Traffic Impact Analysis

Riverside Leadership Academy
New Bern, NC

Prepared for:

Hubrich Contracting, Inc.

Kimley»Horn

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Riverside Leadership Academy
New Bern, North Carolina

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New Bern, North Carolina

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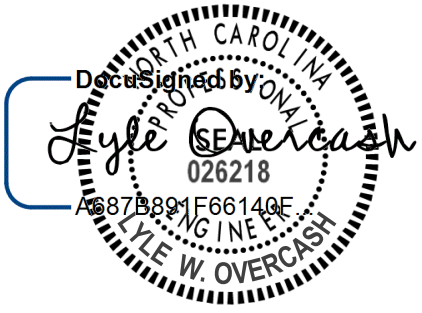

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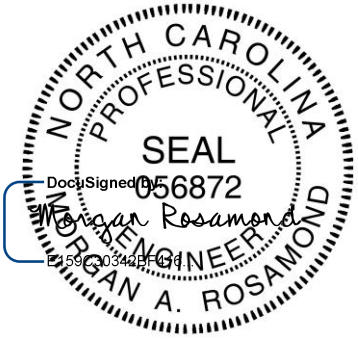

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Executive Summary

Kimley-Horn and Associates, Inc. has performed a Traffic Impact Analysis for the proposed Riverside Leadership Academy charter school, to be located west of Old Airport Road and north of Connor Grant Road in New Bern, North Carolina. Riverside Leadership Academy is proposed to consist of two buildings: one lower school for grades K-8 and one upper school for grades 9-12. The school is expected to open in the fall of 2024 with 520 students enrolled in the lower school and 260 students enrolled in the upper school.

This report presents trip generation, distribution, traffic and queueing analyses, and recommendations for transportation improvements required to meet anticipated traffic demands in conjunction with the development. The following traffic conditions were studied:

- Existing Traffic (2023)
- Projected Background Traffic (2024)
- Projected Build-out Traffic (2024)

Site access is proposed via one full movement connection to the existing intersection of Old Airport Road at Hidden Pond Drive. This site driveway is expected to be used for entry and exit by parents, staff, students, and buses.

Analyses were performed for the AM peak hour (7-9 AM) and school PM peak hour (2-4 PM) at the following intersections:

- Old Airport Road at W Grantham Road
- Old Airport Road at Hidden Pond Drive/Site Driveway
- Old Airport Road at Conner Grant Road
- Airport Road at Old Airport Road
- Old Airport Road/Taberna Country Club Driveway at Taberna Way

The Municipal and School Transportation Assistance (MSTA) Urban Charter School Traffic Calculator was used to determine the trip generation potential of the proposed Riverside Leadership Academy. The MSTA Urban Charter School Traffic Calculator was used to generate traffic for this school. As shown in Table ES-1, the lower school has the potential to generate approximately 651 AM peak hour trips and 477 school PM peak hour trips. The upper school has the potential to generate approximately 309 AM peak hour trips and 276 school PM peak hour trips.

Table ES-1
MSTA Urban Charter School Traffic Calculator (Vehicles)

Land Use	Intensity		AM Peak Hour		School PM Peak Hour	
			In	Out	In	Out
Grades K-8 – Lower School	520	students	360	291	204	273
Grades 9-12 – Upper School	260	students	202	107	83	193

As Riverside Leadership Academy plans to use one driveway and one queue zone, the lower and upper schools will have to be staggered by 45 minutes. The school that generated the more conservative trip generation, the lower school, was analyzed in this study.

For the given student capacity, MSTA calculations state that the lower school should provide enough storage to accommodate an average queue length of 2,219 feet and a high demand queue length of 2,885 feet and the upper school should provide enough storage to accommodate an average queue length of 936 feet and a high demand queue length of 1,218 feet. As currently envisioned, the site layout provides approximately 3,000 feet of queue for the lower school and 2,300 feet of queue for the upper school.

Capacity analyses were performed using Synchro Version 11. Table ES-2 summarizes the operation of the study intersections for the AM and school PM peak hour traffic conditions.

Table ES-2 - Level of Service Summary									
Intersection and Approach/Movement	Traffic Control	Existing (2023) Traffic		Background (2024) Traffic		Build-out (2024) Traffic		Build-out (2024) Traffic - Improved	
		AM	PM	AM	PM	AM	PM	AM	PM
Old Airport Road at W Grantham Road	Unsignalized	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
Westbound		B (10.7)	B (10.5)	B (10.2)	B (10.4)	F (92.2)	C (21.5)	E (49.0)	C (17.3)
Southbound Left		A (7.9)	A (7.5)	A (7.7)	A (7.5)	A (9.0)	A (8.4)	A (9.0)	A (8.4)
Old Airport Road at Hidden Pond Drive/Site Driveway	Unsignalized	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
Eastbound		N/A		N/A		F (561.6)	F (136.6)	F (218.5)	F (58.6)
Westbound		B (10.2)	A (9.9)	A (9.8)	A (9.8)	D (25.6)	C (17.6)	C (15.9)	B (14.0)
Northbound Left		N/A		N/A		A (9.6)	A (8.6)	A (7.7)	A (7.8)
Southbound Left		A (7.8)	A (7.7)	A (7.7)	A (7.7)	A (7.8)	A (7.7)	A (7.8)	A (7.7)
Old Airport Road at Conner Grant Road	Unsignalized	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	N/A	
Eastbound		B (10.7)	B (10.3)	B (10.1)	B (10.1)	B (14.8)	B (12.5)		
Northbound Left		A (7.5)	A (7.6)	A (7.4)	A (7.6)	A (7.9)	A (8.0)		
Airport Road at Old Airport Road	Unsignalized	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	N/A	
Northbound		B (10.8)	A (9.3)	B (10.2)	A (9.3)	B (13.8)	B (10.2)		
Westbound Left		A (7.6)	A (7.6)	A (7.5)	A (7.6)	A (8.0)	A (7.8)		
Taberna Way at Old Airport Road/Taberna Country Club Driveway	Unsignalized	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	N/A	
Northbound		B (10.8)	A (9.7)	B (10.3)	A (9.5)	B (12.7)	B (10.3)		
Southbound		B (11.3)	B (10.5)	B (10.5)	B (10.1)	C (19.8)	B (14.7)		
Eastbound Left		A (7.6)	A (7.5)	A (7.6)	A (7.5)	A (8.2)	A (7.8)		
Westbound Left		A (7.3)	A (7.3)	A (7.3)	A (7.3)	A (7.3)	A (7.3)		

Recommended Improvements:

The following roadway laneage is recommended to accommodate the projected traffic by the proposed Riverside Leadership Academy charter school:

Old Airport Road at W Grantham Road

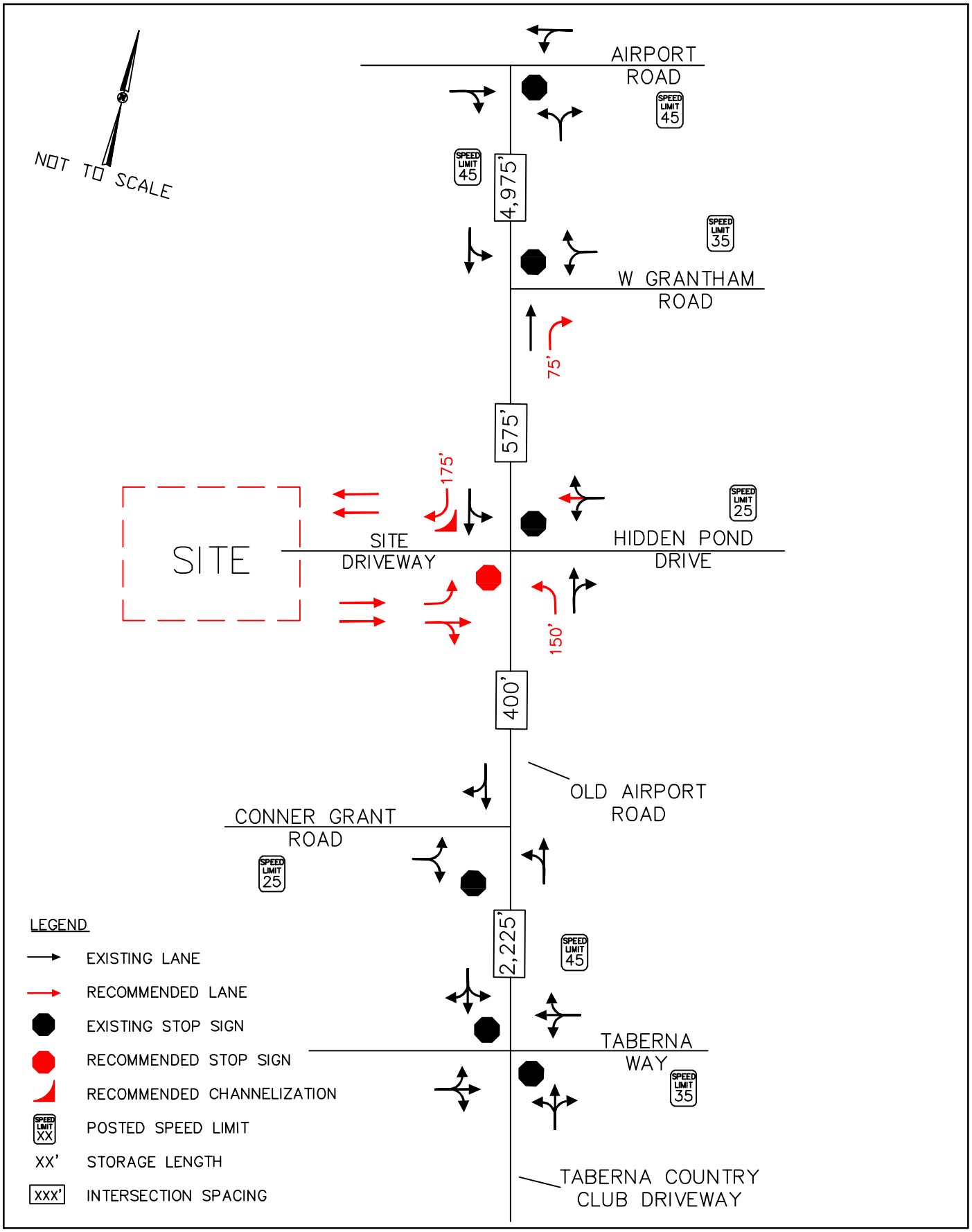
- Construct a northbound right-turn lane with approximately 75 feet of storage and appropriate deceleration.

Old Airport Road at Hidden Pond Drive/Site Driveway

- Construct a full movement site driveway for the proposed school west of Old Airport Road with two ingress lanes and two egress lanes, to be striped as a left-turn lane and a shared through/right-turn lane.
- Provide a northbound left-turn lane with approximately 150 feet of storage and appropriate deceleration.
- Provide a channelized southbound right-turn lane with approximately 175 feet of storage and appropriate deceleration.

The analyses indicate that with the recommended improvements in place Old Airport Road at W Grantham Road is expected to operate with short to moderate delays at project build-out. It should be noted that with the improvements described above, Old Airport Road at Hidden Pond Drive/Site Driveway is expected to operate with long delays in the AM and school PM peak hours. However, SimTraffic reported a maximum queue of 178 feet in the AM peak hour and 270 feet in the school PM peak hour along the eastbound Site Driveway approach at Old Airport Road. Based on these SimTraffic results, the queue is not expected to impact the school's loading zones and is to be contained on-site; therefore, no additional improvements are recommended.

The recommended roadway laneage for the projected (2024) build-out traffic condition is shown on **Figure ES-1**.



Kimley»Horn	RIVERSIDE LEADERSHIP ACADEMY NEW BERN, NC TRAFFIC IMPACT ANALYSIS	RECOMMENDED ROADWAY LANEAGE	FIGURE ES-1

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Kimley-Horn and Associates, Inc. has performed a Traffic Impact Analysis for the proposed Riverside Leadership Academy charter school, to be located west of Old Airport Road and north of Connor Grant Road in New Bern, North Carolina. Riverside Leadership Academy is proposed to consist of two buildings: one lower school for grades K-8 and one upper school for grades 9-12. The school is expected to open in the fall of 2024 with 520 students enrolled in the lower school and 260 students enrolled in the upper school.

This report presents trip generation, distribution, traffic and queueing analyses, and recommendations for transportation improvements required to meet anticipated traffic demands in conjunction with the development. The following traffic conditions were studied:

- Existing Traffic (2023)
- Projected Background Traffic (2024)
- Projected Build-out Traffic (2024)

Site access is proposed via one full movement connection to the existing intersection of Old Airport Road at Hidden Pond Drive. This site driveway is expected to be used for entry and exit by parents, staff, students, and buses.

Analyses were performed for the AM peak hour (7-9 AM) and school PM peak hour (2-4 PM). For the purposes of this study, K-8 students were analyzed as the school is proposes to operate with two bell schedules with a stagger of 45 minutes between the lower and upper schools.

NCDOT and the City of New Bern provided background data and were consulted regarding the elements to be covered in this analysis. The approved Memorandum of Understanding is included **Appendix A** of this report.

2.0 Inventory

2.1 Study Area

The study area for this development includes the following intersections:

- Old Airport Road at W Grantham Road
- Old Airport Road at Hidden Pond Drive/Site Driveway
- Old Airport Road at Conner Grant Road
- Airport Road at Old Airport Road
- Taberna Way at Old Airport Road/Taberna Country Club Driveway

Figure 2.1 shows the site location and study area.

2.2 Existing Conditions

The proposed New Bern Charter School development is located west of Old Airport Road and north of Conner Grant Road in New Bern, North Carolina. The site is currently vacant. Roadways in the study area include Old Airport Road, W Grantham Road, Hidden Pond Drive, and Conner Grant Road. The existing roadway laneage is shown in **Figure 2.2**.

Old Airport Road is a 2-lane undivided roadway and has a posted speed limit of 45 miles per hour (mph). The NCDOT functional classification for Old Airport Road is local. The City of New Bern functional classification for Old Airport Road is collector. The reported 2021 Old Airport Road Average Annual Daily Traffic (AADT) volume at Conner Grant Road is 2,500 vehicles per day (vpd).

W Grantham Road is a 2-lane undivided road with a posted speed limit of 35 mph. The NCDOT and City of New Bern functional classification of W Grantham Road is local. The estimated 2023 W Grantham Road ADT volume east of Old Airport Road is approximately 1,000 vpd.

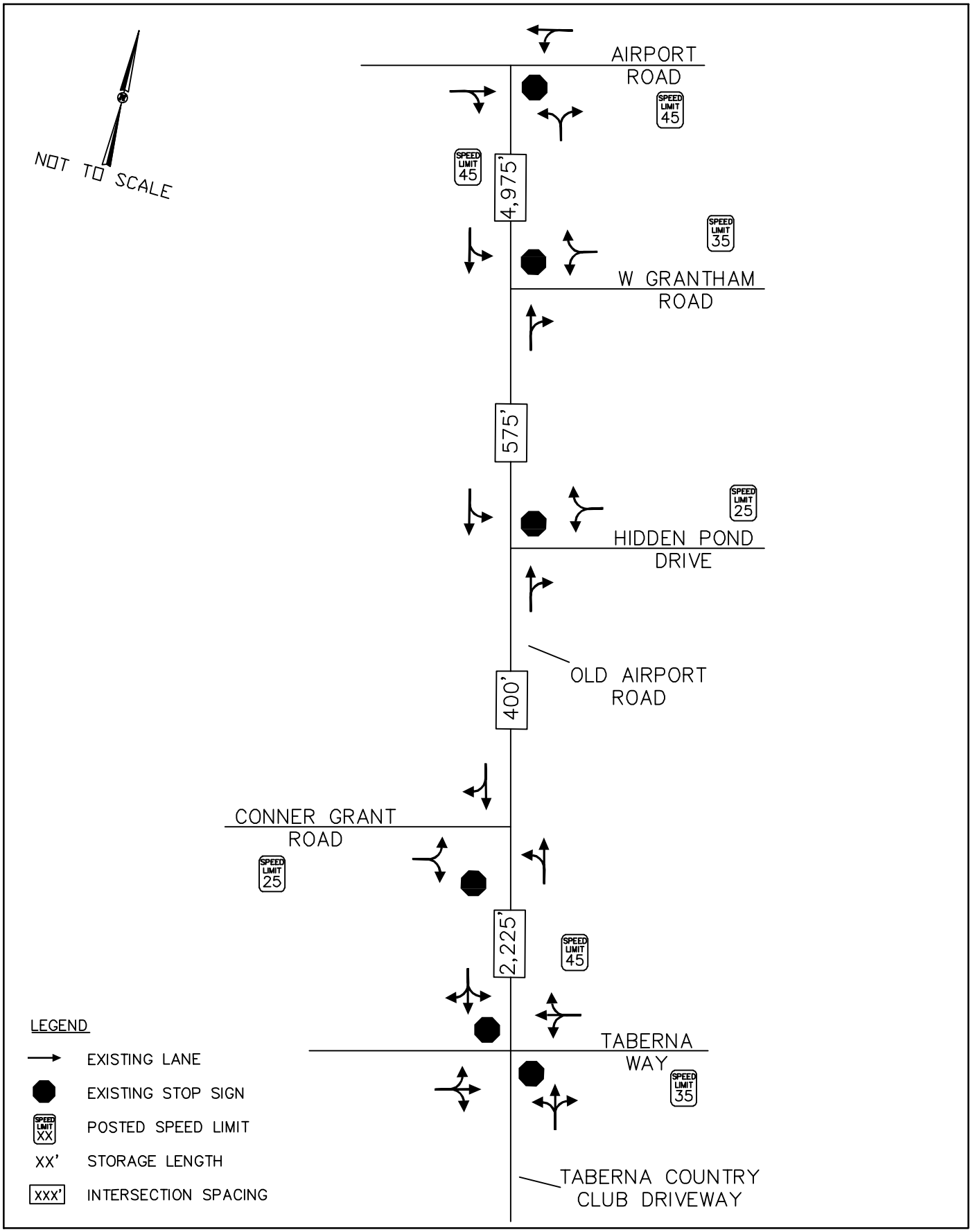
Hidden Pond Drive is a 2-lane undivided road with a posted speed limit of 25 mph. The NCDOT functional classification of Hidden Pond Drive is local. The City of New Bern functional classification for Hidden Pond Drive is minor. The estimated 2023 Hidden Pond Drive ADT volume north of east of Old Airport Road is approximately 250 vpd.

Conner Grant Road is a 2-lane undivided road with a posted speed limit of 25 mph. The NCDOT and City of New Bern functional classification of Conner Grand Road is local. The estimated 2023 Conner Grant Road ADT volume west of Old Airport Road is approximately 800 vpd.

Airport Road is a 2-lane undivided road with a posted speed limit of 45 mph. The NCDOT and City of New Bern functional classification of Airport Road is local. The estimated 2023 Airport Road ADT volume east of Old Airport Road is approximately 3,400 vpd.

Taberna Way is a 2-lane undivided road with a posted speed limit of 35 mph. The NCDOT functional classification of Taberna Way is local. The City of New Bern functional classification for Taberna Way is collector. The estimated 2023 Taberna Way ADT volume east of Old Airport Road is 1,900 vpd.

Kimley»Horn	RIVERSIDE LEADERSHIP ACADEMY NEW BERN, NC TRAFFIC IMPACT ANALYSIS	SITE LOCATION	FIGURE 2.1



Kimley»Horn	RIVERSIDE LEADERSHIP ACADEMY NEW BERN, NC TRAFFIC IMPACT ANALYSIS	EXISTING ROADWAY LANEAGE	FIGURE 2.2

3.0 Traffic Generation

The proposed Riverside Leadership Academy plans to enroll 520 students in grades K-8 in the lower school and 260 students in grades 9-12. To calculate the trips generated by this proposed school, the MSTA Urban Charter School Traffic Calculator was used.

As shown in Table 3.0, the lower school has the potential to generate approximately 651 AM peak hour trips and 477 school PM peak hour trips. The upper school has the potential to generate approximately 309 AM peak hour trips and 276 school PM peak hour trips.

Table 3.0
MSTA Urban Charter School Traffic Calculator

Land Use	Intensity		AM Peak Hour		School PM Peak Hour	
			In	Out	In	Out
Grades K-8 – Lower School	520	students	360	291	204	273
Grades 9-12 – Upper School	260	students	202	107	83	193

The trip generation spreadsheets are included in **Appendix B**.

As Riverside Leadership Academy plans to use one driveway and one queue zone, the lower and upper schools will have to be staggered by 45 minutes. The school that generated the more conservative trip generation, the lower school, was analyzed in this study.

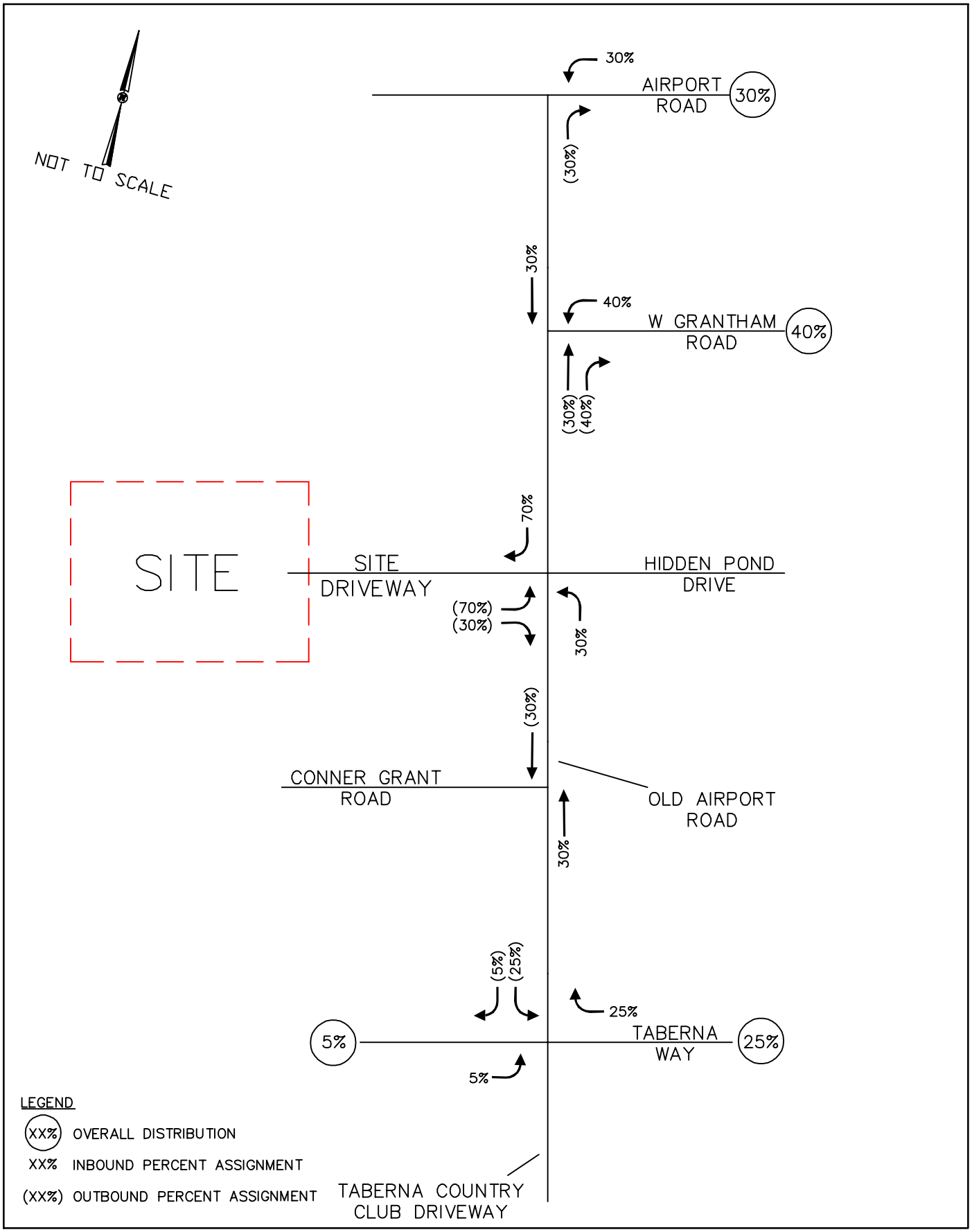
For the given student capacity, MSTA calculations state that the lower school should provide enough storage to accommodate an average queue length of 2,219 feet and a high demand queue length of 2,885 feet and the upper school should provide enough storage to accommodate an average queue length of 936 feet and a high demand queue length of 1,218 feet. As currently envisioned, the site layout provides approximately 3,000 feet of queue for the lower school and 2,300 feet of queue for the upper school.

4.0 Site Traffic Distribution

The proposed generated trips were assigned to the surrounding roadway network. The directional distribution and assignment are based on land uses in the area and a review of existing travel patterns as well as engineering judgment.

- 40% to/from the east via W Grantham Road
- 30% to/from the east via Airport Road
- 25% to/from the east via Taberna Way
- 5% to/from the west via Taberna Way

Figure 4.1 shows the site traffic distribution and percent assignment for the proposed Riverside Leadership Academy.



Kimley»Horn	RIVERSIDE LEADERSHIP ACADEMY NEW BERN, NC TRAFFIC IMPACT ANALYSIS	LOWER & UPPER SCHOOL SITE DISTRIBUTION AND PERCENT ASSIGNMENT	FIGURE 4.1

5.0 Projected Traffic Volumes

5.1 Existing Traffic

Turning movement counts at the study intersections were collected in May 2023 for the AM and school PM peak hours on a day when Craven County public schools were in session. The existing (2023) AM and school PM peak hour traffic volumes are shown on **Figure 5.1** and **Figure 5.2**, respectively, and the traffic count data is included in **Appendix C**.

5.2 Approved Development Traffic

Approved development traffic is generated by approved but not yet constructed projects in the vicinity of the proposed project. Based on coordination with the City of New Bern and NCDOT staff, no developments were identified for inclusion in this analysis as background traffic.

5.3 Historic Growth Traffic

Historic growth traffic is the increase in traffic due to usage increases and non-specific growth throughout the area. Based on the historic AADT information in the area and conversations with the NCDOT, an annual growth rate of 1% per year was then applied to the existing traffic up to the projected build-out year (2024).

The projected (2024) background AM and school PM peak hour traffic volumes are shown on **Figure 5.1** and **Figure 5.2**, respectively**.** Background growth calculations are detailed on intersection spreadsheets in the Appendix of this report.

5.4 Site Traffic

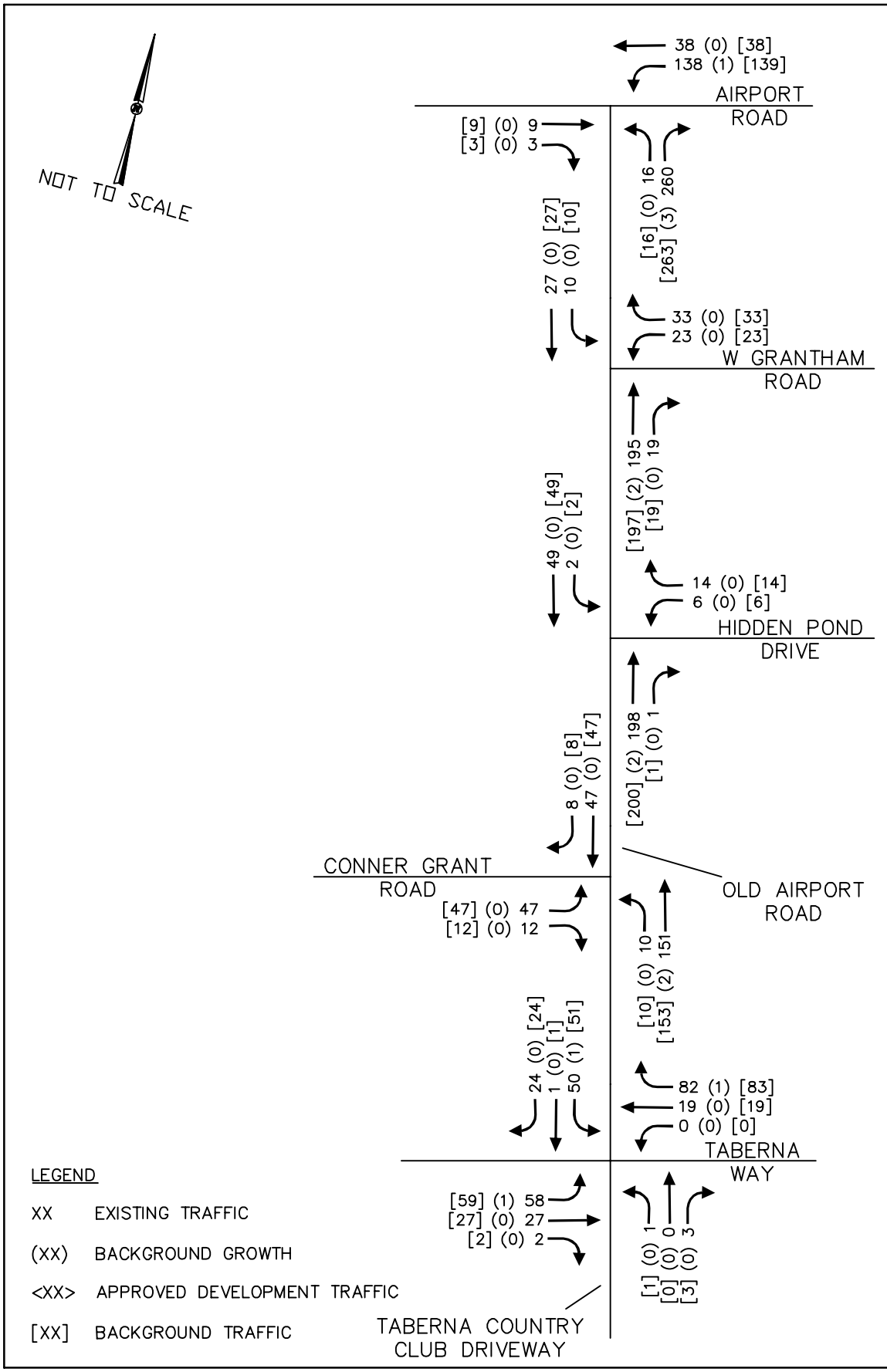
The proposed site traffic was generated and assigned to the adjacent roadway network according to the distribution discussed previously in Section 4.0.

The AM and school PM peak hour site traffic volumes for parents, staff, and students are shown on **Figure 5.3** and **Figure 5.4**, respectively.

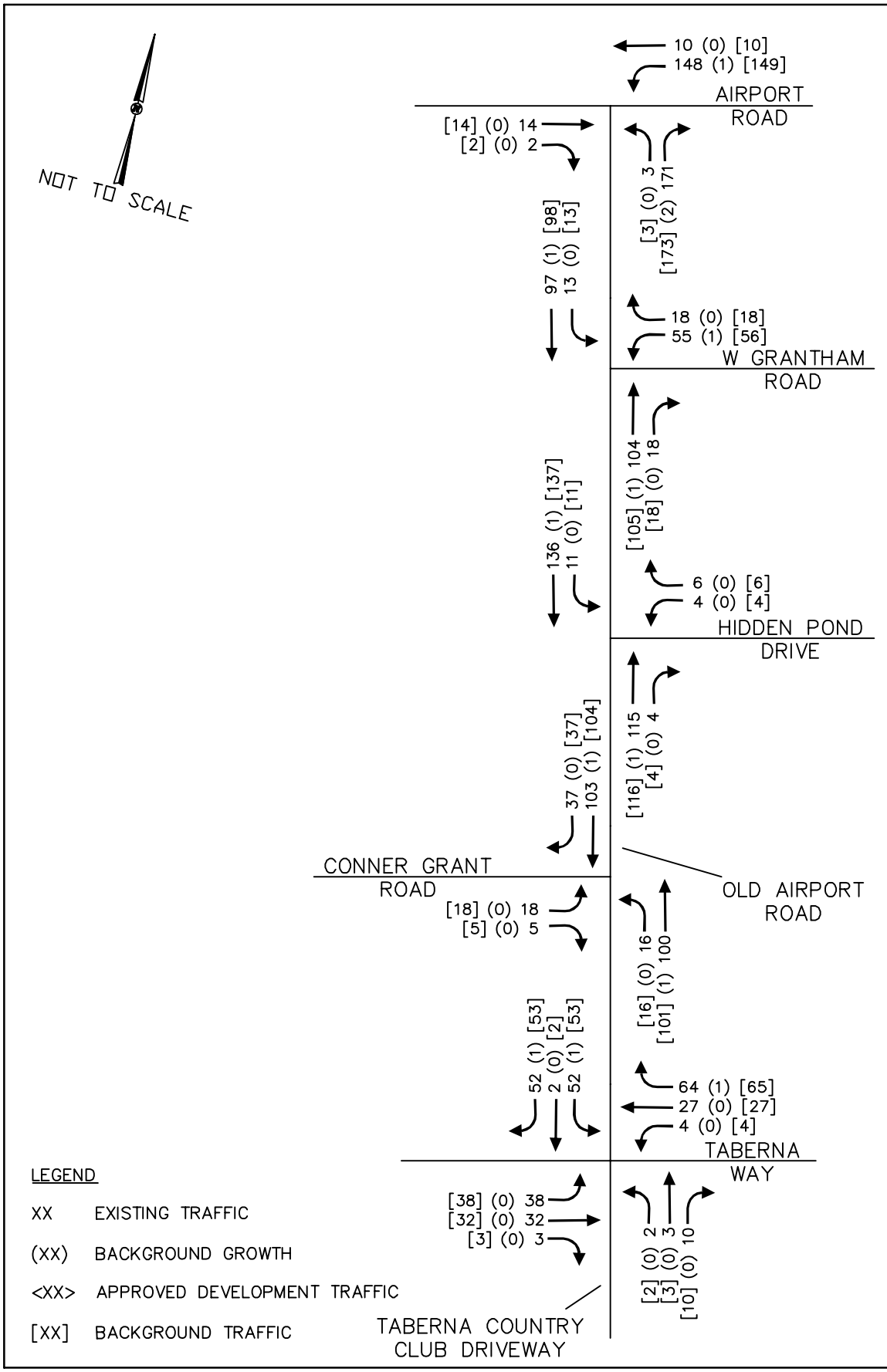
5.5 Build-Out Traffic

To obtain the projected build-out traffic volumes, the projected site traffic was added to the projected background traffic. Traffic volume calculations are detailed in intersection spreadsheets included in **Appendix D.**

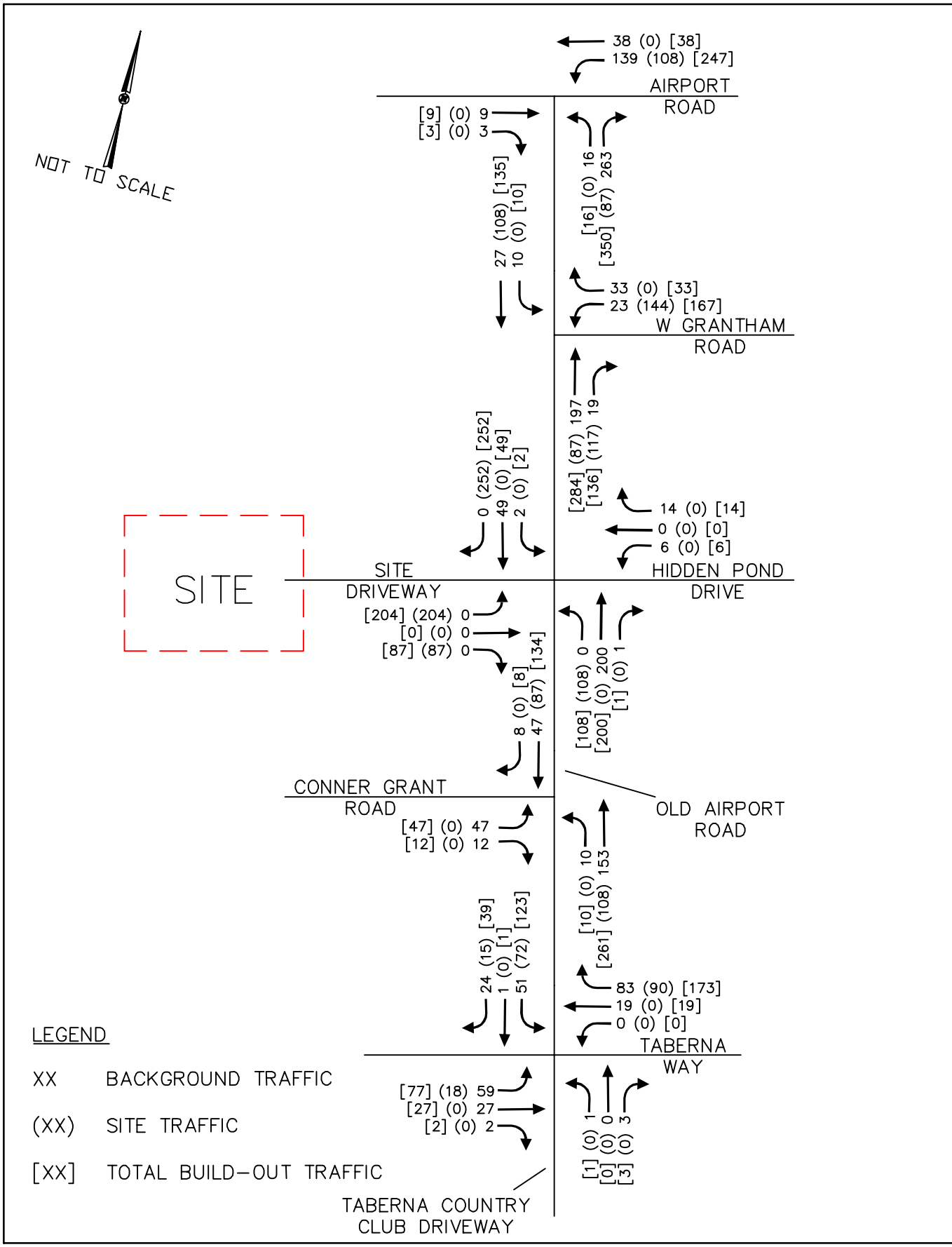
The projected (2024) build-out AM and school PM peak hour traffic volumes are shown on **Figure 5.3** and **Figure 5.4**, respectively.



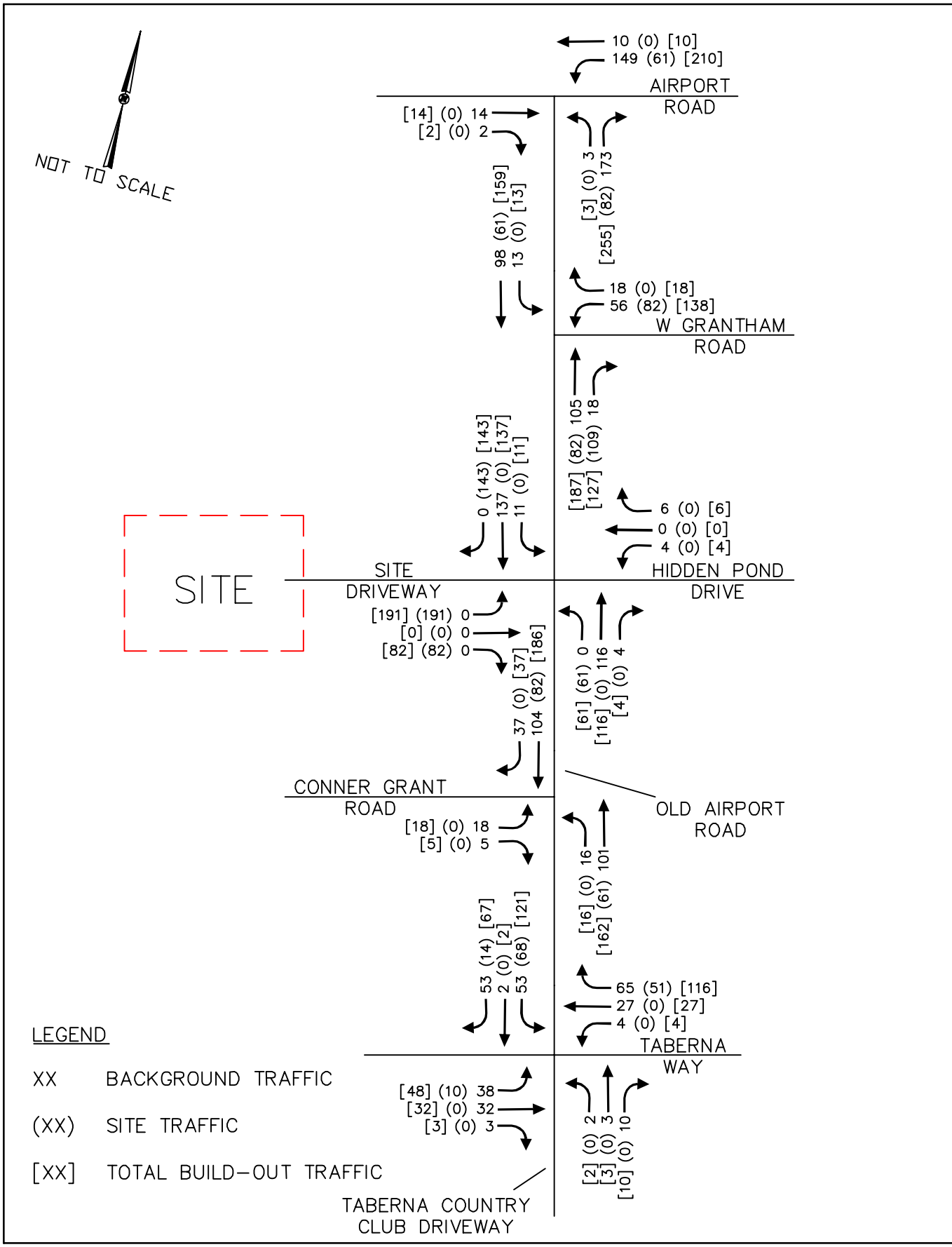
Kimley»Horn	RIVERSIDE LEADERSHIP ACADEMY NEW BERN, NC TRAFFIC IMPACT ANALYSIS	EXISTING AND BACKGROUND (2024) AM PEAK HOUR TRAFFIC VOLUMES	FIGURE 5.1



Kimley»Horn	RIVERSIDE LEADERSHIP ACADEMY NEW BERN, NC TRAFFIC IMPACT ANALYSIS	EXISTING AND BACKGROUND (2024) SCHOOL PM PEAK HOUR TRAFFIC VOLUMES	FIGURE 5.2



Kimley»Horn	RIVERSIDE LEADERSHIP ACADEMY NEW BERN, NC TRAFFIC IMPACT ANALYSIS	PROJECTED (2024) BUILD-OUT AM PEAK HOUR LOWER SCHOOL TRAFFIC VOLUMES	FIGURE 5.3



Kimley»Horn	RIVERSIDE LEADERSHIP ACADEMY NEW BERN, NC TRAFFIC IMPACT ANALYSIS	PROJECTED (2024) BUILD-OUT PM PEAK HOUR LOWER SCHOOL TRAFFIC VOLUMES	FIGURE 5.4

6.0 Turn Lane Analysis

A turn lane analysis was performed at the intersection of Old Airport Road at Hidden Pond Drive/Site Driveway to evaluate the need for right-turn and left-turn lanes on Old Airport Road. This analysis was performed using the methodology in NCHRP Report 457. Table 6.1 and 6.2 below summarizes the results of this analysis.

Table 6.1
Site Driveway Right-Turn Lane Analysis

Intersection	Right-Turn Lane Warrant
Old Airport Road at Hidden Pond Drive/Site Driveway	AM – Warranted School PM – Warranted

Table 6.2
Site Driveway Left-Turn Lane Analysis

Intersection	Left-Turn Lane Warrant
Old Airport Road at Hidden Pond Drive/Site Driveway	AM – Warranted School PM - Warranted

The results of this turn lane analysis helped to determine what turn lanes would be needed at the Site Driveway. A left-turn lane and right-turn lane are both expected to be warranted at the site driveway. The analysis output is included in **Appendix E.**

7.0 Capacity Analysis

Capacity analyses were performed for the AM and school PM peak hours for the existing (2023), background (2024), and the projected (2024) lower school build-out conditions using Synchro Version 11 software to determine the operating characteristics of the adjacent road network and the impacts of the proposed project.

Level-of-Service (LOS) is a qualitative measure that describes operational conditions and motorist perceptions within a traffic stream. The *Highway Capacity Manual* defines six levels of service, LOS A through LOS F, with A representing the shortest average delays and F representing the longest average delays. LOS D is the typically accepted standard for signalized intersections in urbanized areas. For signalized intersections, LOS is defined for the overall intersection operation.

For unsignalized intersections, only the movements that must yield right-of-way experience control delay. Therefore, LOS criteria for the overall intersection is not reported by Synchro Version 11 or computable using methodology published in the *Highway Capacity Manual.* It is typical for stop sign controlled side streets and driveways intersecting major streets to experience long delays during peak hours, while the majority of the traffic moving through the intersection on the major street experiences little or no delay. Table 7 lists the LOS control delay thresholds published in the *Highway Capacity Manual* for signalized and unsignalized intersections.

Table 7.0
Level-of-Service Control Delay Thresholds

Level-of-Service	Signalized Intersections – Control Delay Per Vehicle [sec/veh]	Unsignalized Intersections – Average Control Delay [sec/veh] & Qualitative Operational Description	
A	≤ 10	≤ 10	Short Delays
B	> 10 – 20	> 10 – 15	
C	> 20 – 35	> 15 – 25	
D	> 35 – 55	> 25 – 35	Moderate Delays
E	> 55 – 80	> 35 – 50	
F	> 80	> 50	Long Delays

The following assumptions were used in the analysis:

- An overall intersection peak hour factor (PHF) of 0.90 was assumed in the projected (2024) background traffic condition at all study intersections unless the existing PHF observed was less than 0.90.

- A weighted PHF by movement was used in the projected (2024) build-out traffic condition, with a PHF of 0.50 used for school traffic volumes and the background overall PHF values used for non-school movements.

Synchro reports for each scenario are included in **Appendix F-I.** Capacity analyses were performed for the existing (2023) and projected (2024) background and build-out conditions for the following intersections:

- Old Airport Road at W Grantham Road
- Old Airport Road at Hidden Pond Drive/Site Driveway
- Old Airport Road at Conner Grant Road
- Airport Road at Old Airport Road
- Old Airport Road/Taberna Country Club Driveway at Taberna Way

All capacity analyses are included in the Appendix and are briefly summarized in the following subsection.

7.1 Old Airport Road at W Grantham Road

Analyses indicate that the unsignalized intersection of Old Airport Road at W Grantham Road currently operates with short delays for the minor street approach (W Grantham Road) in the AM and school PM peak hours.

Under background (2024) traffic conditions, the minor street approach is projected to continue to operate with short delays in both peak hours.

Under build-out (2024) traffic conditions, the intersection is projected to operate with long delays at the minor street approach in the AM peak hour and short delays in the school PM peak hour. Long delays are not uncommon at all-way stop controlled intersections with mainlines with heavy through movement traffic volumes (Old Airport Road).

The following mitigation is recommended as part of this project to accommodate vehicular site traffic.

- Construct a northbound right-turn lane with approximately 75 feet of storage and appropriate deceleration.

With these improvements, the minor street approach is projected to operate with moderate delays in the AM peak hour and short delays in the school PM peak hour.

While a roundabout at this intersection was not recommended as an improvement due to Riverside Leadership Academy, the amount of right-of-way available along Old Airport Road in the northeast and southeast corners of the intersection and the traffic patterns at this intersection make Old Airport Road at W Grantham Road a desirable location for a future roundabout.

Table 7.1, below, summarizes the operation of the intersection of Old Airport Road at W Grantham Road for the existing (2023) and projected (2024) background and build-out traffic conditions.

Table 7.1
Old Airport Road at W Grantham Road (Unsignalized)

Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Existing (2023) Traffic	WB - B (10.7) SBL - A (7.9)	WB - B (10.5) SBL - A (7.5)
Background (2024) Traffic	WB - B (10.2) SBL - A (7.7)	WB - B (10.4) SBL - A (7.5)
Build-out (2024) Traffic	WB - F (92.2) SBL - A (9.0)	WB - C (21.5) SBL - A (8.4)
Build-out (2024) Traffic - Improved	WB - E (49.0) SBL - A (9.0)	WB - C (17.3) SBL - A (8.4)

7.2 Old Airport Road at Hidden Pond Drive/Site Driveway

Analyses indicate that the unsignalized intersection of Old Airport Road at Hidden Pond Drive/Site Driveway currently operates with short delays for the minor street approach (Hidden Pond Drive) during the AM and school PM peak hours.

Under background (2024) traffic conditions, the minor street approach is projected to continue to operate with short delays in both peak hours.

Under build-out (2024) traffic conditions, the westbound minor street approach (Hidden Pond Drive) is projected to operate with moderate delays in the AM peak hour and short delays in the school PM peak hour. The eastbound minor street approach (Site Driveway) is projected to operate with long delays in the AM and PM peak hours.

A full movement driveway is proposed for the proposed Riverside Leadership Academy that would tie into the existing intersection as a fourth leg. Therefore, the following mitigation is recommended as part of this project to accommodate vehicular site traffic.

- Construct a full movement site driveway for the proposed school west of Old Airport Road with two ingress lanes and two egress lanes, to be striped as a left-turn lane and a shared through/right-turn lane.
- Provide a northbound left-turn lane with approximately 150 feet of storage and appropriate deceleration.
- Provide a channelized southbound right-turn lane with approximately 175 feet of storage and appropriate deceleration.

With these improvements, the westbound minor street approach (Hidden Pond Drive) is projected to operate with short delays in the AM and school PM peak hours. The eastbound approach is projected to operate with long delays in the AM and school PM peak hours.

It should be noted that with these improvements SimTraffic reported a maximum queue of 178 feet in the AM peak hour and 270 feet in the school PM peak hour along the eastbound Site Driveway approach at Old Airport Road. Based on these SimTraffic results, the queue is not expected to impact the school's loading zones and is to be contained on-site; therefore, no additional improvements are recommended.

Table 7.2, located on the following page, summarizes the operation of the intersection of Old Airport Road at Hidden Pond Drive/Site Driveway for the existing (2023) and projected (2024) & (2027) background and build-out traffic conditions.

Table 7.2 **Old Airport Road at Hidden Pond Drive/Site Driveway (Unsignalized)**		
Condition	**AM Peak Hour LOS (Delay)**	**PM Peak Hour LOS (Delay)**
Existing (2023) Traffic	EB - N/A WB - B (10.2) NBL - N/A SBL - A (7.8)	EB - N/A WB - A (9.9) NBL - N/A SBL - A (7.7)
Background (2024) Traffic	EB - N/A WB - A (9.8) NBL - N/A SBL - A (7.7)	EB - N/A WB - A (9.8) NBL - N/A SBL - A (7.7)
Build-out (2024) Traffic	EB - F (561.6) WB - D (25.6) NBL - A (9.6) SBL - A (7.8)	EB - F (136.6) WB - C (17.6) NBL - A (8.6) SBL - A (7.7)
Build-out (2024) Traffic - Improved	EB - F (218.5) WB - C (15.9) NBL - A (7.7) SBL - A (7.8)	EB - F (58.6) WB - B (14.0) NBL - A (7.8) SBL - A (7.7)

7.3 Old Airport Road at Conner Grant Road

Analyses indicate that the unsignalized intersection of Old Airport Road at Conner Grant Road currently operates with short delays for the minor street approach (Conner Grant Road) during the AM and school PM peak hours.

Under future traffic conditions, the minor street approach (Conner Grant Road) is projected to operate with short delays in the AM and school PM peak hours, with or without the proposed school in place.

As site traffic is expected to have a minimal impact on the operation of this intersection, so no improvements are recommended to accommodate projected site traffic.

Table 7.3, below, summarizes the operation of the intersection of Old Airport Road at Conner Grant Road for the existing (2023) and projected (2024) background and build-out traffic conditions.

Table 7.3
Old Airport Road at Conner Grant Road (Unsignalized)

Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Existing (2023) Traffic	EB - B (10.7) NBL - A (7.5)	EB - B (10.3) NBL - A (7.6)
Background (2024) Traffic	EB - B (10.1) NBL - A (7.4)	EB - B (10.1) NBL - A (7.6)
Build-out (2024) Traffic	EB - B (14.8) NBL - A (7.9)	EB - B (12.5) NBL - A (8.0)

7.4 Airport Road at Old Airport Road

Analyses indicate that the unsignalized intersection of Airport Road at Old Airport Road currently operates with short delays for the minor street approach (Old Airport Road) during the AM and school PM peak hours.

Under future traffic conditions, the minor street approach (Old Airport Road) is projected to operate with short delays in the AM and school PM peak hours, with or without the proposed school in place.

As site traffic is expected to have a minimal impact on the operation of this intersection, so no improvements are recommended to accommodate projected site traffic.

Table 7.4, below, summarizes the operation of the intersection of Airport Road at Old Airport Road for the existing (2023) and projected (2024) background and build-out traffic conditions.

Table 7.4
Airport Road at Old Airport Road (Unsignalized)

Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Existing (2023) Traffic	NB - B (10.8) WBL - A (7.6)	NB - A (9.3) WBL - A (7.6)
Background (2024) Traffic	NB - B (10.2) WBL - A (7.5)	NB - A (9.3) WBL - A (7.6)
Build-out (2024) Traffic	NB - B (13.8) WBL - A (8.0)	NB - B (10.2) WBL - A (7.8)

7.5 Old Airport Road/Taberna Country Club Driveway at Taberna Way

Analyses indicate that the unsignalized intersection of Old Airport Road/Taberna Country Club Driveway at Taberna Way currently operates with short delays for the minor street approaches (Old Airport Road/Taberna Country Club Driveway) during the AM and school PM peak hours.

Under future traffic conditions, the minor street approaches (Old Airport Road/Taberna Country Club Driveway) are projected to operate with short delays in the AM and school PM peak hours, with or without the proposed school in place.

As site traffic is expected to have a minimal impact on the operation of this intersection, so no improvements are recommended to accommodate projected site traffic.

Table 7.5, below, summarizes the operation of the intersection of Old Airport Road/Taberna Country Club Driveway at Taberna Way for the existing (2023) and projected (2024) background and build-out traffic conditions.

Table 7.5
Taberna Way at Old Airport Road/Taberna Country Club Driveway (Unsignalized)

Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Existing (2023) Traffic	NB - B (10.8) SB - B (11.3) EBL - A (7.6) WBL - A (7.3)	NB - A (9.7) SB - B (10.5) EBL - A (7.5) WBL - A (7.3)
Background (2024) Traffic	NB - B (10.3) SB - B (10.5) EBL - A (7.6) WBL - A (7.3)	NB - A (9.5) SB - B (10.1) EBL - A (7.5) WBL - A (7.3)
Build-out (2024) Traffic	NB - B (12.7) SB - C (19.8) EBL - A (8.2) WBL - A (7.3)	NB - B (10.3) SB - B (14.7) EBL - A (7.8) WBL - A (7.3)

8.0 Recommendations

The following roadway laneage is recommended to accommodate the projected traffic by the proposed Riverside Leadership Academy charter school:

Old Airport Road at W Grantham Road

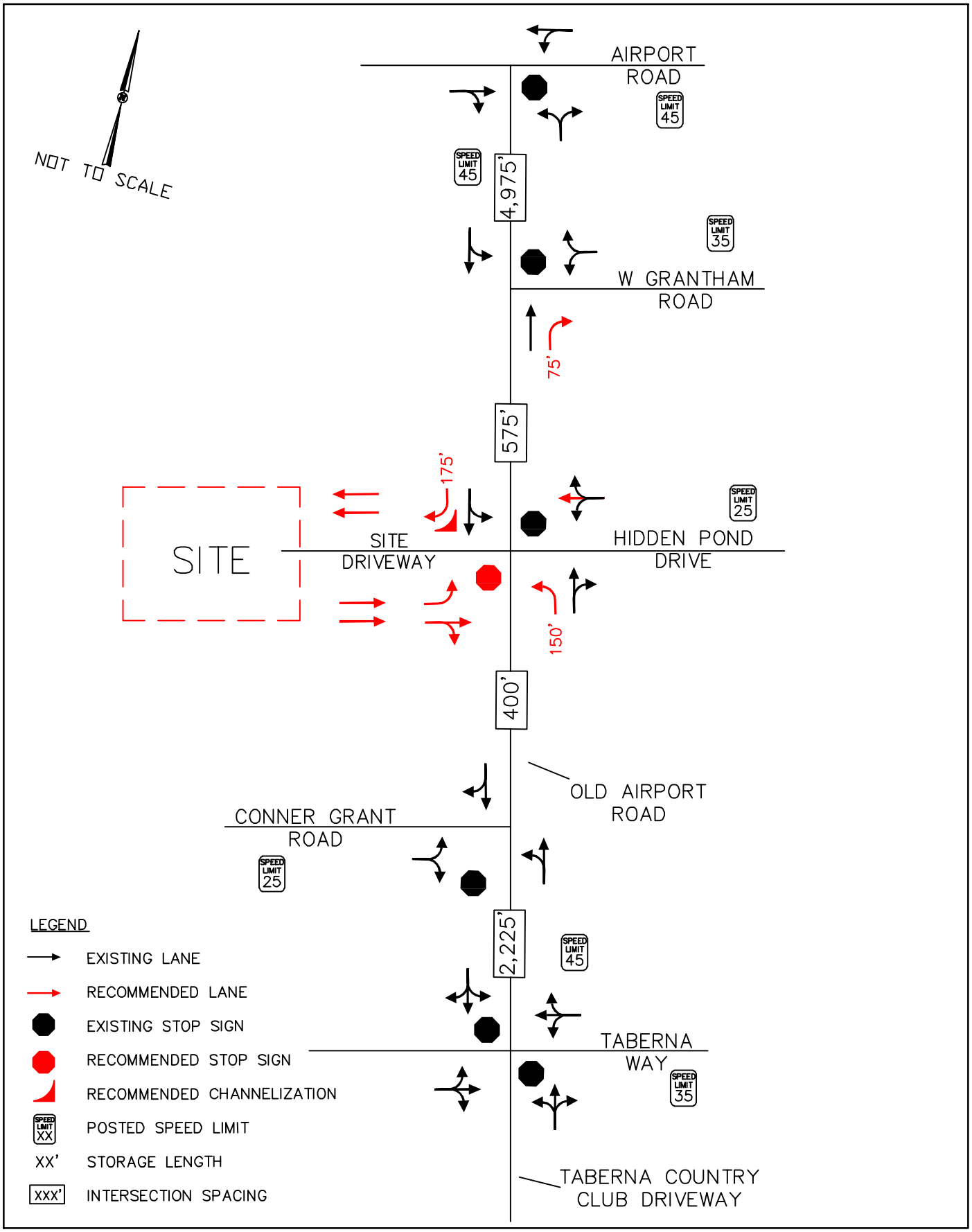
- Construct a northbound right-turn lane with approximately 75 feet of storage and appropriate deceleration.

Old Airport Road at Hidden Pond Drive/Site Driveway

- Construct a full movement site driveway for the proposed school west of Old Airport Road with two ingress lanes and two egress lanes, to be striped as a left-turn lane and a shared through/right-turn lane.
- Provide a northbound left-turn lane with approximately 150 feet of storage and appropriate deceleration.
- Provide a channelized southbound right-turn lane with approximately 175 feet of storage and appropriate deceleration.

The analyses indicate that with the recommended improvements in place Old Airport Road at W Grantham Road is expected to operate with short to moderate delays at project build-out. It should be noted that with the improvements described above, Old Airport Road at Hidden Pond Drive/Site Driveway is expected to operate with long delays in the AM and school PM peak hours. However, SimTraffic reported a maximum queue of 178 feet in the AM peak hour and 270 feet in the school PM peak hour along the eastbound Site Driveway approach at Old Airport Road. Based on these SimTraffic results, the queue is not expected to impact the school's loading zones and is to be contained on-site; therefore, no additional improvements are recommended.

The recommended roadway laneage for the projected (2024) build-out traffic condition is shown on **Figure 8.1**.



Kimley»Horn	RIVERSIDE LEADERSHIP ACADEMY NEW BERN, NC TRAFFIC IMPACT ANALYSIS	RECOMMENDED ROADWAY LANEAGE	FIGURE 8.1

9.0 On-Site Vehicular Operations

9.1 On-Site Queueing Plan

As currently envisioned, the proposed school is expected to contain 780 students in two academic buildings: 520 students grades K-8 in the lower school buildings and 260 students grades 9-12 in the upper school building. For the given student capacity, MSTA calculations state that the lower school should provide enough storage to accommodate an average queue length of 2,219 feet and a high demand queue length of 2,885 feet and the upper school should provide enough storage to accommodate an average queue length of 936 feet and a high demand queue length of 1,218 feet. As currently envisioned, the site layout provides approximately 3,000 feet of queue for the lower school and 2,300 feet of queue for the upper school. As both the lower and upper schools share the same queue space, the schools must be staggered by 45 minutes.

Per MSTA guidelines, the drop-off/pick-up operations were modeled in Synchro using a 40-second cycle length. SimTraffic simulations indicate that all carpool queuing will be accommodated on-site and will not impact public streets.

Therefore, the proposed school configuration is expected to provide enough storage space to cover both the average and high demand queue lengths.

Figure 10.1 shows the traffic management plan for Riverside Leadership Academy.

9.2 On-Site Traffic Management Plan

The traffic management plans for Riverside Leadership Academy is visually depicted on **Figure 10.1,** and this section is an extension of this figure to detail how each user will interact with the site during loading operations.

Site access is proposed one driveway on Old Airport Road, connecting to Hidden Pond Drive.

<u>Bell Schedule</u>
Riverside Leadership Academy proposes two bell schedules for the campus with a 45-minute stagger between the lower and upper schools. A traffic management plan for the lower and upper schools is provided and shown on **Figure 9.1**. Based on coordination with MSTA staff, an emergency traffic management plan for the maximum student capacity is provided and shown on **Figure 9.2**.

<u>Users</u>
Parents:

- Parents will follow the queuing pattern shown on the traffic management plan and enter a double lane queue that circles the site.

- It is anticipated that five (5) – seven (7) vehicles will enter and exit the single stacked loading zones at any given time. It is recommended that no vehicle be allowed to pass another vehicle unless instructed by a staff member.
- Parents who need additional time during loading operations will be directed to park in the visitor/short-term parking area just west of the entrance to the school.

Buses:

- The buses will arrive at the school before morning loading operations begin and depart after afternoon operations are concluded.
- Busses are expected to be parked onsite during the school day in spaces located along the bus loop in the rear of the school.

Staff:

- Staff members will be instructed to arrive at the school before morning loading operations begin and depart after afternoon operations are concluded to avoid any potential internal conflicts and reduce on-site queues.

Students:

- Students are expected to enter the parking lot north of the schools using the first internal driveway to minimize their time spent in the school queue.
- Students will be instructed to park in the lot north of the upper school building.

TMP Enforcement

It is important for the school to continue to monitor traffic operations and make any changes necessary to address issues that might arise from school operations. The school shall address anyone not following correct TMP operations.

Figure 9.1 Traffic Management Plan

Riverside Leadership Academy
Grades K-8

520 Student Population
2,219 Feet Average Queue (MSTA Urban Charter Trip Calculator)
2,885 Feet 30% High Demand Length (MSTA Urban Charter Trip Calculator)
3,000 Feet Desired Queue

This Design Provides
3,000 Feet Total Queue

Riverside Leadership Academy
Grades 9-12

260 Student Population
936 Feet Average Queue (MSTA Urban Charter Trip Calculator)
1,218 Feet 30% High Demand Length (MSTA Urban Charter Trip Calculator)
1,500 Feet Desired Queue

This Design Provides
2,300 Feet Total Queue

Student Parking

Student Parking

Upper School Single Bay Loading Zone

Short-Term Parking

Lower School Single Bay Loading Zone

Staff Parking

Staff Parking

Site Driveway

34 STAFF PARKING

SEE NOTE 2

SEE NOTE 3

BASKETBALL COURT

NCHSAA REGULATION HIGH SCHOOL

HIGH SCHOOL CLASSROOMS 19,125 SF

MIDDLE SCHOOL CLASSROOMS 19,125 SF

BUS PARKING

BUS PARKING

10'x70' SIGHT TRIANGLE

10'x70' SIGHT TRIANGLE

OLD AIRPORT ROAD
SR 1111 - 60' PUBLIC R/W

Notes:

1. Parents will enter and exit the school via Site Driveway along Old Airport Road.

2. Staff members will be directed to enter prior and exit after loading procedures. Staff will enter and exit via the school driveway.

3. The loading zone will be modeled as as single lane in analysis of this site. The second lane is expected to be used as a bypass lane.

4. Buses are expected to be used by the school. They are expected to enter at Site Driveway and park onsite during school hours.

Know what's **below.**
Call before you dig.
(Or call: 1-800-632-4949)

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30 ft.

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919.490.1645 PHONE
Lic. #C-1030

NEW BERN CHARTER SCHOOL
CRAVEN COUNTY, NORTH CAROLINA
ENLARGED SITE LAYOUT PLAN

REV.	DATE	DESCRIPTION

DATE: AUGUST 21, 2023

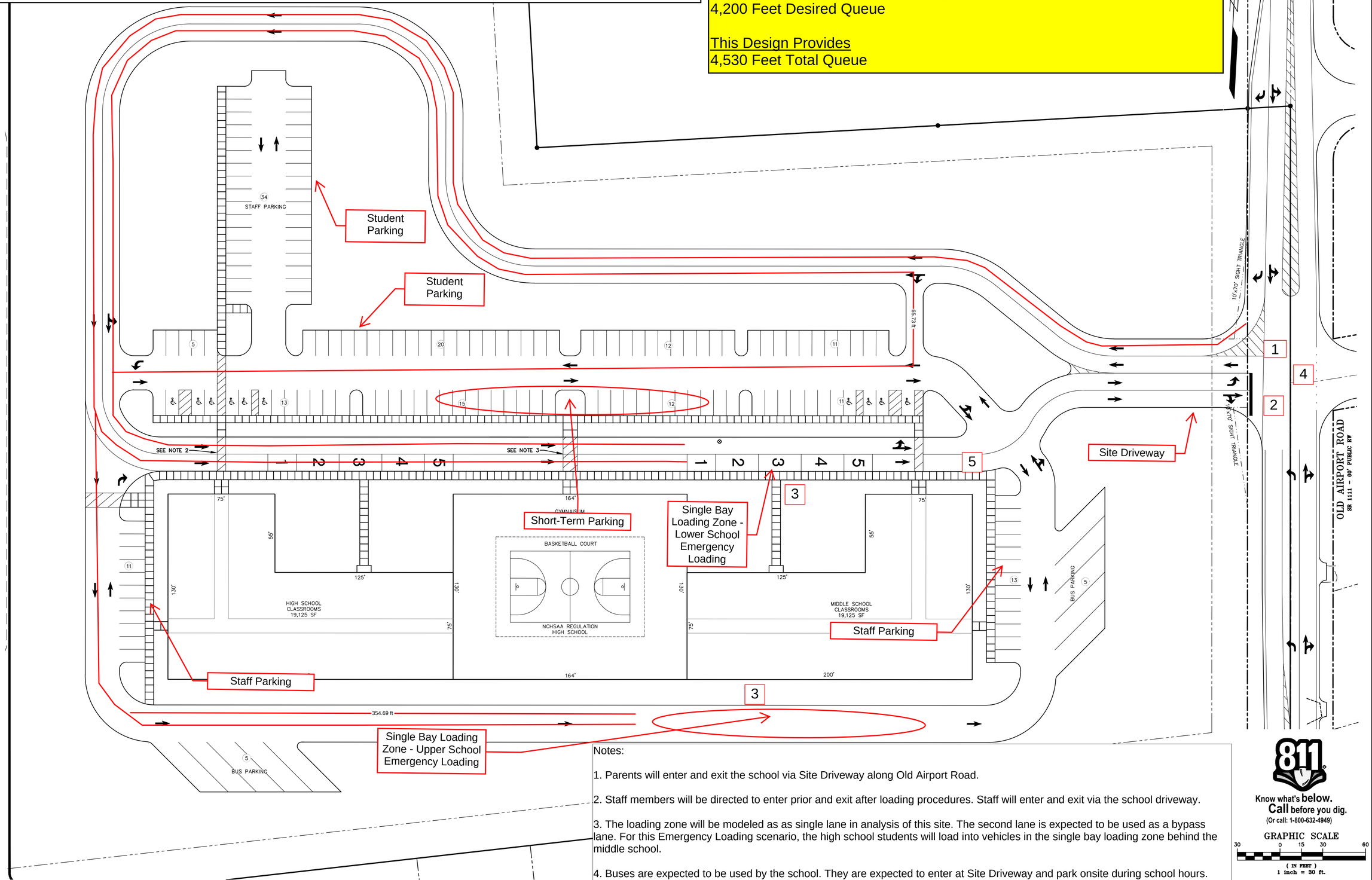
SHEET NO.
C3.2

Figure 9.2
Emergency Traffic Management Plan

Riverside Leadership Academy
Grades K-12

780 Student Population
3,155 Feet Average Queue (MSTA Urban Charter Trip Calculator)
4,102 Feet 30% High Demand Length (MSTA Urban Charter Trip Calculator)
4,200 Feet Desired Queue

This Design Provides
4,530 Feet Total Queue



Notes:

1. Parents will enter and exit the school via Site Driveway along Old Airport Road.

2. Staff members will be directed to enter prior and exit after loading procedures. Staff will enter and exit via the school driveway.

3. The loading zone will be modeled as as single lane in analysis of this site. The second lane is expected to be used as a bypass lane. For this Emergency Loading scenario, the high school students will load into vehicles in the single bay loading zone behind the middle school.

4. Buses are expected to be used by the school. They are expected to enter at Site Driveway and park onsite during school hours.

5. A staff member will be located here to direct exiting traffic during the Emergency Loading.

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NEW BERN CHARTER SCHOOL
CRAVEN COUNTY, NORTH CAROLINA
ENLARGED SITE LAYOUT PLAN

REV.	DATE	DESCRIPTION

DATE: AUGUST 21, 2023

811
Know what's below.
Call before you dig.
(Or call: 1-800-632-4949)

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30 ft.

SHEET NO.
C3.2

Appendix

Appendix A:

Approved Assumptions Memorandum

NCDOT Traffic Impact Analysis Need Screening / Scoping Request

TIA Need Screening → TIA Scoping → TIA Submittal

A Traffic Impact Analysis (TIA) may be required for developments based on the site trip generation estimates, site context, or at the discretion of the NCDOT District Engineer. The Applicant or the TIA Consultant shall submit this form along with the site plan to the District Engineer to determine the TIA need and, if a TIA is required, initiate the TIA scoping process. Without an approved scope, the TIA is incomplete and will be rejected until the study is revised to conform to NCDOT's TIA requirements.

Project Name: Riverside Leadership Academy **Previous Name:** If Applicable New Bern Charter School

Location: W of Old Airport Rd & N of Connor Grant Rd **County:** Craven **Municipality:** New Bern

Project Description: Charter school with two buildings: one for grades K-8 and one for grades 9-12

Project Contact:	Applicant	TIA Consultant
Company Name	Hubrich Contracting, Inc.	Kimley-Horn
Contact Person	Steve Hubrich	Lyle Overcash, PE
Phone Number	919.471.2895	919.678.4131
Email	steve@hubrichcontracting.com	lyle.overcash@kimley-horn.com
Mailing Address	4321 Medical Park Drive, Suite 100	421 Fayeteville Street, Suite 600
	Durham, NC 27704	Raleigh, NC 27601

Site Plan Prepared By: Civil Consultants **Site Plan Date:** 7/7/2023

See site plan/vicinity map requirements on page 2.

Parcel Size: _____ Acre(s) **Anticipated Build-Out Year:** 2024

Weekday Site Trip Generation - Do NOT adjust for mode split, pass-by, internal capture, or diverted trips.

ITE LUC	Proposed Land Use	Size	Unit	Daily Trips	Peak Hour Type	AM Peak Hour Trips			PM Peak Hour Trips			Data Source
						Enter	Exit	Total	Enter	Exit	Total	
	Urban Charter - K-8	520	Students			360	291	651	204	273	477	Other Data**
	Urban Charter-9-12	260	Students			202	107	309	83	193	276	Other Data**
Total		780	Students			562	398	960	287	466	753	

Refer to the current *NCDOT Congestion Management Capacity Analysis Guidelines* for acceptable trip calculation methods and data sources.

**Explain local or other data sources, if used: MSTA School Traffic Calculator - Urban Charter School

☐ The estimated site trips meet NCDOT's TIA trip threshold of 3,000 daily trips.

☐ The estimated site trips meet the municipal TIA trip threshold of _____

☒ This project is located in a known STIP and/ or local CIP project # U-5713/R-5777A&B

☐ This project includes a rezoning request.

☐ The proposed site access is located within 1,000 feet of an interchange.

☐ The Applicant requests for a new or modified control-of-access break.

☐ The Applicant requests for a new or modified median break.

_____ Steve Hubrich _____

Applicant's Signature | Print Name | Date

NCDOT Traffic Impact Analysis Need Screening / Scoping Request

TIA Need Screening → TIA Scoping → TIA Submittal

Site Plan/Vicinity Map Requirement for TIA Need Screening: While the site plan may not be finalized during the TIA scoping stage, the graphic representation of the proposed development shall provide adequate details on the development scope and context. More specifically, the site plan/map shall clearly show the location and type of each access point, spacing to adjacent and opposing driveways or intersections, internal street network, proposed buildings/parcels with their anticipated uses and sizes at full build-out and, if applicable, any nearby interstate, US, NC or Secondary Roads (SR).

Project Name: Riverside Leadership Academy **Project Reference Number:** 014251010

☐ **A TIA is Required by the Local Government.** In addition, the study area is expected to include NCDOT maintained transportation facilities.

☒ **A TIA is Required by NCDOT,** per the *Policy on Street and Driveway Access to North Carolina Highways*.

If either or both of the boxes above are checked, the Applicant/TIA Consultant is hereby requested to fill out as much as possible of the following TIA scoping checklist, and return it along with the supporting documents to NCDOT prior to the scoping meeting.

☐ **A TIA is NOT required**. This decision is based on the development information presented above. Changes in the development plan will require re-evaluation of the TIA need, and may necessitate a TIA. The Applicant should inform the District Engineer of any significant changes in a timely fashion to avoid delays or rejections of the driveway permit / encroachment agreement applications.

Additional Comments:

The TIA need decision is made by the NCDOT Division ____ District____ on _____.

NCDOT District Representative's Signature

Print Name

Email concurrence may be used in lieu of the signature.

NCDOT TIA Scoping Checklist

TIA Need Screening → TIA Scoping → TIA Submittal

Project Name: Riverside Leadership Academy **TIA Scoping Date:** 8/10/23

☒ **TIA Need Screening Forms are Attached.** Project Reference #: 014251010 Decision Date: _____

☒ **Site Plan and Access**

☒ Provide a site plan illustrating site access, internal and external roadways, buildings and land uses.
Refer to NCDOT's *Policy on Street and Driveway Access to North Carolina Highways* pages 14 and 15 for site plan requirements.

☒ Identify site access.

New Access	On Road	Access Type		Driveway Spacing		
	Road Name	Permitted Movements	Traffic Control	Distance (ft)	Direction	Nearest Intersection / Access
Access A						
Access B						
Access C						
Access D						
Access E						
Access F						
Access G						
Access H						

Existing Access	Existing Intersection of		Access Modification	**Proposed Interconnectivity** (If Applicable)		
	Road A	Road B		Connector #	Road Connected	Adjacent Development
Access 1	Old Airport Road	Hidden Pond Drive		Connector 1		
Access 2				Connector 2		
Access 3				Connector 3		
Access 4				Connector 4		

☐ Additional access clarifications and provisions (e.g., proposed control-of-access or median breaks, modifications of existing access, loading/unloading area access, bike/pedestrian accommodation).

☒ **Proposed K-12 School Site**

☒ NCDOT MSTA School Traffic Calculator for **Urban Charter School** shall be used.

☒ Peak Hour Factors (PHFs) shall be adjusted/weighted for new school trips (0.5 PHF by default).

☒ Internal school circulation analysis is required, and should be submitted in advance or concurrent with the TIA submittal.

☒ Clarify traffic operation plans (e.g. traffic circulation pattern, pedestrian access, drop-off/pick-up zone location and configuration, queue storage area and, if applicable, staggered start times).

High School and Middle School will have staggered start times.

☒ Trip Generation

The TIA Consultant shall prepare trip generation estimates following the current *NCDOT Congestion Management Capacity Analysis Guidelines*, and submit the calculation sheets and supporting information to the District Engineer for approval prior to capacity analysis.

ITE LUC	Proposed Land Use	Size	Unit	Daily Trips	Peak Hour Type	AM Peak Hour Trips			PM Peak Hour Trips			Data Source
						Enter	Exit	Total	Enter	Exit	Total	
	Urban Charter - K-8	520	Students			358	291	659	204	271	475	Other Data**
	Urban Charter-9-12	260	Students			200	107	307	83	191	274	Other Data**
Unadjusted Site Trips						558	398	966	287	462	749	
Internal Capture Trips (Attach Calculation Sheets)				0		0	0	0	0	0	0	
Internal Capture % of Unadjusted Site Trips				0 %		0 %			0 %			
LUC	Proposed Land Use	Any Internal Trips?		Pass-By % of External Trips								
				%		%			%			
				%		%			%			
				%		%			%			
				%		%			%			
				%		%			%			
Pass-By Trips (Attach Calculation Sheets)												
Adjacent Street Volumes												
Non-Pass-By Primary Trips						558	398	966	287	462	749	
Diverted Trips, if Applicable and Justifiable												Please Select

**Explain local or other data sources, if used:

MSTA School Traffic Calculator - Urban Charter

☐ Existing Site Trip Information for Redevelopment Projects (Attach separate sheets as needed)

ITE LUC	Existing Land Use	Size	Unit	Daily Trips	Peak Hour Type	AM Peak Hour Trips			PM Peak Hour Trips			Data Source
						Enter	Exit	Total	Enter	Exit	Total	
					Please Select							Please Select
Total Existing Site Trips												

☒ Trip Distribution

☒ Trip distribution diagrams are submitted concurrently with this document (attach separate sheets).

☐ Trip distribution diagrams will be submitted separately, along with supporting information, to the District Engineer for review and approval prior to capacity analysis. The trip distribution shall be based on the current and anticipated traffic patterns, as well as instructions noted below.

40% to/from the east via Grantham Road
30% to/from the east via Airport Road
25% to/from the east via Taberna Way
5% to/from the west via Taberna Way

If required by the District Engineer, the following additional diagrams shall also be submitted:

☐ Mixed-Use Developments (separate diagrams for residential, commercial, and office trips)
☐ Inter-Development Trips (if 'internal" trips cross public streets)
☐ Pass-By Trips
☐ Diverted Trips
☐ Each Analysis Period

☐ Mode Split

☐ Provide Data Source and Justification

Mode / Period	Auto		
AM Peak	%	%	%
PM Peak	%	%	%
Daily	%	%	%
	%	%	%

☐ Identify proper infrastructure and accommodation for other modes of travel.

☒ Analysis Peak Periods:

☒ Weekday AM Peak 7:00 - 9:00 AM
☐ Weekday PM Peak
☐ Weekday Midday Peak
☒ Weekday PM School Peak 2:00 - 4:00 PM
☐ Weekend _____ Peak
☐ Other

☒ Study Area Intersections and Data Collection

The study area shall include the site access intersections (both new and existing) identified under "Site Plan and Access" on page 1, as well as the following external and, if applicable, internal intersections.

External Intersection	Intersection of		Traffic Control	Intersection Turning Movement Counts			Notes
	Road A	Road B		New / Existing	Date of Counts	Growth Adjustment	
#1	Old Airport Road	Grantham Road	2-Way Stop	Use Existing Counts	5/3/23		
#2	Old Airport Road	Hidden Pond Dr	2-Way Stop	Use Existing Counts	5/3/23		
#3	Old Airport Road	Conner Grant	2-Way Stop	Use Existing Counts	5/3/23		
#4	Airport Road	Old Airport Road	2-Way Stop	Require New Counts	8/31/23		
#5	Old Airport Road	Taberna Way	2-Way Stop	Require New Counts	8/31/23		
#6							
#7							
#8							
#9							
#10							
#11							
#12							

Internal Intersection	Intersection of		Access Type		Intersection Spacing		
	Road A	Road B	Traffic Control	Permitted Movements	Distance (ft)	Direction	Nearest Intersection
#101			Please Select	Please Select		Please Select	
#102							
#103							
#104							
#105							

The following data will be collected:

☒ New traffic turning movement counts in ☐ 15-min intervals ☒ 5-min intervals (near schools)
Unless otherwise noted above, new traffic counts shall be collected at the existing study intersections during the analysis periods. Weekday counts shall avoid Mondays, Fridays, holidays, school breaks, road closures, and major weather events.

☒ To account for the impact of existing and/or proposed school traffic, PHFs will be adjusted for:

intersections numbered: 1-5

and access points numbered: 1

☐ Traffic Forecast Data for TIP: _____

☒ Roadway/Intersection Configuration & Traffic Control

☒ Traffic Signal Phasing & Timing Data

☐ Crash Data: _____ Period: _____

☐ Other:

☒ Future Year Conditions

☒ Project Build-Out Year: 2024

☐ Future Analysis Year(s): _____

☐ Identify below any funded/committed future transportation improvements, as well as any approved but incomplete developments near the site.

Funded STIP / Local CIP Project	Project Description	Year Complete
U-5713/R-5777A&B	Upgrade to freeway, Neuse River Bridge, East of Thurman Rd	2025

Nearby Approved Development	Location	Future Land Use (exclude any completed phases)	Committed Improvements

☒ Annual Growth Factor: 1 %

Justification/Data Source: Based on historical NCDOT AADT data

☐ Local Comprehensive Transportation Plan Compliance

☐ Identify Applicable Local Transportation Planning Documents

☐ Identify Applicable Roadways inside the Study Area

Road Name	Classification	Speed Limit	Proposed Cross-Section	Proposed Right-of-Way	Compliance Requirements	Affect Study Intersection #

☒ Study Method

The traffic analysis shall follow the current *NCDOT Congestion Management Capacity Analysis Guidelines*, *Policy on Street and Driveway Access to North Carolina Highways*, and use the current approved version of analysis software (e.g. Synchro/SimTraffic, HCS, Sidra Intersection, TransModeler).

The study shall include the following analysis scenarios for each analysis period.

1. Existing Conditions
2. Future No-Build Conditions (existing + background growth + approved developments + committed or funded improvements)
3. Future Build Conditions (future no-build + site trips)
4. Future Build with Improvements Conditions (future build traffic with improvements to mitigate the proposed development's impacts) and, if applicable:

☐ 5. TIP Design Year Analysis _____

☐ 6. Alternative Access Scenario (without proposed control-of-access or median break / modification)

The following additional analysis/outputs should be provided as warranted:

☐ Signal Warrant Analysis for accesses/intersections _____
☐ Multi-Modal Level of Service Analysis
☒ School Loading Zone Traffic Simulation
☐ Phasing Analysis (scope separately as needed)
☐ Safety/Crash Analysis
☐ Control-of-Access Modification Justification
☐ Median Break / Modification Justification
☐ Other _____

☒ Submittals

In addition to the hardcopies required below, the TIA Consultant shall provide the District Engineer and, if required, the local government an electronic copy of the study documents, including the latest site plan, figures and appendices, in searchable PDF files and the original traffic analysis files (e.g., Synchro, HCS). To expedite review, the NCDOT electronic submittals shall also be delivered concurrently to:

☐ Div. Traffic Engr ☐ Regional Traffic Engr ☐ Congestion Management ☐ Other _____

Submittals	NCDOT		Local Government	
	Electronic	Hardcopy	Electronic	Hardcopy
Trip Generation & Distribution	Required		Please Select	
Draft TIA Report	Required			
Final Sealed TIA Report	Required			

☐ **Additional Comments (**municipal TIA requirements, approved variations from NCDOT guidelines)

Agreement by All Parties

The undersigned agree to the contents and methodology described above for completing the required traffic impact analysis for the proposed development identified herein. Any changes to the above methodology contemplated by the Applicant or the TIA Consultant must be submitted to the District Engineer in writing. If approved by NCDOT, then such changes may be accepted for the TIA report. Subsequent revisions to the development plan (e.g. land use, density, site access, or schedule) may require additional scoping and analysis, and may modify the TIA requirements.

This agreement shall become effective on the date approved by NCDOT, and shall expire ____ months after the effective date or upon significant changes to the roadway network and/or development assumptions, whichever occurs first. Once expired, renewal or re-scoping will be required for subsequent TIA submittals.

APPLICANT

_____	Steve Hubrich	_____
Signature	Print Name	Date

TIA CONSULTANT

_____	Lyle Overcash	_____
Signature	Print Name	Date

LOCAL GOVERNMENT REPRESENTATIVE (If Applicable)

_____	_____	_____
Signature	Print Name	Date

Email concurrence may be used in lieu of the signature.

NCDOT DISTRICT REPRESENTATIVE

Reviewed and approved by the NCDOT Division ____District____ on _____.

_____	_____
Signature	Print Name

Email concurrence may be used in lieu of the signature.

Traffic Management Plan

Riverside Leadership Academy
Grades K-8

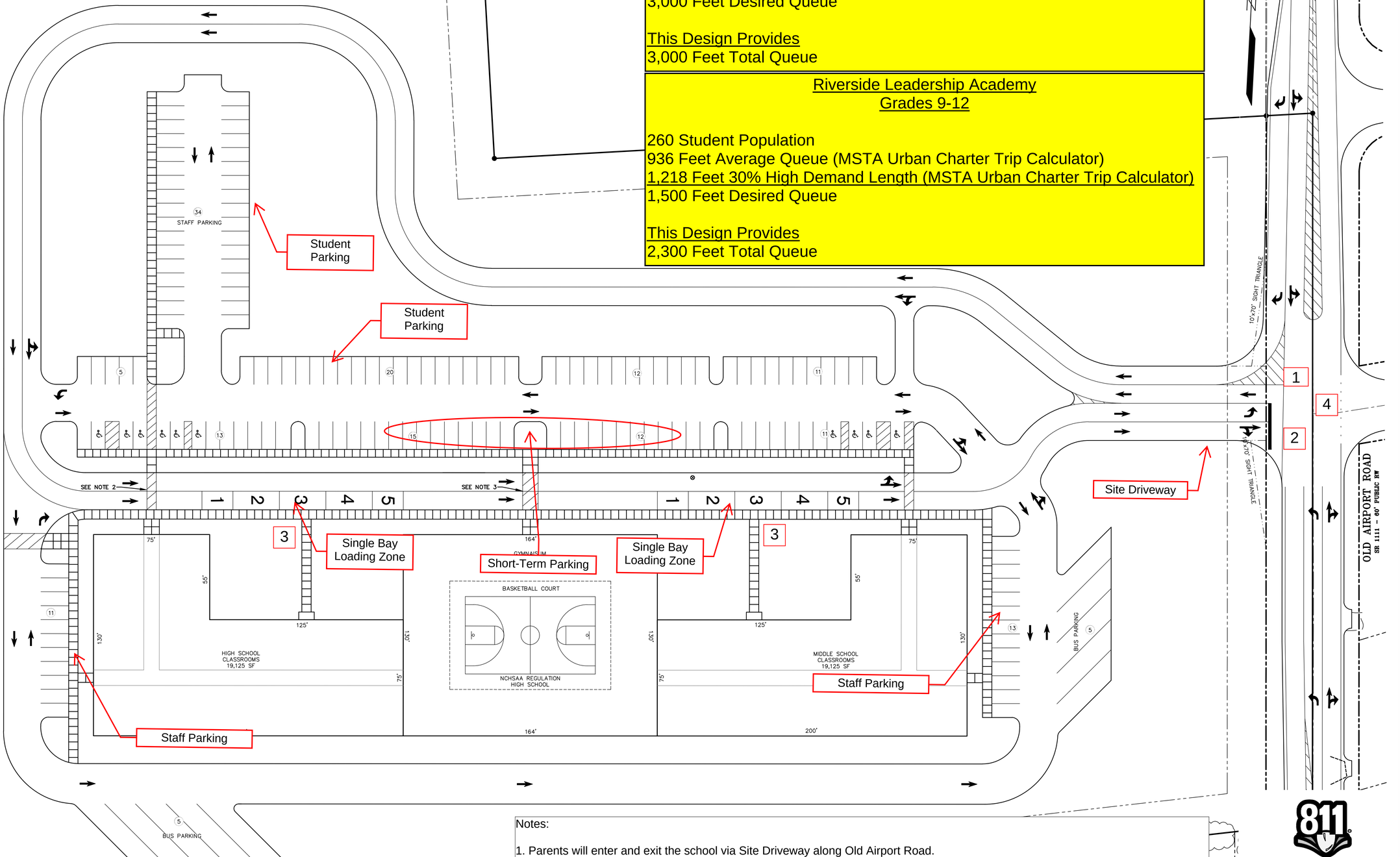
520 Student Population
2,219 Feet Average Queue (MSTA Urban Charter Trip Calculator)
2,885 Feet 30% High Demand Length (MSTA Urban Charter Trip Calculator)
3,000 Feet Desired Queue

This Design Provides
3,000 Feet Total Queue

Riverside Leadership Academy
Grades 9-12

260 Student Population
936 Feet Average Queue (MSTA Urban Charter Trip Calculator)
1,218 Feet 30% High Demand Length (MSTA Urban Charter Trip Calculator)
1,500 Feet Desired Queue

This Design Provides
2,300 Feet Total Queue



Notes:

1. Parents will enter and exit the school via Site Driveway along Old Airport Road.

2. Staff members will be directed to enter prior and exit after loading procedures. Staff will enter and exit via the school driveway.

3. The loading zone will be modeled as as single lane in analysis of this site. The second lane is expected to be used as a bypass lane.

4. Buses are expected to be used by the school. They are expected to enter at Site Driveway and park onsite during school hours.

811
Know what's **below.**
Call before you dig.
(Or call: 1-800-632-4949)

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30 ft.

civil consultants
LAND PLANNERS + CIVIL ENGINEERS
WWW.CIVIL-CONSULTANTS.COM
3709 LYCKAN PARKWAY - SUITE 201 - DURHAM, NC 27707
919.490.1645 PHONE
Lic. #C-1030

NEW BERN CHARTER SCHOOL
CRAVEN COUNTY, NORTH CAROLINA
ENLARGED SITE LAYOUT PLAN

REV.	DATE	DESCRIPTION

DATE: AUGUST 21, 2023

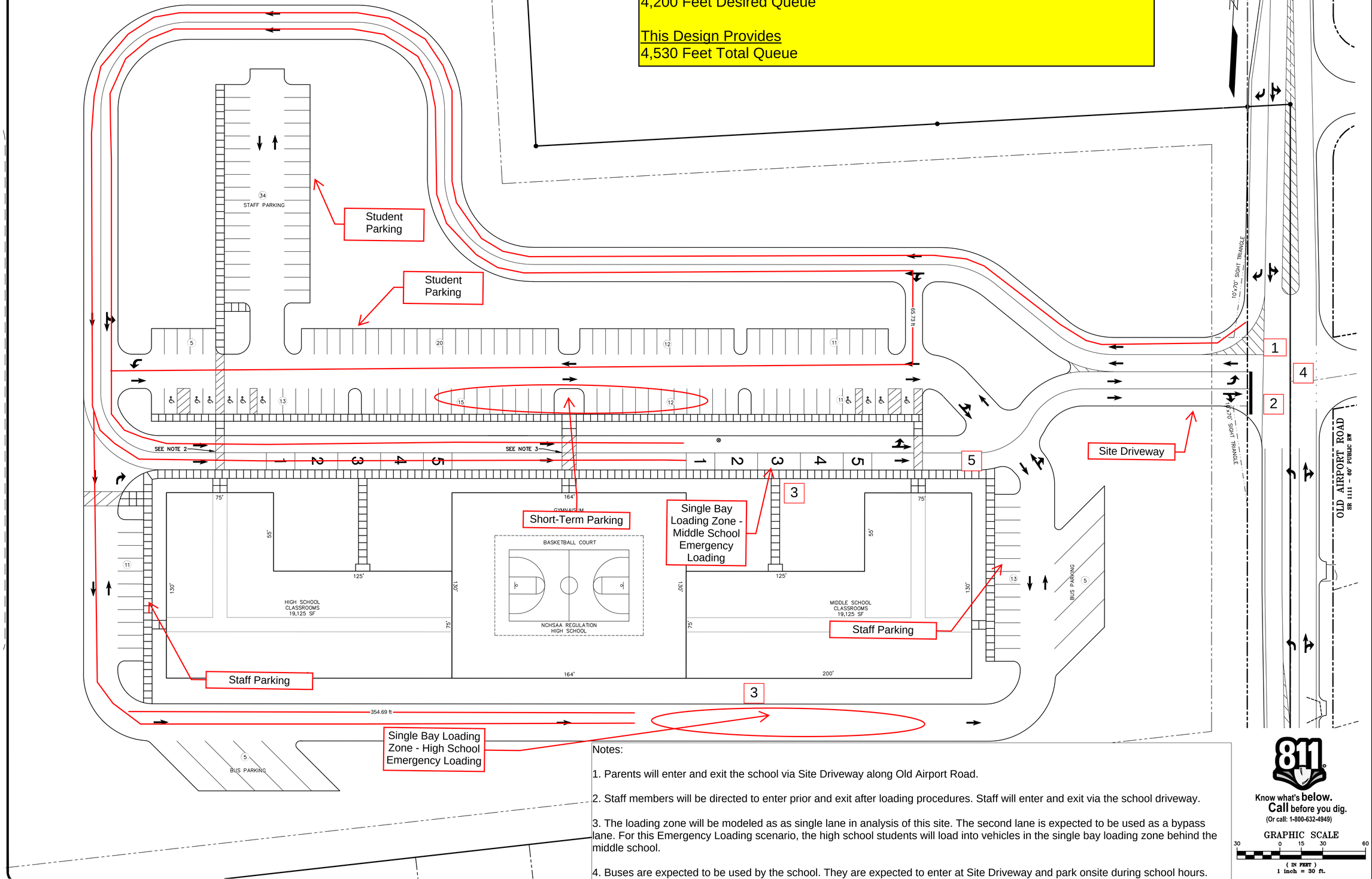
SHEET NO.
C3.2

Emergency Traffic Management Plan

Riverside Leadership Academy
Grades K-12

780 Student Population
3,155 Feet Average Queue (MSTA Urban Charter Trip Calculator)
4,102 Feet 30% High Demand Length (MSTA Urban Charter Trip Calculator)
4,200 Feet Desired Queue

This Design Provides
4,530 Feet Total Queue



Notes:

1. Parents will enter and exit the school via Site Driveway along Old Airport Road.

2. Staff members will be directed to enter prior and exit after loading procedures. Staff will enter and exit via the school driveway.

3. The loading zone will be modeled as as single lane in analysis of this site. The second lane is expected to be used as a bypass lane. For this Emergency Loading scenario, the high school students will load into vehicles in the single bay loading zone behind the middle school.

4. Buses are expected to be used by the school. They are expected to enter at Site Driveway and park onsite during school hours.

5. A staff member will be located here to direct exiting traffic during the Emergency Loading.

civil consultants
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3709 LYCKAN PARKWAY - SUITE 201 - DURHAM, NC 27707
919.490.1645 PHONE
Lic. #C-1030

NEW BERN CHARTER SCHOOL
CRAVEN COUNTY, NORTH CAROLINA
ENLARGED SITE LAYOUT PLAN

REV.	DATE	DESCRIPTION

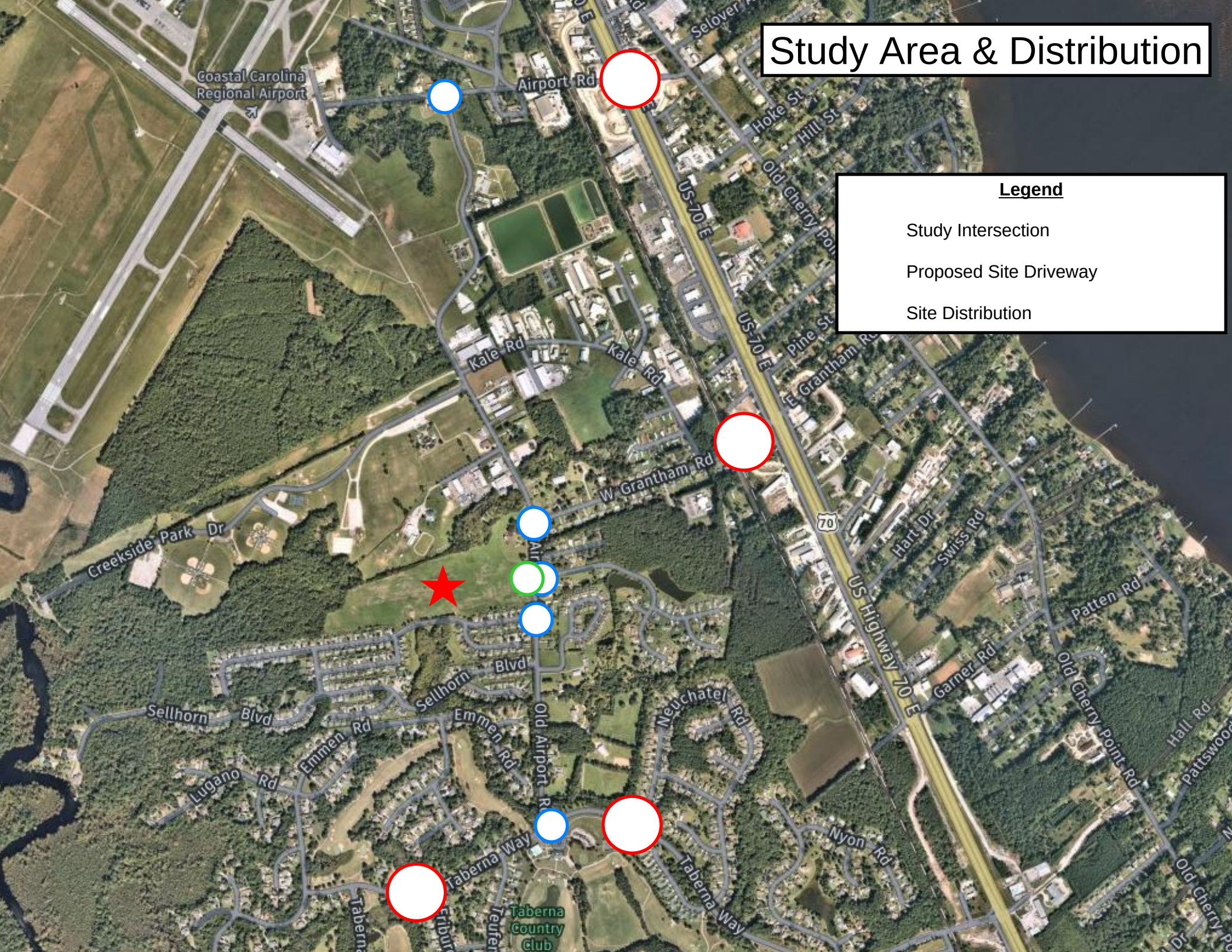
DATE: AUGUST 21, 2023

811
Know what's below.
Call before you dig.
(Or call: 1-800-632-4949)

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30 ft.

SHEET NO.
C3.2

Study Area & Distribution



MSTA School Traffic Calculations

AM and PM Peak Traffic Estimates

(These numbers do not reflect peak hour traffic volumes)

School Name: New Bern Charter School - Grades K-8

Type: **Urban Charter**

Version: 102816

AM Cars / Student	PM Cars / Student	Avg. Car Length	PM At one Time
55.94%	39.15%	22.19	48.67%
52.91%	47.50%	22.19	46.12%
50.08%	47.58%	22.83	55.71%

MSTA School Queue Input

Calculations

Grade Level	Student Population	Number of Buses	Staff Members	Student Drivers	PM Total Vehicles	PM Peak Vehicles	Average Queue Length	Total AM Trips	Total PM Trips	High Demand Length
										30%
K - 10	520	4	65		204	100	2219	651	477	2885
11th										
12th										
Sum >>	520	4	65		204	100	2219	651	477	2885
										666

Grade K-10

Direction	AM Trips Generated Parents	Buses	Staff	Trips	PM Trips Generated Parents	Buses	Staff	Trips
IN	291	4	65	360	204			204
OUT	291			291	204	4	65	273
		AM K-10 Trips		**651**		PM K-10 Trips		**477**

ADT
1128

Direction	AM Trips Generated Parents	Buses	Staff		Trips	PM Trips Generated Parents	Buses	Staff		Trips
IN										
OUT										
			AM 11th Trips					PM 11th Trips		

Direction	AM Trips Generated Parents	Buses	Staff		Trips	PM Trips Generated Parents	Buses	Staff		Trips
IN										
OUT										
			AM 12th Trips					PM 12th Trips		

All AM TRIPS	In	360
	Out	291
	Total	651

All PM TRIPS	In	204
	Out	273
	Total	477

1128

NOTES

- **Average Queue Length does not** include an alternative traffic pattern required for high traffic demand days which is usually 30% additional length.
- **Average Queue Length does not** include the Student Loading Zone.
- Peak traffic volumes at schools normally occur within a 30-minute time period. (justifying a PHF of 0.5)

Calculated 7/11/2023 By:_____

MSTA School Traffic Calculations

AM and PM Peak Traffic Estimates

(These numbers do not reflect peak hour traffic volumes)

School Name: New Bern Charter School - Grades 9-12

Type: **Urban Charter**

Version: 102816

AM Cars / Student	PM Cars / Student	Avg. Car Length	PM At one Time
55.94%	39.15%	22.19	48.67%
52.91%	47.50%	22.19	46.12%
50.08%	47.58%	22.83	55.71%

MSTA School Queue Input

Calculations

Grade Level	Student Population	Number of Buses	Staff Members	Student Drivers	PM Total Vehicles	PM Peak Vehicles	Average Queue Length	Total AM Trips	Total PM Trips	High Demand Length
										30%
K - 10	130	2	16		51	25	555	163	120	721
11th	65	1	7	21	23	11	244	75	75	317
12th	65	1	7	55	9	6	137	71	81	179
Sum >>	260	4	30	76	83	42	936	309	276	1218
										282

Grade K-10

	AM Trips Generated				PM Trips Generated			
Direction	Parents	Buses	Staff	Trips	Parents	Buses	Staff	Trips
IN	73	2	16	91	51			51
OUT	73			73	51	2	16	69
		AM K-10 Trips		163		PM K-10 Trips		120

Grade 11

	AM Trips Generated					PM Trips Generated				
Direction	Parents	Buses	Staff	Student Dvr	Trips	Parents	Buses	Staff	Student Dvr	Trips
IN	25	1	7	17	50	23				23
OUT	25				25	23	1	7	21	52
			AM 11th Trips		75			PM 11th Trips		75

Grade 12

	AM Trips Generated					PM Trips Generated				
Direction	Parents	Buses	Staff	Student Dvr	Trips	Parents	Buses	Staff	Student Dvr	Trips
IN	9	1	7	44	61	9				9
OUT	9				9	9	1	7	55	72
			AM 12th Trips		71			PM 12th Trips		81

All AM TRIPS	In	202
	Out	107
	Total	309

All PM TRIPS	In	83
	Out	193
	Total	276

ADT
283
150
152
585

NOTES

- **Average Queue Length does not** include an alternative traffic pattern required for high traffic demand days which is usually 30% additional length.
- **Average Queue Length does not** include the Student Loading Zone.
- Peak traffic volumes at schools normally occur within a 30-minute time period. (justifying a PHF of 0.5)

Calculated 7/11/2023 By:_____

Appendix B:
MSTA Urban Charter School
Traffic Calculator Sheets

MSTA School Traffic Calculations

AM and PM Peak Traffic Estimates

(These numbers do not reflect peak hour traffic volumes)

School Name: New Bern Charter School - Grades K-8

Type: **Urban Charter**

Version: 102816

AM Cars / Student	PM Cars / Student	Avg. Car Length	PM At one Time
55.94%	39.15%	22.19	48.67%
52.91%	47.50%	22.19	46.12%
50.08%	47.58%	22.83	55.71%

MSTA School Queue Input

Calculations

Grade Level	Student Population	Number of Buses	Staff Members	Student Drivers	PM Total Vehicles	PM Peak Vehicles	Average Queue Length	Total AM Trips	Total PM Trips	High Demand Length
										30%
K - 10	520	4	65		204	100	2219	651	477	2885
11th										
12th										
Sum >>	520	4	65		204	100	2219	651	477	2885
										666

Grade K-10

Direction	AM Trips Generated Parents	Buses	Staff	Trips	PM Trips Generated Parents	Buses	Staff	Trips
IN	291	4	65	360	204			204
OUT	291			291	204	4	65	273
		AM K-10 Trips		**651**		PM K-10 Trips		**477**

ADT
1128

Direction	AM Trips Generated Parents	Buses	Staff		Trips	PM Trips Generated Parents	Buses	Staff		Trips
IN										
OUT										
			AM 11th Trips					PM 11th Trips		

Direction	AM Trips Generated Parents	Buses	Staff		Trips	PM Trips Generated Parents	Buses	Staff		Trips
IN										
OUT										
			AM 12th Trips					PM 12th Trips		

All AM TRIPS	In	360
	Out	291
	Total	651

All PM TRIPS	In	204
	Out	273
	Total	477

1128

NOTES

- **Average Queue Length does not** include an alternative traffic pattern required for high traffic demand days which is usually 30% additional length.
- **Average Queue Length does not** include the Student Loading Zone.
- Peak traffic volumes at schools normally occur within a 30-minute time period. (justifying a PHF of 0.5)

Calculated 7/11/2023 By:_____

MSTA School Traffic Calculations

AM and PM Peak Traffic Estimates

(These numbers do not reflect peak hour traffic volumes)

School Name: New Bern Charter School - Grades 9-12

Type: **Urban Charter**

Version: 102816

AM Cars / Student	PM Cars / Student	Avg. Car Length	PM At one Time
55.94%	39.15%	22.19	48.67%
52.91%	47.50%	22.19	46.12%
50.08%	47.58%	22.83	55.71%

MSTA School Queue Input

Calculations

Grade Level	Student Population	Number of Buses	Staff Members	Student Drivers	PM Total Vehicles	PM Peak Vehicles	Average Queue Length	Total AM Trips	Total PM Trips	High Demand Length
										30%
K - 10	130	2	16		51	25	555	163	120	721
11th	65	1	7	21	23	11	244	75	75	317
12th	65	1	7	55	9	6	137	71	81	179
Sum >>	260	4	30	76	83	42	936	309	276	1218
										282

Grade K-10

	AM Trips Generated				PM Trips Generated			
Direction	Parents	Buses	Staff	Trips	Parents	Buses	Staff	Trips
IN	73	2	16	91	51			51
OUT	73			73	51	2	16	69
		AM K-10 Trips		163		PM K-10 Trips		120

Grade 11

	AM Trips Generated					PM Trips Generated				
Direction	Parents	Buses	Staff	Student Dvr	Trips	Parents	Buses	Staff	Student Dvr	Trips
IN	25	1	7	17	50	23				23
OUT	25				25	23	1	7	21	52
			AM 11th Trips		75			PM 11th Trips		75

Grade 12

	AM Trips Generated					PM Trips Generated				
Direction	Parents	Buses	Staff	Student Dvr	Trips	Parents	Buses	Staff	Student Dvr	Trips
IN	9	1	7	44	61	9				9
OUT	9				9	9	1	7	55	72
			AM 12th Trips		71			PM 12th Trips		81

All AM TRIPS	In	202
	Out	107
	Total	309

All PM TRIPS	In	83
	Out	193
	Total	276

ADT
283
150
152
585

NOTES

- **Average Queue Length does not** include an alternative traffic pattern required for high traffic demand days which is usually 30% additional length.
- **Average Queue Length does not** include the Student Loading Zone.
- Peak traffic volumes at schools normally occur within a 30-minute time period. (justifying a PHF of 0.5)

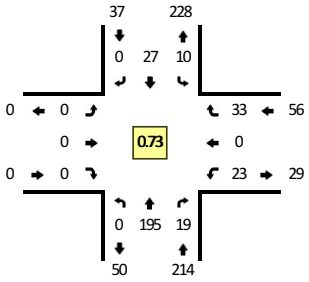
Calculated 7/11/2023 By:_____

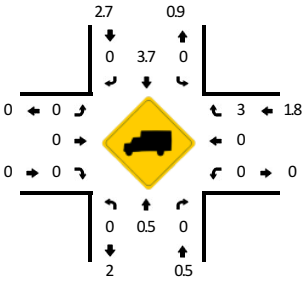
Appendix C:
Traffic Count Data

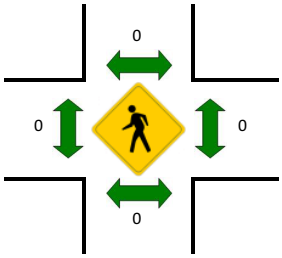
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

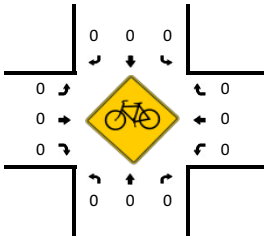
LOCATION: Old Airport Rd -- Grantham Rd | **QC JOB #:** 16180801
CITY/STATE: James City, NC | **DATE:** Wed, May 3 2023

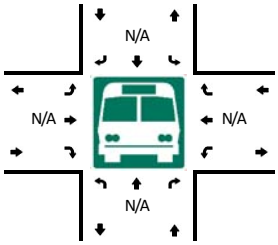
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

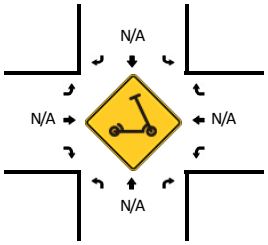












5-Min Count Period Beginning At	Old Airport Rd (Northbound)				Old Airport Rd (Southbound)				Grantham Rd (Eastbound)				Grantham Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	6	3	0	1	2	0	0	0	0	0	0	3	0	3	0	18	
7:05 AM	0	11	0	0	0	0	0	0	0	0	0	0	2	0	0	0	13	
7:10 AM	0	4	0	0	0	0	0	0	0	0	0	0	2	0	0	0	6	
7:15 AM	0	14	0	0	0	2	0	0	0	0	0	0	2	0	1	0	19	
7:20 AM	0	14	4	0	1	1	0	0	0	0	0	0	1	0	5	0	26	
7:25 AM	0	9	0	0	0	2	0	0	0	0	0	0	0	0	1	0	12	
7:30 AM	0	20	2	0	1	2	0	0	0	0	0	0	0	0	1	0	26	
7:35 AM	0	21	0	0	0	0	0	0	0	0	0	0	2	0	5	0	28	
7:40 AM	0	13	3	0	1	4	0	0	0	0	0	0	5	0	4	0	30	
7:45 AM	0	18	3	0	2	4	0	0	0	0	0	0	0	0	4	0	31	
7:50 AM	0	22	3	0	2	3	0	0	0	0	0	0	6	0	4	0	40	
7:55 AM	0	21	1	0	2	4	0	0	0	0	0	0	2	0	4	0	34	283
8:00 AM	0	19	2	0	0	2	0	0	0	0	0	0	4	0	2	0	29	294
8:05 AM	0	15	1	0	1	1	0	0	0	0	0	0	1	0	2	0	21	302
8:10 AM	0	9	0	0	0	2	0	0	0	0	0	0	0	0	0	0	11	307
8:15 AM	0	8	0	0	0	5	0	0	0	0	0	0	4	0	2	0	19	307
8:20 AM	0	13	0	0	0	6	0	0	0	0	0	0	1	0	3	0	23	304
8:25 AM	0	11	0	0	0	2	0	0	0	0	0	0	0	0	2	0	15	307
8:30 AM	0	11	0	0	1	5	0	0	0	0	0	0	3	0	1	0	21	302
8:35 AM	0	9	1	0	2	2	0	0	0	0	0	0	2	0	1	0	17	291
8:40 AM	0	16	1	0	0	3	0	0	0	0	0	0	0	0	3	0	23	284
8:45 AM	0	16	1	0	0	3	0	0	0	0	0	0	4	0	0	0	24	277
8:50 AM	0	9	0	0	0	3	0	0	0	0	0	0	4	0	2	0	18	255
8:55 AM	0	8	1	0	0	1	0	0	0	0	0	0	4	0	2	0	16	237

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	244	28	0	24	44	0	0	0	0	0	0	32	0	48	0	420
Heavy Trucks	0	0	0		0	4	0		0	0	0		0	0	4		8
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

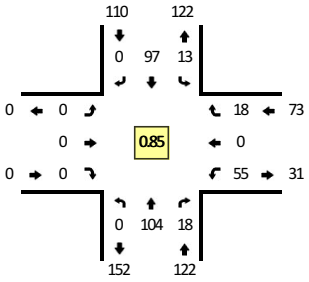
Comments:

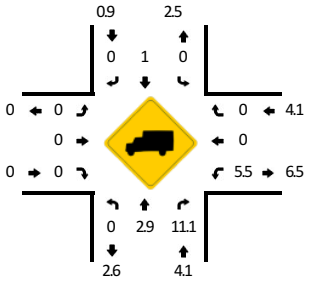
Report generated on 5/9/2023 7:24 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

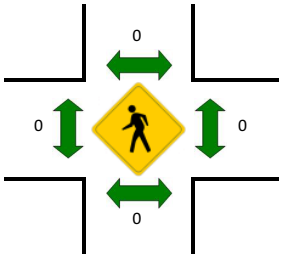
LOCATION: Old Airport Rd -- Grantham Rd | **QC JOB #:** 16180802
CITY/STATE: James City, NC | **DATE:** Wed, May 3 2023

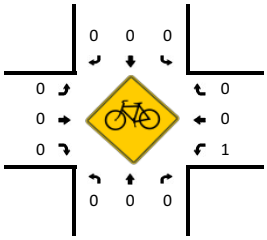
Peak-Hour: 3:00 PM -- 4:00 PM
Peak 15-Min: 3:10 PM -- 3:25 PM

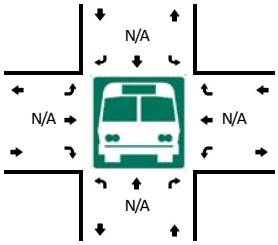


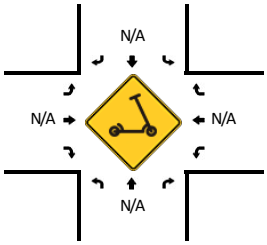


Quality Counts
DATA THAT DRIVES COMMUNITIES









5-Min Count Period Beginning At	Old Airport Rd (Northbound)				Old Airport Rd (Southbound)				Grantham Rd (Eastbound)				Grantham Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
2:00 PM	0	7	1	0	2	4	0	0	0	0	0	0	1	0	0	0	15	
2:05 PM	0	7	1	0	1	4	0	0	0	0	0	0	4	0	2	0	19	
2:10 PM	0	4	0	0	1	4	0	0	0	0	0	0	3	0	5	0	17	
2:15 PM	0	3	0	0	0	9	0	0	0	0	0	0	3	0	0	0	15	
2:20 PM	0	4	1	0	1	4	0	0	0	0	0	0	4	0	3	0	17	
2:25 PM	0	6	0	0	1	7	0	0	0	0	0	0	1	0	1	0	16	
2:30 PM	0	8	0	0	1	6	0	0	0	0	0	0	6	0	0	0	21	
2:35 PM	0	10	1	0	2	9	0	0	0	0	0	0	2	0	3	0	27	
2:40 PM	0	9	0	0	4	6	0	0	0	0	0	0	6	0	2	0	27	
2:45 PM	0	5	2	0	0	5	0	0	0	0	0	0	1	0	2	0	15	
2:50 PM	0	6	1	0	0	14	0	0	0	0	0	0	4	0	3	0	28	
2:55 PM	0	5	0	0	0	6	0	0	0	0	0	0	3	0	2	0	16	233
3:00 PM	0	10	2	0	3	9	0	0	0	0	0	0	2	0	0	0	26	244
3:05 PM	0	7	0	0	0	8	0	0	0	0	0	0	3	0	0	0	18	243
3:10 PM	0	12	3	0	2	9	0	0	0	0	0	0	5	0	0	0	31	257
3:15 PM	0	10	1	0	0	9	0	0	0	0	0	0	7	0	0	0	27	269
3:20 PM	0	7	4	0	0	11	0	0	0	0	0	0	8	0	2	0	32	284
3:25 PM	0	8	3	0	2	9	0	0	0	0	0	0	5	0	1	0	28	296
3:30 PM	0	11	1	0	2	7	0	0	0	0	0	0	5	0	0	0	26	301
3:35 PM	0	4	1	0	0	9	0	0	0	0	0	0	6	0	4	0	24	298
3:40 PM	0	12	0	0	1	7	0	0	0	0	0	0	3	0	4	0	27	298
3:45 PM	0	5	1	0	0	3	0	0	0	0	0	0	3	0	2	0	14	297
3:50 PM	0	7	0	0	2	8	0	0	0	0	0	0	2	0	0	0	19	288
3:55 PM	0	11	2	0	1	8	0	0	0	0	0	0	6	0	5	0	33	305

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	116	32	0	8	116	0	0	0	0	0	0	80	0	8	0	360
Heavy Trucks	0	4	0		0	0	0		0	0	0		4	0	0		8
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		4	0	0		4
Scooters																	

Comments:

Report generated on 5/9/2023 7:25 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

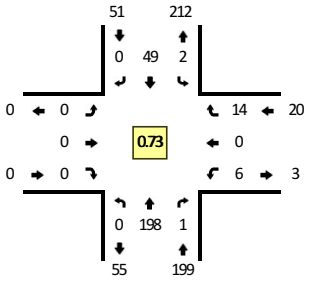
Type of peak hour being reported: Intersection Peak

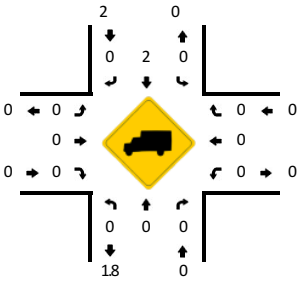
Method for determining peak hour: Total Entering Volume

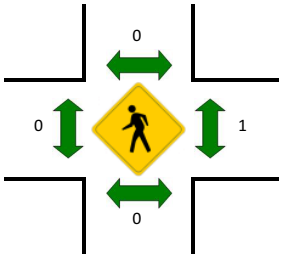
LOCATION: Old Airport Rd -- Hidden Pond Dr
CITY/STATE: James City, NC

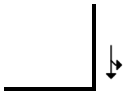
QC JOB #: 16180803
DATE: Wed, May 3 2023

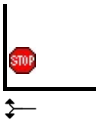
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

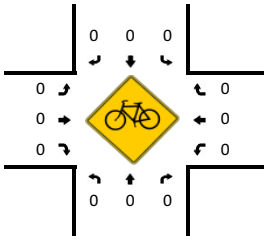


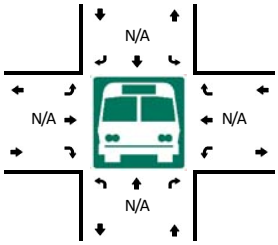


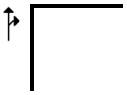


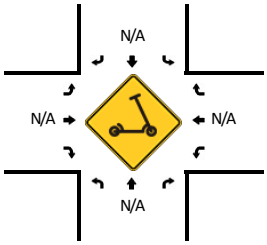












5-Min Count Period Beginning At	Old Airport Rd (Northbound)				Old Airport Rd (Southbound)				Hidden Pond Dr (Eastbound)				Hidden Pond Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	5	1	0	2	3	0	0	0	0	0	0	0	0	1	0	12	
7:05 AM	0	10	0	0	0	2	0	0	0	0	0	0	1	0	3	0	16	
7:10 AM	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	0	5	
7:15 AM	0	14	0	0	0	4	0	0	0	0	0	0	0	0	1	0	19	
7:20 AM	0	15	0	0	1	1	0	0	0	0	0	0	0	0	2	0	19	
7:25 AM	0	9	0	0	0	2	0	0	0	0	0	0	0	0	0	0	11	
7:30 AM	0	20	0	0	0	2	0	0	0	0	0	0	0	0	2	0	24	
7:35 AM	0	17	0	0	0	2	0	0	0	0	0	0	2	0	2	0	23	
7:40 AM	0	14	0	0	0	10	0	0	0	0	0	0	1	0	1	0	26	
7:45 AM	0	19	1	0	0	6	0	0	0	0	0	0	0	0	3	0	29	
7:50 AM	0	26	0	0	1	7	0	0	0	0	0	0	1	0	0	0	35	
7:55 AM	0	21	0	0	0	6	0	0	0	0	0	0	1	0	1	0	29	248
8:00 AM	0	20	0	0	0	6	0	0	0	0	0	0	1	0	2	0	29	265
8:05 AM	0	16	0	0	0	1	0	0	0	0	0	0	0	0	0	0	17	266
8:10 AM	0	7	0	0	0	2	0	0	0	0	0	0	0	0	0	0	9	270
8:15 AM	0	7	0	0	1	7	0	0	0	0	0	0	0	0	0	0	15	266
8:20 AM	0	10	0	0	0	9	0	0	0	0	0	0	0	0	1	0	20	267
8:25 AM	0	10	0	0	0	2	0	0	0	0	0	0	0	0	0	0	12	268
8:30 AM	0	11	0	0	0	8	0	0	0	0	0	0	0	0	0	0	19	263
8:35 AM	0	9	0	0	0	4	0	0	0	0	0	0	0	0	1	0	14	254
8:40 AM	0	13	0	0	0	3	0	0	0	0	0	0	1	0	3	0	20	248
8:45 AM	0	16	0	0	0	7	0	0	0	0	0	0	0	0	0	0	23	242
8:50 AM	0	8	0	0	1	4	0	0	0	0	0	0	0	0	1	0	14	221
8:55 AM	0	8	0	0	0	5	0	0	0	0	0	0	0	0	1	0	14	206

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	264	4	0	4	76	0	0	0	0	0	0	8	0	16	0	372
Heavy Trucks	0	0	0		0	4	0		0	0	0		0	0	0		4
Buses																	
Pedestrians		0				0				0				4			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 5/9/2023 7:25 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

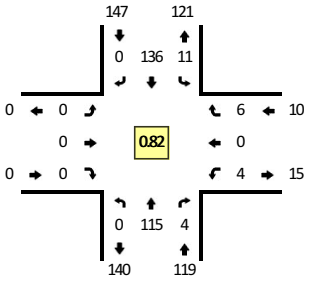
Type of peak hour being reported: Intersection Peak

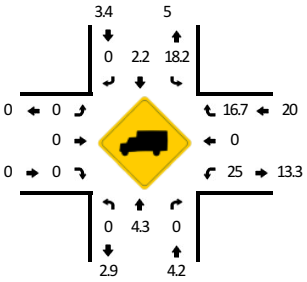
Method for determining peak hour: Total Entering Volume

LOCATION: Old Airport Rd -- Hidden Pond Dr
CITY/STATE: James City, NC

QC JOB #: 16180804
DATE: Wed, May 3 2023

Peak-Hour: 3:00 PM -- 4:00 PM
Peak 15-Min: 3:10 PM -- 3:25 PM





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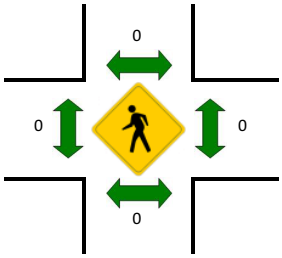
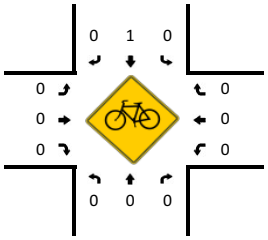
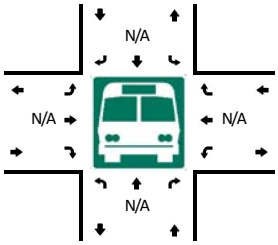
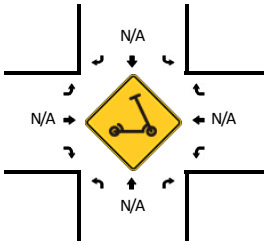








5-Min Count Period Beginning At	Old Airport Rd (Northbound)				Old Airport Rd (Southbound)				Hidden Pond Dr (Eastbound)				Hidden Pond Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
2:00 PM	0	9	0	0	0	5	0	0	0	0	0	0	2	0	0	0	16	
2:05 PM	0	7	0	0	0	7	0	0	0	0	0	0	0	0	1	0	15	
2:10 PM	0	3	0	0	2	6	0	0	0	0	0	0	0	0	0	0	11	
2:15 PM	0	3	0	0	0	11	0	0	0	0	0	0	0	0	0	0	14	
2:20 PM	0	5	0	0	0	8	0	0	0	0	0	0	1	0	0	0	14	
2:25 PM	0	6	0	0	1	6	0	0	0	0	0	0	0	0	0	0	13	
2:30 PM	0	8	0	0	0	11	0	0	0	0	0	0	0	0	0	0	19	
2:35 PM	0	9	0	0	0	13	0	0	0	0	0	0	0	0	1	0	23	
2:40 PM	0	10	0	0	1	12	0	0	0	0	0	0	0	0	0	0	23	
2:45 PM	0	8	0	0	0	5	0	0	0	0	0	0	0	0	0	0	13	
2:50 PM	0	8	0	0	2	15	0	0	0	0	0	0	0	0	0	0	25	
2:55 PM	0	5	0	0	0	10	0	0	0	0	0	0	1	0	0	0	16	202
3:00 PM	0	12	0	0	1	9	0	0	0	0	0	0	0	0	0	0	22	208
3:05 PM	0	9	0	0	2	9	0	0	0	0	0	0	0	0	0	0	20	213
3:10 PM	0	14	0	0	1	13	0	0	0	0	0	0	0	0	1	0	29	231
3:15 PM	0	8	0	0	0	15	0	0	0	0	0	0	0	0	2	0	25	242
3:20 PM	0	11	0	0	1	18	0	0	0	0	0	0	0	0	0	0	30	258
3:25 PM	0	11	0	0	1	11	0	0	0	0	0	0	1	0	0	0	24	269
3:30 PM	0	11	0	0	1	11	0	0	0	0	0	0	0	0	2	0	25	275
3:35 PM	0	3	1	0	0	13	0	0	0	0	0	0	0	0	0	0	17	269
3:40 PM	0	12	1	0	2	9	0	0	0	0	0	0	0	0	0	0	24	270
3:45 PM	0	7	0	0	0	7	0	0	0	0	0	0	1	0	0	0	15	272
3:50 PM	0	6	1	0	2	6	0	0	0	0	0	0	1	0	0	0	16	263
3:55 PM	0	11	1	0	0	15	0	0	0	0	0	0	1	0	1	0	29	276

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	132	0	0	8	184	0	0	0	0	0	0	0	0	12	0	336
Heavy Trucks	0	4	0		0	4	0		0	0	0		0	0	0		8
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	4	0		0	0	0		0	0	0		4
Scooters																	

Comments:

Report generated on 5/9/2023 7:25 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

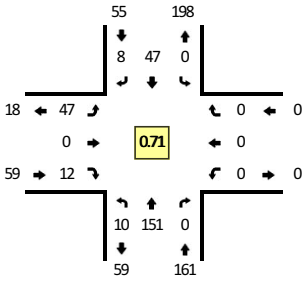
Type of peak hour being reported: Intersection Peak

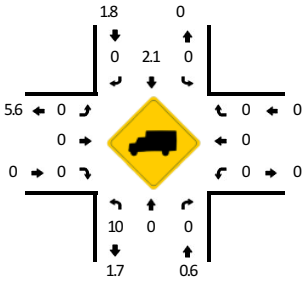
Method for determining peak hour: Total Entering Volume

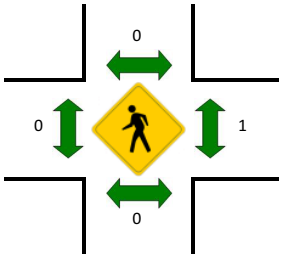
LOCATION: Old Airport Rd -- Conner Grant Rd
CITY/STATE: New Bern, NC

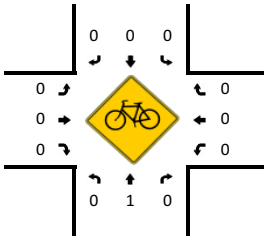
QC JOB #: 16180805
DATE: Wed, May 3 2023

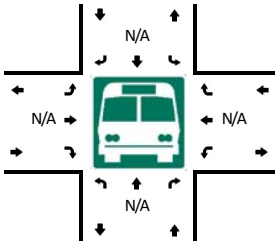
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:50 AM -- 8:05 AM

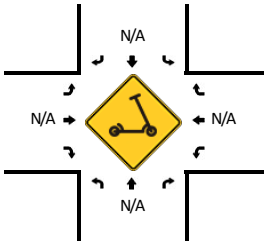












5-Min Count Period Beginning At	Old Airport Rd (Northbound)				Old Airport Rd (Southbound)				Conner Grant Rd (Eastbound)				Conner Grant Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	1	5	0	0	0	3	0	0	1	0	2	0	0	0	0	0	12	
7:05 AM	0	6	0	0	0	2	1	0	4	0	5	0	0	0	0	0	18	
7:10 AM	0	2	0	0	0	1	1	0	0	0	1	0	0	0	0	0	5	
7:15 AM	0	12	0	0	0	4	0	0	2	0	2	0	0	0	0	0	20	
7:20 AM	0	11	0	0	0	1	0	0	4	0	2	0	0	0	0	0	18	
7:25 AM	0	4	0	0	0	2	0	0	6	0	0	0	0	0	0	0	12	
7:30 AM	1	17	0	0	0	2	0	0	3	0	1	0	0	0	0	0	24	
7:35 AM	1	12	0	0	0	4	0	0	4	0	2	0	0	0	0	0	23	
7:40 AM	0	9	0	0	0	10	0	0	6	0	1	0	0	0	0	0	26	
7:45 AM	1	14	0	0	0	6	1	0	5	0	1	0	0	0	0	0	28	
7:50 AM	4	21	0	0	0	4	4	0	5	0	3	0	0	0	0	0	41	
7:55 AM	0	17	0	0	0	6	1	0	3	0	0	0	0	0	0	0	27	254
8:00 AM	2	17	0	0	0	6	1	0	3	0	0	0	0	0	0	0	29	271
8:05 AM	0	12	0	0	0	1	0	0	4	0	0	0	0	0	0	0	17	270
8:10 AM	1	5	0	0	0	1	1	0	2	0	0	0	0	0	0	0	10	275
8:15 AM	1	7	0	0	0	5	0	0	1	0	0	0	0	0	0	0	14	269
8:20 AM	0	8	0	0	0	7	3	0	2	0	0	0	0	0	0	0	20	271
8:25 AM	0	9	0	0	0	2	1	0	1	0	0	0	0	0	0	0	13	272
8:30 AM	0	9	0	0	0	6	2	0	3	0	0	0	0	0	0	0	20	268
8:35 AM	0	7	0	0	0	4	0	0	2	0	0	0	0	0	0	0	13	258
8:40 AM	0	11	0	0	0	4	0	0	2	0	1	0	0	0	0	0	18	250
8:45 AM	0	10	0	0	0	6	1	0	5	0	1	0	0	0	0	0	23	245
8:50 AM	0	7	0	0	0	4	0	0	1	0	1	0	0	0	0	0	13	217
8:55 AM	0	6	0	0	0	4	1	0	2	0	0	0	0	0	0	0	13	203

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	24	220	0	0	0	64	24	0	44	0	12	0	0	0	0	0	388
Heavy Trucks	4	0	0		0	0	0		0	0	0		0	0	0		4
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

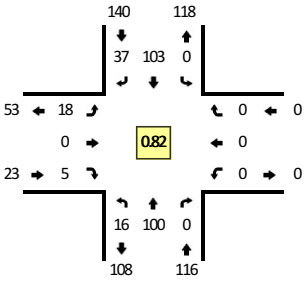
Report generated on 5/9/2023 7:25 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

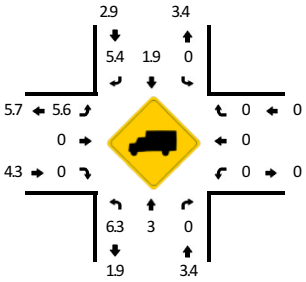
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

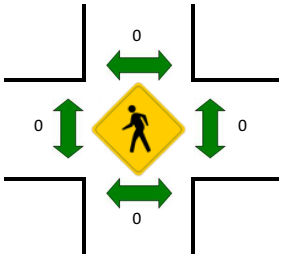
LOCATION: Old Airport Rd -- Conner Grant Rd | **QC JOB #:** 16180806
CITY/STATE: New Bern, NC | **DATE:** Wed, May 3 2023

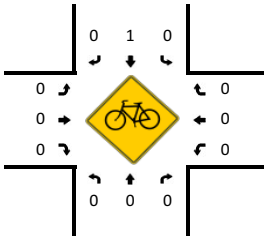
Peak-Hour: 3:00 PM -- 4:00 PM
Peak 15-Min: 3:10 PM -- 3:25 PM

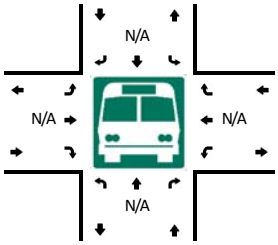


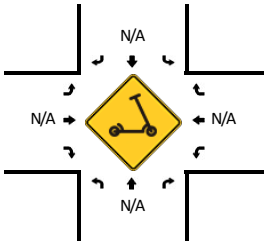
Quality Counts
DATA THAT DRIVES COMMUNITIES











5-Min Count Period Beginning At	Old Airport Rd (Northbound)				Old Airport Rd (Southbound)				Conner Grant Rd (Eastbound)				Conner Grant Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
2:00 PM	0	8	0	0	0	6	1	0	0	0	0	0	0	0	0	0	15	
2:05 PM	1	5	0	0	0	5	2	0	2	0	0	0	0	0	0	0	15	
2:10 PM	0	2	0	0	0	6	0	0	0	0	0	0	0	0	0	0	8	
2:15 PM	0	3	0	0	0	9	2	0	0	0	0	0	0	0	0	0	14	
2:20 PM	0	4	0	0	0	7	2	0	1	0	2	0	0	0	0	0	16	
2:25 PM	0	5	0	0	0	4	2	0	1	0	0	0	0	0	0	0	12	
2:30 PM	0	8	0	0	0	8	3	0	0	0	1	0	0	0	0	0	20	
2:35 PM	0	6	0	0	0	12	1	0	2	0	1	0	0	0	0	0	22	
2:40 PM	1	8	0	0	0	9	2	0	2	0	0	0	0	0	0	0	22	
2:45 PM	0	7	0	0	0	5	0	0	1	0	0	0	0	0	0	0	13	
2:50 PM	0	6	0	0	0	11	4	0	2	0	0	0	0	0	0	0	23	
2:55 PM	0	4	0	0	0	9	2	0	1	0	1	0	0	0	0	0	17	197
3:00 PM	0	10	0	0	0	8	0	0	3	0	0	0	0	0	0	0	21	203
3:05 PM	3	8	0	0	0	6	3	0	0	0	0	0	0	0	0	0	20	208
3:10 PM	1	14	0	0	0	5	7	0	1	0	0	0	0	0	0	0	28	228
3:15 PM	2	6	0	0	0	10	6	0	0	0	0	0	0	0	0	0	24	238
3:20 PM	2	8	0	0	0	11	8	0	3	0	1	0	0	0	0	0	33	255
3:25 PM	1	9	0	0	0	11	1	0	2	0	0	0	0	0	0	0	24	267
3:30 PM	1	8	0	0	0	9	1	0	3	0	0	0	0	0	0	0	22	269
3:35 PM	1	3	0	0	0	12	2	0	2	0	0	0	0	0	0	0	20	267
3:40 PM	1	11	0	0	0	8	1	0	1	0	2	0	0	0	0	0	24	269
3:45 PM	0	6	0	0	0	6	1	0	1	0	1	0	0	0	0	0	15	271
3:50 PM	2	7	0	0	0	6	2	0	0	0	1	0	0	0	0	0	18	266
3:55 PM	2	10	0	0	0	11	5	0	2	0	0	0	0	0	0	0	30	279

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	20	112	0	0	0	104	84	0	16	0	4	0	0	0	0	0	340
Heavy Trucks	0	4	0		0	0	4		0	0	0		0	0	0		8
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	4	0		0	0	0		0	0	0		4
Scooters																	

Comments:

Report generated on 5/9/2023 7:25 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

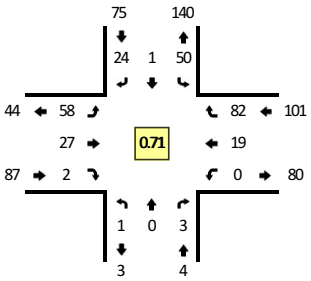
Type of peak hour being reported: Intersection Peak

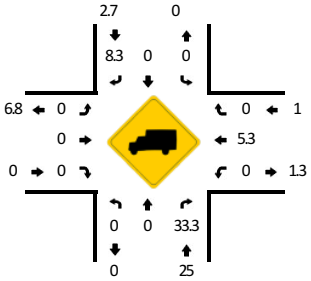
Method for determining peak hour: Total Entering Volume

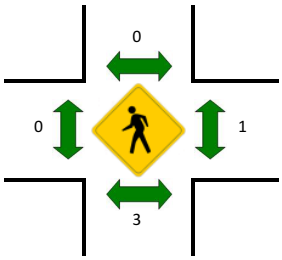
LOCATION: Old Airport Rd -- Taberna Way
CITY/STATE: New Bern, NC

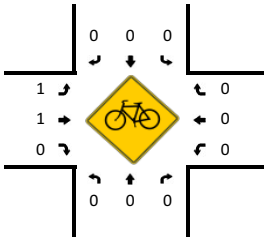
QC JOB #: 16301901
DATE: Thu, Sep 7 2023

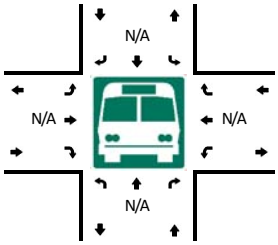
Peak-Hour: 7:20 AM -- 8:20 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

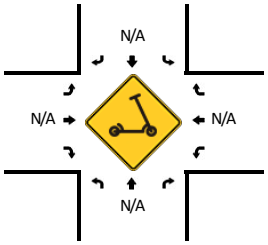












5-Min Count Period Beginning At	Old Airport Rd (Northbound)				Old Airport Rd (Southbound)				Taberna Way (Eastbound)				Taberna Way (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	2	0	0	1	5	4	0	0	0	0	1	0	13	
7:05 AM	0	0	0	0	2	0	3	0	9	5	0	0	0	0	3	0	22	
7:10 AM	0	0	0	0	3	0	2	0	4	3	0	0	0	2	1	0	15	
7:15 AM	0	0	0	0	2	0	0	0	2	2	0	0	0	1	1	0	8	
7:20 AM	0	0	0	0	6	0	1	0	5	5	0	0	0	0	3	0	20	
7:25 AM	0	0	0	0	6	0	3	0	1	2	0	0	0	1	2	0	15	
7:30 AM	0	0	0	0	1	0	2	0	4	1	1	0	0	0	6	0	15	
7:35 AM	0	0	1	0	7	0	2	0	3	1	0	0	0	1	5	0	20	
7:40 AM	0	0	1	0	6	1	3	0	4	2	0	0	0	0	3	0	20	
7:45 AM	0	0	0	0	3	0	1	0	6	3	0	0	0	3	11	0	27	
7:50 AM	0	0	0	0	5	0	1	0	8	0	0	0	0	0	18	0	32	
7:55 AM	0	0	0	0	3	0	1	0	12	3	0	0	0	5	11	0	35	242
8:00 AM	0	0	0	0	3	0	2	0	4	5	0	0	0	4	7	0	25	254
8:05 AM	1	0	0	0	3	0	1	0	1	2	0	0	0	0	5	0	13	245
8:10 AM	0	0	1	0	2	0	1	0	5	3	1	0	0	2	7	0	22	252
8:15 AM	0	0	0	0	5	0	6	0	5	0	0	0	0	3	4	0	23	267
8:20 AM	0	0	0	0	0	0	1	0	2	3	0	0	1	1	2	0	10	257
8:25 AM	0	0	0	0	5	1	0	0	2	3	0	0	0	3	4	0	18	260
8:30 AM	0	0	0	0	1	1	5	0	5	0	1	0	0	0	5	0	18	263
8:35 AM	0	0	0	0	2	0	1	0	6	2	0	0	0	0	3	0	14	257
8:40 AM	0	0	0	0	4	0	3	0	5	2	0	0	0	0	4	0	18	255
8:45 AM	0	0	0	0	2	0	0	0	4	1	1	0	0	1	3	0	12	240
8:50 AM	0	0	0	0	2	0	1	0	2	0	3	0	0	0	5	0	13	221
8:55 AM	0	0	0	0	2	0	2	0	0	4	0	0	0	1	5	0	14	200

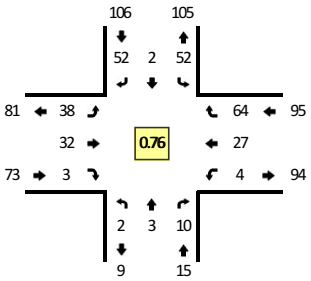
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	44	0	12	0	104	24	0	0	0	32	160	0	376
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	4	0		4
Buses																	
Pedestrians		4				0				0				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

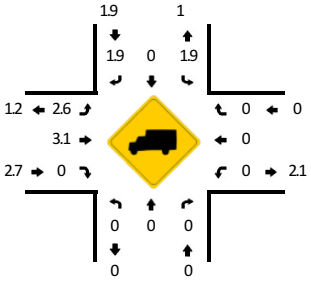
Comments:

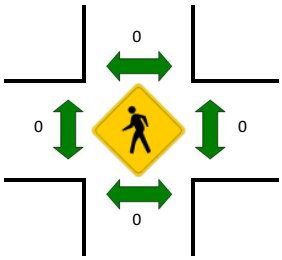
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

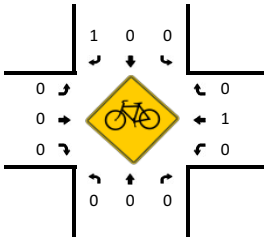
LOCATION: Old Airport Rd -- Taberna Way | **QC JOB #:** 16301902
CITY/STATE: New Bern, NC | **DATE:** Thu, Sep 7 2023

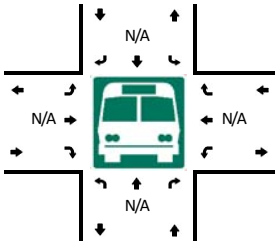
Peak-Hour: 3:00 PM -- 4:00 PM
Peak 15-Min: 3:45 PM -- 4:00 PM

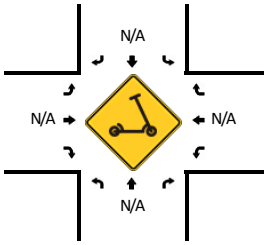












5-Min Count Period Beginning At	Old Airport Rd (Northbound)				Old Airport Rd (Southbound)				Taberna Way (Eastbound)				Taberna Way (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
2:00 PM	0	0	0	0	6	1	2	0	1	2	1	0	0	4	2	0	19	
2:05 PM	0	1	1	0	2	0	3	0	0	3	0	0	0	0	1	0	11	
2:10 PM	0	0	3	0	7	1	4	0	2	0	1	0	0	4	3	0	25	
2:15 PM	0	1	0	0	3	0	3	0	1	2	1	0	1	2	2	0	16	
2:20 PM	0	0	0	0	3	0	3	0	1	1	0	0	0	0	2	0	10	
2:25 PM	1	0	1	0	3	1	3	0	1	0	0	0	0	4	2	0	16	
2:30 PM	0	0	1	0	8	0	4	0	2	4	0	0	2	1	4	0	26	
2:35 PM	0	0	0	0	2	0	2	0	0	2	0	0	0	0	5	0	11	
2:40 PM	0	0	0	0	4	0	3	0	2	2	0	0	0	1	1	0	13	
2:45 PM	0	0	0	0	4	0	3	0	1	1	0	0	0	2	0	0	11	
2:50 PM	0	0	0	0	1	0	3	0	4	2	0	0	0	3	5	0	18	
2:55 PM	0	0	0	0	1	0	7	0	2	0	0	0	0	3	3	0	16	192
3:00 PM	0	0	0	0	4	0	4	0	4	4	0	0	0	2	4	0	22	195
3:05 PM	0	0	1	0	3	0	2	0	2	1	1	0	1	4	3	0	18	202
3:10 PM	0	1	0	0	3	0	3	0	4	3	0	0	0	1	11	0	26	203
3:15 PM	0	0	0	0	5	1	3	0	1	0	1	0	0	1	7	0	19	206
3:20 PM	0	0	1	0	3	0	8	0	1	0	0	0	2	1	10	0	26	222
3:25 PM	0	0	1	0	5	1	3	0	2	2	0	0	0	3	2	0	19	225
3:30 PM	0	0	1	0	4	0	5	0	6	5	0	0	0	2	3	0	26	225
3:35 PM	1	0	1	0	1	0	3	0	1	4	0	0	0	4	6	0	21	235
3:40 PM	0	1	0	0	3	0	3	0	3	1	0	0	0	2	4	0	17	239
3:45 PM	1	1	4	0	7	0	8	0	7	5	1	0	0	2	8	0	44	272
3:50 PM	0	0	1	0	3	0	3	0	3	5	0	0	1	3	4	0	23	277
3:55 PM	0	0	0	0	11	0	7	0	4	2	0	0	0	2	2	0	28	289

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	4	20	0	84	0	72	0	56	48	4	0	4	28	56	0	380
Heavy Trucks	0	0	0		4	0	0		0	0	0		0	0	0		4
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	4		0	0	0		0	0	0		4
Scooters																	

Comments:

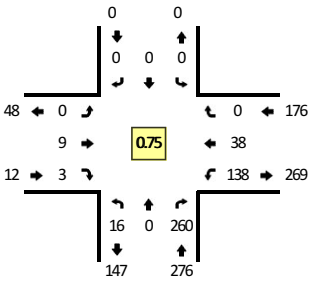
Type of peak hour being reported: Intersection Peak

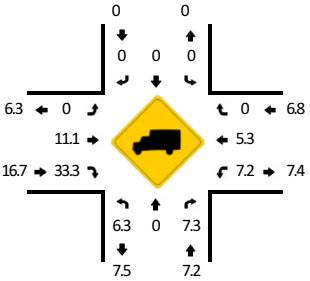
Method for determining peak hour: Total Entering Volume

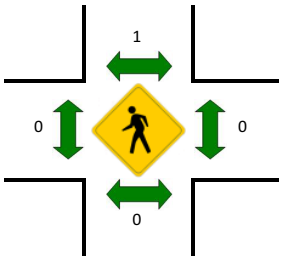
LOCATION: Old Airport Rd -- Airport Rd
CITY/STATE: James City, NC

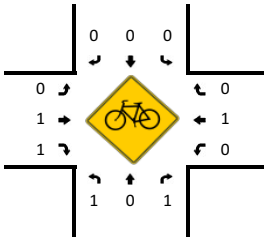
QC JOB #: 16301903
DATE: Thu, Sep 7 2023

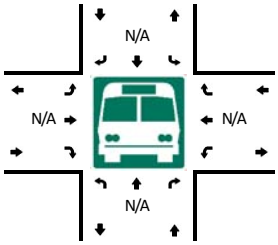
Peak-Hour: 7:05 AM -- 8:05 AM
Peak 15-Min: 7:50 AM -- 8:05 AM

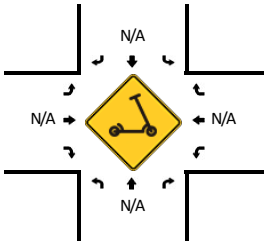












5-Min Count Period Beginning At	Old Airport Rd (Northbound)				Old Airport Rd (Southbound)				Airport Rd (Eastbound)				Airport Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	17	1	0	0	0	0	0	0	0	0	16	0	0	0	34	
7:05 AM	0	0	22	0	0	0	0	0	0	0	1	0	6	3	0	0	32	
7:10 AM	0	0	23	1	0	0	0	0	0	1	0	0	8	1	0	0	34	
7:15 AM	0	0	20	0	0	0	0	0	0	0	0	0	10	0	0	0	30	
7:20 AM	1	0	12	0	0	0	0	0	0	0	0	0	7	1	0	0	21	
7:25 AM	0	0	19	0	0	0	0	0	0	0	0	0	13	3	0	0	35	
7:30 AM	1	0	22	0	0	0	0	0	0	2	0	0	11	3	0	0	39	
7:35 AM	2	0	19	0	0	0	0	0	0	1	0	0	7	1	0	0	30	
7:40 AM	0	0	21	2	0	0	0	0	0	0	0	0	17	3	0	0	43	
7:45 AM	1	0	22	1	0	0	0	0	0	2	1	0	15	3	0	0	45	
7:50 AM	2	0	20	1	0	0	0	0	0	0	0	0	13	9	0	0	45	
7:55 AM	1	0	25	0	0	0	0	0	0	1	0	0	20	5	0	0	52	440
8:00 AM	2	0	35	1	0	0	0	0	0	2	1	0	11	6	0	0	58	464
8:05 AM	1	0	12	0	0	0	0	0	0	0	0	0	11	5	0	0	29	461
8:10 AM	0	0	13	1	0	0	0	0	0	0	0	0	11	2	0	0	27	454
8:15 AM	0	0	14	0	0	0	0	0	0	0	0	0	11	0	0	0	25	449
8:20 AM	0	0	11	0	0	0	0	0	0	0	0	0	8	1	0	0	20	448
8:25 AM	0	0	17	0	0	0	0	0	0	4	0	0	6	3	0	0	30	443
8:30 AM	0	0	17	0	0	0	0	0	0	2	0	0	7	2	0	0	28	432
8:35 AM	1	0	26	0	0	0	0	0	0	0	0	0	3	1	0	0	31	433
8:40 AM	0	0	23	0	0	0	0	0	0	0	1	0	8	1	0	0	33	423
8:45 AM	0	0	11	2	0	0	0	0	0	0	0	0	11	0	0	0	24	402
8:50 AM	1	0	11	0	0	0	0	0	0	1	0	0	7	1	0	0	21	378
8:55 AM	0	0	11	0	0	0	0	0	0	1	0	0	8	1	0	0	21	347

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	20	0	320	8	0	0	0	0	0	12	4	0	176	80	0	0	620
Heavy Trucks	0	0	4		0	0	0		0	4	0		20	8	0		36
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

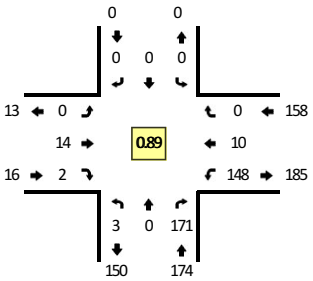
Type of peak hour being reported: Intersection Peak

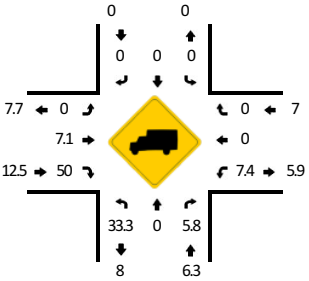
Method for determining peak hour: Total Entering Volume

LOCATION: Old Airport Rd -- Airport Rd
CITY/STATE: James City, NC

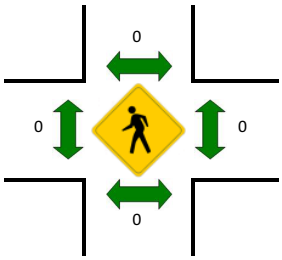
QC JOB #: 16301904
DATE: Thu, Sep 7 2023

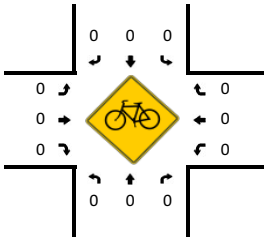
Peak-Hour: 2:55 PM -- 3:55 PM
Peak 15-Min: 3:40 PM -- 3:55 PM

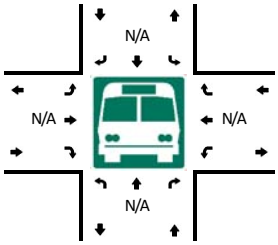


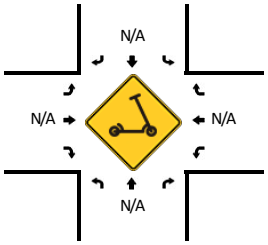


TRUE DATA TO IMPROVE MOBILITY









5-Min Count Period Beginning At	Old Airport Rd (Northbound)				Old Airport Rd (Southbound)				Airport Rd (Eastbound)				Airport Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
2:00 PM	2	0	8	0	0	0	0	0	0	1	0	0	10	3	0	0	24	
2:05 PM	0	0	10	0	0	0	0	0	0	3	0	0	11	1	0	0	25	
2:10 PM	1	0	9	0	0	0	0	0	0	0	1	0	11	0	0	0	22	
2:15 PM	0	0	12	1	0	0	0	0	0	3	0	0	7	3	0	0	26	
2:20 PM	0	0	8	0	0	0	0	0	0	1	0	0	5	3	0	0	17	
2:25 PM	0	0	9	0	0	0	0	0	0	2	0	0	6	1	0	0	18	
2:30 PM	0	0	7	0	0	0	0	0	0	3	0	0	10	1	0	1	22	
2:35 PM	0	0	11	0	0	0	0	0	0	2	0	0	7	0	0	0	20	
2:40 PM	0	0	9	0	0	0	0	0	0	1	0	0	5	1	0	0	16	
2:45 PM	1	0	14	0	0	0	0	0	0	0	0	0	8	1	0	0	24	
2:50 PM	0	0	14	0	0	0	0	0	0	0	1	0	10	2	0	0	27	
2:55 PM	0	0	13	0	0	0	0	0	0	1	0	0	9	2	0	0	25	266
3:00 PM	1	0	12	0	0	0	0	0	0	2	2	0	15	0	0	0	32	274
3:05 PM	0	0	13	0	0	0	0	0	0	3	0	0	10	1	0	0	27	276
3:10 PM	0	0	12	0	0	0	0	0	0	0	0	0	12	0	0	0	24	278
3:15 PM	0	0	14	0	0	0	0	0	0	0	0	0	13	0	0	0	27	279
3:20 PM	1	0	17	0	0	0	0	0	0	2	0	0	11	0	0	0	31	293
3:25 PM	0	0	12	0	0	0	0	0	0	0	0	0	13	0	0	0	25	300
3:30 PM	0	0	14	0	0	0	0	0	0	0	0	0	10	2	0	0	26	304
3:35 PM	0	0	17	0	0	0	0	0	0	1	0	0	15	0	0	0	33	317
3:40 PM	0	0	10	0	0	0	0	0	0	2	0	0	16	2	0	0	30	331
3:45 PM	0	0	18	0	0	0	0	0	0	2	0	0	10	1	0	0	31	338
3:50 PM	1	0	19	0	0	0	0	0	0	1	0	0	14	2	0	0	37	348
3:55 PM	0	0	7	0	0	0	0	0	0	0	0	0	16	0	0	0	23	346

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	0	188	0	0	0	0	0	0	20	0	0	160	20	0	0	392
Heavy Trucks	0	0	8		0	0	0		0	0	0		8	0	0		16
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Appendix D:
Intersection Spreadsheets

INTERSECTION VOLUME DEVELOPMENT

INTERSECTION #1

Old Airport Road at -/W Grantham Road

AM PEAK HOUR

	Old Airport Road Northbound				Old Airport Road Southbound				- Eastbound				W Grantham Road Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2023 Traffic Volumes	0	0	195	19	0	10	27	0	0	0	0	0	0	23	0	33
Count Balancing																
Pedestrians			0				0				0				0	
Conflicting Pedestrians		0		0		0		0		0		0		0		0
Bicycles	0	0	0	0					0	0	0	0	0	0	0	0
Conflicting Bicycles				0				0				0				0
Heavy Vehicles	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	4%	2%	2%	2%	2%	2%	2%	2%	2%	3%
Peak Hour Factor			0.73				0.73				0.73				0.73	
Adjustment Factor	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Adjusted 2023 Volumes	0	0	195	19	0	10	27	0	0	0	0	0	0	23	0	33
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Background Growth	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Background PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
2024 No-Build Traffic	0	0	197	19	0	10	27	0	0	0	0	0	0	23	0	33
Trip Distribution IN							30%							40%		
Trip Distribution OUT			(30%)	(40%)												
Balancing Adjustment				1												
Lower School Trips	0	0	87	117	0	0	108	0	0	0	0	0	0	144	0	0
Total Vehicular Project Trips	0	0	87	117	0	0	108	0	0	0	0	0	0	144	0	0
Weighted Build PHF	0.90	0.90	0.66	0.53	0.90	0.73	0.55	0.90	0.90	0.90	0.90	0.90	0.90	0.53	0.90	0.73
2024 Build Traffic	0	0	284	136	0	10	135	0	0	0	0	0	0	167	0	33

School PM PEAK HOUR

	Old Airport Road Northbound				Old Airport Road Southbound				- Eastbound				W Grantham Road Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2023 Traffic Volumes	0	0	104	18	0	13	97	0	0	0	0	0	0	55	0	18
Count Balancing																
Pedestrians			0				0				0				0	
Conflicting Pedestrians		0		0		0		0		0		0		0		0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Conflicting Bicycles				0				0				0				0
Heavy Vehicles	0	0	3	2	0	0	1	0	0	0	0	0	0	3	0	0
Heavy Vehicle %	2%	2%	3%	11%	2%	2%	2%	2%	2%	2%	2%	2%	2%	5%	2%	2%
Peak Hour Factor			0.85				0.85				0.85				0.85	
Adjustment Factor	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Adjusted 2023 Volumes	0	0	104	18	0	13	97	0	0	0	0	0	0	55	0	18
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Background Growth	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0
Total Approved Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Background PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
2024 No-Build Traffic	0	0	105	18	0	13	98	0	0	0	0	0	0	56	0	18
Trip Distribution IN							30%							40%		
Trip Distribution OUT			(30%)	(40%)												
Balancing Adjustment																
Lower School Trips	0	0	82	109	0	0	61	0	0	0	0	0	0	82	0	0
Total Vehicular Project Trips	0	0	82	109	0	0	61	0	0	0	0	0	0	82	0	0
Weighted Build PHF	0.90	0.90	0.70	0.55	0.90	0.85	0.72	0.90	0.90	0.90	0.90	0.90	0.90	0.64	0.90	0.85
2024 Build Traffic	0	0	187	127	0	13	159	0	0	0	0	0	0	138	0	18

INTERSECTION VOLUME DEVELOPMENT

INTERSECTION #2

Old Airport Road at Site Driveway/Hidden Pond Drive

AM PEAK HOUR

	Old Airport Road Northbound				Old Airport Road Southbound				Site Driveway Eastbound				Hidden Pond Drive Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2023 Traffic Volumes	0	0	198	1	0	2	49	0	0	0	0	0	0	6	0	14
Count Balancing																
Pedestrians			0				0				0				1	
Conflicting Pedestrians		0		1		1		0		0		0		0		0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bicycles				0				0				0				0
Heavy Vehicles	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Peak Hour Factor			0.73				0.73				0.73				0.73	
Adjustment Factor	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Adjusted 2023 Volumes	0	0	198	1	0	2	49	0	0	0	0	0	0	6	0	14
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Background Growth	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Background PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
2024 No-Build Traffic	0	0	200	1	0	2	49	0	0	0	0	0	0	6	0	14
Trip Distribution IN		30%						70%								
Trip Distribution OUT										(70%)		(30%)				
Balancing Adjustment																
Lower School Trips	0	108	0	0	0	0	0	252	0	204	0	87	0	0	0	0
Total Vehicular Project Trips	0	108	0	0	0	0	0	252	0	204	0	87	0	0	0	0
Weighted Build PHF	0.90	0.50	0.73	0.73	0.90	0.73	0.73	0.50	0.90	0.50	0.50	0.50	0.90	0.73	0.50	0.73
2024 Build Traffic	0	108	200	1	0	2	49	252	0	204	0	87	0	6	0	14

School PM PEAK HOUR

	Old Airport Road Northbound				Old Airport Road Southbound				Site Driveway Eastbound				Hidden Pond Drive Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2023 Traffic Volumes	0	0	115	4	0	11	136	0	0	0	0	0	0	4	0	6
Count Balancing																
Pedestrians			0				0				0				0	
Conflicting Pedestrians		0		0		0		0		0		0		0		0
Bicycles	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Conflicting Bicycles				0				1				0				0
Heavy Vehicles	0	0	5	0	0	2	3	0	0	0	0	0	0	1	0	1
Heavy Vehicle %	2%	2%	4%	2%	2%	18%	2%	2%	2%	2%	2%	2%	2%	25%	2%	17%
Peak Hour Factor			0.82				0.82				0.82				0.82	
Adjustment Factor	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Adjusted 2023 Volumes	0	0	115	4	0	11	136	0	0	0	0	0	0	4	0	6
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Background Growth	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0
Total Approved Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Background PHF	0.90	0.90	0.90	0.90	0.90	0.50	0.90	0.50	0.90	0.50	0.90	0.90	0.90	0.90	0.90	0.50
2024 No-Build Traffic	0	0	116	4	0	11	137	0	0	0	0	0	0	4	0	6
Trip Distribution IN		30%						70%								
Trip Distribution OUT										(70%)		(30%)				
Balancing Adjustment																
Lower School Trips	0	61	0	0	0	0	0	143	0	191	0	82	0	0	0	0
Total Vehicular Project Trips	0	61	0	0	0	0	0	143	0	191	0	82	0	0	0	0
Weighted Build PHF	0.90	0.50	0.82	0.82	0.90	0.82	0.82	0.50	0.90	0.50	0.50	0.50	0.90	0.82	0.50	0.82
2024 Build Traffic	0	61	116	4	0	11	137	143	0	191	0	82	0	4	0	6

INTERSECTION VOLUME DEVELOPMENT

INTERSECTION #3

Old Airport Road at Conner Grant Road/-

AM PEAK HOUR

	Old Airport Road Northbound				Old Airport Road Southbound				Conner Grant Road Eastbound				- Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2023 Traffic Volumes	0	10	151	0	0	0	47	8	0	47	0	12	0	0	0	0
Count Balancing																
Pedestrians			0				0				0				1	
Conflicting Pedestrians		0		1		1		0		0		0		0		0
Bicycles	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bicycles				1				0				0				0
Heavy Vehicles	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Heavy Vehicle %	2%	10%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Peak Hour Factor			0.71				0.71				0.71				0.71	
Adjustment Factor	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Adjusted 2023 Volumes	0	10	151	0	0	0	47	8	0	47	0	12	0	0	0	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Background Growth	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Background PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
2024 No-Build Traffic	0	10	153	0	0	0	47	8	0	47	0	12	0	0	0	0
Trip Distribution IN			30%													
Trip Distribution OUT							(30%)									
Balancing Adjustment																
Lower School Trips	0	0	108	0	0	0	87	0	0	0	0	0	0	0	0	0
Total Vehicular Project Trips	0	0	108	0	0	0	87	0	0	0	0	0	0	0	0	0
Weighted Build PHF	0.90	0.71	0.62	0.90	0.90	0.90	0.57	0.71	0.90	0.71	0.90	0.71	0.90	0.90	0.90	0.90
2024 Build Traffic	0	10	261	0	0	0	134	8	0	47	0	12	0	0	0	0

School PM PEAK HOUR

	Old Airport Road Northbound				Old Airport Road Southbound				Conner Grant Road Eastbound				- Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2023 Traffic Volumes	0	16	100	0	0	0	103	37	0	18	0	5	0	0	0	0
Count Balancing																
Pedestrians			0				0				0				0	
Conflicting Pedestrians		0		0		0		0		0		0		0		0
Bicycles	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Conflicting Bicycles				0				1				0				0
Heavy Vehicles	0	1	3	0	0	0	2	2	0	1	0	0	0	0	0	0
Heavy Vehicle %	2%	6%	3%	2%	2%	2%	2%	5%	2%	6%	2%	2%	2%	2%	2%	2%
Peak Hour Factor			0.82				0.82				0.82				0.82	
Adjustment Factor	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Adjusted 2023 Volumes	0	16	100	0	0	0	103	37	0	18	0	5	0	0	0	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Background Growth	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0
Total Approved Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Background PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
2024 No-Build Traffic	0	16	101	0	0	0	104	37	0	18	0	5	0	0	0	0
Trip Distribution IN			30%													
Trip Distribution OUT							(30%)									
Balancing Adjustment																
Lower School Trips	0	0	61	0	0	0	82	0	0	0	0	0	0	0	0	0
Total Vehicular Project Trips	0	0	61	0	0	0	82	0	0	0	0	0	0	0	0	0
Weighted Build PHF	0.90	0.82	0.70	0.90	0.90	0.90	0.68	0.82	0.90	0.82	0.90	0.82	0.90	0.90	0.90	0.90
2024 Build Traffic	0	16	162	0	0	0	186	37	0	18	0	5	0	0	0	0

INTERSECTION VOLUME DEVELOPMENT

INTERSECTION #4

Airport Road at Old Airport Road/-

AM PEAK HOUR

	Old Airport Road Northbound				- Southbound				Airport Road Eastbound				Airport Road Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2023 Traffic Volumes	0	16	0	260	0	0	0	0	0	0	9	3	0	138	38	0
Count Balancing																
Pedestrians		0				1				0				0		
Conflicting Pedestrians		0		0		0		0		1		0		0		1
Bicycles	0	1	0	1	0	0	0	0	0	0	1	1	0	0	1	0
Conflicting Bicycles				0				0				1				1
Heavy Vehicles	0	1	0	19	0	0	0	0	0	0	1	1	0	10	2	0
Heavy Vehicle %	2%	6%	2%	7%	2%	2%	2%	2%	2%	2%	11%	33%	2%	7%	5%	2%
Peak Hour Factor		0.75				0.75				0.75				0.75		
Adjustment Factor	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Adjusted 2023 Volumes	0	16	0	260	0	0	0	0	0	0	9	3	0	138	38	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Background Growth	0	0	0	3	0	0	0	0	0	0	0	0	0	1	0	0
Total Approved Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Background PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
2024 No-Build Traffic	0	16	0	263	0	0	0	0	0	0	9	3	0	139	38	0
Trip Distribution IN														30%		
Trip Distribution OUT				(30%)												
Balancing Adjustment																
Lower School Trips	0	0	0	87	0	0	0	0	0	0	0	0	0	108	0	0
Total Vehicular Project Trips	0	0	0	87	0	0	0	0	0	0	0	0	0	108	0	0
Weighted Build PHF	0.90	0.75	0.90	0.69	0.90	0.90	0.90	0.90	0.90	0.90	0.75	0.75	0.90	0.64	0.75	0.90
2024 Build Traffic	0	16	0	350	0	0	0	0	0	0	9	3	0	247	38	0

School PM PEAK HOUR

	Old Airport Road Northbound				- Southbound				Airport Road Eastbound				Airport Road Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2023 Traffic Volumes	0	3	0	171	0	0	0	0	0	0	14	2	0	148	10	0
Count Balancing																
Pedestrians		0				0				0				0		
Conflicting Pedestrians		0		0		0		0		0		0		0		0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bicycles				0				0				0				0
Heavy Vehicles	0	1	0	10	0	0	0	0	0	0	1	1	0	11	0	0
Heavy Vehicle %	2%	33%	2%	6%	2%	2%	2%	2%	2%	2%	7%	50%	2%	7%	2%	2%
Peak Hour Factor		0.89				0.89				0.89				0.89		
Adjustment Factor	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Adjusted 2023 Volumes	0	3	0	171	0	0	0	0	0	0	14	2	0	148	10	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Background Growth	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0
Total Approved Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Background PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
2024 No-Build Traffic	0	3	0	173	0	0	0	0	0	0	14	2	0	149	10	0
Trip Distribution IN														30%		
Trip Distribution OUT				(30%)												
Balancing Adjustment																
Lower School Trips	0	0	0	82	0	0	0	0	0	0	0	0	0	61	0	0
Total Vehicular Project Trips	0	0	0	82	0	0	0	0	0	0	0	0	0	61	0	0
Weighted Build PHF	0.90	0.89	0.90	0.76	0.90	0.90	0.90	0.90	0.90	0.90	0.89	0.89	0.90	0.78	0.89	0.90
2024 Build Traffic	0	3	0	255	0	0	0	0	0	0	14	2	0	210	10	0

INTERSECTION VOLUME DEVELOPMENT

INTERSECTION #5

Taberna Way at Taberna Country Club Driveway/Old Airport Road

AM PEAK HOUR

	Taberna Country Club Driveway Northbound				Old Airport Road Southbound				Taberna Way Eastbound				Taberna Way Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2023 Traffic Volumes	0	1	0	3	0	50	1	24	0	58	27	2	0	0	19	82
Count Balancing																
Pedestrians		3				0				0				1		
Conflicting Pedestrians		0		1		1		0		0		3		3		0
Bicycles	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
Conflicting Bicycles				0				0				1				0
Heavy Vehicles	0	0	0	1	0	0	0	2	0	0	0	0	0	0	1	0
Heavy Vehicle %	2%	2%	2%	33%	2%	2%	2%	8%	2%	2%	2%	2%	2%	2%	5%	2%
Peak Hour Factor		0.71				0.71				0.71				0.71		
Adjustment Factor	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Adjusted 2023 Volumes	0	1	0	3	0	50	1	24	0	58	27	2	0	0	19	82
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Background Growth	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
Total Approved Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Background PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
2024 No-Build Traffic	0	1	0	3	0	51	1	24	0	59	27	2	0	0	19	83
Trip Distribution IN										5%						25%
Trip Distribution OUT						(25%)		(5%)								
Balancing Adjustment						-1										
Lower School Trips	0	0	0	0	0	72	0	15	0	18	0	0	0	0	0	90
Total Vehicular Project Trips	0	0	0	0	0	72	0	15	0	18	0	0	0	0	0	90
Weighted Build PHF	0.90	0.71	0.71	0.71	0.90	0.59	0.71	0.63	0.90	0.66	0.71	0.71	0.90	0.71	0.71	0.60
2024 Build Traffic	0	1	0	3	0	123	1	39	0	77	27	2	0	0	19	173

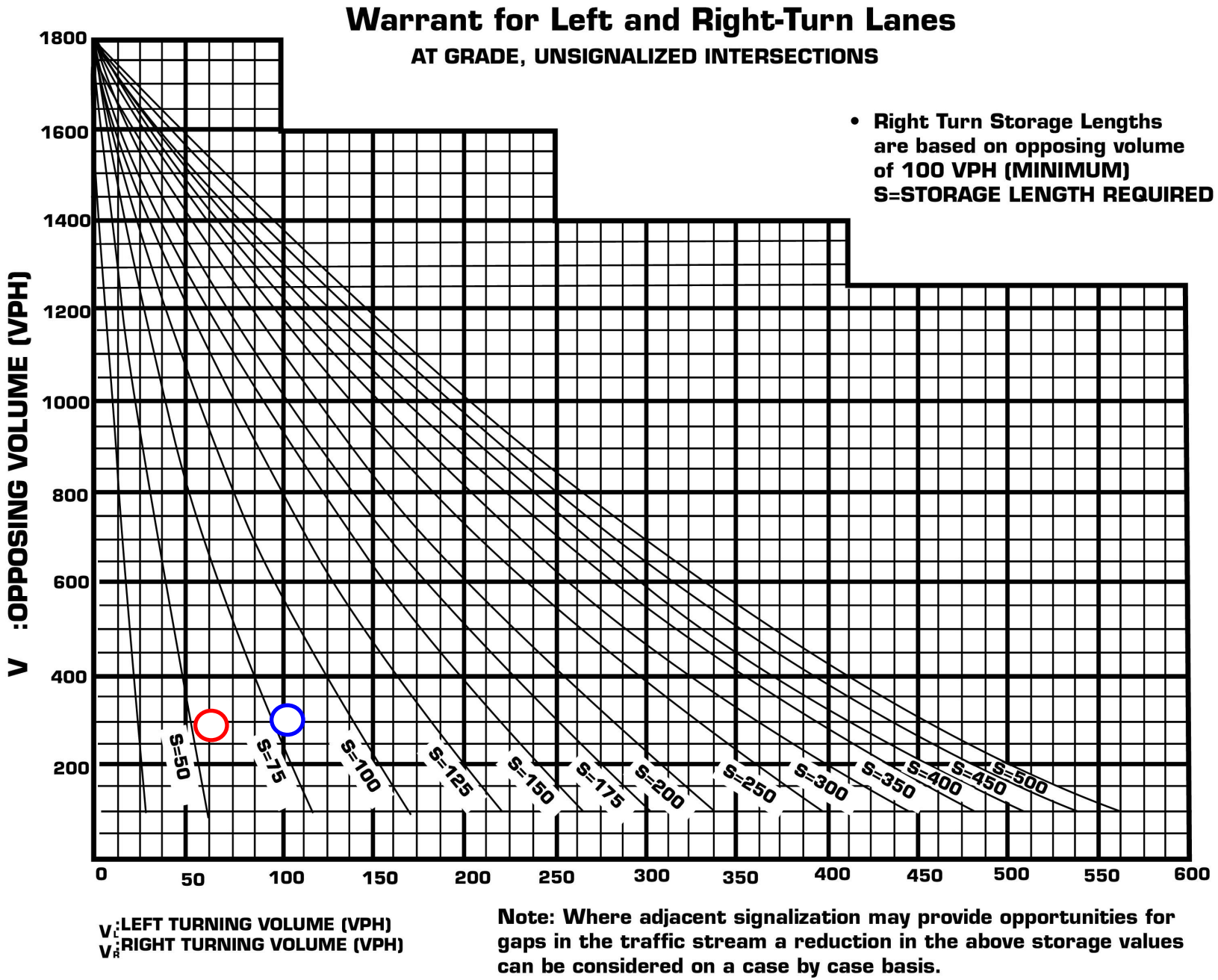
School PM PEAK HOUR

	Taberna Country Club Driveway Northbound				Old Airport Road Southbound				Taberna Way Eastbound				Taberna Way Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2023 Traffic Volumes	0	2	3	10	0	52	2	52	0	38	32	3	0	4	27	64
Count Balancing																
Pedestrians		0				0				0				0		
Conflicting Pedestrians		0		0		0		0		0		0		0		0
Bicycles	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
Conflicting Bicycles				0				0				0				1
Heavy Vehicles	0	0	0	0	0	1	0	1	0	1	1	0	0	0	0	0
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	3%	2%	2%	2%	2%	2%
Peak Hour Factor		0.76				0.76				0.76				0.76		
Adjustment Factor	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Adjusted 2023 Volumes	0	2	3	10	0	52	2	52	0	38	32	3	0	4	27	64
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Background Growth	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1
Total Approved Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Background PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
2024 No-Build Traffic	0	2	3	10	0	53	2	53	0	38	32	3	0	4	27	65
Trip Distribution IN										5%						25%
Trip Distribution OUT						(25%)		(5%)								
Balancing Adjustment																
Lower School Trips	0	0	0	0	0	68	0	14	0	10	0	0	0	0	0	51
Total Vehicular Project Trips	0	0	0	0	0	68	0	14	0	10	0	0	0	0	0	51
Weighted Build PHF	0.90	0.76	0.76	0.76	0.90	0.61	0.76	0.71	0.90	0.71	0.76	0.76	0.90	0.76	0.76	0.65
2024 Build Traffic	0	2	3	10	0	121	2	67	0	48	32	3	0	4	27	116

Appendix E:
Turn Lane Analysis

Left-Turn Lane Warrants

Site Driveway
AM Peak Hour (108 left-turns, 305 opposing)
School PM Peak Hour (61 left-turns, 291 opposing)

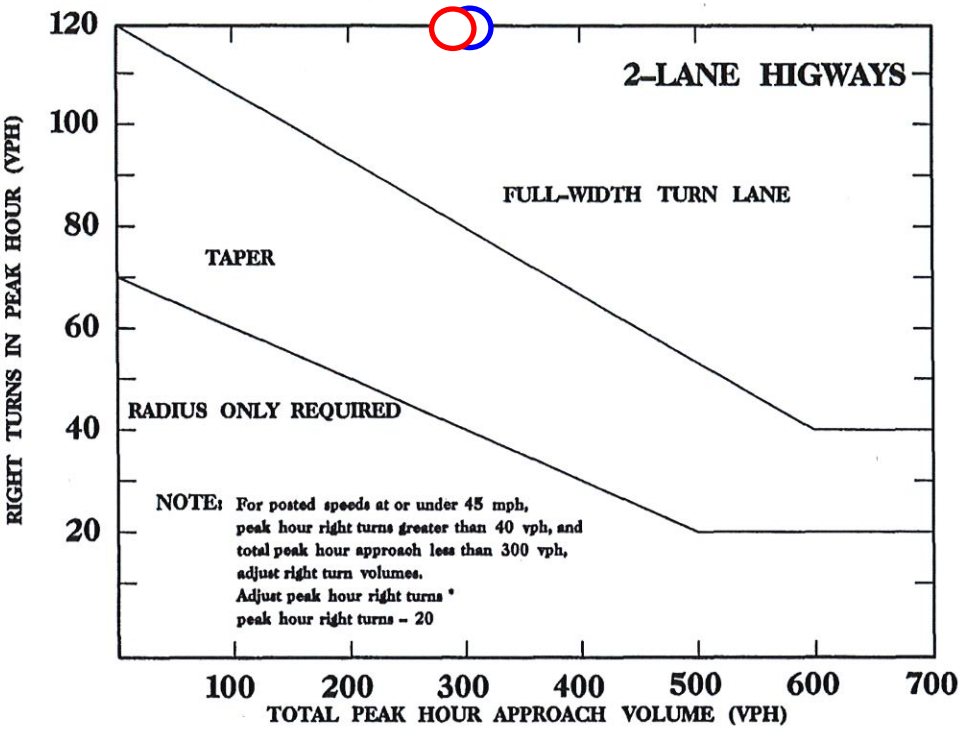


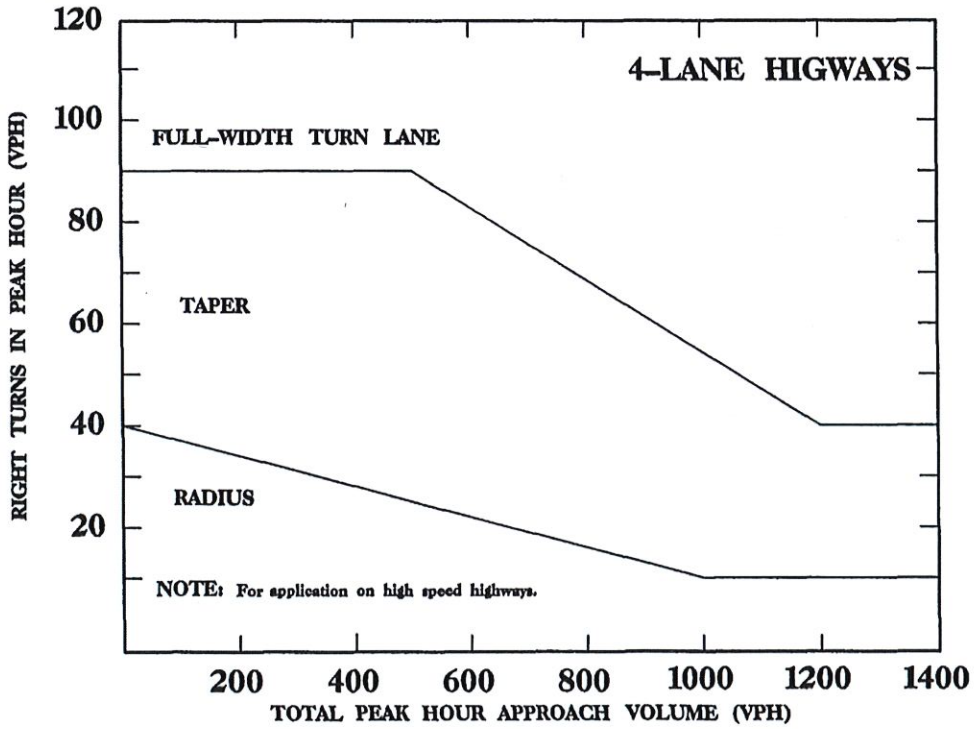
Site Driveway #1
AM Peak Hour (252 right-turns, 305 total approach)
School PM Peak Hour (143 right-turns, 291 total approach)

FIGURE 4 **9 - 1**

F – 4 C

RIGHT TURN LANE WARRANTS





Appendix F:
Synchro Output:
Existing (2023)

Intersection	
Int Delay, s/veh	2.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	33	195	19	10	27
Future Vol, veh/h	23	33	195	19	10	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	73	73	73	73	73	73
Heavy Vehicles, %	2	3	2	2	2	4
Mvmt Flow	32	45	267	26	14	37

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	345	280	0	0	293	0
Stage 1	280	-	-	-	-	-
Stage 2	65	-	-	-	-	-
Critical Hdwy	6.42	6.23	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.327	-	-	2.218	-
Pot Cap-1 Maneuver	652	756	-	-	1269	-
Stage 1	767	-	-	-	-	-
Stage 2	958	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	645	756	-	-	1269	-
Mov Cap-2 Maneuver	645	-	-	-	-	-
Stage 1	767	-	-	-	-	-
Stage 2	947	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.7	0	2.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	706	1269	-
HCM Lane V/C Ratio	-	-	0.109	0.011	-
HCM Control Delay (s)	-	-	10.7	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0	-

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	14	198	4	4	49
Future Vol, veh/h	6	14	198	4	4	49
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	73	73	73	73	73	73
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	19	271	5	5	67

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	352	275	0	0	277	0
Stage 1	275	-	-	-	-	-
Stage 2	77	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	646	764	-	-	1286	-
Stage 1	771	-	-	-	-	-
Stage 2	946	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	643	763	-	-	1285	-
Mov Cap-2 Maneuver	643	-	-	-	-	-
Stage 1	770	-	-	-	-	-
Stage 2	942	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	0.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	723	1285	-
HCM Lane V/C Ratio	-	-	0.038	0.004	-
HCM Control Delay (s)	-	-	10.2	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	47	12	10	151	47	8
Future Vol, veh/h	47	12	10	151	47	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	10	2	2	2
Mvmt Flow	66	17	14	213	66	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	313	72	77	0	-	0
Stage 1	72	-	-	-	-	-
Stage 2	241	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.2	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.29	-	-	-
Pot Cap-1 Maneuver	680	990	1472	-	-	-
Stage 1	951	-	-	-	-	-
Stage 2	799	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	673	990	1472	-	-	-
Mov Cap-2 Maneuver	673	-	-	-	-	-
Stage 1	941	-	-	-	-	-
Stage 2	799	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.7	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1472	-	720	-	-
HCM Lane V/C Ratio	0.01	-	0.115	-	-
HCM Control Delay (s)	7.5	0	10.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

Intersection	
Int Delay, s/veh	8.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	9	4	138	38	16	260
Future Vol, veh/h	9	4	138	38	16	260
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	75	75	75	75	75	75
Heavy Vehicles, %	11	33	7	5	6	7
Mvmt Flow	12	5	184	51	21	347

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	17	0	434	15
Stage 1	-	-	-	-	15	-
Stage 2	-	-	-	-	419	-
Critical Hdwy	-	-	4.17	-	6.46	6.27
Critical Hdwy Stg 1	-	-	-	-	5.46	-
Critical Hdwy Stg 2	-	-	-	-	5.46	-
Follow-up Hdwy	-	-	2.263	-	3.554	3.363
Pot Cap-1 Maneuver	-	-	1568	-	572	1050
Stage 1	-	-	-	-	998	-
Stage 2	-	-	-	-	655	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1568	-	503	1050
Mov Cap-2 Maneuver	-	-	-	-	503	-
Stage 1	-	-	-	-	998	-
Stage 2	-	-	-	-	576	-

Approach	EB	WB	NB
HCM Control Delay, s	0	6	10.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	988	-	-	1568	-
HCM Lane V/C Ratio	0.372	-	-	0.117	-
HCM Control Delay (s)	10.8	-	-	7.6	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	1.7	-	-	0.4	-

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	58	27	4	4	19	82	4	4	4	50	4	24
Future Vol, veh/h	58	27	4	4	19	82	4	4	4	50	4	24
Conflicting Peds, #/hr	0	0	3	3	0	0	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	71	71	71	71	71	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	5	2	2	2	33	2	2	8
Mvmt Flow	82	38	6	6	27	115	6	6	6	70	6	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	142	0	0	47	0	0	325	362	45	309	308	85
Stage 1	-	-	-	-	-	-	208	208	-	97	97	-
Stage 2	-	-	-	-	-	-	117	154	-	212	211	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.53	7.12	6.52	6.28
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	2.218	-	-	2.218	-	-	3.518	4.018	3.597	3.518	4.018	3.372
Pot Cap-1 Maneuver	1441	-	-	1560	-	-	628	565	943	643	606	958
Stage 1	-	-	-	-	-	-	794	730	-	910	815	-
Stage 2	-	-	-	-	-	-	888	770	-	790	728	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1441	-	-	1556	-	-	571	528	939	604	567	958
Mov Cap-2 Maneuver	-	-	-	-	-	-	571	528	-	604	567	-
Stage 1	-	-	-	-	-	-	746	685	-	857	812	-
Stage 2	-	-	-	-	-	-	847	767	-	733	684	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	5	0.3	10.8	11.3
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	637	1441	-	-	1556	-	-	679
HCM Lane V/C Ratio	0.027	0.057	-	-	0.004	-	-	0.162
HCM Control Delay (s)	10.8	7.6	0	-	7.3	0	-	11.3
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0	-	-	0.6

Intersection	
Int Delay, s/veh	2.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	55	18	104	18	13	97
Future Vol, veh/h	55	18	104	18	13	97
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	5	2	3	11	2	2
Mvmt Flow	65	21	122	21	15	114

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	277	133	0	0	143	0
Stage 1	133	-	-	-	-	-
Stage 2	144	-	-	-	-	-
Critical Hdwy	6.45	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	706	916	-	-	1440	-
Stage 1	886	-	-	-	-	-
Stage 2	876	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	698	916	-	-	1440	-
Mov Cap-2 Maneuver	698	-	-	-	-	-
Stage 1	886	-	-	-	-	-
Stage 2	866	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.5	0	0.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	742	1440	-
HCM Lane V/C Ratio	-	-	0.116	0.011	-
HCM Control Delay (s)	-	-	10.5	7.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0	-

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	6	115	4	11	136
Future Vol, veh/h	4	6	115	4	11	136
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	25	17	4	2	18	2
Mvmt Flow	5	7	140	5	13	166

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	335	143	0	0	145	0
Stage 1	143	-	-	-	-	-
Stage 2	192	-	-	-	-	-
Critical Hdwy	6.65	6.37	-	-	4.28	-
Critical Hdwy Stg 1	5.65	-	-	-	-	-
Critical Hdwy Stg 2	5.65	-	-	-	-	-
Follow-up Hdwy	3.725	3.453	-	-	2.362	-
Pot Cap-1 Maneuver	616	866	-	-	1345	-
Stage 1	831	-	-	-	-	-
Stage 2	788	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	609	866	-	-	1345	-
Mov Cap-2 Maneuver	609	-	-	-	-	-
Stage 1	831	-	-	-	-	-
Stage 2	779	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	0.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	741	1345	-
HCM Lane V/C Ratio	-	-	0.016	0.01	-
HCM Control Delay (s)	-	-	9.9	7.7	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	5	16	100	103	37
Future Vol, veh/h	18	5	16	100	103	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	6	2	6	3	2	5
Mvmt Flow	22	6	20	122	126	45

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	311	149	171	0	-	0
Stage 1	149	-	-	-	-	-
Stage 2	162	-	-	-	-	-
Critical Hdwy	6.46	6.22	4.16	-	-	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.318	2.254	-	-	-
Pot Cap-1 Maneuver	673	898	1382	-	-	-
Stage 1	869	-	-	-	-	-
Stage 2	857	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	662	898	1382	-	-	-
Mov Cap-2 Maneuver	662	-	-	-	-	-
Stage 1	855	-	-	-	-	-
Stage 2	857	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.3	1.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1382	-	702	-	-
HCM Lane V/C Ratio	0.014	-	0.04	-	-
HCM Control Delay (s)	7.6	0	10.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	7.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	14	4	148	10	4	171
Future Vol, veh/h	14	4	148	10	4	171
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	89	89	89	89	89	89
Heavy Vehicles, %	7	50	7	2	33	6
Mvmt Flow	16	4	166	11	4	192

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	20	0	361	18
Stage 1	-	-	-	-	18	-
Stage 2	-	-	-	-	343	-
Critical Hdwy	-	-	4.17	-	6.73	6.26
Critical Hdwy Stg 1	-	-	-	-	5.73	-
Critical Hdwy Stg 2	-	-	-	-	5.73	-
Follow-up Hdwy	-	-	2.263	-	3.797	3.354
Pot Cap-1 Maneuver	-	-	1564	-	581	1049
Stage 1	-	-	-	-	930	-
Stage 2	-	-	-	-	655	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1564	-	519	1049
Mov Cap-2 Maneuver	-	-	-	-	519	-
Stage 1	-	-	-	-	930	-
Stage 2	-	-	-	-	585	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.1	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1025	-	-	1564	-
HCM Lane V/C Ratio	0.192	-	-	0.106	-
HCM Control Delay (s)	9.3	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.7	-	-	0.4	-

Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	38	32	4	4	27	64	4	4	10	52	4	52
Future Vol, veh/h	38	32	4	4	27	64	4	4	10	52	4	52
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	76	76	76	76	76	76	76	76	76
Heavy Vehicles, %	3	3	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	50	42	5	5	36	84	5	5	13	68	5	68

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	120	0	0	47	0	0	270	275	45	242	235	78
Stage 1	-	-	-	-	-	-	145	145	-	88	88	-
Stage 2	-	-	-	-	-	-	125	130	-	154	147	-
Critical Hdwy	4.13	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.227	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1462	-	-	1560	-	-	683	632	1025	712	666	983
Stage 1	-	-	-	-	-	-	858	777	-	920	822	-
Stage 2	-	-	-	-	-	-	879	789	-	848	775	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1462	-	-	1560	-	-	613	608	1025	678	641	983
Mov Cap-2 Maneuver	-	-	-	-	-	-	613	608	-	678	641	-
Stage 1	-	-	-	-	-	-	828	750	-	888	820	-
Stage 2	-	-	-	-	-	-	810	787	-	802	748	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.9	0.3	9.7	10.5
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	787	1462	-	-	1560	-	-	795
HCM Lane V/C Ratio	0.03	0.034	-	-	0.003	-	-	0.179
HCM Control Delay (s)	9.7	7.5	0	-	7.3	0	-	10.5
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.6

Intersection: 1: Old Airport Road & W Grantham Road

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	53	24
Average Queue (ft)	24	2
95th Queue (ft)	45	12
Link Distance (ft)	702	473
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Old Airport Road & Hidden Pond Drive

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	37	18
Average Queue (ft)	14	1
95th Queue (ft)	39	9
Link Distance (ft)	539	534
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Old Airport Road & Conner Grant Road

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	53	15
Average Queue (ft)	27	1
95th Queue (ft)	51	8
Link Distance (ft)	592	2183
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Old Airport Road & Airport Road

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	32	106
Average Queue (ft)	2	52
95th Queue (ft)	16	86
Link Distance (ft)	683	570
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Taberna Country Club Driveway/Old Airport Road & Taberna Way

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	42	14	43	58
Average Queue (ft)	6	1	10	27
95th Queue (ft)	27	7	36	47
Link Distance (ft)	403	233	365	2183
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

Intersection: 1: Old Airport Road & W Grantham Road

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	66	19
Average Queue (ft)	29	1
95th Queue (ft)	52	10
Link Distance (ft)	702	473
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Old Airport Road & Hidden Pond Drive

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	46	22
Average Queue (ft)	10	1
95th Queue (ft)	36	9
Link Distance (ft)	539	534
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Old Airport Road & Conner Grant Road

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	54	30
Average Queue (ft)	18	1
95th Queue (ft)	46	15
Link Distance (ft)	592	2183
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Old Airport Road & Airport Road

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	8	41	81
Average Queue (ft)	0	3	40
95th Queue (ft)	6	20	66
Link Distance (ft)	660	683	570
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Taberna Country Club Driveway/Old Airport Road & Taberna Way

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	29	3	36	59
Average Queue (ft)	3	0	15	33
95th Queue (ft)	16	3	39	51
Link Distance (ft)	403	233	365	2183
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

Appendix G:
Synchro Output:
Background (2024)

Intersection	
Int Delay, s/veh	2.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	33	197	19	10	27
Future Vol, veh/h	23	33	197	19	10	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	3	2	2	2	4
Mvmt Flow	26	37	219	21	11	30

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	282	230	0	0	240	0
Stage 1	230	-	-	-	-	-
Stage 2	52	-	-	-	-	-
Critical Hdwy	6.42	6.23	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.327	-	-	2.218	-
Pot Cap-1 Maneuver	708	807	-	-	1327	-
Stage 1	808	-	-	-	-	-
Stage 2	970	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	702	807	-	-	1327	-
Mov Cap-2 Maneuver	702	-	-	-	-	-
Stage 1	808	-	-	-	-	-
Stage 2	962	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	2.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	760	1327	-
HCM Lane V/C Ratio	-	-	0.082	0.008	-
HCM Control Delay (s)	-	-	10.2	7.7	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	14	200	4	4	49
Future Vol, veh/h	6	14	200	4	4	49
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	7	16	222	4	4	54

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	287	225	0	0	227	0
Stage 1	225	-	-	-	-	-
Stage 2	62	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	703	814	-	-	1341	-
Stage 1	812	-	-	-	-	-
Stage 2	961	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	700	813	-	-	1340	-
Mov Cap-2 Maneuver	700	-	-	-	-	-
Stage 1	811	-	-	-	-	-
Stage 2	958	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	0.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	775	1340	-
HCM Lane V/C Ratio	-	-	0.029	0.003	-
HCM Control Delay (s)	-	-	9.8	7.7	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	47	12	10	153	47	8
Future Vol, veh/h	47	12	10	153	47	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	10	2	2	2
Mvmt Flow	52	13	11	170	52	9

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	249	57	61	0	-	0
Stage 1	57	-	-	-	-	-
Stage 2	192	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.2	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.29	-	-	-
Pot Cap-1 Maneuver	739	1009	1493	-	-	-
Stage 1	966	-	-	-	-	-
Stage 2	841	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	733	1009	1493	-	-	-
Mov Cap-2 Maneuver	733	-	-	-	-	-
Stage 1	958	-	-	-	-	-
Stage 2	841	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.1	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1493	-	776	-	-
HCM Lane V/C Ratio	0.007	-	0.084	-	-
HCM Control Delay (s)	7.4	0	10.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection	
Int Delay, s/veh	8.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	9	4	139	38	16	263
Future Vol, veh/h	9	4	139	38	16	263
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, %	11	33	7	5	6	7
Mvmt Flow	10	4	154	42	18	292

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	14	0	362	12
Stage 1	-	-	-	-	12	-
Stage 2	-	-	-	-	350	-
Critical Hdwy	-	-	4.17	-	6.46	6.27
Critical Hdwy Stg 1	-	-	-	-	5.46	-
Critical Hdwy Stg 2	-	-	-	-	5.46	-
Follow-up Hdwy	-	-	2.263	-	3.554	3.363
Pot Cap-1 Maneuver	-	-	1572	-	629	1054
Stage 1	-	-	-	-	1001	-
Stage 2	-	-	-	-	705	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1572	-	566	1054
Mov Cap-2 Maneuver	-	-	-	-	566	-
Stage 1	-	-	-	-	1001	-
Stage 2	-	-	-	-	635	-

Approach	EB	WB	NB
HCM Control Delay, s	0	5.9	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1004	-	-	1572	-
HCM Lane V/C Ratio	0.309	-	-	0.098	-
HCM Control Delay (s)	10.2	-	-	7.5	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	1.3	-	-	0.3	-

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	59	27	4	4	19	83	4	4	4	51	4	24
Future Vol, veh/h	59	27	4	4	19	83	4	4	4	51	4	24
Conflicting Peds, #/hr	0	0	3	3	0	0	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
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	5	2	2	2	33	2	2	8
Mvmt Flow	66	30	4	4	21	92	4	4	4	57	4	27

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	113	0	0	37	0	0	258	288	36	244	244	67
Stage 1	-	-	-	-	-	-	167	167	-	75	75	-
Stage 2	-	-	-	-	-	-	91	121	-	169	169	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.53	7.12	6.52	6.28
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	2.218	-	-	2.218	-	-	3.518	4.018	3.597	3.518	4.018	3.372
Pot Cap-1 Maneuver	1476	-	-	1574	-	-	695	622	955	710	658	980
Stage 1	-	-	-	-	-	-	835	760	-	934	833	-
Stage 2	-	-	-	-	-	-	916	796	-	833	759	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1476	-	-	1570	-	-	646	590	951	676	624	980
Mov Cap-2 Maneuver	-	-	-	-	-	-	646	590	-	676	624	-
Stage 1	-	-	-	-	-	-	794	723	-	891	831	-
Stage 2	-	-	-	-	-	-	884	794	-	785	722	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	5	0.3	10.3	10.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	699	1476	-	-	1570	-	-	743
HCM Lane V/C Ratio	0.019	0.044	-	-	0.003	-	-	0.118
HCM Control Delay (s)	10.3	7.6	0	-	7.3	0	-	10.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	2.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	56	18	105	18	13	98
Future Vol, veh/h	56	18	105	18	13	98
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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, %	5	2	3	11	2	2
Mvmt Flow	62	20	117	20	14	109

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	264	127	0	0	137	0
Stage 1	127	-	-	-	-	-
Stage 2	137	-	-	-	-	-
Critical Hdwy	6.45	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	719	923	-	-	1447	-
Stage 1	891	-	-	-	-	-
Stage 2	882	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	712	923	-	-	1447	-
Mov Cap-2 Maneuver	712	-	-	-	-	-
Stage 1	891	-	-	-	-	-
Stage 2	873	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	0.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	754	1447	-
HCM Lane V/C Ratio	-	-	0.109	0.01	-
HCM Control Delay (s)	-	-	10.4	7.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0	-

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	6	116	4	11	137
Future Vol, veh/h	4	6	116	4	11	137
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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, %	25	17	4	2	18	2
Mvmt Flow	4	7	129	4	12	152

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	307	131	0	0	133	0
Stage 1	131	-	-	-	-	-
Stage 2	176	-	-	-	-	-
Critical Hdwy	6.65	6.37	-	-	4.28	-
Critical Hdwy Stg 1	5.65	-	-	-	-	-
Critical Hdwy Stg 2	5.65	-	-	-	-	-
Follow-up Hdwy	3.725	3.453	-	-	2.362	-
Pot Cap-1 Maneuver	640	880	-	-	1359	-
Stage 1	841	-	-	-	-	-
Stage 2	802	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	634	880	-	-	1359	-
Mov Cap-2 Maneuver	634	-	-	-	-	-
Stage 1	841	-	-	-	-	-
Stage 2	794	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	0.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	762	1359	-
HCM Lane V/C Ratio	-	-	0.015	0.009	-
HCM Control Delay (s)	-	-	9.8	7.7	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	5	16	101	104	37
Future Vol, veh/h	18	5	16	101	104	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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, %	6	2	6	3	2	5
Mvmt Flow	20	6	18	112	116	41

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	285	137	157	0	-	0
Stage 1	137	-	-	-	-	-
Stage 2	148	-	-	-	-	-
Critical Hdwy	6.46	6.22	4.16	-	-	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.318	2.254	-	-	-
Pot Cap-1 Maneuver	697	911	1399	-	-	-
Stage 1	880	-	-	-	-	-
Stage 2	870	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	687	911	1399	-	-	-
Mov Cap-2 Maneuver	687	-	-	-	-	-
Stage 1	868	-	-	-	-	-
Stage 2	870	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.1	1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1399	-	726	-	-
HCM Lane V/C Ratio	0.013	-	0.035	-	-
HCM Control Delay (s)	7.6	0	10.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	7.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	14	4	149	10	4	173
Future Vol, veh/h	14	4	149	10	4	173
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, %	7	50	7	2	33	6
Mvmt Flow	16	4	166	11	4	192

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	20	0	361	18
Stage 1	-	-	-	-	18	-
Stage 2	-	-	-	-	343	-
Critical Hdwy	-	-	4.17	-	6.73	6.26
Critical Hdwy Stg 1	-	-	-	-	5.73	-
Critical Hdwy Stg 2	-	-	-	-	5.73	-
Follow-up Hdwy	-	-	2.263	-	3.797	3.354
Pot Cap-1 Maneuver	-	-	1564	-	581	1049
Stage 1	-	-	-	-	930	-
Stage 2	-	-	-	-	655	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1564	-	519	1049
Mov Cap-2 Maneuver	-	-	-	-	519	-
Stage 1	-	-	-	-	930	-
Stage 2	-	-	-	-	585	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.1	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1025	-	-	1564	-
HCM Lane V/C Ratio	0.192	-	-	0.106	-
HCM Control Delay (s)	9.3	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.7	-	-	0.4	-

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	38	32	4	4	27	65	4	4	10	53	4	53
Future Vol, veh/h	38	32	4	4	27	65	4	4	10	53	4	53
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
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, %	3	3	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	42	36	4	4	30	72	4	4	11	59	4	59

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	102	0	0	40	0	0	228	232	38	204	198	66
Stage 1	-	-	-	-	-	-	122	122	-	74	74	-
Stage 2	-	-	-	-	-	-	106	110	-	130	124	-
Critical Hdwy	4.13	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.227	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1484	-	-	1570	-	-	727	668	1034	754	698	998
Stage 1	-	-	-	-	-	-	882	795	-	935	833	-
Stage 2	-	-	-	-	-	-	900	804	-	874	793	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1484	-	-	1570	-	-	664	647	1034	724	676	998
Mov Cap-2 Maneuver	-	-	-	-	-	-	664	647	-	724	676	-
Stage 1	-	-	-	-	-	-	856	772	-	908	831	-
Stage 2	-	-	-	-	-	-	840	802	-	835	770	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.8	0.3	9.5	10.1
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	823	1484	-	-	1570	-	-	832
HCM Lane V/C Ratio	0.024	0.028	-	-	0.003	-	-	0.147
HCM Control Delay (s)	9.5	7.5	0	-	7.3	0	-	10.1
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.5

Intersection: 1: Old Airport Road & W Grantham Road

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	52	21
Average Queue (ft)	24	1
95th Queue (ft)	44	11
Link Distance (ft)	702	473
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Old Airport Road & Hidden Pond Drive

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	36	4	11
Average Queue (ft)	14	0	0
95th Queue (ft)	39	4	6
Link Distance (ft)	539	336	534
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Old Airport Road & Conner Grant Road

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	59	8
Average Queue (ft)	27	0
95th Queue (ft)	50	6
Link Distance (ft)	592	2183
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Old Airport Road & Airport Road

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	29	98
Average Queue (ft)	2	51
95th Queue (ft)	14	82
Link Distance (ft)	683	570
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Taberna Country Club Driveway/Old Airport Road & Taberna Way

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	37	3	49	60
Average Queue (ft)	7	0	11	28
95th Queue (ft)	26	2	36	48
Link Distance (ft)	403	233	365	2183
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

Intersection: 1: Old Airport Road & W Grantham Road

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	72	24
Average Queue (ft)	31	1
95th Queue (ft)	56	11
Link Distance (ft)	702	473
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Old Airport Road & Hidden Pond Drive

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	52	18
Average Queue (ft)	9	1
95th Queue (ft)	36	9
Link Distance (ft)	539	534
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Old Airport Road & Conner Grant Road

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	58	29
Average Queue (ft)	19	1
95th Queue (ft)	47	12
Link Distance (ft)	592	2183
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Old Airport Road & Airport Road

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	6	42	79
Average Queue (ft)	0	3	38
95th Queue (ft)	6	21	62
Link Distance (ft)	660	683	570
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Taberna Country Club Driveway/Old Airport Road & Taberna Way

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	24	3	32	61
Average Queue (ft)	3	0	13	32
95th Queue (ft)	16	3	37	53
Link Distance (ft)	403	233	365	2183
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

Appendix H:
Synchro Output:
Build Out (2024)

Intersection	
Int Delay, s/veh	25.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	167	33	284	136	10	135
Future Vol, veh/h	167	33	284	136	10	135
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	53	73	66	53	73	55
Heavy Vehicles, %	2	3	2	2	2	2
Mvmt Flow	315	45	430	257	14	245

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	832	559	0	0	687	0
Stage 1	559	-	-	-	-	-
Stage 2	273	-	-	-	-	-
Critical Hdwy	6.42	6.23	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.327	-	-	2.218	-
Pot Cap-1 Maneuver	339	527	-	-	907	-
Stage 1	572	-	-	-	-	-
Stage 2	773	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	333	527	-	-	907	-
Mov Cap-2 Maneuver	333	-	-	-	-	-
Stage 1	572	-	-	-	-	-
Stage 2	759	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	92.2	0	0.5
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	349	907	-
HCM Lane V/C Ratio	-	-	1.032	0.015	-
HCM Control Delay (s)	-	-	92.2	9	0
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	12.4	0	-

Intersection	
Int Delay, s/veh	197

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	204	4	87	6	4	14	108	200	4	4	49	252
Future Vol, veh/h	204	4	87	6	4	14	108	200	4	4	49	252
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	50	50	73	50	73	50	73	73	73	73	50
Heavy Vehicles, %	0	0	0	2	0	2	2	2	2	2	2	2
Mvmt Flow	408	8	174	8	8	19	216	274	5	5	67	504

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1051	1041	319	1130	1291	278	571	0	0	280	0	0
Stage 1	329	329	-	710	710	-	-	-	-	-	-	-
Stage 2	722	712	-	420	581	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.12	6.5	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.518	4	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 207	232	726	181	165	761	1002	-	-	1283	-	-
Stage 1	688	650	-	424	440	-	-	-	-	-	-	-
Stage 2	421	439	-	611	503	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 154	172	726	106	122	760	1002	-	-	1282	-	-
Mov Cap-2 Maneuver	~ 154	172	-	106	122	-	-	-	-	-	-	-
Stage 1	513	646	-	315	327	-	-	-	-	-	-	-
Stage 2	~ 298	327	-	456	500	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 561.6	25.6	4.2	0.1
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1002	-	-	154	636	210	1282	-	-
HCM Lane V/C Ratio	0.216	-	-	2.649	0.286	0.169	0.004	-	-
HCM Control Delay (s)	9.6	0	-	$ 806.4	12.9	25.6	7.8	0	-
HCM Lane LOS	A	A	-	F	B	D	A	A	-
HCM 95th %tile Q(veh)	0.8	-	-	36	1.2	0.6	0	-	-

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

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	47	12	10	261	134	8
Future Vol, veh/h	47	12	10	261	134	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	71	71	71	62	57	71
Heavy Vehicles, %	2	2	10	2	2	2
Mvmt Flow	66	17	14	421	235	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	690	241	246	0	-	0
Stage 1	241	-	-	-	-	-
Stage 2	449	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.2	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.29	-	-	-
Pot Cap-1 Maneuver	411	798	1275	-	-	-
Stage 1	799	-	-	-	-	-
Stage 2	643	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	405	798	1275	-	-	-
Mov Cap-2 Maneuver	405	-	-	-	-	-
Stage 1	788	-	-	-	-	-
Stage 2	643	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.8	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1275	-	450	-	-
HCM Lane V/C Ratio	0.011	-	0.185	-	-
HCM Control Delay (s)	7.9	0	14.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.7	-	-

Intersection	
Int Delay, s/veh	10.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	9	4	247	38	16	350
Future Vol, veh/h	9	4	247	38	16	350
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	75	75	64	75	75	69
Heavy Vehicles, %	11	34	4	5	6	5
Mvmt Flow	12	5	386	51	21	507

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	17	0	838	15
Stage 1	-	-	-	-	15	-
Stage 2	-	-	-	-	823	-
Critical Hdwy	-	-	4.14	-	6.46	6.25
Critical Hdwy Stg 1	-	-	-	-	5.46	-
Critical Hdwy Stg 2	-	-	-	-	5.46	-
Follow-up Hdwy	-	-	2.236	-	3.554	3.345
Pot Cap-1 Maneuver	-	-	1587	-	331	1056
Stage 1	-	-	-	-	998	-
Stage 2	-	-	-	-	425	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1587	-	248	1056
Mov Cap-2 Maneuver	-	-	-	-	248	-
Stage 1	-	-	-	-	998	-
Stage 2	-	-	-	-	319	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.1	13.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	933	-	-	1587	-
HCM Lane V/C Ratio	0.567	-	-	0.243	-
HCM Control Delay (s)	13.8	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	3.7	-	-	1	-

Intersection	
Int Delay, s/veh	8.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	77	27	4	4	19	173	4	4	4	123	4	39
Future Vol, veh/h	77	27	4	4	19	173	4	4	4	123	4	39
Conflicting Peds, #/hr	0	0	3	3	0	0	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	66	71	71	71	71	60	71	71	71	59	71	63
Heavy Vehicles, %	2	2	2	2	5	2	2	2	34	2	2	5
Mvmt Flow	117	38	6	6	27	288	6	6	6	208	6	62

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	315	0	0	47	0	0	495	605	45	465	464	171
Stage 1	-	-	-	-	-	-	278	278	-	183	183	-
Stage 2	-	-	-	-	-	-	217	327	-	282	281	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.54	7.12	6.52	6.25
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	2.218	-	-	2.218	-	-	3.518	4.018	3.606	3.518	4.018	3.345
Pot Cap-1 Maneuver	1245	-	-	1560	-	-	485	412	941	508	495	865
Stage 1	-	-	-	-	-	-	728	680	-	819	748	-
Stage 2	-	-	-	-	-	-	785	648	-	725	678	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1245	-	-	1556	-	-	410	370	937	460	444	865
Mov Cap-2 Maneuver	-	-	-	-	-	-	410	370	-	460	444	-
Stage 1	-	-	-	-	-	-	656	613	-	740	744	-
Stage 2	-	-	-	-	-	-	720	645	-	645	611	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	6	0.1	12.7	19.8
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	483	1245	-	-	1556	-	-	514
HCM Lane V/C Ratio	0.035	0.094	-	-	0.004	-	-	0.537
HCM Control Delay (s)	12.7	8.2	0	-	7.3	0	-	19.8
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0.3	-	-	0	-	-	3.1

Intersection	
Int Delay, s/veh	5.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	138	18	187	127	13	159
Future Vol, veh/h	138	18	187	127	13	159
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	64	85	70	55	85	72
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	216	21	267	231	15	221

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	634	383	0	0	498	0
Stage 1	383	-	-	-	-	-
Stage 2	251	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	443	664	-	-	1066	-
Stage 1	689	-	-	-	-	-
Stage 2	791	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	436	664	-	-	1066	-
Mov Cap-2 Maneuver	436	-	-	-	-	-
Stage 1	689	-	-	-	-	-
Stage 2	778	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.5	0	0.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	450	1066	-
HCM Lane V/C Ratio	-	-	0.526	0.014	-
HCM Control Delay (s)	-	-	21.5	8.4	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	3	0	-

Intersection	
Int Delay, s/veh	59

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	191	4	82	4	4	6	61	116	4	11	137	143
Future Vol, veh/h	191	4	82	4	4	6	61	116	4	11	137	143
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	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	50	50	82	50	82	50	82	82	82	82	50
Heavy Vehicles, %	2	0	2	25	0	17	0	4	2	18	2	0
Mvmt Flow	382	8	164	5	8	7	122	141	5	13	167	286

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	731	726	310	810	867	144	453	0	0	146	0	0
Stage 1	336	336	-	388	388	-	-	-	-	-	-	-
Stage 2	395	390	-	422	479	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.5	6.22	7.35	6.5	6.37	4.1	-	-	4.28	-	-
Critical Hdwy Stg 1	6.12	5.5	-	6.35	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.5	-	6.35	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4	3.318	3.725	4	3.453	2.2	-	-	2.362	-	-
Pot Cap-1 Maneuver	~ 337	354	730	273	293	865	1118	-	-	1344	-	-
Stage 1	678	645	-	592	612	-	-	-	-	-	-	-
Stage 2	630	611	-	567	558	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 294	308	730	187	255	865	1118	-	-	1344	-	-
Mov Cap-2 Maneuver	~ 294	308	-	187	255	-	-	-	-	-	-	-
Stage 1	597	637	-	522	539	-	-	-	-	-	-	-
Stage 2	542	538	-	428	551	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	136.6	17.6	3.9	0.2
HCM LOS	F	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1118	-	-	294	686	306	1344	-	-
HCM Lane V/C Ratio	0.109	-	-	1.299	0.251	0.066	0.01	-	-
HCM Control Delay (s)	8.6	0	-	192.7	12	17.6	7.7	0	-
HCM Lane LOS	A	A	-	F	B	C	A	A	-
HCM 95th %tile Q(veh)	0.4	-	-	18.7	1	0.2	0	-	-

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

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	5	16	162	186	37
Future Vol, veh/h	18	5	16	162	186	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	70	68	82
Heavy Vehicles, %	6	2	6	2	2	5
Mvmt Flow	22	6	20	231	274	45

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	568	297	319	0	-	0
Stage 1	297	-	-	-	-	-
Stage 2	271	-	-	-	-	-
Critical Hdwy	6.46	6.22	4.16	-	-	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.318	2.254	-	-	-
Pot Cap-1 Maneuver	478	742	1219	-	-	-
Stage 1	745	-	-	-	-	-
Stage 2	765	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	469	742	1219	-	-	-
Mov Cap-2 Maneuver	469	-	-	-	-	-
Stage 1	731	-	-	-	-	-
Stage 2	765	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.5	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1219	-	510	-	-
HCM Lane V/C Ratio	0.016	-	0.055	-	-
HCM Control Delay (s)	8	0	12.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	8.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	14	4	210	10	4	255
Future Vol, veh/h	14	4	210	10	4	255
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	89	89	78	89	89	76
Heavy Vehicles, %	7	51	5	2	34	4
Mvmt Flow	16	4	269	11	4	336

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	20	0	567	18
Stage 1	-	-	-	-	18	-
Stage 2	-	-	-	-	549	-
Critical Hdwy	-	-	4.15	-	6.74	6.24
Critical Hdwy Stg 1	-	-	-	-	5.74	-
Critical Hdwy Stg 2	-	-	-	-	5.74	-
Follow-up Hdwy	-	-	2.245	-	3.806	3.336
Pot Cap-1 Maneuver	-	-	1577	-	435	1055
Stage 1	-	-	-	-	928	-
Stage 2	-	-	-	-	520	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1577	-	360	1055
Mov Cap-2 Maneuver	-	-	-	-	360	-
Stage 1	-	-	-	-	928	-
Stage 2	-	-	-	-	431	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.4	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1029	-	-	1577	-
HCM Lane V/C Ratio	0.33	-	-	0.171	-
HCM Control Delay (s)	10.2	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	1.5	-	-	0.6	-

Intersection	
Int Delay, s/veh	7.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	48	32	4	4	27	116	4	4	10	121	4	67
Future Vol, veh/h	48	32	4	4	27	116	4	4	10	121	4	67
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	76	76	76	76	65	76	76	76	61	76	71
Heavy Vehicles, %	2	3	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	68	42	5	5	36	178	5	5	13	198	5	94

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	214	0	0	47	0	0	366	405	45	325	318	125
Stage 1	-	-	-	-	-	-	181	181	-	135	135	-
Stage 2	-	-	-	-	-	-	185	224	-	190	183	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1356	-	-	1560	-	-	590	535	1025	628	598	926
Stage 1	-	-	-	-	-	-	821	750	-	868	785	-
Stage 2	-	-	-	-	-	-	817	718	-	812	748	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1356	-	-	1560	-	-	504	505	1025	589	565	926
Mov Cap-2 Maneuver	-	-	-	-	-	-	504	505	-	589	565	-
Stage 1	-	-	-	-	-	-	778	711	-	823	782	-
Stage 2	-	-	-	-	-	-	726	715	-	754	709	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.6	0.2	10.3	14.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	703	1356	-	-	1560	-	-	665
HCM Lane V/C Ratio	0.034	0.05	-	-	0.003	-	-	0.448
HCM Control Delay (s)	10.3	7.8	0	-	7.3	0	-	14.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0	-	-	2.3

Intersection: 1: Old Airport Road & W Grantham Road

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	202	50
Average Queue (ft)	62	3
95th Queue (ft)	138	19
Link Distance (ft)	702	473
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Old Airport Road & Site Driveway/Hidden Pond Drive

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	LTR	LTR	LTR
Maximum Queue (ft)	137	79	47	83	35
Average Queue (ft)	78	38	16	14	2
95th Queue (ft)	138	68	42	51	16
Link Distance (ft)	82	82	535	334	517
Upstream Blk Time (%)	17	0			
Queuing Penalty (veh)	42	0			
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 3: Old Airport Road & Conner Grant Road

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	69	23
Average Queue (ft)	30	1
95th Queue (ft)	58	11
Link Distance (ft)	592	2183
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Old Airport Road & Airport Road

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	37	163
Average Queue (ft)	3	62
95th Queue (ft)	19	110
Link Distance (ft)	683	570
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Taberna Country Club Driveway/Old Airport Road & Taberna Way

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	66	19	48	100
Average Queue (ft)	16	1	9	41
95th Queue (ft)	48	9	34	72
Link Distance (ft)	403	233	365	2183
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 15: Site Driveway

Movement	EB	EB
Directions Served	T	T
Maximum Queue (ft)	78	2
Average Queue (ft)	11	0
95th Queue (ft)	53	2
Link Distance (ft)	4	4
Upstream Blk Time (%)	7	0
Queuing Penalty (veh)	17	0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 18:

Movement	WB
Directions Served	LT
Maximum Queue (ft)	12
Average Queue (ft)	0
95th Queue (ft)	8
Link Distance (ft)	106
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 20:

Movement	SB
Directions Served	LR
Maximum Queue (ft)	58
Average Queue (ft)	27
95th Queue (ft)	52
Link Distance (ft)	23
Upstream Blk Time (%)	4
Queuing Penalty (veh)	4
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 23:

Movement	SB	SB	B22	B22
Directions Served	L	LT	T	T
Maximum Queue (ft)	112	115	9	6
Average Queue (ft)	12	13	0	0
95th Queue (ft)	96	101	9	6
Link Distance (ft)	437	437	439	439
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 24:

Movement	EB
Directions Served	LT
Maximum Queue (ft)	57
Average Queue (ft)	5
95th Queue (ft)	31
Link Distance (ft)	30
Upstream Blk Time (%)	3
Queuing Penalty (veh)	9
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 27:

Movement	EB	EB	NB
Directions Served	T	T	R
Maximum Queue (ft)	319	337	22
Average Queue (ft)	101	113	1
95th Queue (ft)	285	305	9
Link Distance (ft)	325	325	54
Upstream Blk Time (%)	8	9	
Queuing Penalty (veh)	12	15	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 29:

Movement	EB	NB
Directions Served	T	R
Maximum Queue (ft)	172	15
Average Queue (ft)	108	1
95th Queue (ft)	190	9
Link Distance (ft)	158	38
Upstream Blk Time (%)	18	0
Queuing Penalty (veh)	73	0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 172

Intersection: 1: Old Airport Road & W Grantham Road

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	118	7	36
Average Queue (ft)	45	0	4
95th Queue (ft)	88	5	22
Link Distance (ft)	702	517	473
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Old Airport Road & Site Driveway/Hidden Pond Drive

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	LTR	LTR	LTR
Maximum Queue (ft)	144	82	65	48	30
Average Queue (ft)	69	37	13	9	2
95th Queue (ft)	132	67	44	33	14
Link Distance (ft)	82	82	535	334	517
Upstream Blk Time (%)	14	0			
Queuing Penalty (veh)	34	1			
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 3: Old Airport Road & Conner Grant Road

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	49	37
Average Queue (ft)	17	3
95th Queue (ft)	45	20
Link Distance (ft)	592	2183
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Old Airport Road & Airport Road

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	47	88
Average Queue (ft)	4	45
95th Queue (ft)	24	74
Link Distance (ft)	683	570
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Taberna Country Club Driveway/Old Airport Road & Taberna Way

Movement	EB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	36	39	90
Average Queue (ft)	6	15	43
95th Queue (ft)	25	40	72
Link Distance (ft)	403	365	2183
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 15: Site Driveway

Movement	EB	EB
Directions Served	T	T
Maximum Queue (ft)	75	36
Average Queue (ft)	10	2
95th Queue (ft)	52	21
Link Distance (ft)	4	4
Upstream Blk Time (%)	5	
Queuing Penalty (veh)	13	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 18:

Movement	
Directions Served	
Maximum Queue (ft)	
Average Queue (ft)	
95th Queue (ft)	
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 20:

Movement	EB
Directions Served	T
Maximum Queue (ft)	63
Average Queue (ft)	6
95th Queue (ft)	42
Link Distance (ft)	111
Upstream Blk Time (%)	1
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 23:

Movement	
Directions Served	
Maximum Queue (ft)	
Average Queue (ft)	
95th Queue (ft)	
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 24:

Movement	EB	EB	NB	SB
Directions Served	LT	T	R	L
Maximum Queue (ft)	53	14	58	64
Average Queue (ft)	5	1	6	31
95th Queue (ft)	28	7	32	62
Link Distance (ft)	30	30		58
Upstream Blk Time (%)	2	0		4
Queuing Penalty (veh)	4	0		5
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 27:

Movement	EB	EB	NB
Directions Served	T	T	R
Maximum Queue (ft)	134	136	23
Average Queue (ft)	42	52	1
95th Queue (ft)	102	107	10
Link Distance (ft)	325	325	54
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 29:

Movement	EB	NB
Directions Served	T	R
Maximum Queue (ft)	167	13
Average Queue (ft)	76	0
95th Queue (ft)	159	6
Link Distance (ft)	158	38
Upstream Blk Time (%)	5	0
Queuing Penalty (veh)	16	0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 72

Appendix I:

Synchro Output:

Build Out (2024) with Improvements

Intersection	
Int Delay, s/veh	13.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	167	33	284	136	10	135
Future Vol, veh/h	167	33	284	136	10	135
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	75	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	53	73	66	53	73	55
Heavy Vehicles, %	2	3	2	2	2	2
Mvmt Flow	315	45	430	257	14	245

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	703	430	0	0	687	0
Stage 1	430	-	-	-	-	-
Stage 2	273	-	-	-	-	-
Critical Hdwy	6.42	6.23	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.327	-	-	2.218	-
Pot Cap-1 Maneuver	404	623	-	-	907	-
Stage 1	656	-	-	-	-	-
Stage 2	773	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	397	623	-	-	907	-
Mov Cap-2 Maneuver	397	-	-	-	-	-
Stage 1	656	-	-	-	-	-
Stage 2	759	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	49	0	0.5
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	416	907	-
HCM Lane V/C Ratio	-	-	0.866	0.015	-
HCM Control Delay (s)	-	-	49	9	0
HCM Lane LOS	-	-	E	A	A
HCM 95th %tile Q(veh)	-	-	8.7	0	-

Intersection	
Int Delay, s/veh	109.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	204	4	87	6	4	14	108	200	4	4	49	252
Future Vol, veh/h	204	4	87	6	4	14	108	200	4	4	49	252
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	0	-	-	-	-	-	150	-	-	-	-	175
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	50	50	73	50	73	50	73	73	73	73	50
Heavy Vehicles, %	0	0	0	2	0	2	2	2	2	2	2	2
Mvmt Flow	408	8	174	8	8	19	216	274	5	5	67	504

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	799	789	67	878	787	278	67	0	0	280	0	0
Stage 1	77	77	-	710	710	-	-	-	-	-	-	-
Stage 2	722	712	-	168	77	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.12	6.5	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.518	4	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 306	325	1002	268	326	761	1535	-	-	1283	-	0
Stage 1	937	835	-	424	440	-	-	-	-	-	-	0
Stage 2	421	439	-	834	835	-	-	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	~ 259	278	1002	193	279	760	1535	-	-	1282	-	-
Mov Cap-2 Maneuver	~ 259	278	-	193	279	-	-	-	-	-	-	-
Stage 1	805	832	-	364	378	-	-	-	-	-	-	-
Stage 2	~ 345	377	-	680	832	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	218.5	15.9	3.4	0.6
HCM LOS	F	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT
Capacity (veh/h)	1535	-	-	259	899	367	1282	-
HCM Lane V/C Ratio	0.141	-	-	1.575	0.202	0.096	0.004	-
HCM Control Delay (s)	7.7	-	-	$ 311.5	10	15.9	7.8	0
HCM Lane LOS	A	-	-	F	B	C	A	A
HCM 95th %tile Q(veh)	0.5	-	-	24.8	0.8	0.3	0	-

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

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	47	12	10	261	134	8
Future Vol, veh/h	47	12	10	261	134	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	71	71	71	62	57	71
Heavy Vehicles, %	2	2	10	2	2	2
Mvmt Flow	66	17	14	421	235	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	690	241	246	0	-	0
Stage 1	241	-	-	-	-	-
Stage 2	449	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.2	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.29	-	-	-
Pot Cap-1 Maneuver	411	798	1275	-	-	-
Stage 1	799	-	-	-	-	-
Stage 2	643	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	405	798	1275	-	-	-
Mov Cap-2 Maneuver	405	-	-	-	-	-
Stage 1	788	-	-	-	-	-
Stage 2	643	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.8	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1275	-	450	-	-
HCM Lane V/C Ratio	0.011	-	0.185	-	-
HCM Control Delay (s)	7.9	0	14.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.7	-	-

Intersection	
Int Delay, s/veh	10.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	9	4	247	38	16	350
Future Vol, veh/h	9	4	247	38	16	350
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	75	75	64	75	75	69
Heavy Vehicles, %	11	34	4	5	6	5
Mvmt Flow	12	5	386	51	21	507

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	17	0	838	15
Stage 1	-	-	-	-	15	-
Stage 2	-	-	-	-	823	-
Critical Hdwy	-	-	4.14	-	6.46	6.25
Critical Hdwy Stg 1	-	-	-	-	5.46	-
Critical Hdwy Stg 2	-	-	-	-	5.46	-
Follow-up Hdwy	-	-	2.236	-	3.554	3.345
Pot Cap-1 Maneuver	-	-	1587	-	331	1056
Stage 1	-	-	-	-	998	-
Stage 2	-	-	-	-	425	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1587	-	248	1056
Mov Cap-2 Maneuver	-	-	-	-	248	-
Stage 1	-	-	-	-	998	-
Stage 2	-	-	-	-	319	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.1	13.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	933	-	-	1587	-
HCM Lane V/C Ratio	0.567	-	-	0.243	-
HCM Control Delay (s)	13.8	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	3.7	-	-	1	-

Intersection	
Int Delay, s/veh	8.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	77	27	4	4	19	173	4	4	4	123	4	39
Future Vol, veh/h	77	27	4	4	19	173	4	4	4	123	4	39
Conflicting Peds, #/hr	0	0	3	3	0	0	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	66	71	71	71	71	60	71	71	71	59	71	63
Heavy Vehicles, %	2	2	2	2	5	2	2	2	34	2	2	5
Mvmt Flow	117	38	6	6	27	288	6	6	6	208	6	62

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	315	0	0	47	0	0	495	605	45	465	464	171
Stage 1	-	-	-	-	-	-	278	278	-	183	183	-
Stage 2	-	-	-	-	-	-	217	327	-	282	281	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.54	7.12	6.52	6.25
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	2.218	-	-	2.218	-	-	3.518	4.018	3.606	3.518	4.018	3.345
Pot Cap-1 Maneuver	1245	-	-	1560	-	-	485	412	941	508	495	865
Stage 1	-	-	-	-	-	-	728	680	-	819	748	-
Stage 2	-	-	-	-	-	-	785	648	-	725	678	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1245	-	-	1556	-	-	410	370	937	460	444	865
Mov Cap-2 Maneuver	-	-	-	-	-	-	410	370	-	460	444	-
Stage 1	-	-	-	-	-	-	656	613	-	740	744	-
Stage 2	-	-	-	-	-	-	720	645	-	645	611	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	6	0.1	12.7	19.8
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	483	1245	-	-	1556	-	-	514
HCM Lane V/C Ratio	0.035	0.094	-	-	0.004	-	-	0.537
HCM Control Delay (s)	12.7	8.2	0	-	7.3	0	-	19.8
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0.3	-	-	0	-	-	3.1

Intersection	
Int Delay, s/veh	4.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	138	18	187	127	13	159
Future Vol, veh/h	138	18	187	127	13	159
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	75	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	64	85	70	55	85	72
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	216	21	267	231	15	221

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	518	267	0	0	498	0
Stage 1	267	-	-	-	-	-
Stage 2	251	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	518	772	-	-	1066	-
Stage 1	778	-	-	-	-	-
Stage 2	791	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	510	772	-	-	1066	-
Mov Cap-2 Maneuver	510	-	-	-	-	-
Stage 1	778	-	-	-	-	-
Stage 2	778	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.3	0	0.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	526	1066	-
HCM Lane V/C Ratio	-	-	0.45	0.014	-
HCM Control Delay (s)	-	-	17.3	8.4	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	2.3	0	-

Intersection	
Int Delay, s/veh	33

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	191	4	82	4	4	6	61	116	4	11	137	143
Future Vol, veh/h	191	4	82	4	4	6	61	116	4	11	137	143
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	-	-	Free
Storage Length	0	-	-	-	-	-	150	-	-	-	-	175
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	50	50	82	50	82	50	82	82	82	82	50
Heavy Vehicles, %	2	0	2	25	0	17	0	4	2	18	2	0
Mvmt Flow	382	8	164	5	8	7	122	141	5	13	167	286

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	588	583	167	667	581	144	167	0	0	146	0	0
Stage 1	193	193	-	388	388	-	-	-	-	-	-	-
Stage 2	395	390	-	279	193	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.5	6.22	7.35	6.5	6.37	4.1	-	-	4.28	-	-
Critical Hdwy Stg 1	6.12	5.5	-	6.35	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.5	-	6.35	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4	3.318	3.725	4	3.453	2.2	-	-	2.362	-	-
Pot Cap-1 Maneuver	421	427	877	343	428	865	1423	-	-	1344	-	0
Stage 1	809	745	-	592	612	-	-	-	-	-	-	0
Stage 2	630	611	-	680	745	-	-	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	~ 381	386	877	255	387	865	1423	-	-	1344	-	-
Mov Cap-2 Maneuver	~ 381	386	-	255	387	-	-	-	-	-	-	-
Stage 1	739	737	-	541	559	-	-	-	-	-	-	-
Stage 2	563	558	-	541	737	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	58.6	14	3.5	0.6
HCM LOS	F	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT
Capacity (veh/h)	1423	-	-	381	828	418	1344	-
HCM Lane V/C Ratio	0.086	-	-	1.003	0.208	0.048	0.01	-
HCM Control Delay (s)	7.8	-	-	80.3	10.5	14	7.7	0
HCM Lane LOS	A	-	-	F	B	B	A	A
HCM 95th %tile Q(veh)	0.3	-	-	12	0.8	0.2	0	-

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

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	5	16	162	186	37
Future Vol, veh/h	18	5	16	162	186	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	70	68	82
Heavy Vehicles, %	6	2	6	2	2	5
Mvmt Flow	22	6	20	231	274	45

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	568	297	319	0	-	0
Stage 1	297	-	-	-	-	-
Stage 2	271	-	-	-	-	-
Critical Hdwy	6.46	6.22	4.16	-	-	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.318	2.254	-	-	-
Pot Cap-1 Maneuver	478	742	1219	-	-	-
Stage 1	745	-	-	-	-	-
Stage 2	765	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	469	742	1219	-	-	-
Mov Cap-2 Maneuver	469	-	-	-	-	-
Stage 1	731	-	-	-	-	-
Stage 2	765	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.5	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1219	-	510	-	-
HCM Lane V/C Ratio	0.016	-	0.055	-	-
HCM Control Delay (s)	8	0	12.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	8.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	14	4	210	10	4	255
Future Vol, veh/h	14	4	210	10	4	255
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	89	89	78	89	89	76
Heavy Vehicles, %	7	51	5	2	34	4
Mvmt Flow	16	4	269	11	4	336

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	20	0	567	18
Stage 1	-	-	-	-	18	-
Stage 2	-	-	-	-	549	-
Critical Hdwy	-	-	4.15	-	6.74	6.24
Critical Hdwy Stg 1	-	-	-	-	5.74	-
Critical Hdwy Stg 2	-	-	-	-	5.74	-
Follow-up Hdwy	-	-	2.245	-	3.806	3.336
Pot Cap-1 Maneuver	-	-	1577	-	435	1055
Stage 1	-	-	-	-	928	-
Stage 2	-	-	-	-	520	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1577	-	360	1055
Mov Cap-2 Maneuver	-	-	-	-	360	-
Stage 1	-	-	-	-	928	-
Stage 2	-	-	-	-	431	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.4	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1029	-	-	1577	-
HCM Lane V/C Ratio	0.33	-	-	0.171	-
HCM Control Delay (s)	10.2	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	1.5	-	-	0.6	-

Intersection	
Int Delay, s/veh	7.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	48	32	4	4	27	116	4	4	10	121	4	67
Future Vol, veh/h	48	32	4	4	27	116	4	4	10	121	4	67
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	76	76	76	76	65	76	76	76	61	76	71
Heavy Vehicles, %	2	3	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	68	42	5	5	36	178	5	5	13	198	5	94

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	214	0	0	47	0	0	366	405	45	325	318	125
Stage 1	-	-	-	-	-	-	181	181	-	135	135	-
Stage 2	-	-	-	-	-	-	185	224	-	190	183	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1356	-	-	1560	-	-	590	535	1025	628	598	926
Stage 1	-	-	-	-	-	-	821	750	-	868	785	-
Stage 2	-	-	-	-	-	-	817	718	-	812	748	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1356	-	-	1560	-	-	504	505	1025	589	565	926
Mov Cap-2 Maneuver	-	-	-	-	-	-	504	505	-	589	565	-
Stage 1	-	-	-	-	-	-	778	711	-	823	782	-
Stage 2	-	-	-	-	-	-	726	715	-	754	709	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.6	0.2	10.3	14.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	703	1356	-	-	1560	-	-	665
HCM Lane V/C Ratio	0.034	0.05	-	-	0.003	-	-	0.448
HCM Control Delay (s)	10.3	7.8	0	-	7.3	0	-	14.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0	-	-	2.3

Intersection: 1: Old Airport Road & W Grantham Road

Movement	WB	NB	SB
Directions Served	LR	R	LT
Maximum Queue (ft)	200	2	40
Average Queue (ft)	60	0	4
95th Queue (ft)	135	2	21
Link Distance (ft)	701		473
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		75	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Old Airport Road & Site Driveway/Hidden Pond Drive

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	LTR	L	LT
Maximum Queue (ft)	129	82	40	40	15
Average Queue (ft)	71	38	15	4	1
95th Queue (ft)	119	68	40	22	7
Link Distance (ft)	76	76	529		530
Upstream Blk Time (%)	10	0			
Queuing Penalty (veh)	22	0			
Storage Bay Dist (ft)				150	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 3: Old Airport Road & Conner Grant Road

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	60	34
Average Queue (ft)	30	2
95th Queue (ft)	53	16
Link Distance (ft)	586	2183
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Old Airport Road & Airport Road

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	35	176
Average Queue (ft)	3	66
95th Queue (ft)	18	124
Link Distance (ft)	683	570
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Taberna Country Club Driveway/Old Airport Road & Taberna Way

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	50	11	53	107
Average Queue (ft)	14	0	10	40
95th Queue (ft)	39	5	37	73
Link Distance (ft)	403	233	365	2183
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 15: Site Driveway

Movement	EB	WB	WB
Directions Served	T	R	R
Maximum Queue (ft)	38	48	58
Average Queue (ft)	2	5	4
95th Queue (ft)	20	26	27
Link Distance (ft)	4	76	76
Upstream Blk Time (%)	0		0
Queuing Penalty (veh)	1		0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 18:

Movement	WB
Directions Served	LT
Maximum Queue (ft)	8
Average Queue (ft)	0
95th Queue (ft)	4
Link Distance (ft)	106
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 20:

Movement	SB
Directions Served	LR
Maximum Queue (ft)	59
Average Queue (ft)	28
95th Queue (ft)	51
Link Distance (ft)	23
Upstream Blk Time (%)	4
Queuing Penalty (veh)	4
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 23:

Movement	SB	SB
Directions Served	L	LT
Maximum Queue (ft)	59	56
Average Queue (ft)	4	5
95th Queue (ft)	42	44
Link Distance (ft)	437	437
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 24:

Movement	EB
Directions Served	LT
Maximum Queue (ft)	11
Average Queue (ft)	0
95th Queue (ft)	7
Link Distance (ft)	30
Upstream Blk Time (%)	0
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 27:

Movement	EB	EB	NB
Directions Served	T	T	R
Maximum Queue (ft)	295	310	20
Average Queue (ft)	92	103	1
95th Queue (ft)	259	274	10
Link Distance (ft)	325	325	54
Upstream Blk Time (%)	4	5	
Queuing Penalty (veh)	6	8	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 29:

Movement	EB	NB
Directions Served	T	R
Maximum Queue (ft)	171	20
Average Queue (ft)	109	1
95th Queue (ft)	190	9
Link Distance (ft)	158	38
Upstream Blk Time (%)	16	0
Queuing Penalty (veh)	63	0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 105

Intersection: 1: Old Airport Road & W Grantham Road

Movement	WB	NB	SB
Directions Served	LR	R	LT
Maximum Queue (ft)	90	4	35
Average Queue (ft)	42	0	3
95th Queue (ft)	72	3	19
Link Distance (ft)	701		473
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		75	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Old Airport Road & Site Driveway/Hidden Pond Drive

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	LTR	L	LT
Maximum Queue (ft)	142	88	52	37	20
Average Queue (ft)	70	38	12	7	1
95th Queue (ft)	130	70	39	27	9
Link Distance (ft)	76	76	529		530
Upstream Blk Time (%)	14	0			
Queuing Penalty (veh)	34	1			
Storage Bay Dist (ft)				150	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 3: Old Airport Road & Conner Grant Road

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	55	30	4
Average Queue (ft)	20	2	0
95th Queue (ft)	47	15	3
Link Distance (ft)	586	2183	335
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: Old Airport Road & Airport Road

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	41	91
Average Queue (ft)	4	44
95th Queue (ft)	23	73
Link Distance (ft)	683	570
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Taberna Country Club Driveway/Old Airport Road & Taberna Way

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	38	3	34	91
Average Queue (ft)	6	0	14	41
95th Queue (ft)	27	3	38	69
Link Distance (ft)	403	233	365	2183
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 15: Site Driveway

Movement	EB	EB
Directions Served	T	T
Maximum Queue (ft)	79	35
Average Queue (ft)	10	2
95th Queue (ft)	49	19
Link Distance (ft)	4	4
Upstream Blk Time (%)	2	
Queuing Penalty (veh)	5	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 18:

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 20:

Movement	EB
Directions Served	T
Maximum Queue (ft)	61
Average Queue (ft)	5
95th Queue (ft)	31
Link Distance (ft)	111
Upstream Blk Time (%)	0
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 23:

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 24:

Movement	EB	EB	NB	SB
Directions Served	LT	T	R	L
Maximum Queue (ft)	49	10	63	68
Average Queue (ft)	5	0	7	30
95th Queue (ft)	27	5	35	60
Link Distance (ft)	30	30		58
Upstream Blk Time (%)	1	0		2
Queuing Penalty (veh)	2	0		2
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 27:

Movement	EB	EB	NB
Directions Served	T	T	R
Maximum Queue (ft)	111	114	15
Average Queue (ft)	40	51	1
95th Queue (ft)	85	92	9
Link Distance (ft)	325	325	54
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 29:

Movement	EB	NB
Directions Served	T	R
Maximum Queue (ft)	166	8
Average Queue (ft)	75	0
95th Queue (ft)	154	5
Link Distance (ft)	158	38
Upstream Blk Time (%)	3	0
Queuing Penalty (veh)	10	0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 54