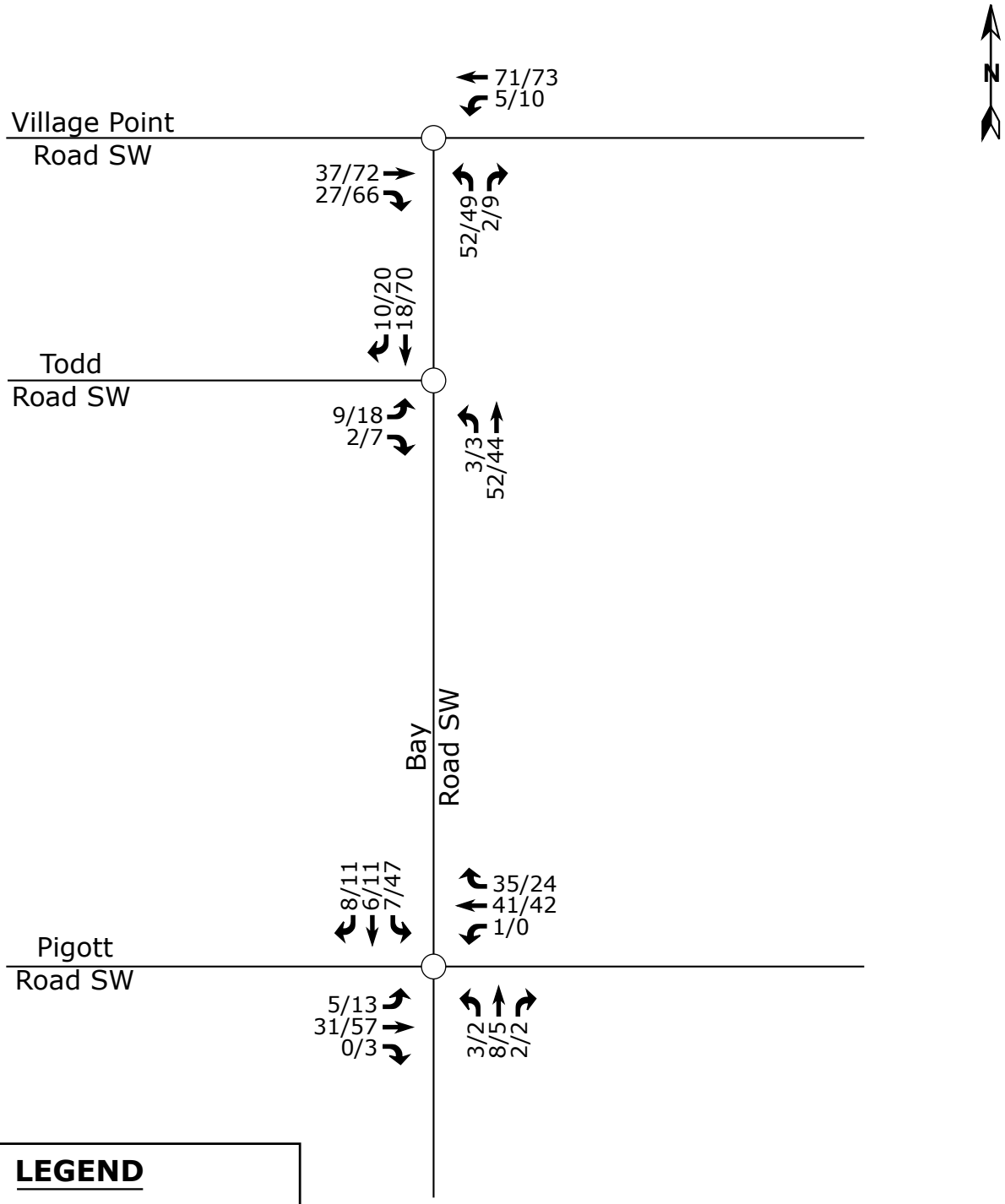
Based on coordination with the NCDOT and the Town, it was determined there were no future roadway improvements to consider with this study.

3.4. 2028 No-Build Peak Hour Traffic Volumes

The 2028 No-Build traffic volumes were determined by projecting the 2025 existing peak hour traffic to the year 2028 and adding the adjacent development trips. Refer to Figure 7 for an illustration of the 2028 No-Build peak hour traffic volumes at the study intersections.

3.5. Analysis of 2028 No-Build Peak Hour Traffic Conditions

The 2028 No-Build AM and PM peak hour traffic volumes at the study intersections were analyzed with future geometric roadway conditions and traffic control. The analysis results are presented in Section 7 of this report.

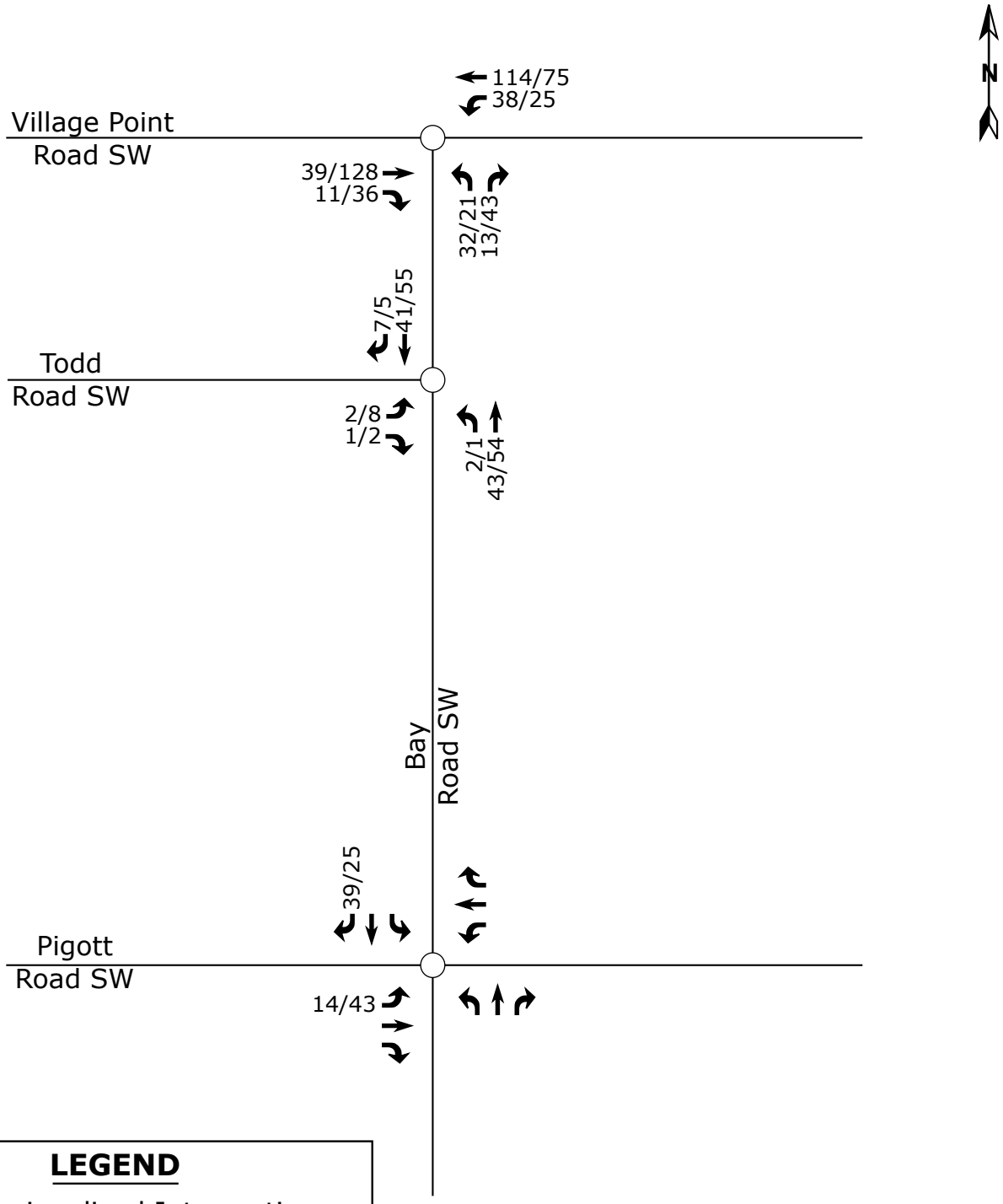


LEGEND

◯ Unsignalized Intersection

X / Y → Weekday AM / PM Peak Hour Traffic

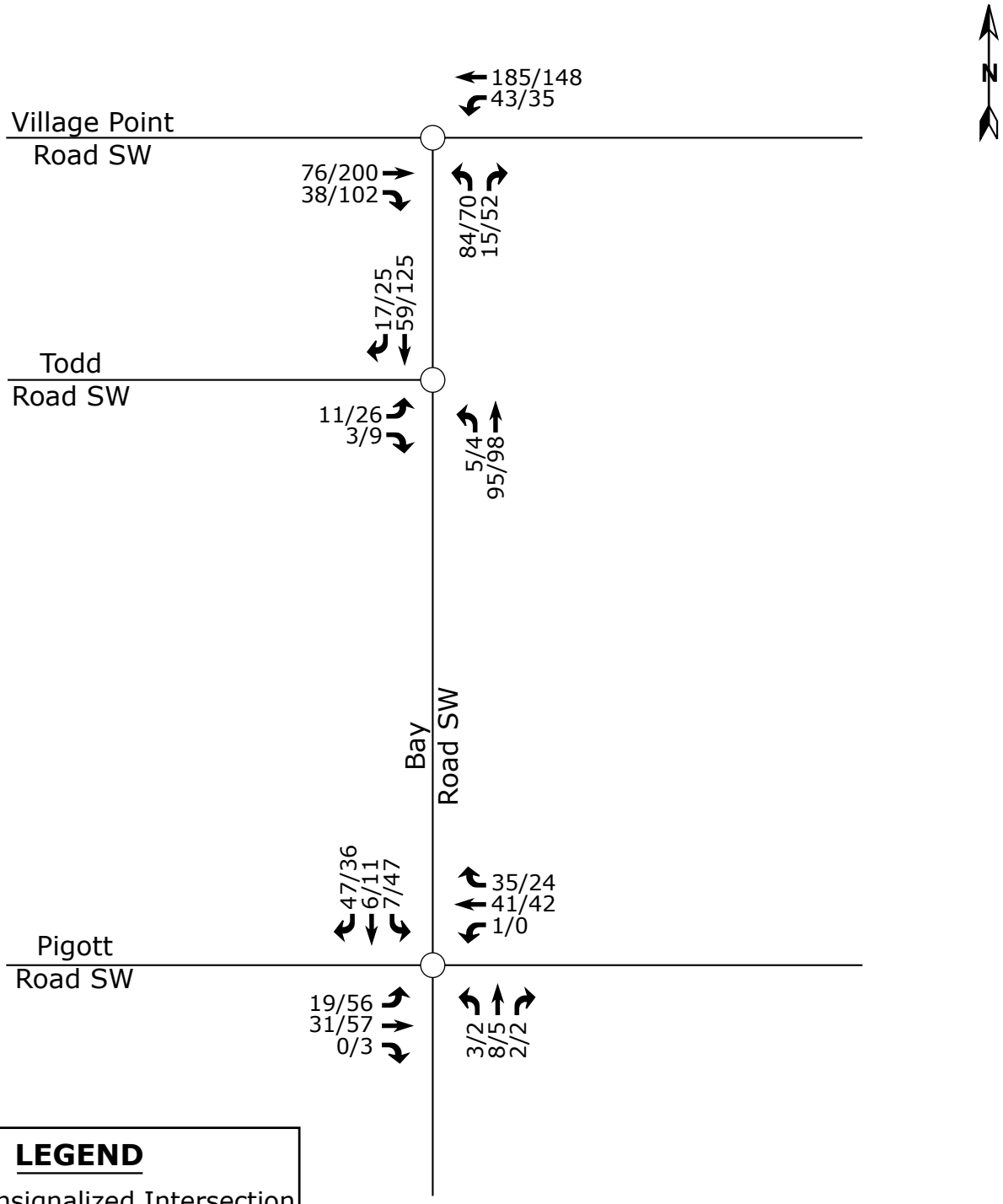
DRMP	66 Lot Bay Road Shallotte, NC	2028 Projected Peak Hour Traffic Scale: Not to Scale | Figure 5



LEGEND

- ○ Unsignalized Intersection
- X / Y → Weekday AM / PM Peak Hour Adjacent Development Trips

DRMP	66 Lot Bay Road Shallotte, NC	Peak Hour Adjacent Development Trips Scale: Not to Scale | Figure 6



LEGEND

○ Unsignalized Intersection

X / Y → Weekday AM / PM Peak Hour Traffic

Note: Based on NCDOT Congestion Management guidelines, a volume of 4 vehicles per hour (vph) was analyzed for any movement with less than 4 vph.

DRMP	66 Lot Bay Road Shallotte, NC	2028 No-Build Peak Hour Traffic
		Scale: Not to Scale | Figure 7

4. SITE TRIP GENERATION AND DISTRIBUTION

4.1. Trip Generation

The proposed development is assumed to consist of 66 single family homes. Average weekday daily, AM peak hour, and PM peak hour trips for the proposed development were estimated using methodology contained within the ITE *Trip Generation Manual*, 11.1 Edition. Table 3 provides a summary of the trip generation potential for the site.

Table 3: Trip Generation Summary

Land Use (ITE Code)	Intensity	Daily Traffic (vpd)	Weekday AM Peak Hour Trips (vph)		Weekday PM Peak Hour Trips (vph)	
			Enter	Exit	Enter	Exit
Single Family Detached (210)	66 Units	688	13	39	43	25

It is estimated that the proposed development will generate approximately 668 total site trips on the roadway network during a typical 24-hour weekday period. Of the daily traffic volume, approximately 52 trips (13 entering and 39 exiting) are expected to occur during the weekday AM peak hour, and 68 trips (43 entering and 25 exiting) during the weekday PM peak hour. These projected volumes do not meet the thresholds that would trigger a full Traffic Impact Analysis (TIA) under the standards set by the Town of Shallotte or NCDOT.

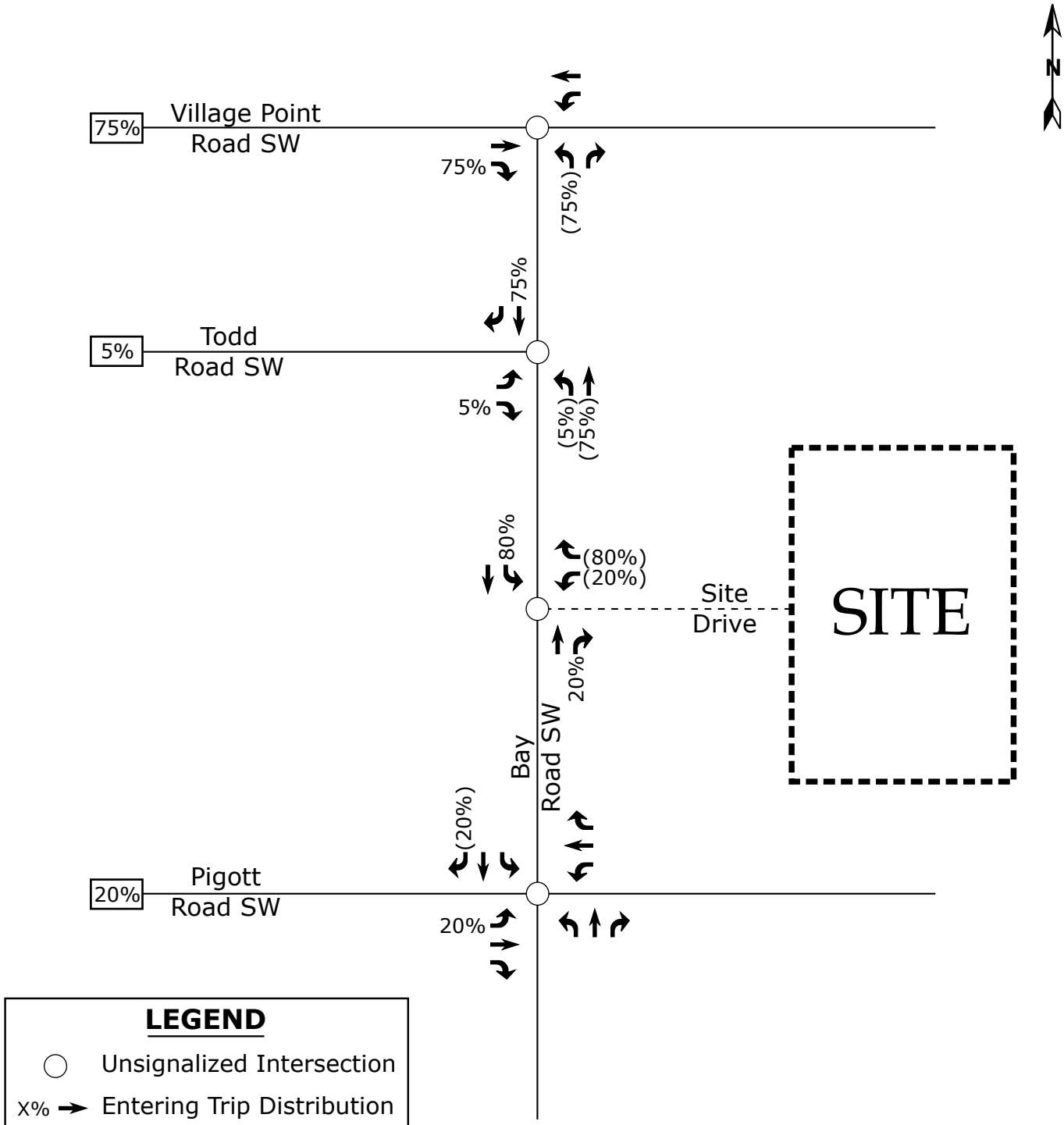
4.2. Site Trip Distribution and Assignment

Trip distribution percentages used in assigning site traffic for this development were estimated based on a combination of existing traffic patterns, population centers adjacent to the study area, and engineering judgment.

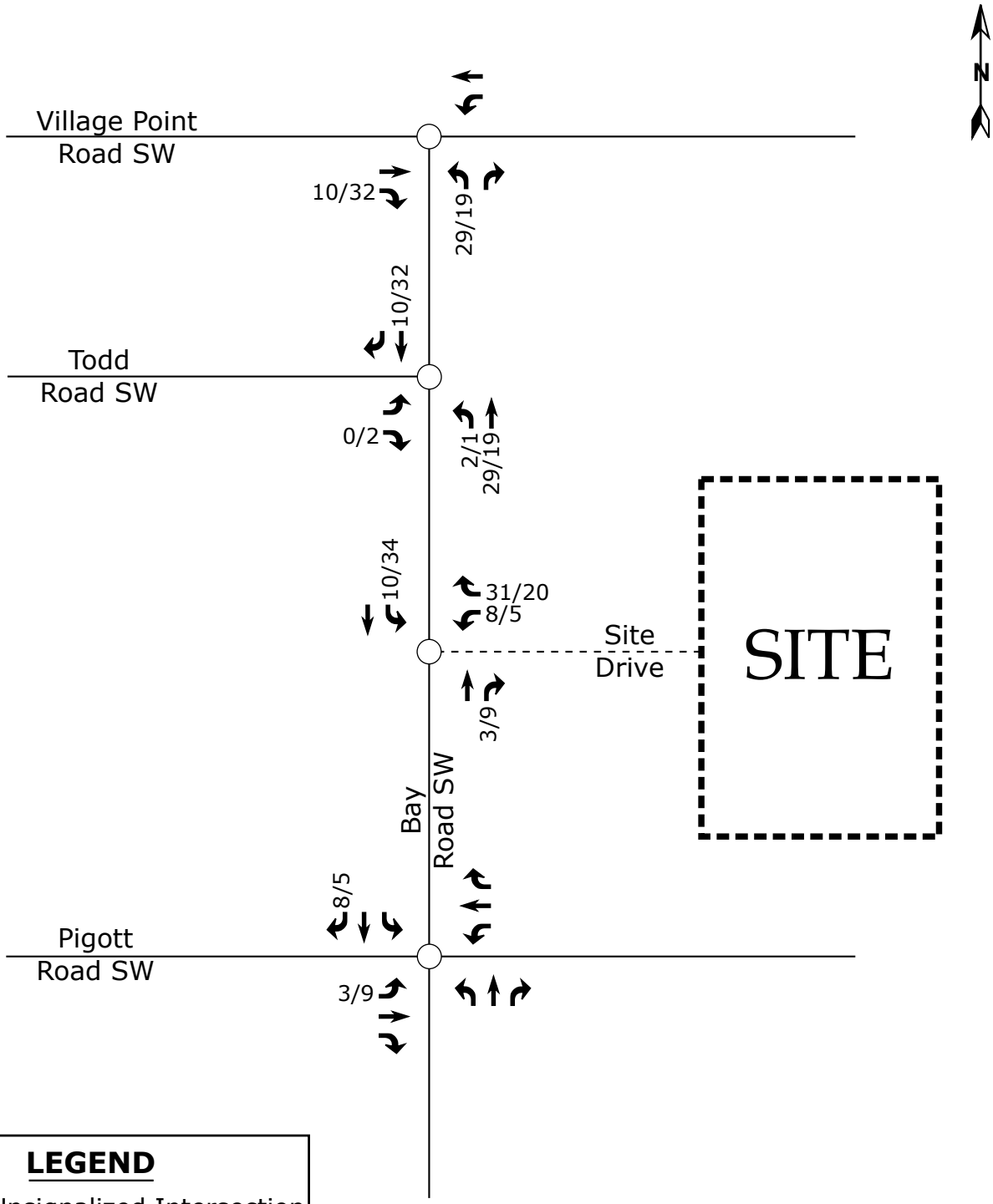
It is estimated that the site trips will be regionally distributed as follows:

- 75% to/from the west via Village Point Road SW
- 20% to/from the west via Pigott Road SW
- 5% to/from the west via Todd Road SW

The site trip distribution is shown in Figure 8. Refer to Figure 9 for the site trip assignment.



DRMP	66 Lot Bay Road Shallotte, NC	Site Trip Distribution	
		Scale: Not to Scale	Figure 8



LEGEND

- ◯ Unsignalized Intersection
- X / Y → Weekday AM / PM Peak Hour Site Trips

DRMP	66 Lot Bay Road Shallotte, NC	Site Trip Assignment Scale: Not to Scale | Figure 9

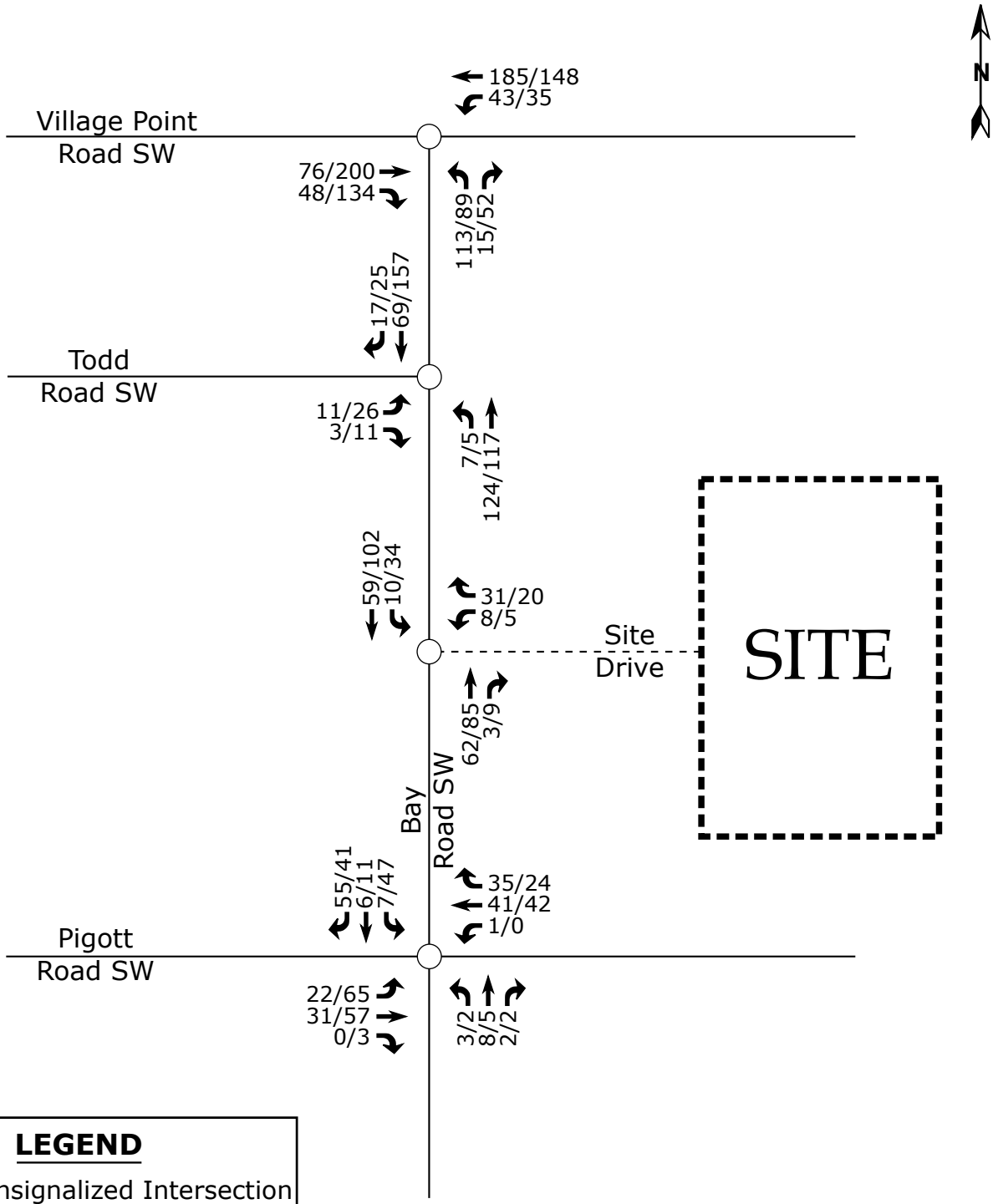
5. 2028 BUILD TRAFFIC CONDITIONS

5.1. 2028 Build Peak Hour Traffic Volumes

To estimate traffic conditions with the site fully built-out, the total site trips were added to the 2028 No-Build traffic volumes to determine the 2028 Build traffic volumes. Refer to Figure 10 for an illustration of the 2028 Build peak hour traffic volumes with the proposed site fully developed.

5.2. Analysis of 2028 Build Peak Hour Traffic Conditions

Study intersections were analyzed with the 2028 Build traffic volumes using the same methodology previously discussed for existing and No-Build traffic conditions. Intersections were analyzed with improvements necessary to accommodate future traffic volumes. The results of the capacity analysis for each intersection are presented in Section 7 of this report.



LEGEND

○ Unsignalized Intersection

X / Y → Weekday AM / PM Peak Hour Traffic

Note: Based on NCDOT Congestion Management guidelines, a volume of 4 vehicles per hour (vph) was analyzed for any movement with less than 4 vph.

DRMP	66 Lot Bay Road Shallotte, NC	2028 Build Peak Hour Traffic
		Scale: Not to Scale | Figure 10

6. TRAFFIC ANALYSIS PROCEDURE

Study intersections were analyzed using the methodology outlined in the *Highway Capacity Manual* (HCM), 6th Edition published by the Transportation Research Board. Capacity and level of service are the design criteria for this traffic study. A computer software package, Synchro (Version 11.1), was used to complete the analyses for the study area intersections. Please note that the unsignalized capacity analysis does not provide an overall level of service for an intersection; only delay for an approach with a conflicting movement.

The HCM defines capacity as "the maximum hourly rate at which persons or vehicles can reasonably be expected to traverse a point or uniform section of a lane or roadway during a given time period under prevailing roadway, traffic, and control conditions." Level of service (LOS) is a term used to represent different driving conditions and is defined as a "qualitative measure describing operational conditions within a traffic stream, and their perception by motorists and/or passengers." Level of service varies from Level "A" representing free flow, to Level "F" where breakdown conditions are evident. Refer to Table 4 for HCM levels of service and related average control delay per vehicle for both signalized and unsignalized intersections. Control delay as defined by the HCM includes "initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay". An average control delay of 50 seconds at a signalized intersection results in LOS "D" operation at the intersection.

Table 4: Highway Capacity Manual – Levels-of-Service and Delay

UNSIGNALIZED INTERSECTION		SIGNALIZED INTERSECTION	
LEVEL OF SERVICE	AVERAGE CONTROL DELAY PER VEHICLE (SECONDS)	LEVEL OF SERVICE	AVERAGE CONTROL DELAY PER VEHICLE (SECONDS)
A	0-10	A	0-10
B	10-15	B	10-20
C	15-25	C	20-35
D	25-35	D	35-55
E	35-50	E	55-80
F	>50	F	>80

6.1. Adjustments to Analysis Guidelines

Capacity analysis at all study intersections was completed according to the NCDOT Congestion Management Guidelines.

7. CAPACITY ANALYSIS

The following study intersections were analyzed under 2025 existing, 2028 No-Build, and 2028 Build traffic conditions:

- Village Point Road SW and Bay Road SW
- Todd Road SW and Bay Road SW
- Pigott Road SW and Bay Road SW
- Bay Road SW and Site Drive

All proposed site driveways were analyzed under 2028 Build traffic conditions. Refer to Tables 5-8 for a summary of capacity analysis results. Refer to Appendices D-H for the Synchro capacity analysis reports and SimTraffic queueing reports.

7.1. Village Point Road SW and Bay Road SW

Refer to the table below for a summary of the capacity analysis of the subject intersection during the analysis scenarios.

Table 5: Analysis Summary of Village Point Road SW and Bay Road SW

Analysis Scenario	Lane Group	Existing Storage (ft)	Weekday AM Peak Hour						Weekday PM Peak Hour					
			Queue (ft)		Lane LOS	Delay (sec)	Approach LOS (sec)	Overall LOS (sec)	Queue (ft)		Lane LOS	Delay (sec)	Approach LOS (sec)	Overall LOS (sec)
			95th	Max					95th	Max				
2024 Existing Conditions	EBTR	--	--	--	--	--	--	N/A	--	--	--	--	--	N/A
	WBLT	--	0	10	A	7	A (7)[1]		0	24	A	8	A (8)[1]	
	NBLR	--	5	49	A	10	A (10)[2]		8	57	B	10	B (10)[2]	
2026 No-Build Conditions	EBTR	--	--	--	--	--	--	N/A	--	4	--	--	--	N/A
	WBLT	--	3	32	A	8	A (8)[1]		0	49	A	8	A (8)[1]	
	NBLR	--	15	65	B	12	B (12)[2]		10	54	B	11	B (11)[2]	
2026 Build Conditions	EBTR	--	--	--	--	--	--	N/A	--	--	--	--	--	N/A
	WBLT	--	3	43	A	8	A (8)[1]		3	78	A	8	A (8)[1]	
	NBLR	--	23	78	B	13	B (13)[2]		28	124	B	14	B (14)[2]	

1. Level of service for major-street left-turn movement.
2. Level of service for minor-street approach.

Capacity analysis of the 2025 Existing, 2028 No-Build, and 2028 Build traffic conditions indicate that the major-street left-turn movement is expected to operate at LOS A and the minor street approach is expected to operate at LOS B or better during both the weekday AM and PM peak hours under all scenarios. No improvements are recommended.

7.2. Todd Road SW and Bay Road SW

Refer to the table below for a summary of the capacity analysis of the subject intersection during the analysis scenarios.

Table 6: Analysis Summary of Todd Road SW and Bay Road SW

Analysis Scenario	Lane Group	Existing Storage (ft)	Weekday AM Peak Hour						Weekday PM Peak Hour					
			Queue (ft)		Lane LOS	Delay (sec)	Approach LOS (sec)	Overall LOS (sec)	Queue (ft)		Lane LOS	Delay (sec)	Approach LOS (sec)	Overall LOS (sec)
			95th	Max					95th	Max				
2024 Existing Conditions	EBLR	--	0	20	A	9	A (9)[2]	N/A	3	44	A	9	A (9)[2]	N/A
	NBLT	--	0	--	A	7	A (7)[1]		0	6	A	7	A (7)[1]	
	SBTR	--	--	--	--	--	--		--	--	--	--	--	
2026 No-Build Conditions	EBLR	--	3	23	A	9	A (9)[2]	N/A	3	40	A	9	A (9)[2]	N/A
	NBLT	--	0	22	A	7	A (7)[1]		0	--	A	7	A (7)[1]	
	SBTR	--	--	--	--	--	--		--	--	--	--	--	
2026 Build Conditions	EBLR	--	3	21	A	10	A (10)[2]	N/A	5	52	B	10	B (10)[2]	N/A
	NBLT	--	0	21	A	7	A (7)[1]		0	29	A	8	A (8)[1]	
	SBTR	--	--	--	--	--	--		--	--	--	--	--	

1. Level of service for major-street left-turn movement.
2. Level of service for minor-street approach.

Capacity analysis of the 2025 Existing, 2028 No-Build, and 2028 Build traffic conditions indicate that the major-street left-turn movement is expected to operate at LOS A and the minor street approach is expected to operate at LOS B or better during both the weekday AM and PM peak hours under all scenarios. No improvements are recommended.

7.3. Pigott Road SW and Bay Road SW

Refer to the table below for a summary of the capacity analysis of the subject intersection during the analysis scenarios.

Table 7: Analysis Summary of Pigott Road SW and Bay Road SW

Analysis Scenario	Lane Group	Existing Storage (ft)	Weekday AM Peak Hour						Weekday PM Peak Hour					
			Queue (ft)		Lane LOS	Delay (sec)	Approach LOS (sec)	Overall LOS (sec)	Queue (ft)		Lane LOS	Delay (sec)	Approach LOS (sec)	Overall LOS (sec)
			95th	Max					95th	Max				
2024 Existing Conditions	EBLTR	--	0	10	A	7	A (7)[1]	N/A	0	23	A	7	A (7)[1]	N/A
	WBLTR	--	0	--	A	7	A (7)[1]		0	0	A	7	A (7)[1]	
	NBLTR	--	3	30	A	9	A (9)[2]		3	30	A	10	A (10)[2]	
	SBLTR	--	3	34	A	9	A (9)[2]		8	69	A	10	A (10)[2]	
2026 No-Build Conditions	EBLTR	--	0	22	A	7	A (7)[1]	N/A	0	29	A	7	A (7)[1]	N/A
	WBLTR	--	0	--	A	7	A (7)[1]		0	12	A	7	A (7)[1]	
	NBLTR	--	3	34	A	10	A (10)[2]		3	30	A	10	A (10)[2]	
	SBLTR	--	5	53	A	9	A (9)[2]		8	84	B	10	B (10)[2]	
2026 Build Conditions	EBLTR	--	0	27	A	7	A (7)[1]	N/A	3	40	A	7	A (7)[1]	N/A
	WBLTR	--	0	--	A	7	A (7)[1]		0	--	A	7	A (7)[1]	
	NBLTR	--	3	30	A	10	A (10)[2]		3	39	B	11	B (11)[2]	
	SBLTR	--	8	46	A	9	A (9)[2]		13	98	B	11	B (11)[2]	

1. Level of service for major-street left-turn movement.
2. Level of service for minor-street approach.

Capacity analysis of the 2025 Existing, 2028 No-Build, and 2028 Build traffic conditions indicate that the major-street left-turn movements are expected to operate at LOS A and the minor street approaches are expected to operate at LOS B or better during both the weekday AM and PM peak hours under all scenarios. No improvements are recommended.

7.4. Bay Road SW and Site Drive

Refer to the table below for a summary of the capacity analysis of the subject intersection during the analysis scenarios.

Table 8: Analysis Summary of Bay Road SW & Site Drive

Analysis Scenario	Lane Group	Existing Storage (ft)	Weekday AM Peak Hour						Weekday PM Peak Hour					
			Queue (ft)		Lane LOS	Delay (sec)	Approach LOS (sec)	Overall LOS (sec)	Queue (ft)		Lane LOS	Delay (sec)	Approach LOS (sec)	Overall LOS (sec)
			95th	Max					95th	Max				
2026 Build Conditions	**WBLR**	--	3	56	A	9	A (9)[2]	N/A	3	39	A	9	A (9)[2]	N/A
	NBT**R**	--	--	--	--	--	--		--	--	--	--	--	
	SB**L**T	--	0	11	A	7	A (7)[1]		3	36	A	8	A (8)[1]	

Improvements to lane configurations are shown in Bold

1. Level of service for major-street left-turn movement.
2. Level of service for minor-street approach.

Capacity analysis of the 2028 Build traffic conditions indicate the major-street left-turn movement and the minor street approach is expected to operate at LOS A during both the weekday AM and PM peak hours.

8. CONCLUSIONS

This Traffic Impact Analysis was conducted to determine the potential traffic impacts of the 66 Lot Bay Road development to be located in Shallotte, North Carolina. The proposed development, anticipated to be completed in 2028, is assumed to consist of 66 single family homes. Site access to is proposed one full movement intersection along Bay Road SW.

The study analyzes traffic conditions during the weekday AM and PM peak hours for the following scenarios:

- 2025 Existing Traffic Conditions
- 2028 No-Build Traffic Conditions
- 2028 Build Traffic Conditions

Trip Generation

Primary site trips are expected to generate approximately 52 trips (13 entering and 39 exiting) during the weekday AM peak hour and 68 trips (43 entering and 25 exiting) during the weekday PM peak hour.

Adjustments to Analysis Guidelines

Capacity analysis at all study intersections was completed according to NCDOT Congestion Management Guidelines. Refer to section 6.1 of this report for a detailed description of any adjustments to these guidelines made throughout the analysis.

Intersection Capacity Analysis Summary

All the study area intersections (including the proposed site driveways) are expected to operate at acceptable levels-of-service under existing and future year conditions with the exception of the intersections listed below. A summary of the study area intersections that are expected to need improvements are as follows:

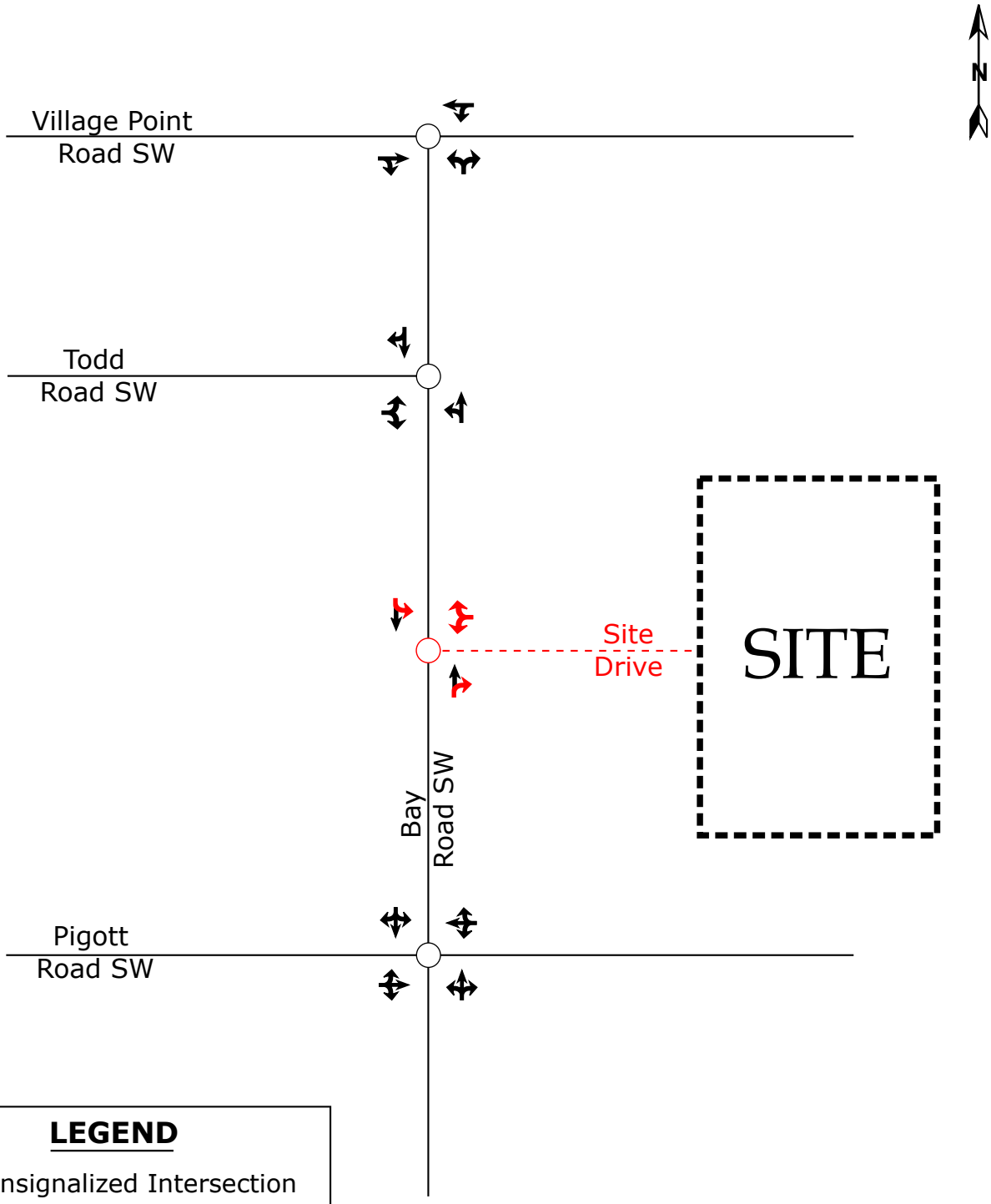
9. RECOMMENDATIONS

The following is a summary of improvements at the study intersections. Refer to Figure 11 for an illustration of the recommended lane configuration for the proposed development.

Improvements by Developer

Bay Road SW and Site Drive

- Construct Site Drive as a westbound approach with one ingress and one egress lane striped as a shared left-turn/right-turn lane.



DRMP	66 Lot Bay Road Shallotte, NC	Recommended Lane Configurations	
		Scale: Not to Scale	Figure 11