DRMP

TRAFFIC IMPACT ANALYSIS

FOR

Horton Street Development

LOCATED

IN

Zebulon, NC

Prepared For:
Caruso Homes
5808 Faringdon Place
Raleigh, North Carolina

April 2025

DRMP Project No. 24577

Prepared By: GB

Reviewed By: CC

DRMP

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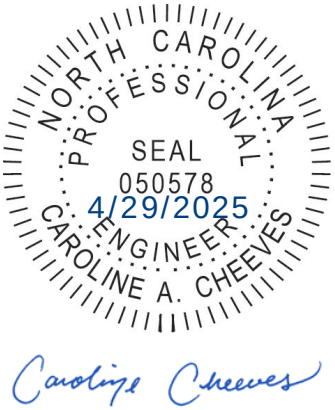

Prepared For:

Caruso Homes

5808 Faringdon Place

Raleigh, NC

Prepared By:

DRMP, Inc.

License #F-1524

TRAFFIC IMPACT ANALYSIS
Horton Street Development

Zebulon, North Carolina

EXECUTIVE SUMMARY

1. Development Overview

A Traffic Impact Analysis (TIA) was conducted for the proposed Horton Street Development in accordance with the Town of Zebulon (Town) Unified Development Ordinance (UDO) and North Carolina Department of Transportation (NCDOT) capacity analysis guidelines. The proposed Horton Street development to be located along Horton Street, north of Temple Johnson Road in Zebulon, North Carolina. The proposed development, anticipated to be completed in 2028, is assumed to consist of 43 single-family homes. In accordance with the Town Unified Development Ordinance (UDO), the study will utilize a build+1 for future year traffic conditions. Site access is proposed via one full-movement driveway along E Horton Street.

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 Zebulon and consists of the following existing intersections:

- E Horton Street & Temple Johnon Road (unsignalized)
- E Horton Street & Naomi Street (unsignalized)
- E Horton Street & NC 96 (signalized)

Existing peak hour traffic volumes were determined based on traffic counts conducted at the study intersection listed above, in November of 2024 by National Data & Surveying Services 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.

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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 2029 (Build + 1) projected weekday AM and PM peak hour traffic volumes. the following adjacent developments were identified to be included as an approved adjacent development in this study:

- Sidney Creek

Additionally, based on coordination with the NCDOT and the Town, it was determined that there are no future roadway improvements within the study area to consider.

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 Homes (210)	43 Units	464	9	26	28	17

To estimate traffic conditions with the site fully built-out, the total site trips were added to the 2029 no-build traffic volumes to determine the 2029 build traffic volumes. The study analyzes traffic conditions during the weekday AM and PM peak hours for the following scenarios:

- 2024 Existing Traffic Conditions
- 2029 No-Build Traffic Conditions
- 2029 Build Traffic Conditions

5. Capacity Analysis Summary

The analysis considered weekday AM and PM peak hour traffic for 2024 existing, 2029 no-build, and 2029 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 below and are illustrated in Figure E-1.

Recommended Improvements by Developer

Horton Street & Site Access

- Construct the southbound approach with one ingress lane and one egress lane striped as a shared left-right.
- Provide stop control for the southbound approach.

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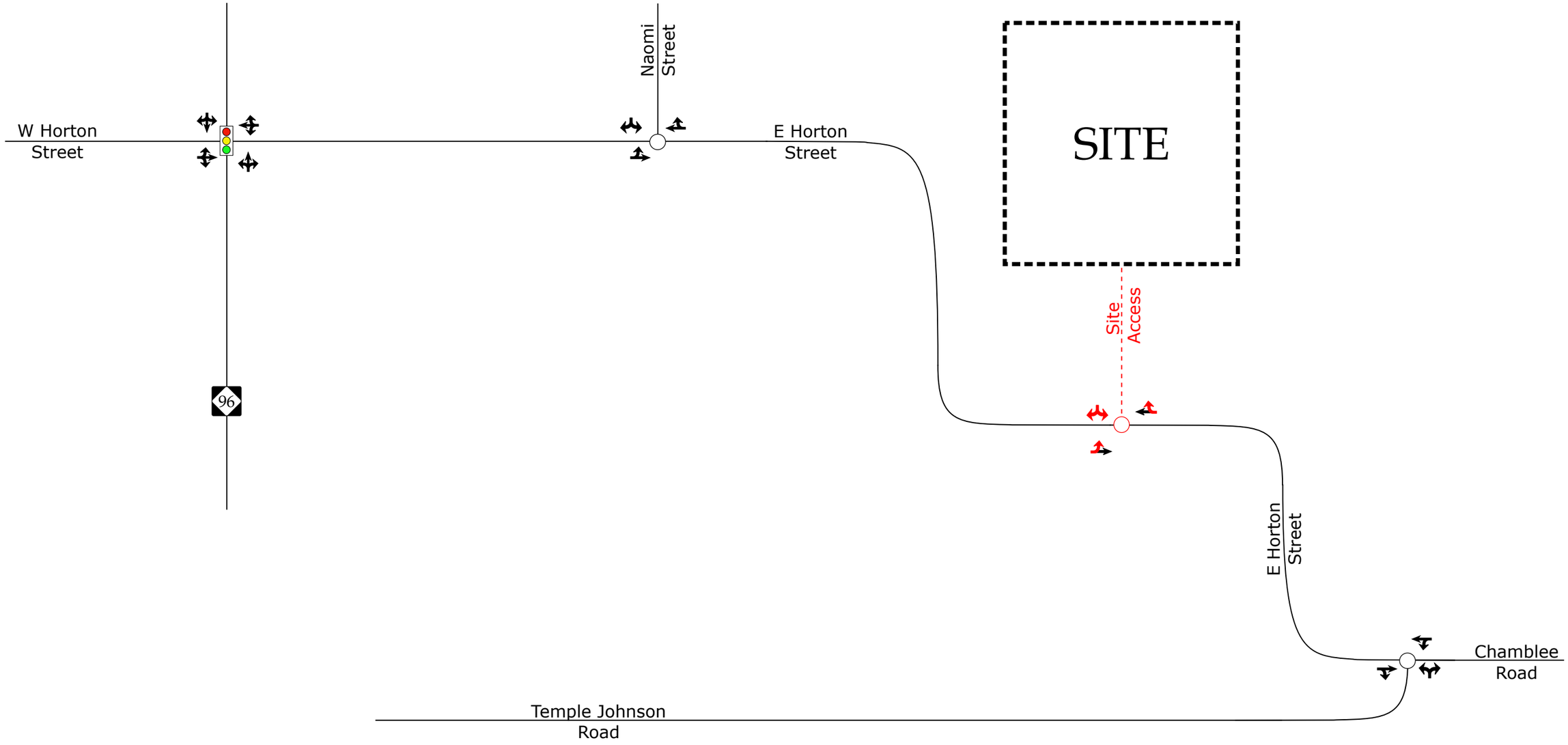

LEGEND

- Unsignalized Intersection
- Signalized Intersection
- Existing Lane
- Improvement by Developer
- X' Storage (In Feet)

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Horton Street Development
Zebulon, NC

Recommended Lane Configurations

Scale: Not to Scale | Figure E-1

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TRAFFIC IMPACT ANALYSIS

Horton Street Development
Zebulon, North Carolina

1. INTRODUCTION

The contents of this report present the findings of the Traffic Impact Analysis (TIA) conducted for the proposed Horton Street development to be located along E Horton Street, north of Temple Johnson Road in Zebulon, North Carolina. The purpose of this study is to determine the potential impacts to the surrounding transportation system created by traffic generated by the proposed development, as well as recommend improvements to mitigate the impacts.

The proposed development, anticipated to be completed in 2028, is assumed to consist of 43 single-family homes. In accordance with the Town of Zebulon (Town) Unified Development Ordinance (UDO) the study will utilize a build+1 for future year traffic conditions.

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

- 2024 Existing Traffic Conditions
- 2029 (build+1) No-Build Traffic Conditions
- 2029 (build+1) Build Traffic Conditions

1.1. Site Location and Study Area

The development is proposed to be located along E Horton Street, north of Temple Johnson Road in Zebulon, 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 and consists of the following existing intersections:

- E Horton Street & Temple Johnon Road (unsignalized)
- E Horton Street & Naomi Street (unsignalized)
- E Horton Street & NC 96 (signalized)

1.2. Proposed Land Use and Site Access

The proposed development, anticipated to be completed in 2028, is assumed to consist of 43 single-family homes.

Site access is proposed via one full-movement driveway along E Horton Street. 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 undeveloped land, residential development, and some commercial development nearby along NC 96.

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	2023 AADT (vpd)
NC 96	NC 96	2-lane undivided	35/20 MPH	7,900
E Horton Street	SR 2345	2-lane undivided	55/35/25 MPH	850
Temple Johnson Road	N/A	2-lane undivided	Not Posted	100*
Naomi Street	SR 2385	2-lane undivided	Not Posted	550

*ADT based on the traffic counts from 2024 and assuming the weekday PM peak hour volume is 10% of the average daily traffic.

LEGEND

- Study Intersection
- Proposed Site Access
- Study Area

N

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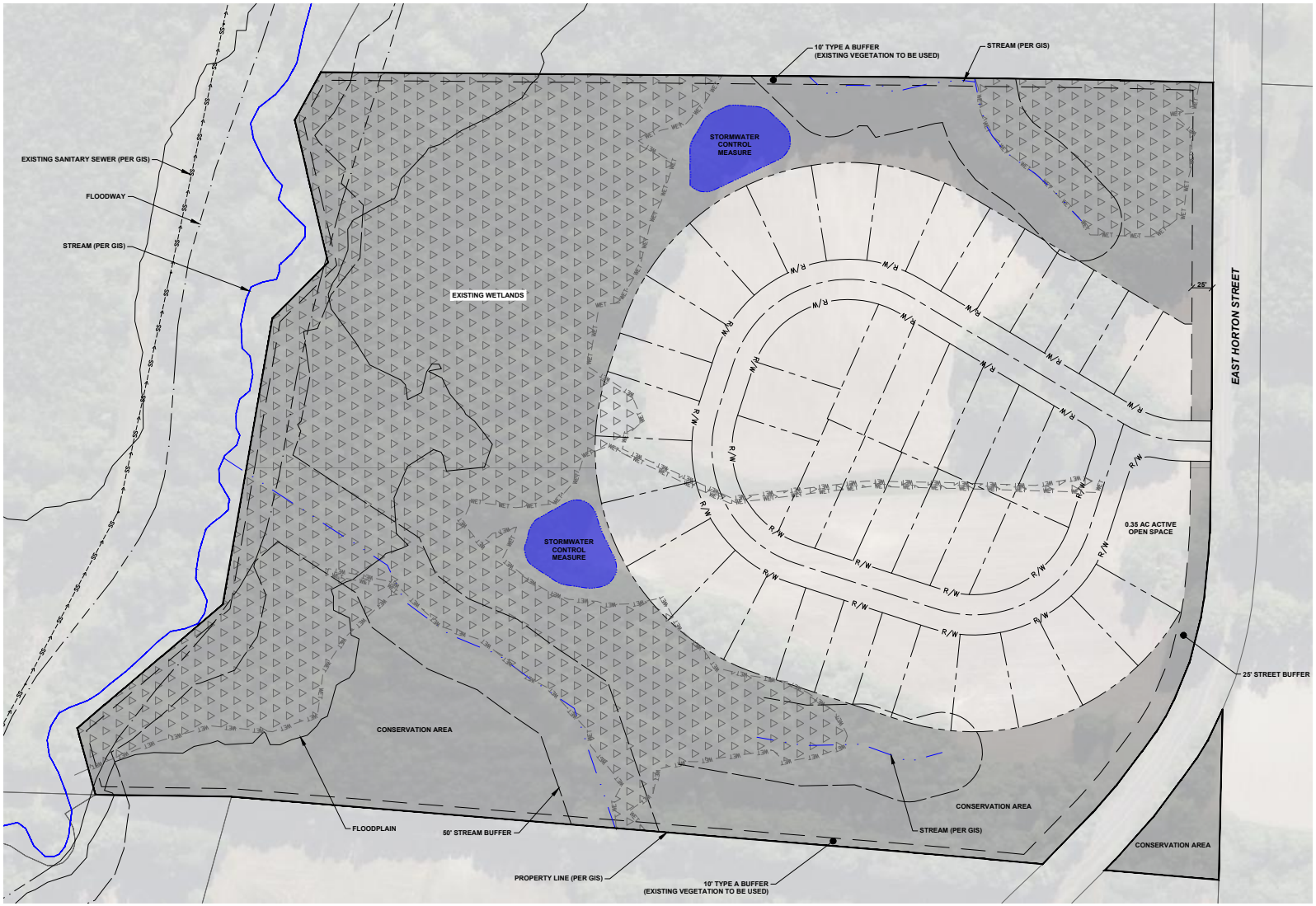
Horton Street Development
Zebulon, NC

Site Location Map

Scale: Not to Scale | Figure 1



SITE DATA

SITE AREA (PER GIS):	25.5 ACRES
CURRENT ZONING:	R2
PROPOSED NUMBER OF LOTS:	43
MAXIMUM DENSITY:	2.0 UNITS/ACRE
PROPOSED DENSITY:	1.7 UNITS/ACRE
MINIMUM LOT SIZE ALLOWED:	6,000 SF
MINIMUM LOT SIZE PROPOSED:	6,000 SF
MINIMUM LOT WIDTH ALLOWED:	30'
MINIMUM LOT WIDTH PROPOSED:	50'
CONSERVATION AREA REQUIRED:	12.75 ACRES (50.0%)
CONSERVATION AREA PROPOSED:	16.39 ACRES (64.3%)

CONSERVATION AREA

60' 30' 0 60' 120'
1"=60'

REV.NO.	DESCRIPTIONS	DATE
	REVISIONS	

McKIM&CREED
8020 Tower Point Drive
Charlotte, North Carolina 28227
Phone: (704) 841-2588, Fax: (704) 841-2567
NC License# F-1222
www.mckimcreed.com

CARUSOHOMES

EAST HORTON STREET
ZEBULON, NC

CONSERVATION SUBDIVISION CONCEPT PLAN

DATE:	NOVEMBER 2024
MCE PROJ. #	
DRAWN	
DESIGNED	
CHECKED	
PROJ. MGR.	

SCALE
HORIZONTAL: 1" = 60'
VERTICAL: N/A

1
DRAWING NUMBER
REVISION

STATUS: PRELIMINARY DRAWING NOT FOR CONSTRUCTION

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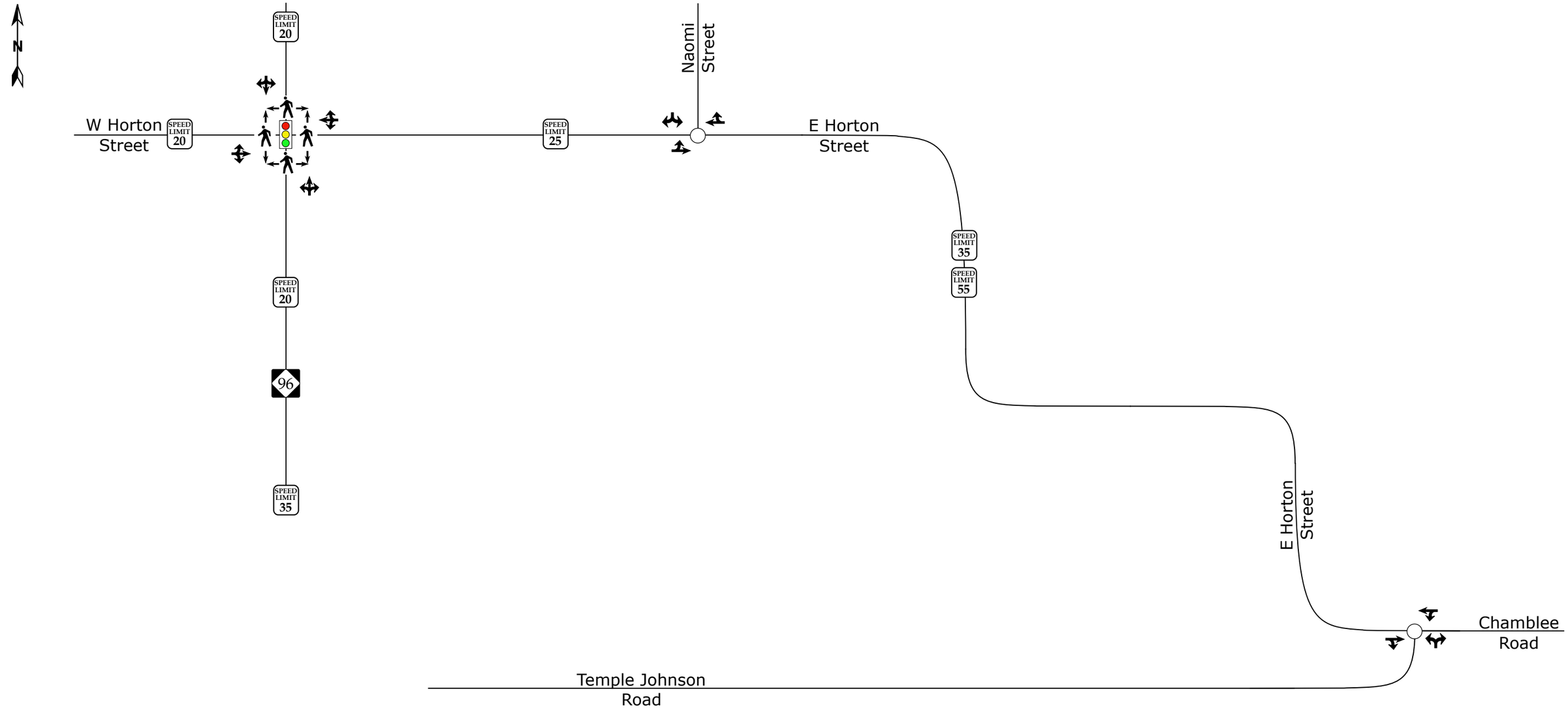

LEGEND

- Unsignalized Intersection
- Signalized Intersection
- Existing Lane
- X' Storage (In Feet)
- Pedestrian Crosswalk
- Posted Speed Limit

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Horton Street Development
Zebulon, NC

2024 Existing Lane Configurations

Scale: Not to Scale | Figure 3

2. 2024 EXISTING PEAK HOUR CONDITIONS

2.1. 2024 Existing Peak Hour Traffic Volumes

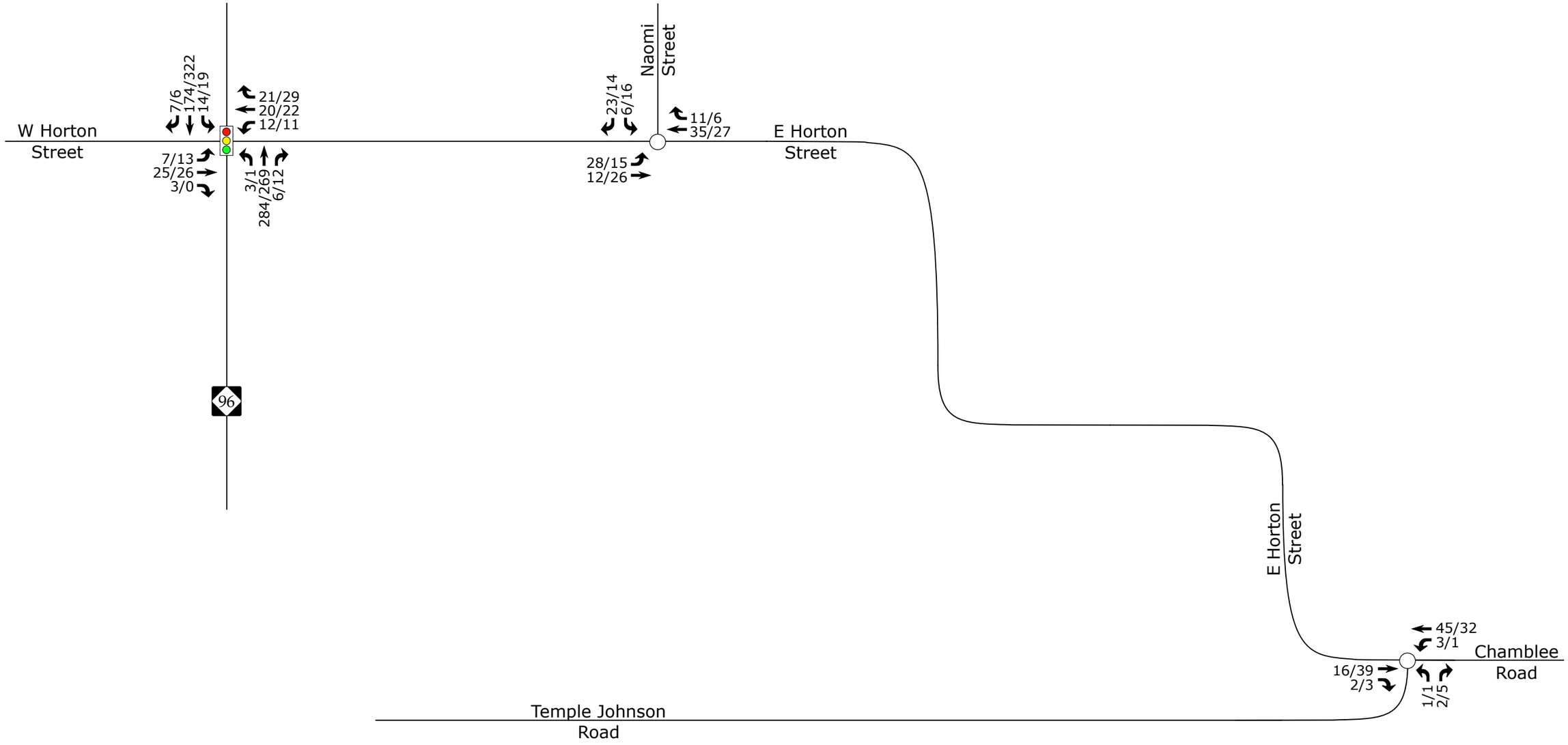
Existing peak hour traffic volumes were determined based on traffic counts conducted at the study intersections listed below, in November 2024 by National Data & Surveying Services during a typical weekday AM (7:00 AM – 9:00 AM) and PM (4:00 PM – 6:00 PM) peak periods:

- E Horton Street & Temple Johnson Road
- E Horton Street & Naomi Street
- E Horton Street & NC 96

Weekday AM and PM traffic volumes were balanced between study intersections, where appropriate. Refer to Figure 4 for 2024 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 2024 Existing Peak Hour Traffic Conditions

The 2024 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. Signal information was obtained from NCDOT and is included in Appendix C. The results of the analysis are presented in Section 7 of this report.



LEGEND

- ○ Unsignalized Intersection
- Signalized 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	Horton Street Development Zebulon, NC	2024 Existing Peak Hour Traffic
		Scale: Not to Scale / Figure 4

3. 2029 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 2029 projected weekday AM and PM peak hour traffic volumes. Refer to Figure 5 for 2029 projected peak hour traffic.

3.2. Adjacent Development Traffic

Through coordination with the NCDOT and the Town, the following adjacent development was identified to be included as an approved adjacent development in this study:

- Sidney Creek

Table 2 provides a summary of the adjacent developments.

Table 2: Adjacent Development Information

Development Name	Location	Build-Out Year	Land Use / Intensity	TIA Performed
Sidney Creek	West of NC 39 along Chamblee Road	2029	565 single-family homes and 140 townhomes	2019 by RKA

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 D.

3.3. Future Roadway Improvements

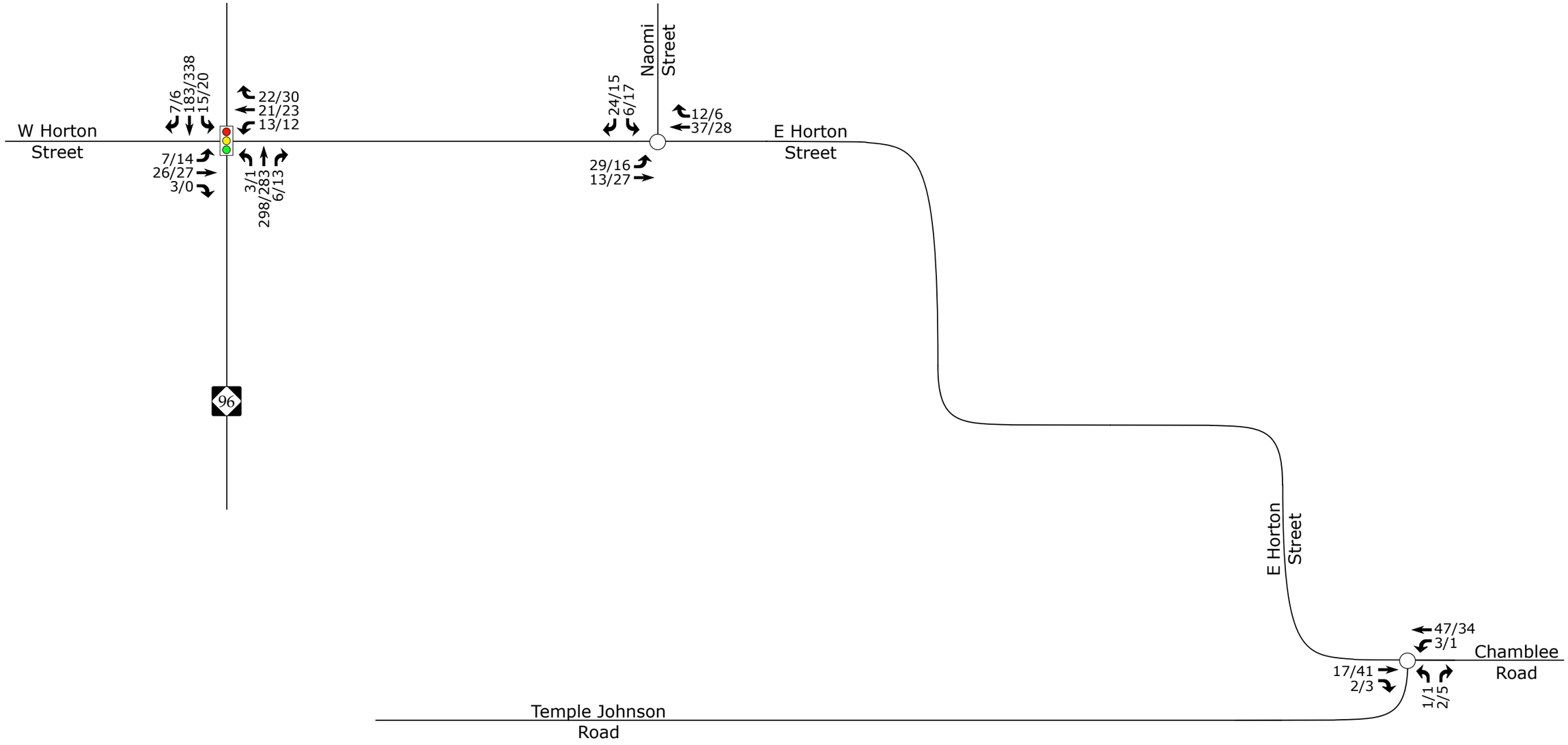
Based on coordination with the NCDOT and the Town, it was determined there were no future roadway improvements to consider with this study.

3.4. 2029 No-Build Peak Hour Traffic Volumes

The 2029 no-build traffic volumes were determined by projecting the 2024 existing peak hour traffic to the year 2029 and adding the adjacent development trips. Refer to Figure 7 for an illustration of the 2029 no-build peak hour traffic volumes at the study intersections.

3.5. Analysis of 2029 No-Build Peak Hour Traffic Conditions

The 2029 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
- Signalized Intersection
- X / Y → Weekday AM / PM Peak Hour Traffic

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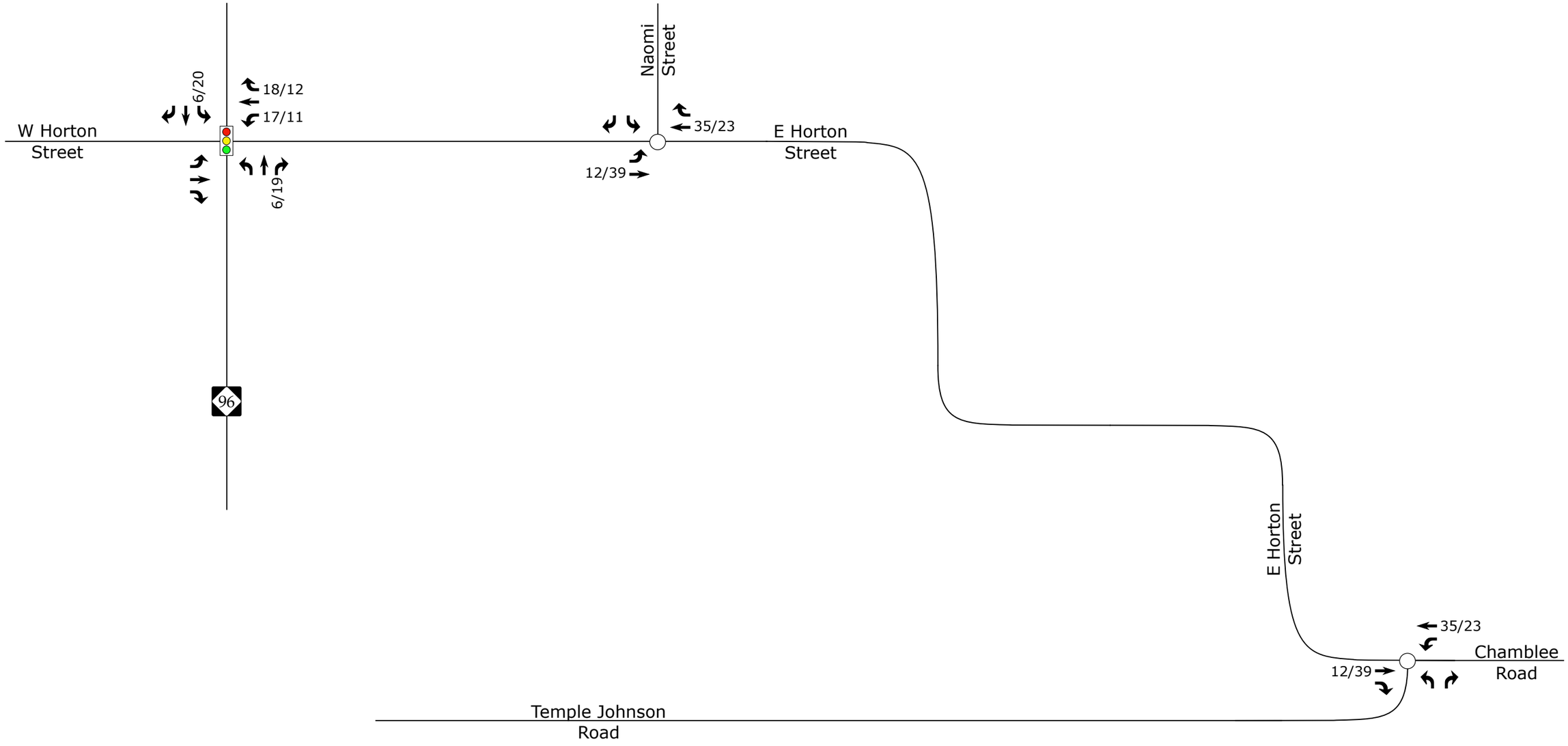
Horton Street Development
Zebulon, NC

2029 Projected Peak Hour Traffic

Scale: Not to Scale

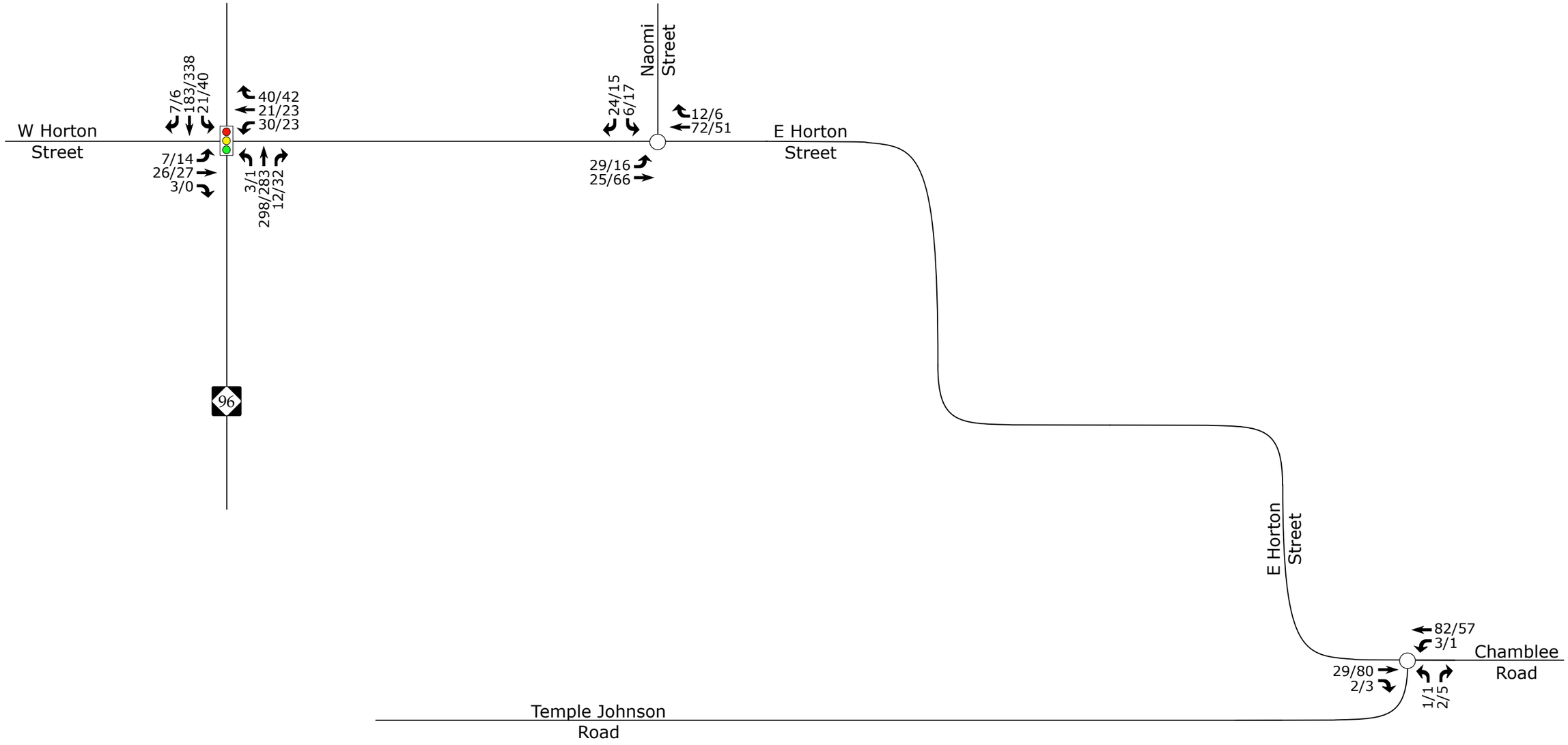
Figure 5



LEGEND

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

DRMP	Horton Street Development Zebulon, NC	Peak Hour Adjacent Development Trips Scale: Not to Scale | Figure 6



LEGEND

- ◯ Unsignalized Intersection
- Signalized 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	Horton Street Development Zebulon, NC	2029 No-Build Peak Hour Traffic	
		Scale: Not to Scale	Figure 7

4. SITE TRIP GENERATION AND DISTRIBUTION

4.1. 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*, 11.1 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 Homes (210)	43 Units	464	9	26	28	17

It is estimated that the proposed development will generate approximately 464 total site trips on the roadway network during a typical 24-hour weekday period. Of the daily traffic volume, it is anticipated that 35 trips (9 entering and 26 exiting) will occur during the weekday AM peak hour and 45 trips (28 entering and 17 exiting) will occur during the weekday PM peak hour.

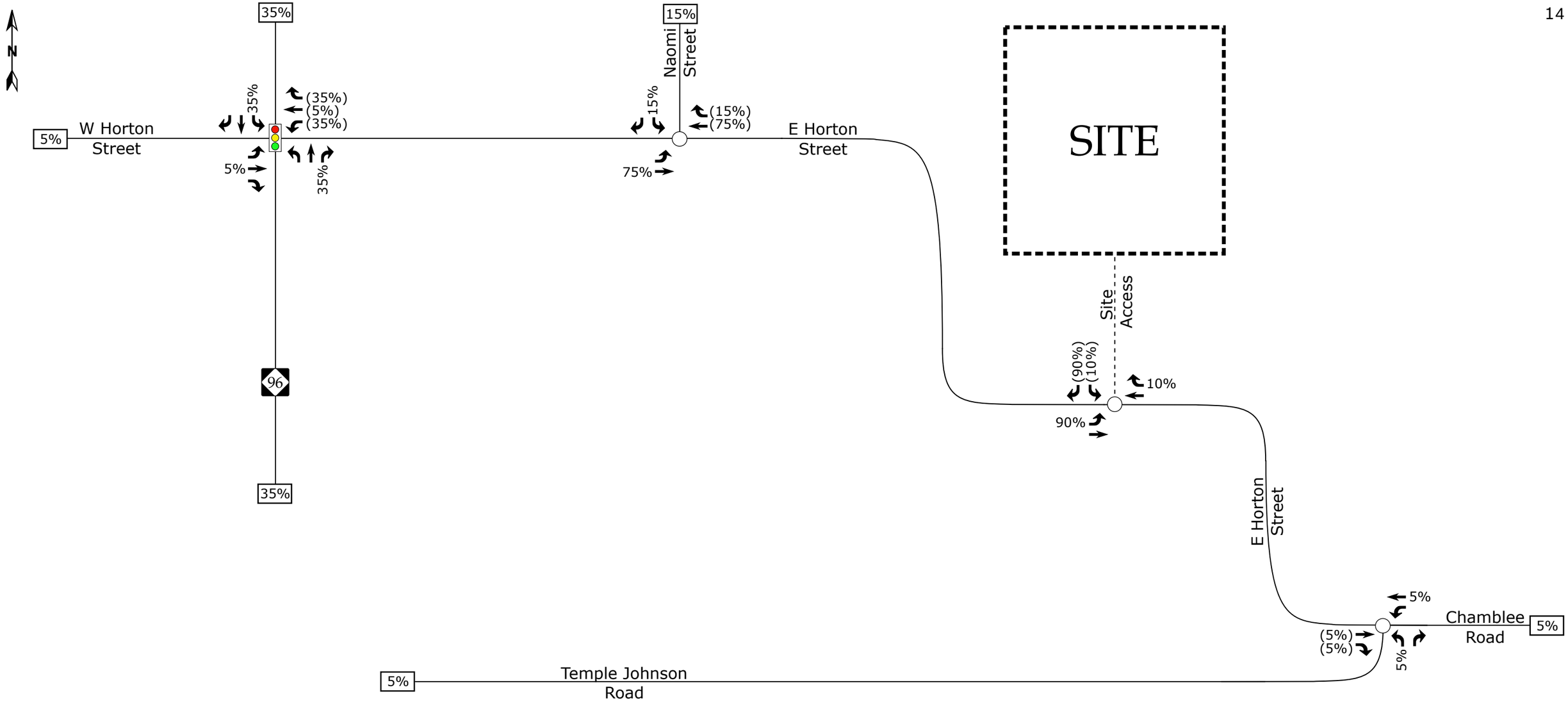
4.2. Site Trip Distribution and Assignment

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 residential site trips will be regionally distributed as follows:

- 35% to/from the north via NC 96
- 35% to/from the south via NC 96
- 15% to/from the north via Naomi Street
- 5% to/from the west via W Horton Street
- 5% to/from the east via Chamblee Road/E Horton Street
- 5% to/from the west via Temple Johnson Road

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



LEGEND

- Unsignalized Intersection
- Signalized Intersection
- X% → Entering Trip Distribution
- (Y%) → Exiting Trip Distribution
- XX% Regional Trip Distribution

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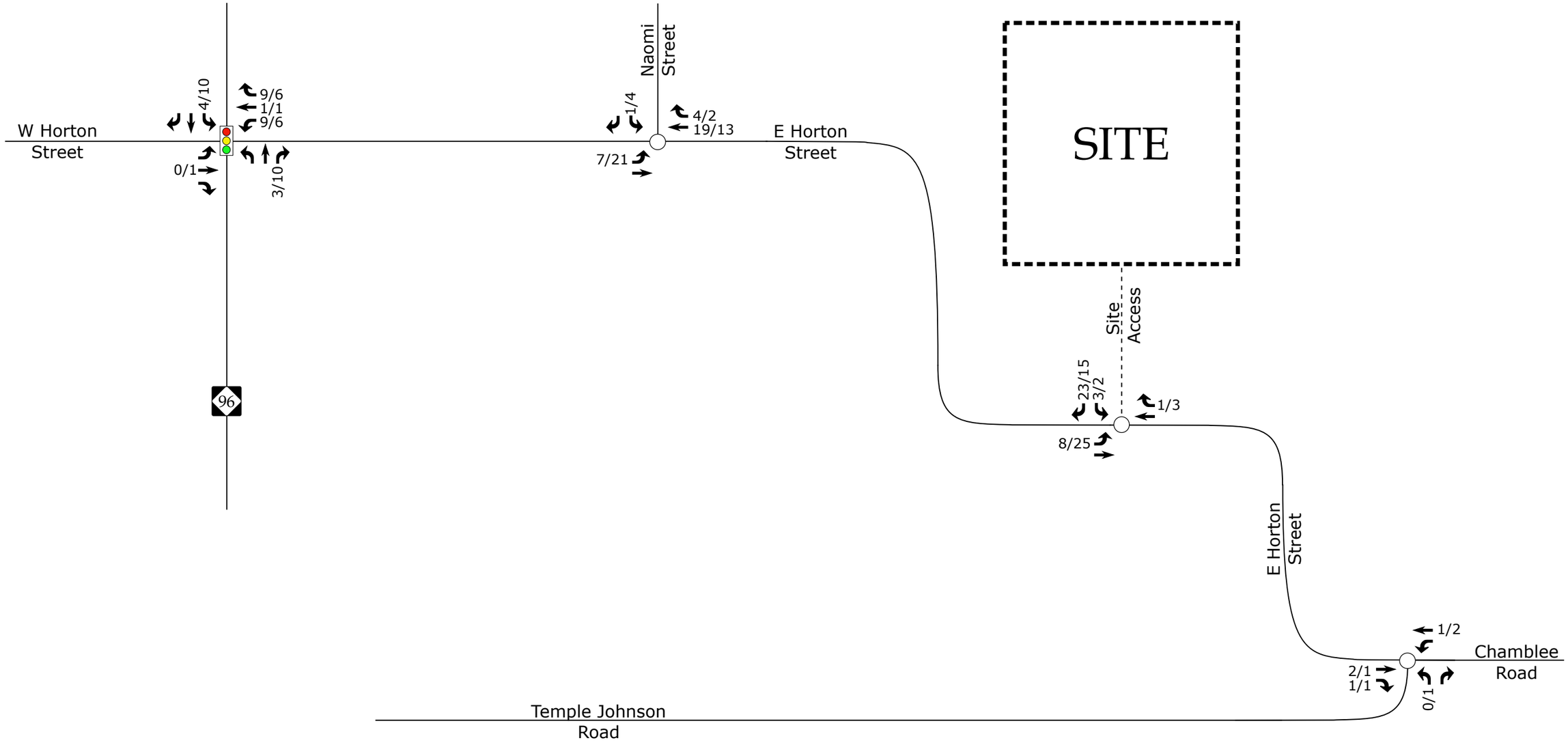
Horton Street Development
Zebulon, NC

Site Trip Distribution

Scale: Not to Scale | Figure 8



LEGEND

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

DRMP	Horton Street Development Zebulon, NC	Site Trip Assignment
		Scale: Not to Scale / Figure 9

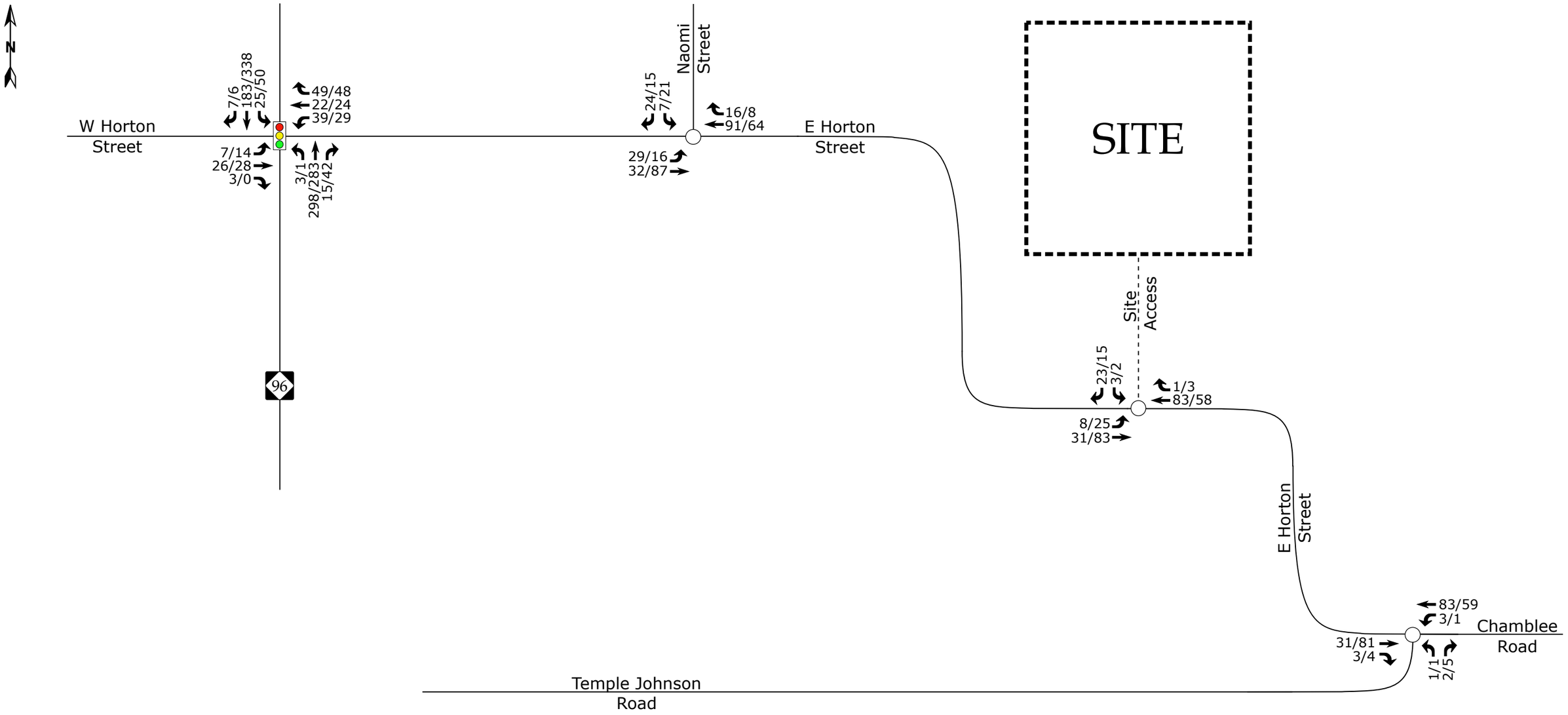
5. 2029 BUILD TRAFFIC CONDITIONS

5.1. 2029 Build Peak Hour Traffic Volumes

To estimate traffic conditions with the site fully built-out, the total site trips were added to the 2029 no-build traffic volumes to determine the 2029 build traffic volumes. Refer to Figure 10 for an illustration of the 2029 build peak hour traffic volumes with the proposed site fully developed.

5.2. Analysis of 2029 Build Peak Hour Traffic Conditions

Study intersections were analyzed with the 2029 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
- Signalized 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	Horton Street Development Zebulon, NC	2029 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 2024 existing, 2029 no-build, and 2029 build traffic conditions:

- E Horton Street & Temple Johnson Road
- E Horton Street & Naomi Street
- E Horton Street & NC 96
- E Horton Street & Site Access

All proposed site driveways were analyzed under 2029 build traffic conditions. Refer to Tables 5-8 for a summary of capacity analysis results. Refer to Appendices E-I for the Synchro capacity analysis reports and SimTraffic queueing reports.

7.1. E Horton Street & Temple Johnson Road

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 E Horton Street & Temple Johnson Road

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
2024 Existing	EB WB NB	1 TH-RT 1 LT-TH 1 LT-RT	-- A[1] A[2]	N/A	-- A[1] A[2]	N/A
2029 No-Build	EB WB NB	1 TH-RT 1 LT-TH 1 LT-RT	-- A[1] A[2]	N/A	-- A[1] A[2]	N/A
2029 Build	EB WB NB	1 TH-RT 1 LT-TH 1 LT-RT	-- A[1] A[2]	N/A	-- A[1] A[2]	N/A

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

Capacity analysis indicates that the major-street left-turn and minor-street approaches are expected to operate at LOS A during both the weekday AM and PM peak hours under all scenarios analyzed. Based on SimTraffic queuing analysis, when comparing the no-build and build traffic conditions, queuing at the intersection is not expected to increase significantly.

Due to the acceptable levels of service, no improvements by the developer are recommended.

7.2. E Horton Street & Naomi Street

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 E Horton Street & Naomi Street

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
2024 Existing	EB WB SB	1 LT-TH 1 TH-RT 1 LT-RT	A[1] -- A[2]	N/A	A[1] -- A[2]	N/A
2029 No-Build	EB WB SB	1 LT-TH 1 TH-RT 1 LT-RT	A[1] -- A[2]	N/A	A[1] -- A[2]	N/A
2029 Build	EB WB SB	1 LT-TH 1 TH-RT 1 LT-RT	A[1] -- A[2]	N/A	A[1] -- A[2]	N/A

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

Capacity analysis indicates that the major-street left-turn and minor-street approaches are expected to operate at LOS A during both the weekday AM and PM peak hours under all scenarios analyzed. Based on SimTraffic queuing analysis, when comparing the no-build and build traffic conditions, queuing at the intersection is not expected to increase significantly.

Due to the acceptable levels of service, no improvements by the developer are recommended.

7.3.E Horton Street & NC 96

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 E Horton Street & NC 96

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
2024 Existing	EB	1 LT-TH-RT	B	A (8)	B	A (8)
	WB	1 LT-TH-RT	B		B	
	NB	1 LT-TH-RT	A		A	
	SB	1 LT-TH-RT	A		A	
2029 No-Build	EB	1 LT-TH-RT	B	A (8)	B	A (8)
	WB	1 LT-TH-RT	B		B	
	NB	1 LT-TH-RT	A		A	
	SB	1 LT-TH-RT	A		A	
2029 Build	EB	1 LT-TH-RT	B	A (9)	B	A (9)
	WB	1 LT-TH-RT	C		C	
	NB	1 LT-TH-RT	A		A	
	SB	1 LT-TH-RT	A		A	

Capacity analysis indicates that the intersection is expected to operate at an overall LOS A during both the weekday AM and PM peak hours under all scenarios analyzed. When comparing the no-build and build traffic conditions queuing at the intersection is not expected to increase significantly.

Due to the acceptable levels of service, no improvements by the developer are recommended.

7.4.E Horton Street & Site Access

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 E Horton Street & Site Access

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
2029 Build	EB	1 **LT**-TH	A[1]	N/A	A[1]	N/A
	WB	1 TH-**RT**	--		--	
	SB	**1 LT-RT**	A[2]		A[2]	

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 indicates that the major-street left-turn and minor-street approaches are expected to operate at LOS A during both the weekday AM and PM peak hours. Queuing along the southbound approach is not expected to exceed 30 feet (approximately one vehicle). It is important to note that E Horton street has an AADT less than 4,000 vehicles per day, which is the typical threshold for NCDOT to consider turn lanes.

8. CONCLUSIONS

This Traffic Impact Analysis was conducted to determine the potential traffic impacts of the Horton Street Development to be located along E Horton Street, north of Temple Johnson Road in Zebulon, North Carolina. The proposed development, anticipated to be completed in 2028, is assumed to consist of 43 single-family homes. Site access is proposed via one full-movement driveway along E Horton Street.

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

- 2024 Existing Traffic Conditions
- 2029 No-Build Traffic Conditions
- 2029 Build Traffic Conditions

Trip Generation

Primary site trips are expected to generate approximately 35 trips (9 entering and 26 exiting) during the weekday AM peak hour and 45 trips (28 entering and 17 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.

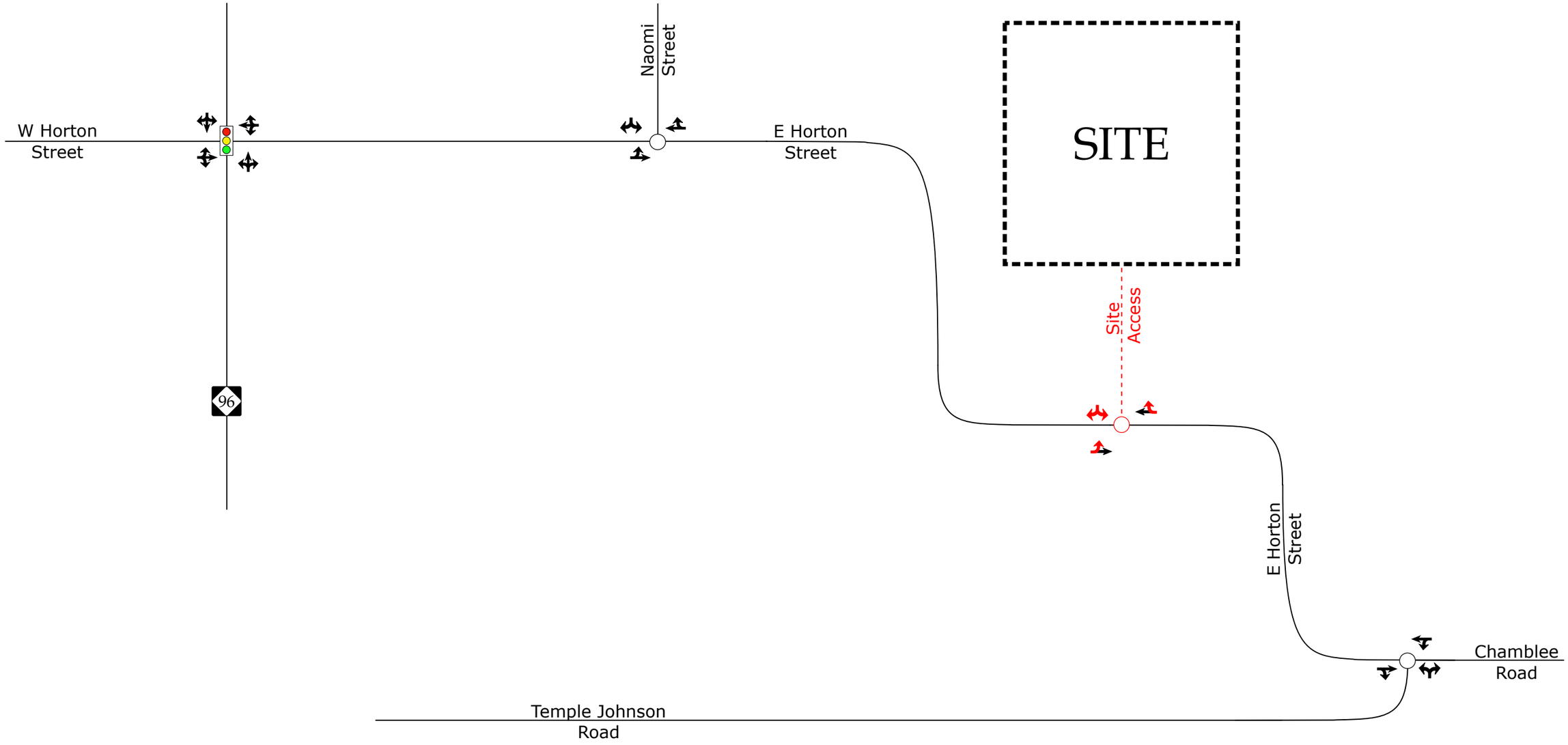
9. RECOMMENDATIONS

Based on the findings of this study, specific geometric improvements have been identified and are recommended to accommodate future traffic conditions. See a more detailed description of the recommended improvements below. Refer to Figure 11 for an illustration of the recommended lane configuration for the proposed development.

Recommended Improvements by Developer

E Horton Street & Site Access

- Construct the southbound approach with one ingress lane and one egress lane striped as a shared left-right.
- Provide stop control for the southbound approach.



LEGEND

- Unsignalized Intersection
- Signalized Intersection
- Existing Lane
- Improvement by Developer
- X' Storage (In Feet)

DRMP

Horton Street Development
Zebulon, NC

Recommended Lane Configurations

Scale: Not to Scale | Figure 11