RAMEY KEMP ASSOCIATES
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September 1, 2021

Meredith Gruber
Town of Rolesville – Planning Director
PO Box 250
502 Southtown Circle
Rolesville, NC 27571
P: 919.554.6517
E: meredith.gruber@rolesville.nc.gov
[Sent via Email]

Subject: **Site Analysis** - Broughton Townhomes
Rolesville, NC

Dear Ms. Gruber,

This letter provides an assessment of the proposed Broughton Townhomes development to be located in the northeast quadrant at the intersection of Main Street and Young Street in Rolesville, North Carolina. The purpose of this study is to determine the potential impacts to the site driveways and surrounding transportation system created by traffic generated by the proposed development.

Proposed Land Use and Site Access

The proposed development is expected to consist of 57 townhomes and is estimated to be built-out in 2023; however, it should be noted that the analysis contained within this letter considers 60 townhomes at full build-out to provide flexibility in the event there is the opportunity to add a few more units. Site access is proposed via one (1) site driveway on Main Street, one (1) site driveway on Young Street, and an extension of Nortwick Road. Refer to the attachments for the site location map and the preliminary site plan.

Based on coordination with the North Carolina Department of Transportation (NCDOT), access at the Main Street site driveway (Site Drive 1) will likely be restricted to a right-in/right-out (RIRO) configuration due to its proximity with Williams Street located approximately 150 feet southwest. Main Street is a 3-lane roadway with a two-way left-turn lane (TWLTL) to facilitate left-turning vehicles from Main Street to the side streets. Allowing full-movement access on Main Street at Site Drive 1 and Williams Street would introduce a safety concern because of the high likelihood for conflicting left-turn movements within the TWLTL on Main Street due to the limited spacing between these roadways. A RIRO configuration at Site Drive 1 can be accommodated with a concrete monolithic island within the throat of the driveway.

Access at the Young Street site driveway (Site Drive 2) is expected to align with Scarboro Street to create a 4-leg, full-movement unsignalized intersection. The NCDOT *Policy on Street and Driveway Access to North Carolina Highways* (Driveway Manual) advises that side streets should be aligned directly across from each other in lieu of two (2) offset 3-leg intersections in close proximity to one another. Young Street is a 3-lane roadway with a two-way left-turn lane (TWLTL) to facilitate left-turning vehicles from Young Street to the side streets.

Cross-access is expected to be provided via an extension of Nortwick Road (Site Drive 3) through the Terrell Plantation subdivision. This extension of Nortwick Road provides connectivity to the Terrell Plantation subdivision which provides access to the unsignalized intersection of Young Street and Granite Falls Boulevard.

Site Trip Generation and Distribution

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*, 10th Edition. Table 1 provides a summary of the trip generation potential for the site.

Table 1: 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
Multifamily Housing (Low-Rise) (220)	60 Units	413	7	23	24	14

It is estimated that the proposed development will generate approximately 413 total site trips on the roadway network during a typical 24-hour weekday period. Of the daily traffic volume, it was anticipated that 30 trips (7 entering and 23 exiting) will occur during the weekday AM peak hour and 38 trips (24 entering and 14 exiting) will occur during the weekday PM peak hour.

Trip distribution percentages used in assigning site traffic for this development were estimated based on the approved scope and methodology from the Cobblestone Crossing TIA submitted in March of 2021 by RKA. It is estimated that the site trips will be regionally distributed as follows:

- 60% to/from the west via Main Street
- 5% to/from the east via Main Street
- 25% to/from the south via Young Street
- 10% to/from the north via Young Street

Refer to the attachments for illustrations of the site trip distribution and site trip assignment.

2023 Build Traffic Conditions

To estimate the 2023 build traffic conditions with the site fully built-out, turning movement counts, COVID-19 adjustment factors, and future traffic projections from the previously submitted Cobblestone Crossing TIA were utilized for analysis purposes. Refer to the attachments for the 2023 build weekday AM and PM peak hour traffic volumes at the study intersections with the site fully developed.

Based on coordination with Sanford Creek Elementary School (SCES) staff, the vast majority of carpool traffic enters and exits the campus utilizing the Granite Falls Boulevard site driveway. It should be noted that Scarboro Street provides an alternative route for carpool traffic traveling to/from SCES; however, through coordination with SCES staff, Scarboro Street is rarely utilized for carpool traffic. Based on coordination with NCDOT, Scarboro Street may be utilized as a direct connection between the proposed Broughton Townhomes development and SCES in the future once the subject development is completed.

Capacity Analysis

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 10.3), was used to complete the analyses for most of 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. Refer to Table 2 for HCM levels of service and related average control delay per vehicle for both signalized and unsignalized intersections.

Table 2: 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

Main Street and Site Drive 1

The proposed unsignalized intersection of Main Street and Site Drive 1 was analyzed under 2023 build traffic conditions with the lane configurations and traffic control shown in Table 3. Refer to Table 3 for a summary of the analysis results. Copies of the Synchro analysis output reports are provided in the attachments.

Table 3: Analysis Summary of Main Street and Site Drive 1

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)
2023 Build Conditions	EB WB **SB**	1 TH 1 TH-**RT** **1 RT**	-- -- B[1]	N/A	-- -- A[1]	N/A

1. Level of service and delay for minor-street approach.
Improvements and/or revised lane configurations by developer are shown in **BOLD** type.

Capacity analysis indicates that the southbound minor street approach is expected to operate at LOS B during the weekday AM peak hour and LOS A during the weekday PM peak hours under 2023 build conditions.

Based on coordination with NCDOT, access at the Main Street site driveway (Site Drive 1) will likely be restricted to a RIRO configuration due to its proximity with Williams Street. A right-turn lane was considered based on

the NCDOT Driveway Manual and the anticipated turning movement volumes into the proposed development from Main Street are not expected to warrant an exclusive westbound (Main Street) right-turn lane.

Young Street and Site Drive 2 / Scarboro Street

The proposed unsignalized intersection of Young Street and Site Drive 2 / Scarboro Street was analyzed under 2023 build traffic conditions with the lane configurations and traffic control shown in Table 4. Refer to Table 4 for a summary of the analysis results. Copies of the Synchro analysis output reports are provided in the attachments.

Table 4: Analysis Summary of Young Street and Site Drive 2 / Scarboro 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)
2023 Build Conditions	EB	1 LT-**TH**-RT	E[2]	N/A	E[2]	N/A
	WB	**1 LT-TH-RT**	E[2]		E[2]	
	NB	1 LT, 1 TH-**RT**	B[1]		A[1]	
	SB	**1 LT**, 1 TH-RT	A[1]		A[1]	

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

Improvements and/or revised lane configurations by developer are shown in **BOLD** type.

Capacity analysis indicates that all major street left-turn movements are expected to operate at LOS B or better, while the minor street approaches are expected to operate at LOS E during the weekday AM and PM peak hours under 2023 build conditions. These levels of service are not uncommon for minor street approaches with heavy mainline traffic volumes.

Due to the poor level of service expected for the minor street approaches, a traffic signal was considered at this intersection under 2023 build traffic conditions to achieve acceptable levels-of-service. The peak hour signal warrant from the *Manual on Uniform Traffic Control Devices* (MUTCD) was considered; however, this intersection does not meet the peak hour warrants for either peak hour under 2023 build traffic conditions. It is not expected that this intersection would satisfy the MUTCD 8-hour and 4-hour warrants, which NCDOT favors for installation of a traffic signal. These longer period warrants are not typically met for residential and school areas due to the distinct peak traffic periods for these types of development.

Turn lanes were considered based on the NCDOT Driveway Manual and the anticipated turning movement volumes into the proposed development from Young Street are not expected to warrant exclusive turn lanes. It should be noted that a TWLTL currently exists along Young Street to facilitate left-turning vehicles into the site. Additionally, based on coordination with NCDOT, a northbound (Young Street) right-turn deceleration lane will likely be required to separate right-turning traffic from vehicles continuing through the intersection.

Conclusions

This letter provides the results of the site analysis for the proposed Broughton Townhomes development, located in the northeast quadrant at the intersection of Main Street and Young Street in Rolesville, North Carolina. The proposed development, anticipated to be completed in 2023, is expected to consist of 57 townhomes; however, the analysis contained within this letter considers 60 townhomes at full build-out to provide for a conservative analysis. It is estimated that the proposed development will generate 30 trips (7 entering and 23 exiting) will occur during the weekday AM peak hour and 38 trips (24 entering and 14 exiting) will occur during the weekday PM peak hour.

Capacity analysis results indicate that the proposed development is not anticipated to cause a significant impact on the roadway network due to the added traffic and the site driveways are expected to operate with delays that are not uncommon for stop-controlled minor street approaches with heavy mainline traffic volumes. Additionally, the proposed site driveways are not expected to impact the plans and improvements associated with the Main Street LAPP funded project (STIP U-6241). Based on coordination with NCDOT, the following items will likely be required prior to issuance of a driveway permit for the subject development:

Main Street and Site Drive 1

- Construct the southbound approach (Site Drive 1) and provide right-in/right-out access configurations for the driveway. Left-turn movements to/from Site Drive 1 will be restricted through implementation of on-site concrete monolithic islands, signing, and pavement markings.
- Provide stop-control for the southbound approach.

Young Street and Site Drive 2 / Scarboro Street

- Construct the westbound approach (Site Drive 2) aligning with Scarboro Street.
- Provide stop-control for the westbound approach.
- Provide a northbound (Young Street) right-turn deceleration lane with a minimum length of 50 feet to separate right-turning traffic from vehicles continuing through the intersection.

If you have any questions or concerns, please do not hesitate to contact me.

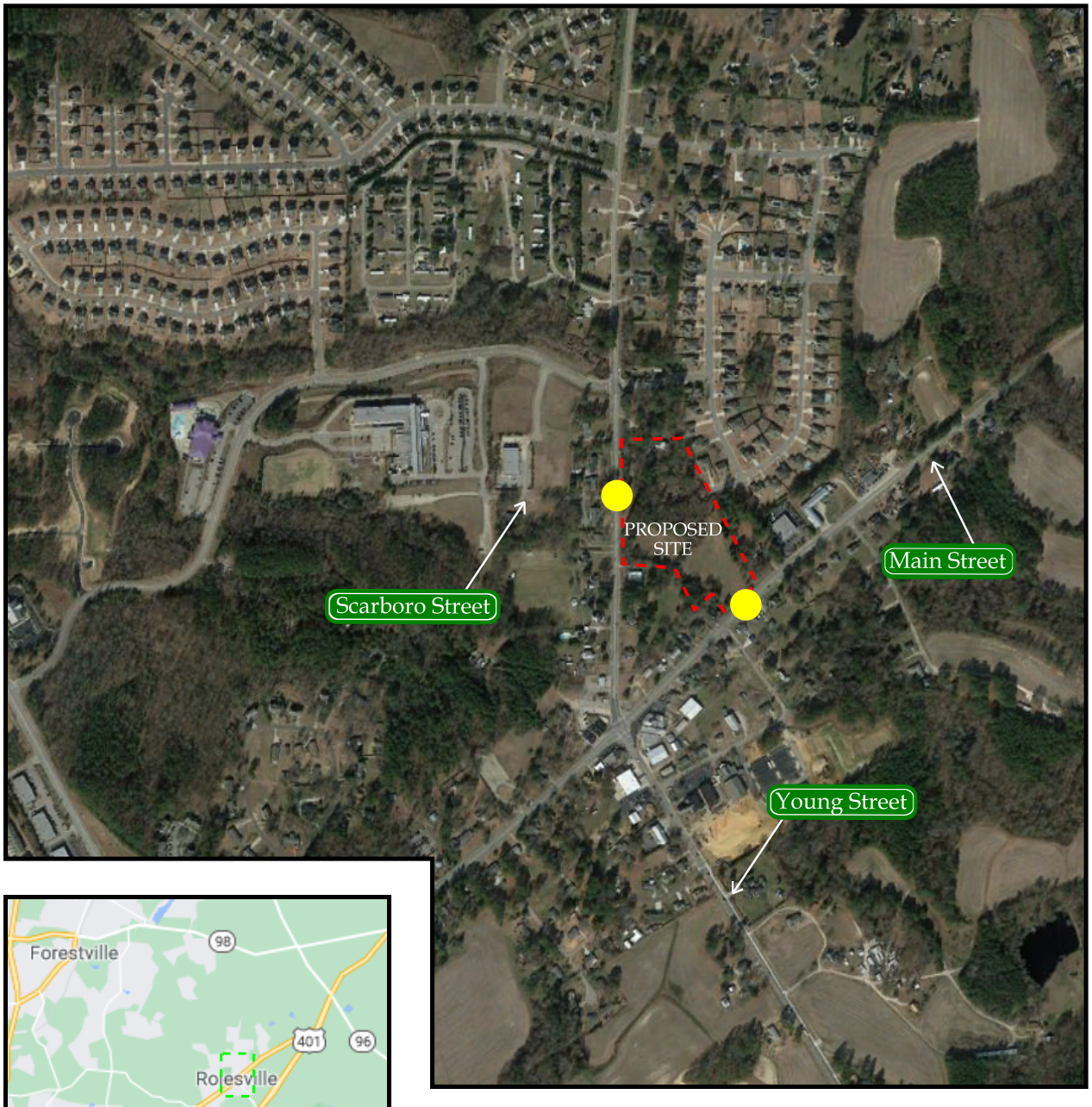
Sincerely,

9/1/2021

Michael Karpinski, P.E.
Traffic Engineering Project Manager
Ramey Kemp & Associates, Inc.

NC Corporate License # C-0910

Attachments: Site Location Map
Preliminary Site Plan
Site Trip Distribution Figure
Site Trip Assignment Figure
2023 Build Peak Hour Traffic Volumes Figure
Synchro Reports – 2023 Build Traffic Conditions



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LEGEND

- Proposed Site Location
- Study Intersection
- Study Area

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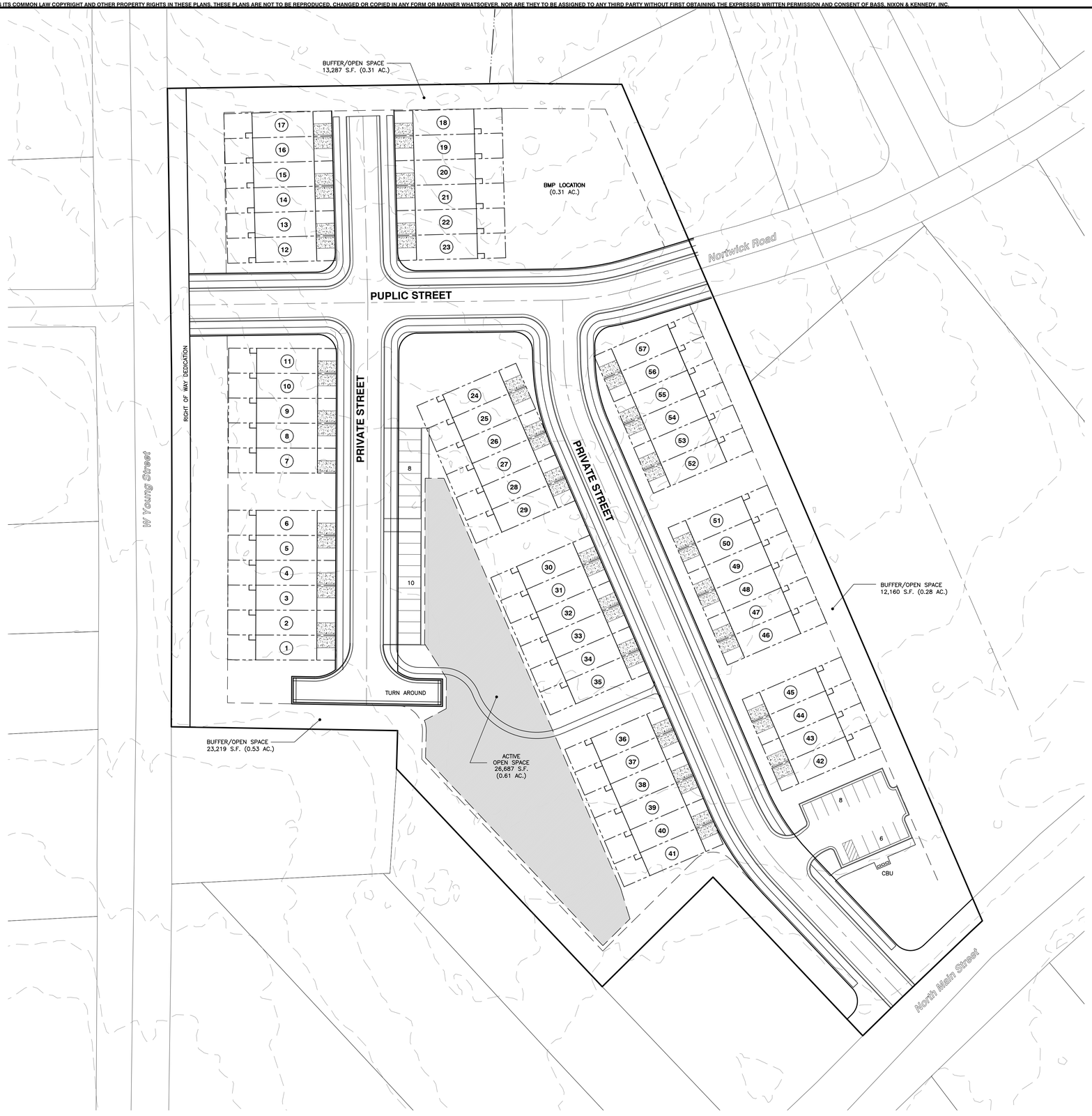
Broughton Townhomes
Rolesville, NC

Site Location Map

Scale: Not to Scale | Figure 1



SITE DATA:

PROJECT AREA:	7.21 ACRES
EXISTING ZONING:	R-1 DETATCHED
PROPOSED ZONING:	R-3 TOWNHOMES
OPEN SPACE REQUIRED:	7.21 AC x 15% = 1.08 ACRES
ACTIVE OPEN SPACE REQUIRED:	1.08 x 25% = 0.38 ACRES
ACTIVE OPEN SPACE PROVIDED:	0.61 ACRES
LANDSCAPE BUFFERS:	1.12 ACRES
BMP AREA:	0.31 ACRES
TOTAL OPEN SPACE PROVIDED:	2.04 ACRES (28.3%)
REQUIRED PARKING:	
2 SPACES PER UNIT PLUS 1/2 SPACE/BEDROOM	114
OVER 2 PLUS 1/4 UNITS FOR GUEST PARKING	
CBU PARKING 3 REQUIRED FOR 57 UNITS	3 (INCLUDES 1 H/C SPACE)
GUEST PARKING:	34
TOTAL PARKING REQUIRED:	151 SPACES
TOTAL PARKING PROVIDED:	152 SPACES

BNK EX TREE TYPE ABBREVIATIONS

APPLE	–	AP
ASH	–	AS
BEECH	–	BE
BLACK WALNUT	–	BW
BRADFORD PEAR	–	BP
BURFORD HOLLY	–	BH
CATALPA	–	CP
CEDAR	–	CR
COTTONWOOD	–	CW
CRABAPPLE	–	CA
CREPE MYRTLE	–	CM
CYPRESS	–	CY
DOGWOOD	–	DW
ELM	–	EL
GUM	–	GM
HACKBERRY	–	HB
HICKORY	–	HK
HOLLY	–	HY
IRONWOOD	–	IW
LOCUST	–	LC
MAGNOLIA	–	MG
MAPLE	–	MP
MIMOSA	–	MM
PEAR	–	PR
PECAN	–	PC
PERSIMMON	–	PS
REDTIP	–	RT
PINE	–	PN
POPLAR	–	PP
REDBUD	–	RB
RED OAK	–	RO
SOURWOOD	–	SW
SWEETBAY	–	SB
SYCAMORE	–	SY
WAX MYRTLE	–	WM
WHITE OAK	–	WO
WILD CHERRY	–	WC
WILLOW	–	WW
ZELKOVA	–	ZA

SCALE IN FEET
0 25 50 100 150 200

BNK

BASS, NIXON & KENNEDY, INC.
CONSULTING ENGINEERS
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607
TELEPHONE: (919)851-4422 FAX: (919)851-8968
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

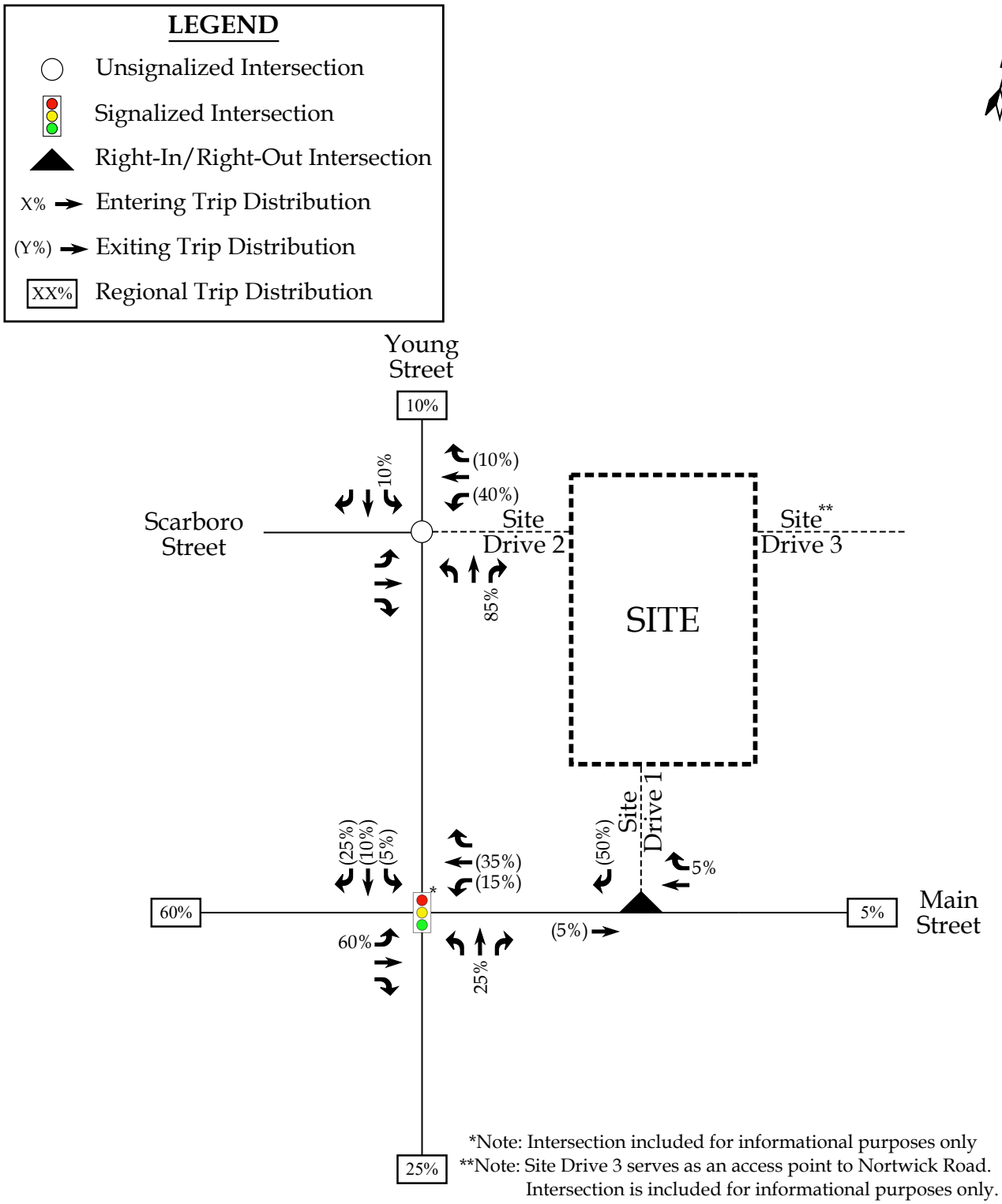
JOB NO. 03-19203 | DATE 10-02-20 | DRAWN BY GPW | CHK BY: MDB | SCALE: 1" = 50'

CONCEPTUAL SITE PLAN

BROUGHTON TOWNHOMES
NORTH MAIN STREET
TOWN OF ROLESVILLE, WAKE COUNTY, NORTH CAROLINA

SHEET C1.0

XXXX OF XXXXX PROJECT NO. XX-XX-XX



*Note: Intersection included for informational purposes only
**Note: Site Drive 3 serves as an access point to Nortwick Road. Intersection is included for informational purposes only.

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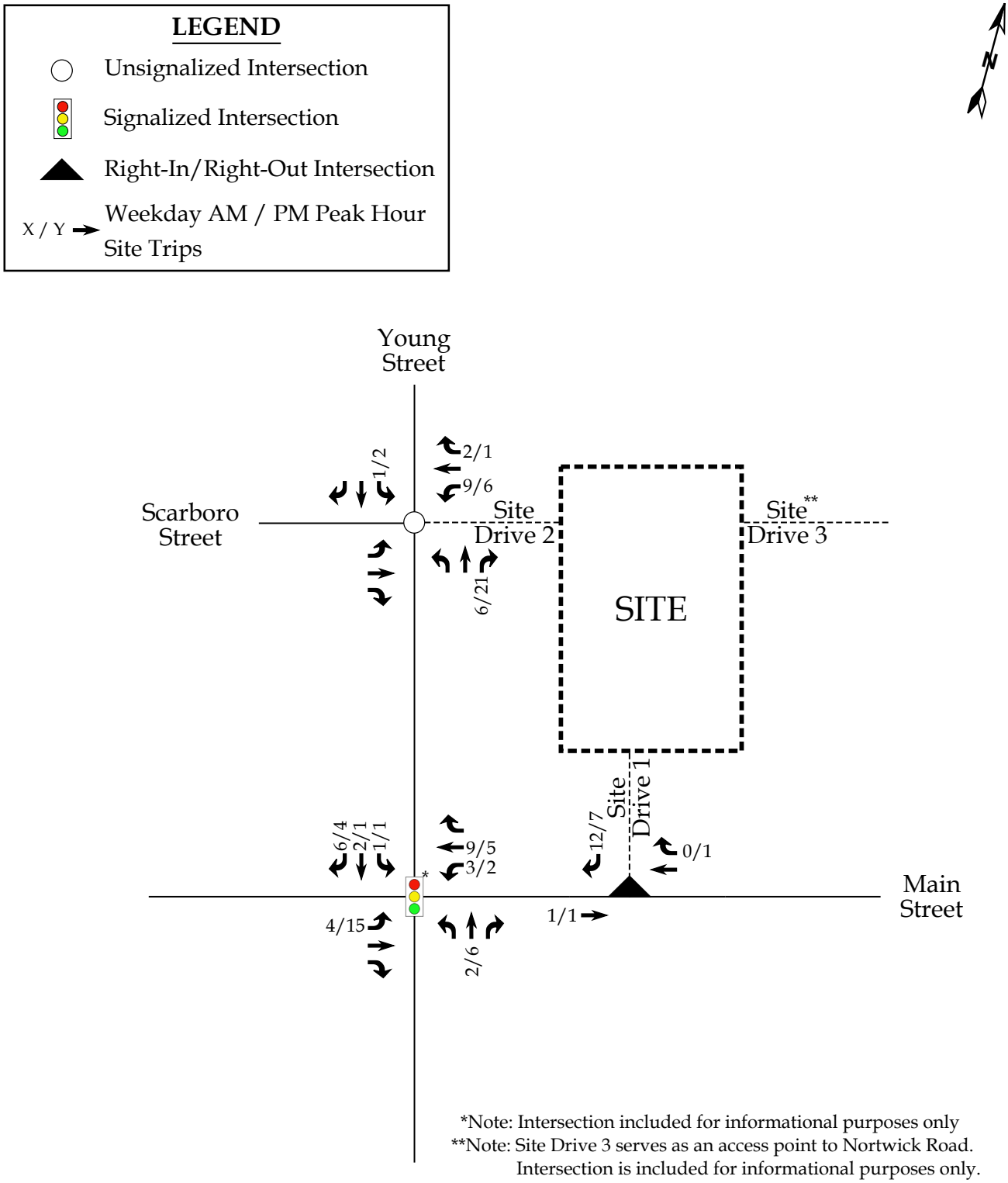
Rolesville, NC

Site Trip Distribution

Scale: Not to Scale | Figure 3



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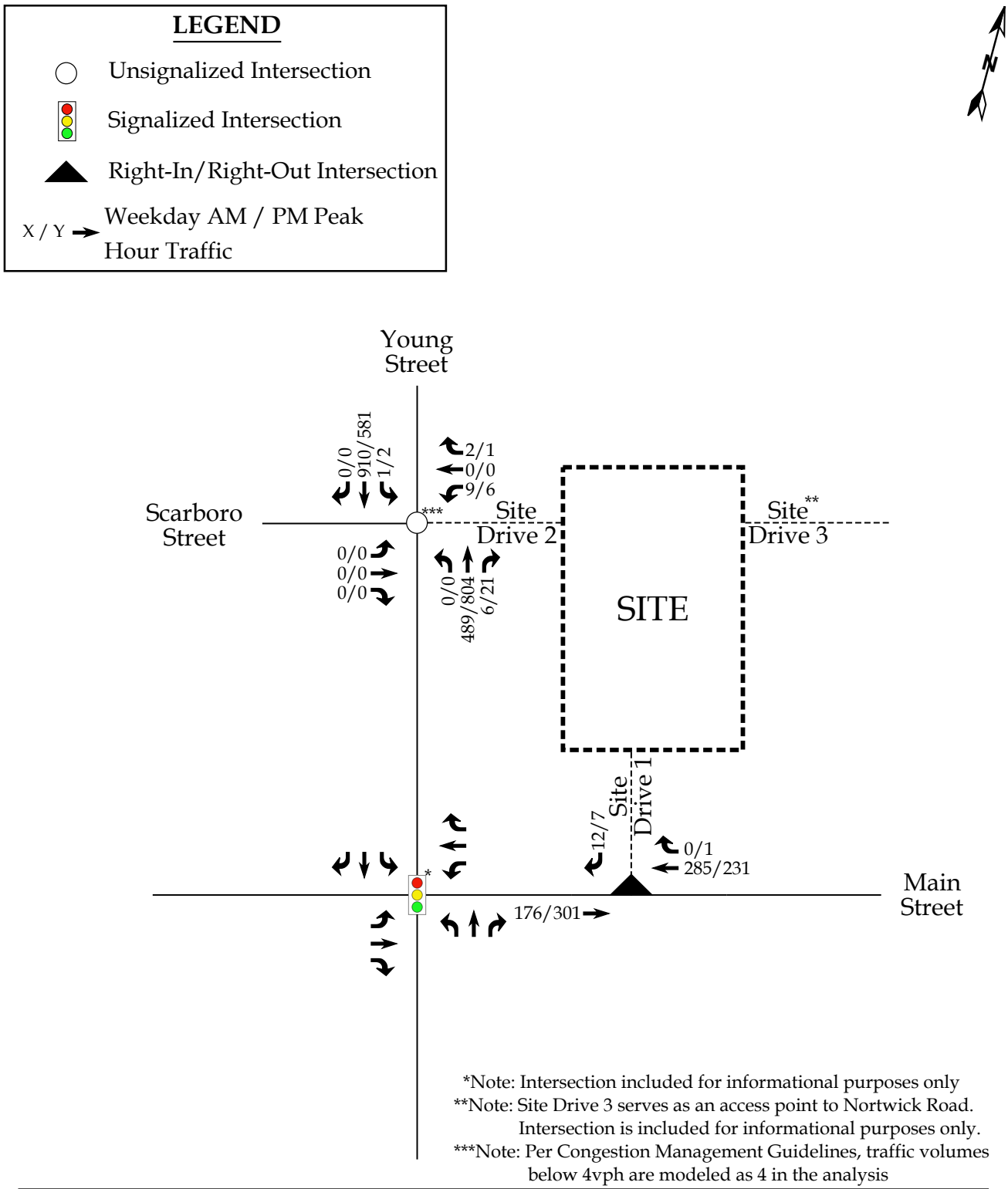

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Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	176	285	4	0	12
Future Vol, veh/h	0	176	285	4	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	196	317	4	0	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	319
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	722
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	722
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	722
HCM Lane V/C Ratio	-	-	-	0.018
HCM Control Delay (s)	-	-	-	10.1
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↱			↗
Traffic Vol, veh/h	0	301	231	4	0	7
Future Vol, veh/h	0	301	231	4	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	334	257	4	0	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	259
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	780
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	780
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	780
HCM Lane V/C Ratio	-	-	-	0.01
HCM Control Delay (s)	-	-	-	9.7
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	4	4	9	4	4	4	489	6	4	910	4
Future Vol, veh/h	4	4	4	9	4	4	4	489	6	4	910	4
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	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	4	4	10	4	4	4	543	7	4	1011	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1580	1579	1013	1580	1578	547	1015	0	0	550	0	0
Stage 1	1021	1021	-	555	555	-	-	-	-	-	-	-
Stage 2	559	558	-	1025	1023	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	88	109	290	88	109	537	683	-	-	1020	-	-
Stage 1	285	314	-	516	513	-	-	-	-	-	-	-
Stage 2	513	512	-	284	313	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	84	108	290	83	108	537	683	-	-	1020	-	-
Mov Cap-2 Maneuver	84	108	-	83	108	-	-	-	-	-	-	-
Stage 1	283	313	-	513	510	-	-	-	-	-	-	-
Stage 2	501	509	-	275	312	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	38.1	44	0.1	0
HCM LOS	E	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	683	-	-	122	111	1020	-	-
HCM Lane V/C Ratio	0.007	-	-	0.109	0.17	0.004	-	-
HCM Control Delay (s)	10.3	-	-	38.1	44	8.5	-	-
HCM Lane LOS	B	-	-	E	E	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.6	0	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	4	4	6	4	4	4	804	21	4	581	4
Future Vol, veh/h	4	4	4	6	4	4	4	804	21	4	581	4
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	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	4	4	7	4	4	4	893	23	4	646	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1573	1580	648	1573	1571	905	650	0	0	916	0	0
Stage 1	656	656	-	913	913	-	-	-	-	-	-	-
Stage 2	917	924	-	660	658	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	89	109	470	89	110	335	936	-	-	745	-	-
Stage 1	454	462	-	328	352	-	-	-	-	-	-	-
Stage 2	326	348	-	452	461	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	84	108	470	85	109	335	936	-	-	745	-	-
Mov Cap-2 Maneuver	84	108	-	85	109	-	-	-	-	-	-	-
Stage 1	452	460	-	327	351	-	-	-	-	-	-	-
Stage 2	316	347	-	441	459	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	36.1	40.4	0	0.1
HCM LOS	E	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	936	-	-	129	117	745	-	-
HCM Lane V/C Ratio	0.005	-	-	0.103	0.133	0.006	-	-
HCM Control Delay (s)	8.9	-	-	36.1	40.4	9.9	-	-
HCM Lane LOS	A	-	-	E	E	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.4	0	-	-