

TECHNICAL APPENDIX

APPENDIX A

WMPO SCOPE OF APPROVAL



305 Chestnut Street
PO Box 1810
Wilmington, NC 28402
Ph: (910) 341-3258
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July 25, 2019

Ms. Caroline Bojarski, EI
Ramey Kemp & Associates, Inc.
5808 Farringdon Place, Suite 100
Raleigh, NC 27609

RE: Approved Scope for the Traffic Impact Analysis (TIA) associated with the proposed
Porter's Neck Development
New Hanover County, NC

Dear Ms. Bojarski,

Based on the information provided and conversations held to date, it is our understanding that the proposed development will consist of:

- 42 Single Family Homes (LUC 210)
- 316 Multi Family Housing units (Low-Rise) (LUC 220)

The site plan provided proposes access at the following points:

- SR 2845 (Market Street) and Site Access 1
- SR 2932 (Shiraz Way) and Site Access 2

Below please find the scope to be used in the Traffic Impact Analysis:

1. Data Collection – Analysis Parameters:

a. Study Intersections

- i. For existing intersections, provide turning movement counts for weekday **during school** (T,W,TH) AM (7:00am-9:00am) and PM (4:00pm-6:00pm) peak periods, signal timing (if applicable), and lane geometry:
 1. SR 1402/SR 1491 (Porters Neck Road) and SR 1402 (Edgewater Club Rd)/SR 2932 (Shiraz Way)
 2. US 17 (Market Street) and SR 1402 (Porters Neck Road)
 3. SR 1400 (Futch Creek Road / Market Street) and SR 2845 (Market Street)
 4. US 17 and U-turn location (North of SR 1400 Market Street)
 5. US 17 and SR 1400 (Market Street)
 6. SR 2932 (Shiraz Way) and Site Access
 7. SR 2845 (Market Street) and Site Access

Wilmington Urban Area Metropolitan Planning Organization

Traffic Signal Plans (including peak hour) may be acquired by sending an email request to NCDOT and the City of Wilmington – NCDOT Traffic Services: Ross Kimbro, rkimbro@ncdot.gov or by calling (910) 341-2220 and the City of Wilmington Denys Vielkanowitz, denys.vielkanowitz@wilmingtonnc.gov or by calling (910) 341-4676.

b. Site Trip Generation, Site Trip Distribution and Background Traffic Assumptions:

- i. Site Trip Generation Estimate
 1. Trip Generation
 - a. Approved modified trip generation attached for use in the TIA
 2. Site Trip Distribution
 - a. Please submit for approval as part of the step 2 process.
 3. Adjacent Development (approved but not yet built):
 - a. Include trip generation for unoccupied and unconstructed homes for the Waterstone Development
 4. Planned Roadway Improvements
 - a. N/A
 5. Background Traffic Assumptions
 - a. Future Build - 2023
 - b. Growth Rate – 1% per year

2. **Capacity Analysis: Weekday AM & PM Peak Hour**

- a. Technical Analysis
 - i. 2019 Existing Conditions
 - ii. 2023 Future No-Build
[Existing + 1% background growth]
 - iii. 2023 Build Conditions
[Existing + 1% background growth + site trips]
 - iv. 2023 Build Conditions + Improvements

3. **Final Report Submittal:**

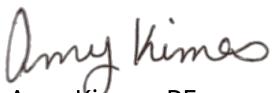
- a. Completed TIA Application
- b. Signed and sealed by a Professional Engineer
- c. Four bound copies
- d. Four Electronic copies to include PDF of TIA and Synchro output files as well as digital Synchro files

4. **Notes:**

- a. This scope shall remain valid for three months from the date of this letter
- b. Please note that if any changes occur (including but not limited to: land use, intensity, phasing, and/or site access) additional analysis may be required.

Please contact me at 910-473-5130 with any questions regarding this scope.

Sincerely,



Amy Kimes, PE

Senior Project Engineer

Wilmington Metropolitan Planning Organization

Attachments:

Trip Generation Summary (provided by RKA; modified)
Traffic Impact Analysis Supplemental Guidelines
Site Map (provided by RKA)

Ec: Benjamin Hughes, PE, District Engineer, NCDOT
Alex Stewart, PE, Deputy Division Engineer, NCDOT
Madi Lee, EI, Development Review Engineer, NCDOT
Jon Roan, Assistant District Engineer, NCDOT
Jessi Leonard, PE, Division Traffic Engineer, NCDOT
Kirsten Spirakis, PE, Senior Assistant Division Traffic Engineer, NCDOT
Brad Schuler, Senior Planner, New Hanover County
Ron Meredith, Current Planner, New Hanover County
Gideon Smith, Current Planner, New Hanover County
Mike Kozlosky, Executive Director, WMPO

Table 1: Trip Generation Summary

| Land Use (ITE Code) | Intensity | Daily Traffic (vpd) | AM Peak Hour Trips (vph) | | PM Peak Hour Trips (vph) | |
|---|------------------|------------------------------------|-------------------------------------|-------------|-------------------------------------|-------------|
| | | | Enter | Exit | Enter | Exit |
| Single-Family Detached Housing (210) | 42 units | 470 | 9 | 26 | 28 | 16 |
| Multifamily Housing (Low-Rise) (220) | 316 units | 2,300 | 33 | 109 | 103 | 61 |
| Total Trips | | 2,770 | 42 | 135 | 131 | 77 |

Traffic Impact Analysis Supplemental Guidelines

The **NCDOT Congestion Management Capacity Analysis Guidelines** shall be the basis for the development of all TIA reports. This Supplement provides a submittal framework for TIAs, as well as direction on certain items within the *Congestion Management Guidelines*. Any deviations from the Congestion Management Guidelines or this supplement must be approved prior to preparation of the TIA.

Submittal Framework for TIAs

Step 1: Scoping Document - The documents to include for review and approval are:

1. Site Plan/Vicinity Map
2. Proposed Land Uses and Trip Generation
3. Proposed Study Intersections and Types of Accesses
4. Proposed Annual Growth Rate
5. Proposed Build Out Year
6. Study Method for Capacity Analysis – peak periods and conditions
7. Approved Developments
8. Committed Improvements

If the proposed development is to be phased, then land uses, trip generation, build out year, roadway improvements and analysis must reflect the proposed phasing. The phase breakdown must be submitted for approval prior to use in the TIA.

Step 2: Trip Generation with Pass-by and Internal Capture, Trip Distribution, and Proposed Volume Balancing

1. Traffic counts must be performed prior to submittal of this step.

Step 3: Draft TIA Report for Input Verification - A digital copy to include the following:

1. All previously approved information from prior stages of submittal.
2. All diagrams – Existing Traffic Volumes, Future No Build Volumes, and Future Build Volumes
3. Synchro / Sidra Network Model Framework – Submit the framework for the Future No Build analysis. This Synchro / Sidra model can be modified for Existing analysis.

Step 4: Final Sealed TIA Report - This is to be a hardcopy submittal of the completed document

Direction for the *Congestion Management Guidelines*

Site Trip Generation, Site Trip Distribution, and Background Traffic Assumptions

1. **Peak Hour Determination** – In efforts to establish a consistent peak hour that will be reported and studied, the peak hour for the controlling intersection shall be determined. Once determined, that peak hour timeframe shall be used for all other intersections. To further clarify:
 - a) Analyze all study intersection volumes and determine the controlling intersection (intersection with highest total volume).
 - b) Identify relevant peak hour for the controlling intersection.
 - c) Use the same peak hour for all intersections in the study.
2. Site Trip Generation:
 - a) **Unadjusted Trips** – Use the appropriate Land Use Code in the current ITE Trip Generation Manual (currently the 10th Edition). The NCDOT Congestion Management Rate vs. Equation Spreadsheet (currently July 1, 2018) specifies the variable, peak hour type, and type of trip calculation method to use.
 - b) **Internal Capture** - The Congestion Management Guidelines state that “reductions for internal capture should be limited to the land use categories and time periods included in the current Handbook.” The current ITE Trip Generation Handbook is the 3rd Edition. It does not provide internal capture data for Saturdays, therefore none should be used. The Congestion Management Guidelines also state that “internal capture rates may be estimated using the NCHRP 684 spreadsheet procedure referenced in the current Handbook.” The current Handbook now uses this spreadsheet as the only method for determining internal capture. The Congestion Management Guidelines give guidance on using the spreadsheet:

“When using this spreadsheet, transit or non-motorized splits should not be used unless otherwise justified and approved. Vehicle occupancy should be “1.1” in accordance with North Carolina averages. The Walking Distances between land uses should be 4000’ or the calculated maximum distance between a given pair of land use categories in the proposed site.”

To determine the internal capture entering and exiting per Land Use, use the percentages in Table 6-P: Internal Capture Percentages by Land Use with the “Estimated Vehicle-Trips” in Table 1-P: Base Vehicle-Trip Generation

Estimates. (Tables found in the NCHRP 684 Internal Trip Capture Estimation Tool.)

- c) Pass-by – The Congestion Management Guidelines state that “pass-by percentages should be obtained from the ITE Trip Generation Handbook.” The current ITE Trip Generation Handbook is the 3rd Edition. The calculation of the trips should be based on the total peak hour trips with a 50/50 entering/exiting split; they are pass-by trips which means they enter and exit along the same path, in the same direction, within the same hour.
- 3. Site Trip Distribution – To be determined based on collected traffic count data. Both site trip distribution and pass-by trip distribution shall be submitted for approval prior to use in the TIA.

Signal Analysis

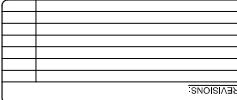
1. For existing signals, the size and position of the detector loops and the signal timings set in Synchro must match the existing signal plans.
2. For proposed signals, size and place the detector loops in Synchro according to Part 1, Section 4 of the NCDOT Signal Design Manual.
3. Existing signal timings shall be “locked” for all scenarios unless phase changes are recommended as an improvement.
4. Check for Recall Mode on Signalized Intersection. If simulating ‘free run’ operation (actuated-uncoordinated), use Min Recall on main street phase. If simulating ‘Coordinated Mode’ (Actuated-Coordinate), use C-Max.
5. Use the *Guidelines for Signalization of Intersections with Two or Three Approaches* (ITRE report dated December 31, 2017) where applicable, to determine possible signalization.

Synchro Analysis and Data Reports

1. Any “Field Condition” analysis that the engineer wishes to include is supplemental to that which is required by the approved scope and Congestion Management Guidelines.
 - a) Congestion Management Guidelines state that right-turn-on-red (RTOR) is not to be used in existing or future conditions.
 - b) Congestion Management Guidelines state that analysis of protected-only phasing in future conditions will identify required storage in the event that protected-only phasing is necessary. Existing permissive left-turn phasing should remain permissive in future conditions, except where protected-only phasing is being analyzed as an improvement to the intersection in the Future + Improvement condition.
2. The “Future No-Build” and “Future Build” analysis conditions should only include improvements that are currently a requirement of another approved development or a State/Municipal project to be constructed in the build year for the proposed development. Any other capacity gained from lane improvements shown in the analysis is assumed to be proposed by the developer and should only be included in the “Future Build+Improvements” analysis condition.
3. The TIA shall include a chart that shows the “Level of Service” and “Delay” for each movement, approach, and overall intersection, for every access alternative and build scenario.
4. A SimTraffic “Queuing and Blocking Report” for the network shall be included for review.
5. A comparison chart listing the Synchro 95th Percentile Queues and the SimTraffic Maximum Queues shall be provided for all exclusive turn lanes.

Recommendations of the TIA Report

1. The *NCDOT Policy On Street And Driveway Access to North Carolina Highways* (p. 21-22) states, “The applicant shall be required to identify mitigation improvements to the roadway network if at least one of the following conditions exists when comparing base network conditions to project conditions:
 - a) The total average delay at an intersection or individual approach increases by 25% or greater, while maintaining the same level of service,
 - b) The Level of Service degrades by at least one level, or
 - c) Level of Service is “F.”
2. The *Congestion Management Guidelines* state “when performing analyses, providing an adequate overall intersection LOS alone is not sufficient. Items such as queuing, individual movement level of service, and volume-to-capacity ratio should be evaluated and addressed.” The information in the charts listed under “Synchro Analysis and Data Reports” in the previous section, should be used when determining the improvements to address the impacts of site-generated traffic.
3. Recommended storage lane lengths shall be provided for all exclusive turn lanes and based on the Synchro 95th Percentile Queue or the SimTraffic Maximum Queue, whichever is larger.
4. If phase changes are recommended as an improvement, then a Synchro analysis for “Future Build+Improvements” shall be included in the TIA.
5. Signal timing adjustments and/or Signal Optimization in Synchro (i.e. “Optimize Splits”) shall not be used unless phase changes are recommended as an improvement. Signal timing adjustment and/or Signal Optimization as a sole “improvement” to mitigate the impacts of site-generated traffic will not be permitted.



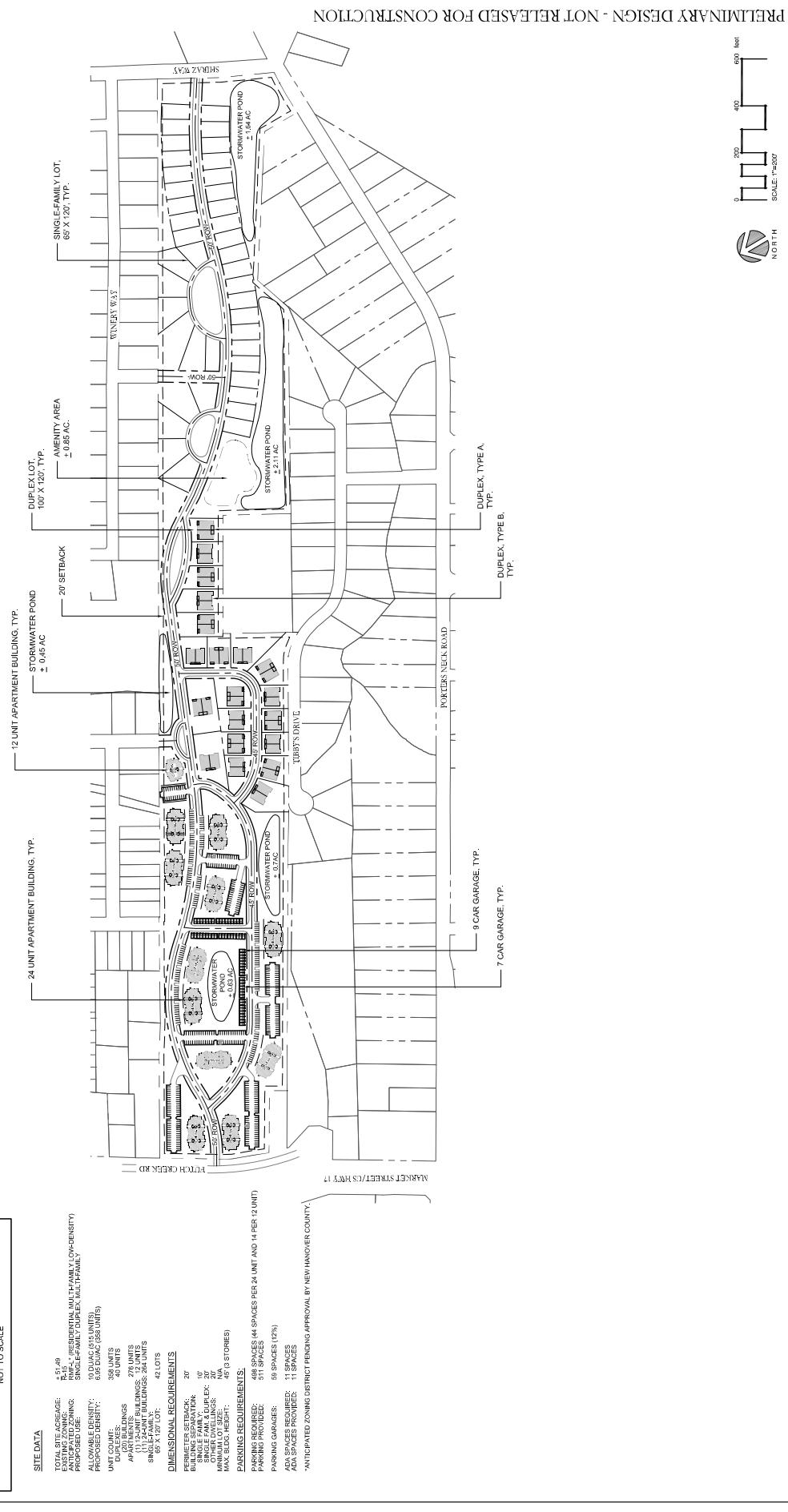
CENTER INFORMATION
REVISONS:

PARAMOUNT
ENVIRONMENTAL DESIGN
PROJECT STATUS
DRAWING NUMBER
DRAFTS
DESIGN
DRAWINGS
RELEASED FOR CONSTRUCTION
10/01/2023
10/01/2023
22 Green Drive
Wilmington, North Carolina 28433
(910) 791-4200, (910) 791-3403
NC License #C-2846

NEW HANOVER COUNTY
DRAFTS
DESIGN
DRAWINGS
RELEASED FOR CONSTRUCTION
10/01/2023
10/01/2023
22 Green Drive
Wilmington, North Carolina 28433
(910) 791-4200, (910) 791-3403
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PRIMER STATE
DRAWING NUMBER
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EX-1
PERIODIC



APPENDIX B

TRAFFIC COUNTS



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PH: 919 872-5115

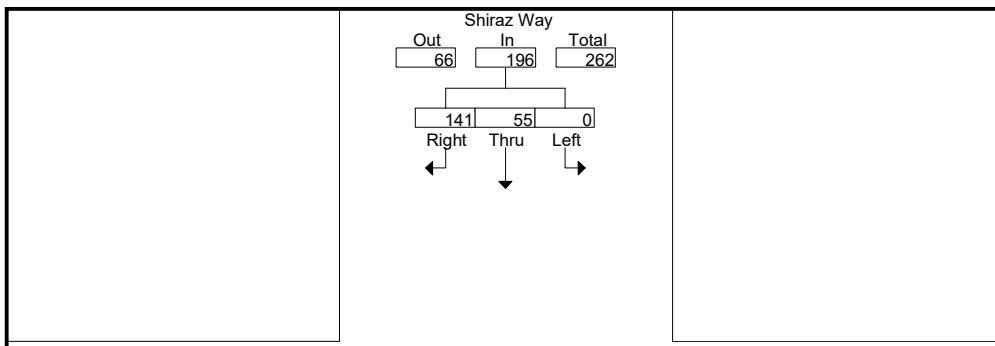
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Site Code : 00000005
Start Date : 8/29/2019
Page No : 1



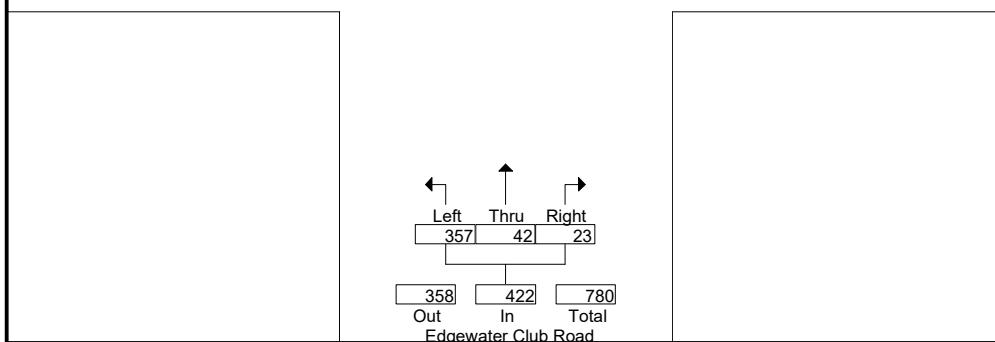
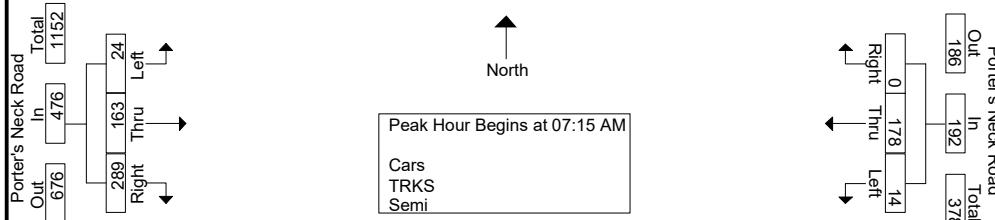
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Porter's Neck Road and Edgewater Club Road-Shiraz Way
Site Code : 00000005
Start Date : 8/29/2019
Page No : 2

| | Shiraz Way From North | | | | Porter's Neck Road From East | | | | Edgewater Club Road From South | | | | Porter's Neck Road From West | | | | |
|---|--------------------------|------|------|------------|---------------------------------|------|------|------------|-----------------------------------|------|------|------------|---------------------------------|------|------|------------|------------|
| Start Time | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Int. Total |
| Peak Hour Analysis From 07:15 AM to 11:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:15 AM | | | | | | | | | | | | | | | | | |
| 07:15 AM | 54 | 29 | 0 | 83 | 0 | 43 | 5 | 48 | 7 | 11 | 100 | 118 | 139 | 33 | 5 | 177 | 426 |
| 07:30 AM | 40 | 20 | 0 | 60 | 0 | 44 | 5 | 49 | 8 | 13 | 140 | 161 | 76 | 44 | 8 | 128 | 398 |
| 07:45 AM | 26 | 3 | 0 | 29 | 0 | 38 | 3 | 41 | 6 | 17 | 66 | 89 | 49 | 50 | 3 | 102 | 261 |
| 08:00 AM | 21 | 3 | 0 | 24 | 0 | 53 | 1 | 54 | 2 | 1 | 51 | 54 | 25 | 36 | 8 | 69 | 201 |
| Total Volume | 141 | 55 | 0 | 196 | 0 | 178 | 14 | 192 | 23 | 42 | 357 | 422 | 289 | 163 | 24 | 476 | 1286 |
| % App. Total | 71.9 | 28.1 | 0 | | 0 | 92.7 | 7.3 | | 5.5 | 10 | 84.6 | | 60.7 | 34.2 | 5 | | |
| PHF | .653 | .474 | .000 | .590 | .000 | .840 | .700 | .889 | .719 | .618 | .638 | .655 | .520 | .815 | .750 | .672 | .755 |



Peak Hour Data

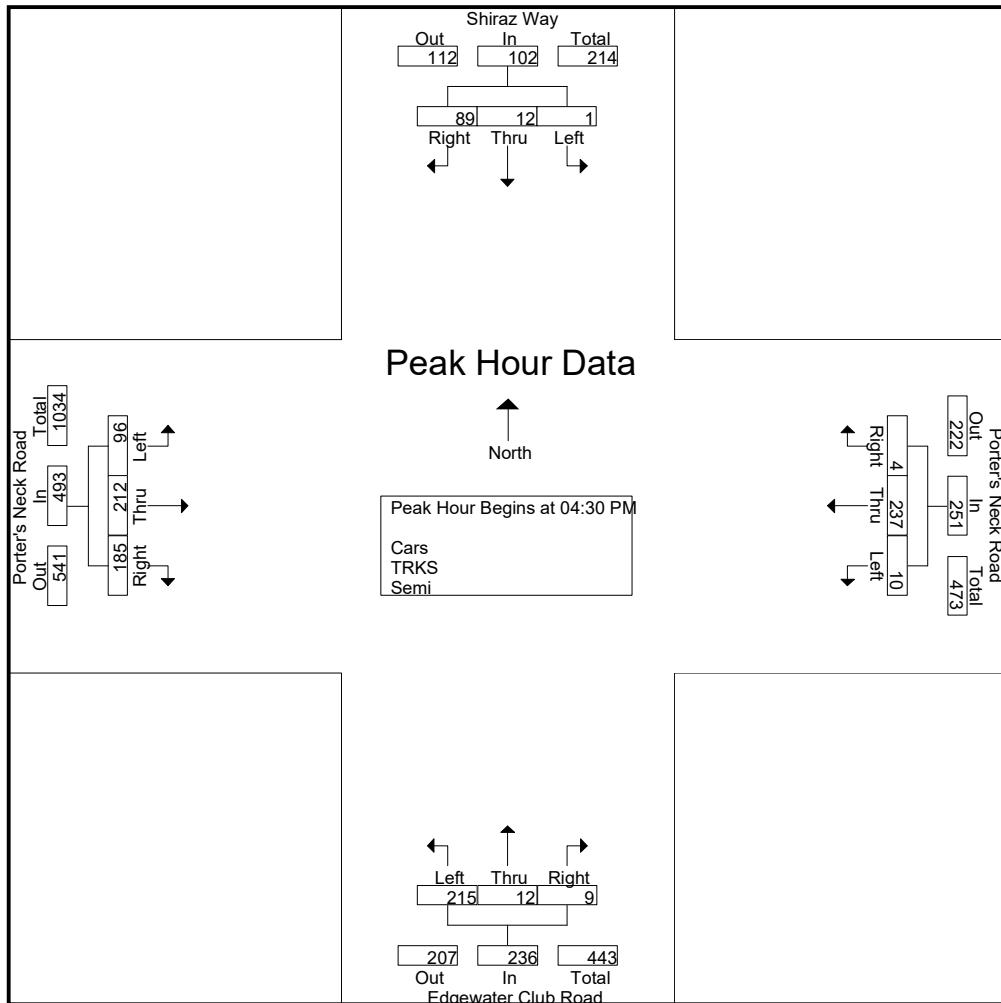




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Raleigh, NC 27609
PH: 919 872-5115

File Name : Porter's Neck Road and Edgewater Club Road-Shiraz Way
Site Code : 00000005
Start Date : 8/29/2019
Page No : 3

| | Shiraz Way From North | | | | Porter's Neck Road From East | | | | Edgewater Club Road From South | | | | Porter's Neck Road From West | | | | |
|--|--------------------------|------|------|------------|---------------------------------|------|------|------------|-----------------------------------|------|------|------------|---------------------------------|------|------|------------|------------|
| Start Time | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Int. Total |
| Peak Hour Analysis From 04:30 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:30 PM | | | | | | | | | | | | | | | | | |
| 04:30 PM | 27 | 2 | 1 | 30 | 0 | 49 | 3 | 52 | 2 | 4 | 71 | 77 | 48 | 58 | 13 | 119 | 278 |
| 04:45 PM | 22 | 6 | 0 | 28 | 1 | 60 | 5 | 66 | 2 | 2 | 48 | 52 | 46 | 48 | 31 | 125 | 271 |
| 05:00 PM | 23 | 2 | 0 | 25 | 3 | 80 | 0 | 83 | 2 | 4 | 50 | 56 | 42 | 56 | 25 | 123 | 287 |
| 05:15 PM | 17 | 2 | 0 | 19 | 0 | 48 | 2 | 50 | 3 | 2 | 46 | 51 | 49 | 50 | 27 | 126 | 246 |
| Total Volume | 89 | 12 | 1 | 102 | 4 | 237 | 10 | 251 | 9 | 12 | 215 | 236 | 185 | 212 | 96 | 493 | 1082 |
| % App. Total | 87.3 | 11.8 | 1 | | 1.6 | 94.4 | 4 | | 3.8 | 5.1 | 91.1 | | 37.5 | 43 | 19.5 | | |
| PHF | .824 | .500 | .250 | .850 | .333 | .741 | .500 | .756 | .750 | .750 | .757 | .766 | .944 | .914 | .774 | .978 | .943 |

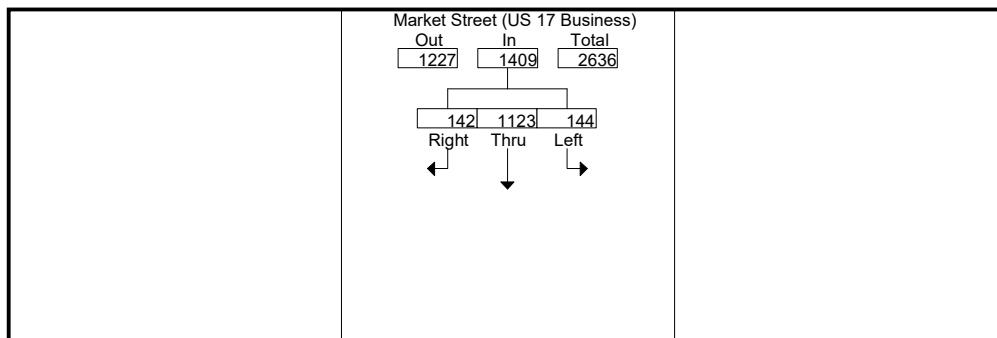




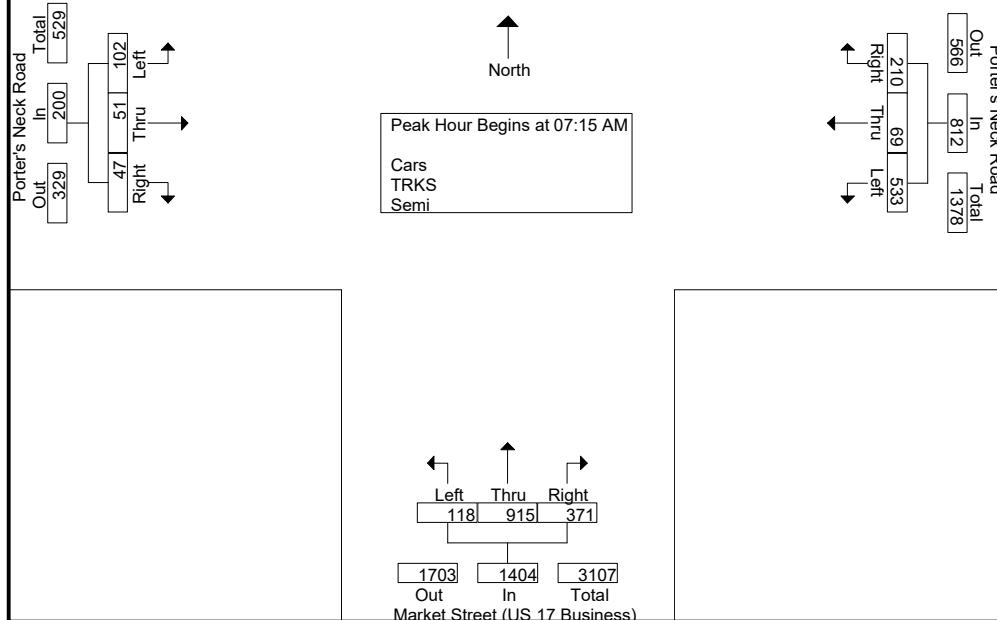
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Market Street and Porter's Neck Road
Site Code : 00000001
Start Date : 8/29/2019
Page No : 2

| | Market Street (US 17 Business) From North | | | | Porter's Neck Road From East | | | | Market Street (US 17 Business) From South | | | | Porter's Neck Road From West | | | | |
|--|--|------|------|------------|---------------------------------|------|------|------------|--|------|------|------------|---------------------------------|------|------|------------|------------|
| Start Time | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Int. Total |
| Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:15 AM | | | | | | | | | | | | | | | | | |
| 07:15 AM | 36 | 311 | 36 | 383 | 30 | 15 | 152 | 197 | 132 | 201 | 25 | 358 | 7 | 18 | 17 | 42 | 980 |
| 07:30 AM | 35 | 281 | 37 | 353 | 65 | 23 | 173 | 261 | 101 | 239 | 32 | 372 | 21 | 7 | 17 | 45 | 1031 |
| 07:45 AM | 26 | 283 | 39 | 348 | 56 | 12 | 116 | 184 | 75 | 255 | 27 | 357 | 12 | 16 | 35 | 63 | 952 |
| 08:00 AM | 45 | 248 | 32 | 325 | 59 | 19 | 92 | 170 | 63 | 220 | 34 | 317 | 7 | 10 | 33 | 50 | 862 |
| Total Volume | 142 | 1123 | 144 | 1409 | 210 | 69 | 533 | 812 | 371 | 915 | 118 | 1404 | 47 | 51 | 102 | 200 | 3825 |
| % App. Total | 10.1 | 79.7 | 10.2 | | 25.9 | 8.5 | 65.6 | | 26.4 | 65.2 | 8.4 | | 23.5 | 25.5 | 51 | | |
| PHF | .789 | .903 | .923 | .920 | .808 | .750 | .770 | .778 | .703 | .897 | .868 | .944 | .560 | .708 | .729 | .794 | .927 |



Peak Hour Data

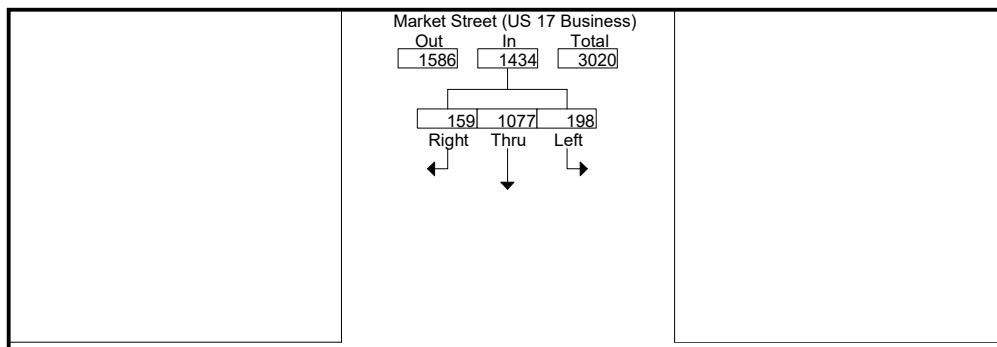




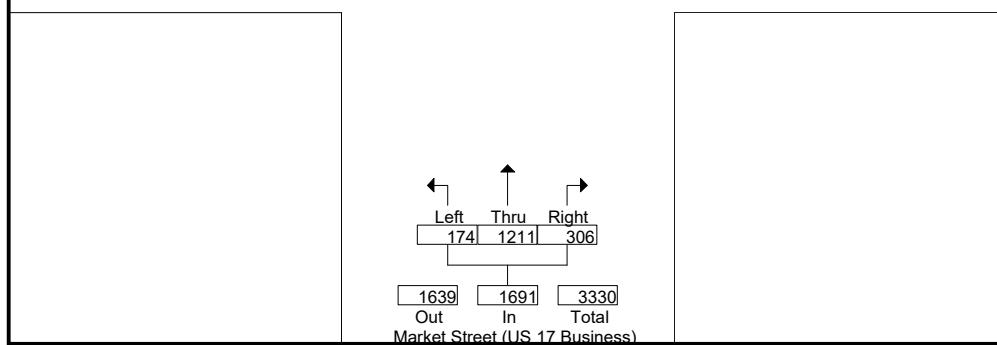
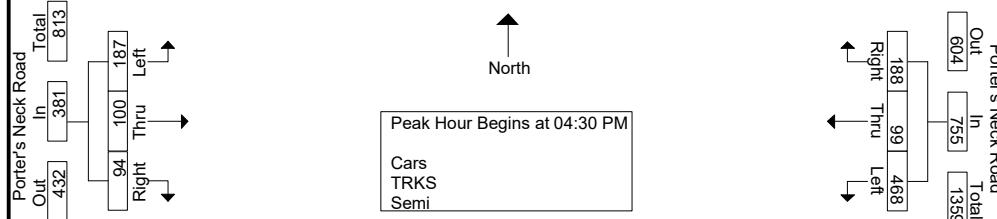
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Market Street and Porter's Neck Road
Site Code : 00000001
Start Date : 8/29/2019
Page No : 3

| | Market Street (US 17 Business) From North | | | | Porter's Neck Road From East | | | | Market Street (US 17 Business) From South | | | | Porter's Neck Road From West | | | | |
|--|--|------|------|------------|---------------------------------|------|------|------------|--|------|------|------------|---------------------------------|------|------|------------|------------|
| Start Time | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Int. Total |
| Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:30 PM | | | | | | | | | | | | | | | | | |
| 04:30 PM | 47 | 266 | 48 | 361 | 44 | 28 | 128 | 200 | 65 | 325 | 43 | 433 | 26 | 27 | 48 | 101 | 1095 |
| 04:45 PM | 34 | 303 | 54 | 391 | 51 | 25 | 104 | 180 | 87 | 301 | 52 | 440 | 10 | 21 | 41 | 72 | 1083 |
| 05:00 PM | 39 | 235 | 60 | 334 | 43 | 21 | 125 | 189 | 71 | 298 | 34 | 403 | 27 | 30 | 54 | 111 | 1037 |
| 05:15 PM | 39 | 273 | 36 | 348 | 50 | 25 | 111 | 186 | 83 | 287 | 45 | 415 | 31 | 22 | 44 | 97 | 1046 |
| Total Volume | 159 | 1077 | 198 | 1434 | 188 | 99 | 468 | 755 | 306 | 1211 | 174 | 1691 | 94 | 100 | 187 | 381 | 4261 |
| % App. Total | 11.1 | 75.1 | 13.8 | | 24.9 | 13.1 | 62 | | 18.1 | 71.6 | 10.3 | | 24.7 | 26.2 | 49.1 | | |
| PHF | .846 | .889 | .825 | .917 | .922 | .884 | .914 | .944 | .879 | .932 | .837 | .961 | .758 | .833 | .866 | .858 | .973 |



Peak Hour Data





5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Futch Creek Road and Futch Creek Road-Market Street
Site Code : 00000002
Start Date : 8/29/2019
Page No : 1

Groups Printed- Cars - TRKS - Semis

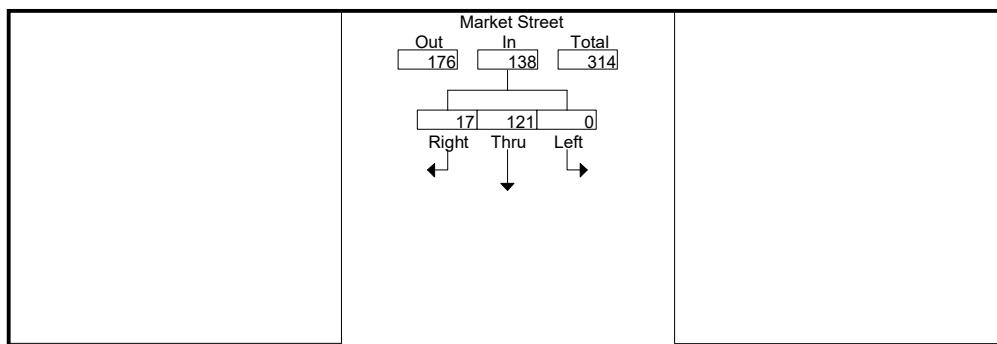
| | Market Street From North | | | | | From East | | | | | Futch Creek Road From South | | | | | Futch Creek Road From West | | | | | | | | |
|---------------|-----------------------------|------|------|------|------------|-----------|------|------|------|------------|--------------------------------|------|------|------|------------|-------------------------------|------|------|------|------------|--------------|--------------|------------|------|
| | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Exclu. Total | Inclu. Total | Int. Total | |
| Start Time | | | | | | | | | | | | | | | | | | | | | | | | |
| 06:45 AM | 3 | 16 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 1 | 0 | 20 | 0 | 0 | 7 | 0 | 7 | 0 | 46 | 46 | |
| Total | 3 | 16 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 1 | 0 | 20 | 0 | 0 | 7 | 0 | 7 | 0 | 46 | 46 | |
| 07:00 AM | 6 | 28 | 0 | 0 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 1 | 0 | 34 | 0 | 0 | 19 | 0 | 19 | 0 | 87 | 87 | |
| 07:15 AM | 2 | 31 | 0 | 0 | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 34 | 1 | 0 | 35 | 0 | 0 | 17 | 0 | 17 | 0 | 85 | 85 | |
| 07:30 AM | 3 | 33 | 0 | 0 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 38 | 0 | 0 | 38 | 0 | 0 | 5 | 0 | 5 | 0 | 79 | 79 | |
| 07:45 AM | 5 | 32 | 0 | 0 | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 0 | 0 | 31 | 0 | 0 | 9 | 0 | 9 | 0 | 77 | 77 | |
| Total | 16 | 124 | 0 | 0 | 140 | 0 | 0 | 0 | 0 | 0 | 0 | 136 | 2 | 0 | 138 | 0 | 0 | 50 | 0 | 50 | 0 | 328 | 328 | |
| 08:00 AM | 7 | 25 | 0 | 0 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 32 | 0 | 0 | 32 | 0 | 0 | 10 | 0 | 10 | 0 | 74 | 74 | |
| 08:15 AM | 5 | 23 | 0 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 0 | 0 | 25 | 0 | 0 | 5 | 0 | 5 | 0 | 58 | 58 | |
| 08:30 AM | 4 | 35 | 0 | 0 | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 17 | 1 | 0 | 3 | 0 | 4 | 0 | 60 | 60 | |
| *** BREAK *** | | | | | | | | | | | | | | | | | | | | | | | | |
| Total | 16 | 83 | 0 | 0 | 99 | 0 | 0 | 0 | 0 | 0 | 0 | 74 | 0 | 0 | 74 | 1 | 0 | 18 | 0 | 19 | 0 | 192 | 192 | |
| *** BREAK *** | | | | | | | | | | | | | | | | | | | | | | | | |
| 03:45 PM | 9 | 39 | 0 | 0 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 1 | 0 | 16 | 0 | 0 | 5 | 0 | 5 | 0 | 69 | 69 | |
| Total | 9 | 39 | 0 | 0 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 1 | 0 | 16 | 0 | 0 | 5 | 0 | 5 | 0 | 69 | 69 | |
| 04:00 PM | 4 | 28 | 0 | 0 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 1 | 0 | 13 | 1 | 0 | 8 | 0 | 9 | 0 | 54 | 54 | |
| 04:15 PM | 5 | 31 | 0 | 0 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 0 | 0 | 27 | 0 | 0 | 3 | 0 | 3 | 0 | 66 | 66 | |
| 04:30 PM | 7 | 24 | 0 | 0 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 2 | 0 | 18 | 1 | 0 | 5 | 0 | 6 | 0 | 55 | 55 | |
| 04:45 PM | 10 | 29 | 0 | 0 | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 0 | 0 | 33 | 1 | 0 | 3 | 0 | 4 | 0 | 76 | 76 | |
| Total | 26 | 112 | 0 | 0 | 138 | 0 | 0 | 0 | 0 | 0 | 0 | 88 | 3 | 0 | 91 | 3 | 0 | 19 | 0 | 22 | 0 | 251 | 251 | |
| 05:00 PM | 11 | 31 | 0 | 0 | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 18 | 1 | 0 | 3 | 0 | 4 | 0 | 64 | 64 | |
| 05:15 PM | 12 | 39 | 0 | 0 | 51 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 20 | 2 | 0 | 8 | 0 | 10 | 0 | 81 | 81 | |
| 05:30 PM | 8 | 24 | 0 | 0 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 14 | 0 | 0 | 4 | 0 | 4 | 0 | 50 | 50 | |
| Grand Total | 101 | 468 | 0 | 0 | 569 | 0 | 0 | 0 | 0 | 0 | 0 | 384 | 7 | 0 | 391 | 7 | 0 | 114 | 0 | 121 | 0 | 1081 | 1081 | |
| Apprch % | 17.8 | 82.2 | 0 | | | 0 | 0 | 0 | | | | 98.2 | 1.8 | | | 5.8 | 0 | 94.2 | | | | | | |
| Total % | 9.3 | 43.3 | 0 | | 52.6 | 0 | 0 | 0 | | | | 35.5 | 0.6 | | | 36.2 | 0.6 | 0 | 10.5 | | 11.2 | 0 | 100 | |
| Cars | 100 | 455 | 0 | | 555 | 0 | 0 | 0 | | | | 377 | 5 | | | 382 | 7 | 0 | 110 | | 117 | 0 | 0 | 1054 |
| % Cars | 99 | 97.2 | 0 | 0 | 97.5 | 0 | 0 | 0 | | | | 98.2 | 71.4 | 0 | | 97.7 | 100 | 0 | 96.5 | 0 | 96.7 | 0 | 0 | 97.5 |
| TRKS | 1 | 13 | 0 | | 14 | 0 | 0 | 0 | | | | 7 | 2 | | | 9 | 0 | 0 | 4 | | 4 | 0 | 0 | 27 |
| % TRKS | 1 | 2.8 | 0 | 0 | 2.5 | 0 | 0 | 0 | | | | 1.8 | 28.6 | 0 | | 2.3 | 0 | 0 | 3.5 | 0 | 3.3 | 0 | 0 | 2.5 |
| Semis | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | | | | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 |
| % Semis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 |



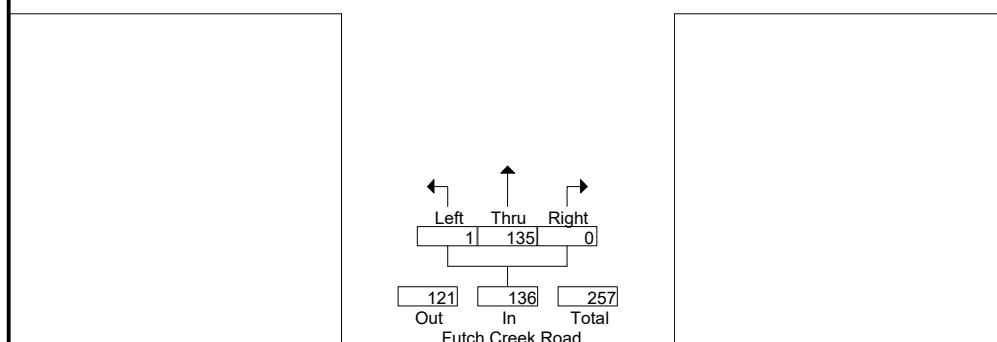
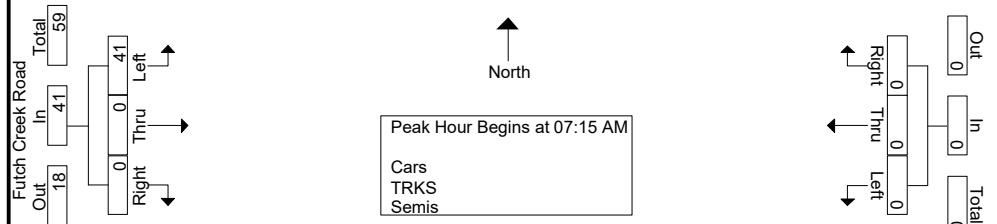
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Futch Creek Road and Futch Creek Road-Market Street
Site Code : 00000002
Start Date : 8/29/2019
Page No : 2

| | Market Street From North | | | | From East | | | | Futch Creek Road From South | | | | Futch Creek Road From West | | | | |
|---|-----------------------------|------|------|------------|-----------|------|------|------------|--------------------------------|------|------|------------|-------------------------------|------|------|------------|------------|
| Start Time | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Int. Total |
| Peak Hour Analysis From 07:15 AM to 11:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:15 AM | | | | | | | | | | | | | | | | | |
| 07:15 AM | 2 | 31 | 0 | 33 | 0 | 0 | 0 | 0 | 0 | 34 | 1 | 35 | 0 | 0 | 17 | 17 | 85 |
| 07:30 AM | 3 | 33 | 0 | 36 | 0 | 0 | 0 | 0 | 0 | 38 | 0 | 38 | 0 | 0 | 5 | 5 | 79 |
| 07:45 AM | 5 | 32 | 0 | 37 | 0 | 0 | 0 | 0 | 0 | 31 | 0 | 31 | 0 | 0 | 9 | 9 | 77 |
| 08:00 AM | 7 | 25 | 0 | 32 | 0 | 0 | 0 | 0 | 0 | 32 | 0 | 32 | 0 | 0 | 10 | 10 | 74 |
| Total Volume | 17 | 121 | 0 | 138 | 0 | 0 | 0 | 0 | 0 | 135 | 1 | 136 | 0 | 0 | 41 | 41 | 315 |
| % App. Total | 12.3 | 87.7 | 0 | | 0 | 0 | 0 | | 0 | 99.3 | 0.7 | | 0 | 0 | 100 | | |
| PHF | .607 | .917 | .000 | .932 | .000 | .000 | .000 | .000 | .000 | .888 | .250 | .895 | .000 | .000 | .603 | .603 | .926 |



Peak Hour Data

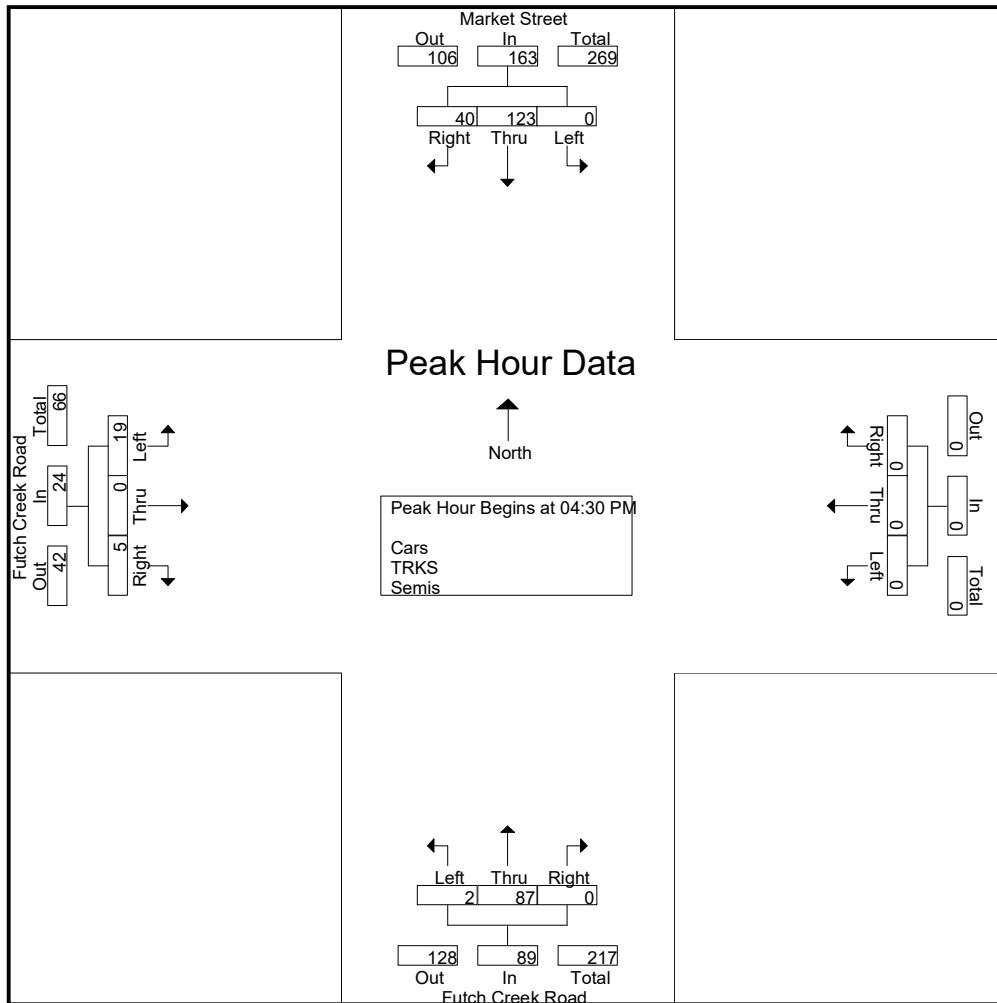




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Raleigh, NC 27609
PH: 919 872-5115

File Name : Futch Creek Road and Futch Creek Road-Market Street
Site Code : 00000002
Start Date : 8/29/2019
Page No : 3

| Start Time | Market Street From North | | | | From East | | | | Futch Creek Road From South | | | | Futch Creek Road From West | | | | Int. Total |
|--|-----------------------------|------|------|------------|-----------|------|------|------------|--------------------------------|------|------|------------|-------------------------------|------|------|------------|------------|
| | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | |
| Peak Hour Analysis From 04:30 PM to 05:30 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:30 PM | | | | | | | | | | | | | | | | | |
| 04:30 PM | 7 | 24 | 0 | 31 | 0 | 0 | 0 | 0 | 0 | 16 | 2 | 18 | 1 | 0 | 5 | 6 | 55 |
| 04:45 PM | 10 | 29 | 0 | 39 | 0 | 0 | 0 | 0 | 0 | 33 | 0 | 33 | 1 | 0 | 3 | 4 | 76 |
| 05:00 PM | 11 | 31 | 0 | 42 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 18 | 1 | 0 | 3 | 4 | 64 |
| 05:15 PM | 12 | 39 | 0 | 51 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 20 | 2 | 0 | 8 | 10 | 81 |
| Total Volume | 40 | 123 | 0 | 163 | 0 | 0 | 0 | 0 | 0 | 87 | 2 | 89 | 5 | 0 | 19 | 24 | 276 |
| % App. Total | 24.5 | 75.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 97.8 | 2.2 | 2.2 | 20.8 | 0 | 79.2 | 0 | |
| PHF | .833 | .788 | .000 | .799 | .000 | .000 | .000 | .000 | .000 | .659 | .250 | .674 | .625 | .000 | .594 | .600 | .852 |





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Sign, No 27665
H-919 872-5115

. 919 872-3113

File Name : Market Street (US 17 BUS) U-Turn Location
Site Code : 00000004
Start Date : 8/29/2019
Page No : 1

Groups Printed- Cars - TRKS - Semi

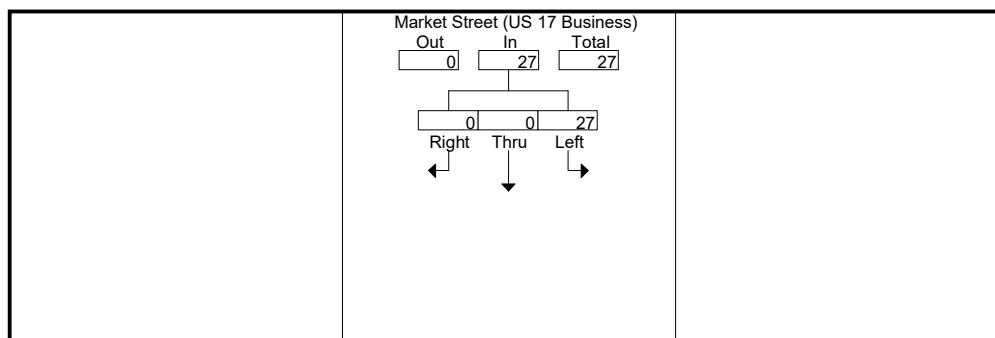
*** BREAK ***



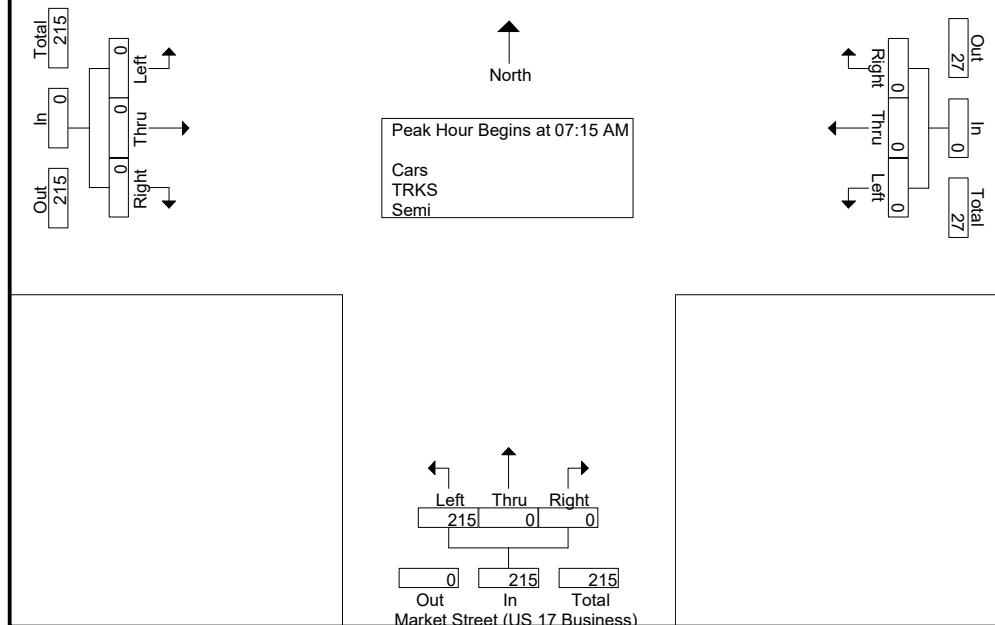
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Market Street (US 17 BUS) U-Turn Location
Site Code : 00000004
Start Date : 8/29/2019
Page No : 2

| | Market Street (US 17 Business) From North | | | | From East | | | | Market Street (US 17 Business) From South | | | | From West | | | | |
|---|--|------|------|------------|-----------|------|------|------------|--|------|------|------------|-----------|------|------|------------|------------|
| Start Time | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Int. Total |
| Peak Hour Analysis From 07:15 AM to 08:30 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:15 AM | | | | | | | | | | | | | | | | | |
| 07:15 AM | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 62 | 62 | 0 | 0 | 0 | 0 | 67 |
| 07:30 AM | 0 | 0 | 10 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 67 | 67 | 0 | 0 | 0 | 0 | 77 |
| 07:45 AM | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 45 | 45 | 0 | 0 | 0 | 0 | 49 |
| 08:00 AM | 0 | 0 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 41 | 41 | 0 | 0 | 0 | 0 | 49 |
| Total Volume | 0 | 0 | 27 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 215 | 215 | 0 | 0 | 0 | 0 | 242 |
| % App. Total | 0 | 0 | 100 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 100 | 0 | 0 | 0 | 0 | |
| PHF | .000 | .000 | .675 | .675 | .000 | .000 | .000 | .000 | .000 | .000 | .802 | .802 | .000 | .000 | .000 | .000 | .786 |



Peak Hour Data

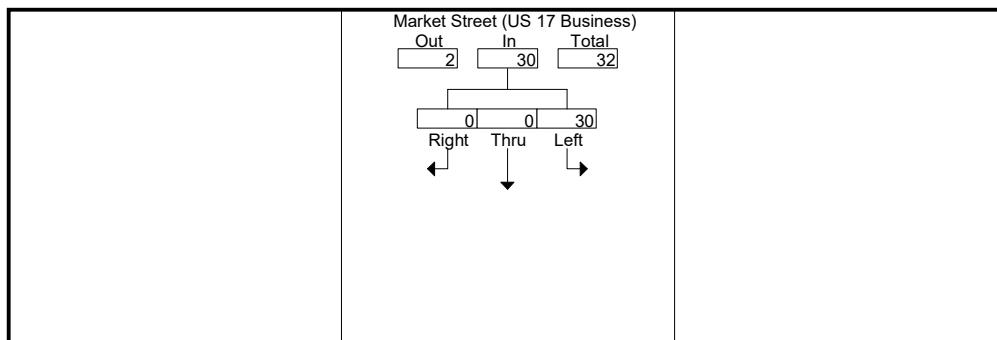




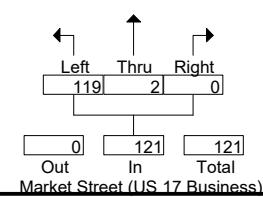
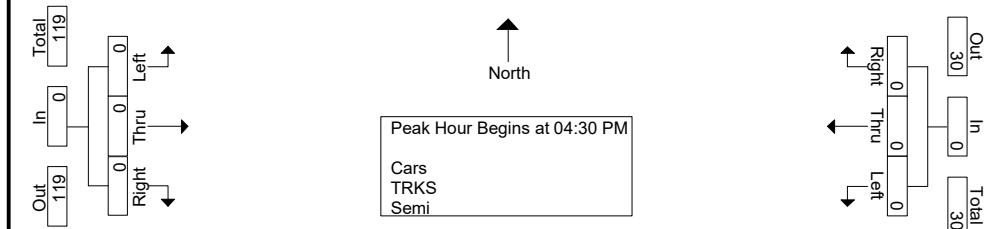
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Market Street (US 17 BUS) U-Turn Location
Site Code : 00000004
Start Date : 8/29/2019
Page No : 3

| | Market Street (US 17 Business) From North | | | | From East | | | | Market Street (US 17 Business) From South | | | | From West | | | | |
|---|--|------|------|------------|-----------|------|------|------------|--|------|------|------------|-----------|------|------|------------|------------|
| Start Time | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Int. Total |
| Peak Hour Analysis From 04:30 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:30 PM | | | | | | | | | | | | | | | | | |
| 04:30 PM | 0 | 0 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 29 | 0 | 0 | 0 | 0 | 35 |
| 04:45 PM | 0 | 0 | 7 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 34 | 34 | 0 | 0 | 0 | 0 | 41 |
| 05:00 PM | 0 | 0 | 11 | 11 | 0 | 0 | 0 | 0 | 0 | 2 | 30 | 32 | 0 | 0 | 0 | 0 | 43 |
| 05:15 PM | 0 | 0 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 26 | 0 | 0 | 0 | 0 | 32 |
| Total Volume | 0 | 0 | 30 | 30 | 0 | 0 | 0 | 0 | 0 | 2 | 119 | 121 | 0 | 0 | 0 | 0 | 151 |
| % App. Total | 0 | 0 | 100 | | 0 | 0 | | | 0 | 1.7 | 98.3 | | 0 | 0 | 0 | | |
| PHF | .000 | .000 | .682 | .682 | .000 | .000 | .000 | .000 | .000 | .250 | .875 | .890 | .000 | .000 | .000 | .000 | .878 |



Peak Hour Data





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Raleigh, NC 27609
PH: 919 872-5115

File Name : Futch Creek Road-Market Street and Market Street (US 17 BUS)
Site Code : 00000003
Start Date : 8/29/2019
Page No : 1

Groups Printed- Cars - TRKS - Semi

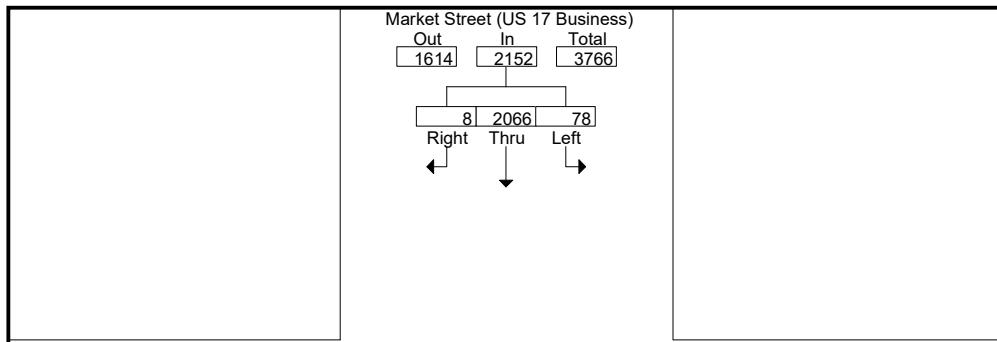
| | Market Street (US 17 Business) From North | | | | | Market Street From East | | | | | Market Street (US 17 Business) From South | | | | | Stephens Church Road From West | | | | | | | |
|---------------|--|------|------|------|-----------|----------------------------|------|------|------|-----------|--|------|------|------|-----------|-----------------------------------|------|------|------|-----------|------------|------------|-----------|
| | Right | Thru | Left | Peds | App.Total | Right | Thru | Left | Peds | App.Total | Right | Thru | Left | Peds | App.Total | Right | Thru | Left | Peds | App.Total | Excl.Total | Incl.Total | Int.Total |
| Start Time | | | | | | | | | | | | | | | | | | | | | | | |
| 07:00 AM | 2 | 521 | 13 | 0 | 536 | 52 | 0 | 0 | 0 | 52 | 14 | 234 | 1 | 0 | 249 | 19 | 0 | 0 | 0 | 19 | 0 | 856 | 856 |
| 07:15 AM | 0 | 581 | 14 | 0 | 595 | 96 | 0 | 0 | 0 | 96 | 27 | 261 | 13 | 0 | 301 | 17 | 0 | 0 | 0 | 17 | 0 | 1009 | 1009 |
| 07:30 AM | 0 | 531 | 24 | 0 | 555 | 96 | 0 | 0 | 0 | 96 | 45 | 287 | 10 | 0 | 342 | 18 | 0 | 0 | 0 | 18 | 0 | 1011 | 1011 |
| 07:45 AM | 8 | 485 | 26 | 0 | 519 | 85 | 0 | 0 | 0 | 85 | 32 | 372 | 5 | 0 | 409 | 13 | 0 | 0 | 0 | 13 | 0 | 1026 | 1026 |
| Total | 10 | 2118 | 77 | 0 | 2205 | 329 | 0 | 0 | 0 | 329 | 118 | 1154 | 29 | 0 | 1301 | 67 | 0 | 0 | 0 | 67 | 0 | 3902 | 3902 |
| 08:00 AM | 0 | 469 | 14 | 0 | 483 | 78 | 0 | 0 | 0 | 78 | 29 | 339 | 10 | 0 | 378 | 17 | 0 | 0 | 0 | 17 | 0 | 956 | 956 |
| 08:15 AM | 0 | 447 | 17 | 0 | 464 | 63 | 0 | 0 | 0 | 63 | 32 | 285 | 6 | 0 | 323 | 15 | 0 | 0 | 0 | 15 | 0 | 865 | 865 |
| 08:30 AM | 0 | 453 | 8 | 0 | 461 | 54 | 0 | 0 | 0 | 54 | 25 | 324 | 7 | 0 | 356 | 18 | 0 | 0 | 0 | 18 | 0 | 889 | 889 |
| 08:45 AM | 0 | 504 | 31 | 0 | 535 | 37 | 0 | 0 | 0 | 37 | 32 | 249 | 6 | 0 | 287 | 9 | 0 | 0 | 0 | 9 | 0 | 868 | 868 |
| Total | 0 | 1873 | 70 | 0 | 1943 | 232 | 0 | 0 | 0 | 232 | 118 | 1197 | 29 | 0 | 1344 | 59 | 0 | 0 | 0 | 59 | 0 | 3578 | 3578 |
| *** BREAK *** | | | | | | | | | | | | | | | | | | | | | | | |
| 04:00 PM | 3 | 416 | 28 | 0 | 447 | 25 | 0 | 0 | 0 | 25 | 40 | 466 | 14 | 0 | 520 | 12 | 0 | 0 | 0 | 12 | 0 | 1004 | 1004 |
| 04:15 PM | 2 | 378 | 16 | 0 | 396 | 35 | 0 | 0 | 0 | 35 | 37 | 472 | 21 | 0 | 530 | 9 | 0 | 0 | 0 | 9 | 0 | 970 | 970 |
| 04:30 PM | 0 | 451 | 26 | 0 | 477 | 45 | 0 | 0 | 0 | 45 | 43 | 548 | 17 | 0 | 608 | 8 | 0 | 0 | 0 | 8 | 0 | 1138 | 1138 |
| 04:45 PM | 2 | 406 | 13 | 0 | 421 | 44 | 0 | 0 | 0 | 44 | 41 | 546 | 22 | 0 | 609 | 11 | 0 | 0 | 0 | 11 | 0 | 1085 | 1085 |
| Total | 7 | 1651 | 83 | 0 | 1741 | 149 | 0 | 0 | 0 | 149 | 161 | 2032 | 74 | 0 | 2267 | 40 | 0 | 0 | 0 | 40 | 0 | 4197 | 4197 |
| 05:00 PM | 0 | 353 | 10 | 0 | 363 | 56 | 0 | 0 | 0 | 56 | 43 | 451 | 15 | 0 | 509 | 13 | 0 | 0 | 0 | 13 | 0 | 941 | 941 |
| 05:15 PM | 3 | 405 | 15 | 0 | 423 | 47 | 0 | 0 | 0 | 47 | 49 | 573 | 25 | 0 | 647 | 11 | 0 | 0 | 0 | 11 | 0 | 1128 | 1128 |
| 05:30 PM | 1 | 377 | 10 | 0 | 388 | 41 | 0 | 0 | 0 | 41 | 48 | 580 | 25 | 0 | 653 | 13 | 0 | 0 | 0 | 13 | 0 | 1095 | 1095 |
| 05:45 PM | 6 | 340 | 19 | 0 | 365 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 10 | 0 | 375 | 375 |
| Total | 10 | 1475 | 54 | 0 | 1539 | 144 | 0 | 0 | 0 | 144 | 140 | 1604 | 65 | 0 | 1809 | 47 | 0 | 0 | 0 | 47 | 0 | 3539 | 3539 |
| Grand Total | 27 | 7117 | 284 | 0 | 7428 | 854 | 0 | 0 | 0 | 854 | 537 | 5987 | 197 | 0 | 6721 | 213 | 0 | 0 | 0 | 213 | 0 | 15216 | 15216 |
| Apprch % | 0.4 | 95.8 | 3.8 | | | 100 | 0 | 0 | | 89.1 | 8 | 89.1 | 2.9 | | | 100 | 0 | 0 | | 0 | | | |
| Total % | 0.2 | 46.8 | 1.9 | | | 48.8 | 5.6 | 0 | 0 | 5.6 | 3.5 | 39.3 | 1.3 | | | 44.2 | 1.4 | 0 | 0 | 1.4 | 0 | 100 | |
| Cars | 27 | 6815 | 274 | | 7116 | 836 | 0 | 0 | | 836 | 505 | 5609 | 177 | | | 6291 | 201 | 0 | 0 | 201 | 0 | 0 | 14444 |
| % Cars | 100 | 95.8 | 96.5 | 0 | 95.8 | 97.9 | 0 | 0 | 0 | 97.9 | 94 | 93.7 | 89.8 | 0 | 93.6 | 94.4 | 0 | 0 | 0 | 94.4 | 0 | 0 | 94.9 |
| TRKS | 0 | 151 | 5 | | 156 | 9 | 0 | 0 | | 9 | 16 | 189 | 10 | | | 215 | 6 | 0 | 0 | 6 | 0 | 0 | 386 |
| % TRKS | 0 | 2.1 | 1.8 | 0 | 2.1 | 1.1 | 0 | 0 | 0 | 1.1 | 3 | 3.2 | 5.1 | 0 | 3.2 | 2.8 | 0 | 0 | 0 | 2.8 | 0 | 0 | 2.5 |
| Semi | 0 | 151 | 5 | | 156 | 9 | 0 | 0 | | 9 | 16 | 189 | 10 | | | 215 | 6 | 0 | 0 | 6 | 0 | 0 | 386 |
| % Semi | 0 | 2.1 | 1.8 | 0 | 2.1 | 1.1 | 0 | 0 | 0 | 1.1 | 3 | 3.2 | 5.1 | 0 | 3.2 | 2.8 | 0 | 0 | 0 | 2.8 | 0 | 0 | 2.5 |



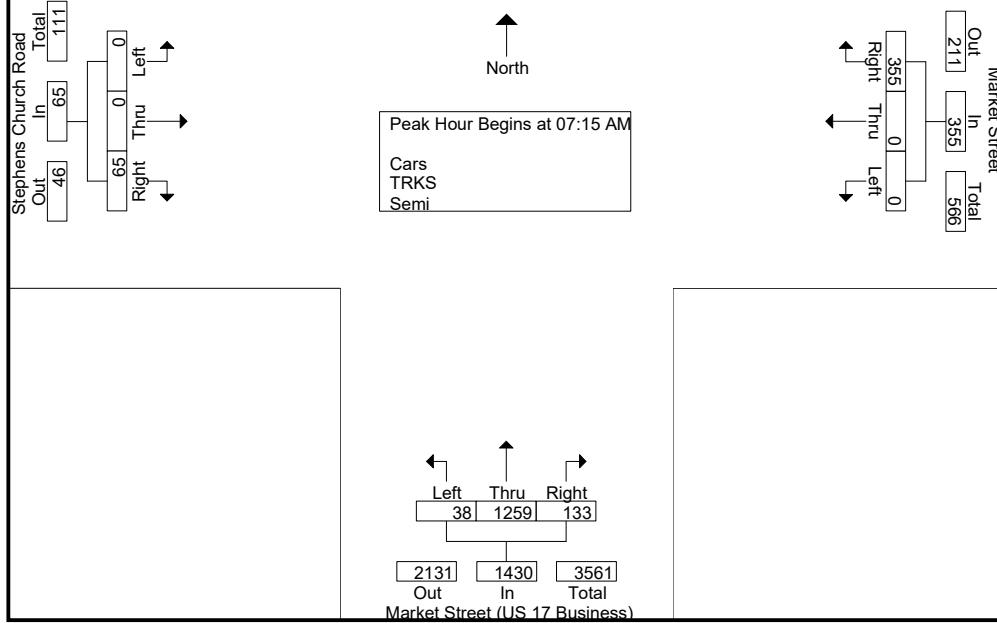
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Futch Creek Road-Market Street and Market Street (US 17 BUS)
Site Code : 00000003
Start Date : 8/29/2019
Page No : 2

| | Market Street (US 17 Business) From North | | | Market Street From East | | | Market Street (US 17 Business) From South | | | Stephens Church Road From West | | | | | | | |
|--|--|------|------|----------------------------|-------|------|--|------------|-------|-----------------------------------|------|------------|-------|------|------|------------|------------|
| Start Time | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Int. Total |
| Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:15 AM | | | | | | | | | | | | | | | | | |
| 07:15 AM | 0 | 581 | 14 | 595 | 96 | 0 | 0 | 96 | 27 | 261 | 13 | 301 | 17 | 0 | 0 | 17 | 1009 |
| 07:30 AM | 0 | 531 | 24 | 555 | 96 | 0 | 0 | 96 | 45 | 287 | 10 | 342 | 18 | 0 | 0 | 18 | 1011 |
| 07:45 AM | 8 | 485 | 26 | 519 | 85 | 0 | 0 | 85 | 32 | 372 | 5 | 409 | 13 | 0 | 0 | 13 | 1026 |
| 08:00 AM | 0 | 469 | 14 | 483 | 78 | 0 | 0 | 78 | 29 | 339 | 10 | 378 | 17 | 0 | 0 | 17 | 956 |
| Total Volume | 8 | 2066 | 78 | 2152 | 355 | 0 | 0 | 355 | 133 | 1259 | 38 | 1430 | 65 | 0 | 0 | 65 | 4002 |
| % App. Total | 0.4 | 96 | 3.6 | | 100 | 0 | 0 | | 9.3 | 88 | 2.7 | | 100 | 0 | 0 | | |
| PHF | .250 | .889 | .750 | .904 | .924 | .000 | .000 | .924 | .739 | .846 | .731 | .874 | .903 | .000 | .000 | .903 | .975 |



Peak Hour Data

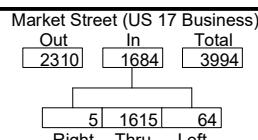




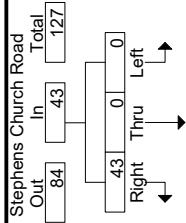
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Futch Creek Road-Market Street and Market Street (US 17 BUS)
Site Code : 00000003
Start Date : 8/29/2019
Page No : 3

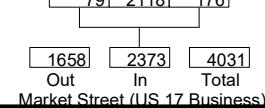
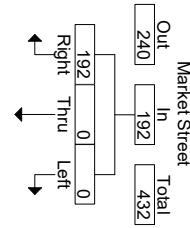
| | Market Street (US 17 Business) From North | | | Market Street From East | | | Market Street (US 17 Business) From South | | | Stephens Church Road From West | | | | | | | |
|---|--|------|------|----------------------------|-------|------|--|------------|-------|-----------------------------------|------|------------|-------|------|------|------------|------------|
| Start Time | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Int. Total |
| Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:30 PM | | | | | | | | | | | | | | | | | |
| 04:30 PM | 0 | 451 | 26 | 477 | 45 | 0 | 0 | 45 | 43 | 548 | 17 | 608 | 8 | 0 | 0 | 8 | 1138 |
| 04:45 PM | 2 | 406 | 13 | 421 | 44 | 0 | 0 | 44 | 41 | 546 | 22 | 609 | 11 | 0 | 0 | 11 | 1085 |
| 05:00 PM | 0 | 353 | 10 | 363 | 56 | 0 | 0 | 56 | 43 | 451 | 15 | 509 | 13 | 0 | 0 | 13 | 941 |
| 05:15 PM | 3 | 405 | 15 | 423 | 47 | 0 | 0 | 47 | 49 | 573 | 25 | 647 | 11 | 0 | 0 | 11 | 1128 |
| Total Volume | 5 | 1615 | 64 | 1684 | 192 | 0 | 0 | 192 | 176 | 2118 | 79 | 2373 | 43 | 0 | 0 | 43 | 4292 |
| % App. Total | 0.3 | 95.9 | 3.8 | | 100 | 0 | 0 | | 7.4 | 89.3 | 3.3 | | 100 | 0 | 0 | | |
| PHF | .417 | .895 | .615 | .883 | .857 | .000 | .000 | .857 | .898 | .924 | .790 | .917 | .827 | .000 | .000 | .827 | .943 |



Peak Hour Data



Peak Hour Begins at 04:30 PM
Cars
TRKS
Semi



1658 2373 4031
Out In Total
Market Street (US 17 Business)

APPENDIX C

SIGNAL PLANS

PHASING DIAGRAM

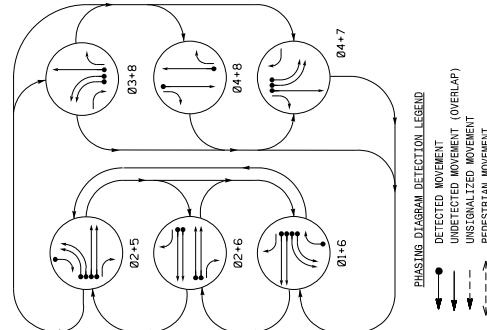
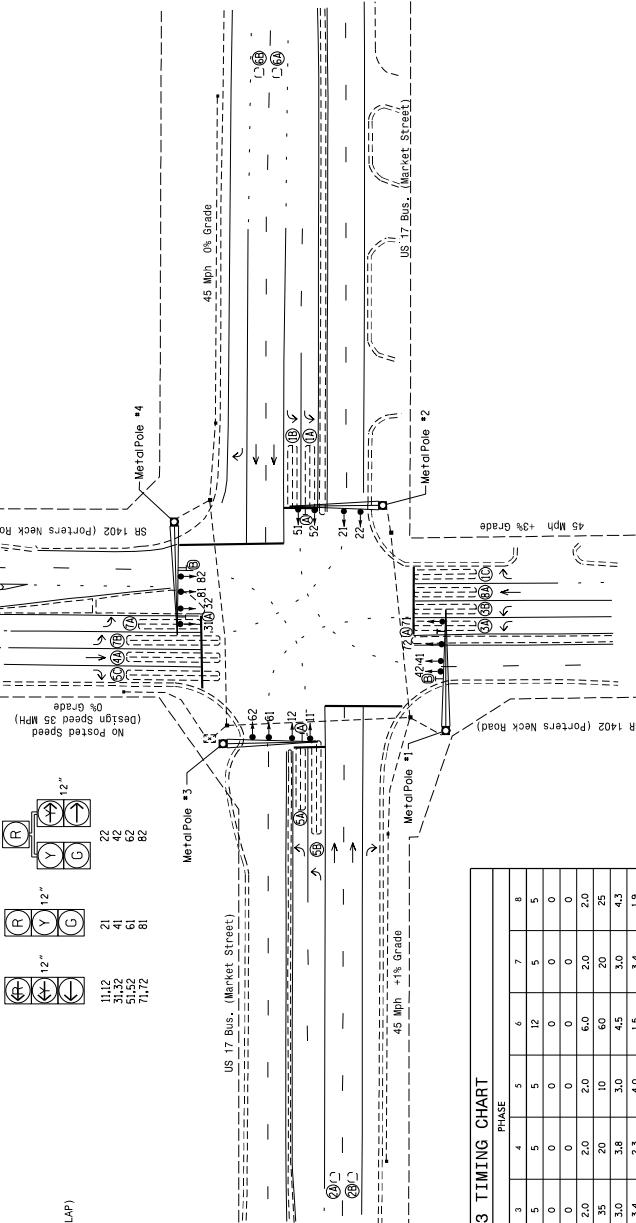


TABLE OF OPERATION

| SIGNAL FACE | PHASE | PROGRAMMING | | | | | | | | | | | |
|-------------|-------------------|-------------|------------------|------|----------|-------|-------------|------------|------------|---------|-----------|-----------|--|
| | | DOP | SITE FROM FORMAN | TURN | NEW 100% | PHASE | EXTEND TIME | DELAY TIME | ADDED TIME | INITIAL | MIN CYCLE | MAX CYCLE | |
| 11,12 | -# -# -# -# -# -# | 1A | 6x40 | 0 | 2-4-2 | - | 1 | Yes | - | - | S - | - | |
| 21 | R G G R R R Y | 1B | 6x40 | 0 | 2-4-2 | - | 1 | Yes | - | - | S - | - | |
| 22 | R G G R R R Y | 1C | 6x40 | 0 | 2-4-2 | - | 1 | Yes | - | - | S - | - | |
| 31,32 | -# -# -# -# -# -# | 2A | 6x16 | 300 | 5 | - | 2 | Yes | - | X | N - | - | |
| 41 | R R R R G G R | 2B | 6x16 | 300 | 5 | - | 2 | Yes | - | X | N - | - | |
| 42 | R R R R G G R | 3A | 6x40 | 0 | 2-4-2 | - | 3 | Yes | - | - | X N - | - | |
| 51,52 | -# -# -# -# -# -# | 3B | 6x40 | 0 | 2-4-2 | - | 3 | Yes | - | - | S - | - | |
| 61 | G G R R R R Y | 4A | 6x60 | +12 | 2-4-2 | - | 4 | Yes | - | - | S - | - | |
| 62 | G G R R R R Y | 5A | 6x40 | 0 | 2-4-2 | - | 5 | Yes | - | - | S - | - | |
| 71,72 | -# -# -# -# -# -# | 5B | 6x60 | +4 | 2-4-2 | - | 5 | Yes | - | - | S - | - | |
| 81 | R R R G G R R | 5C | 6x60 | +12 | 2-4-2 | - | 5 | Yes | - | 15 | - | - | |
| 82 | R R R G G R R | 6A | 6x16 | 300 | 5 | - | 6 | Yes | - | - | X N - | - | |
| 7A | Heads L.E.D. | 6B | 6x40 | 0 | 2-4-2 | - | 6 | Yes | - | - | X N - | - | |
| 7B | All Heads L.E.D. | 7A | 6x60 | +12 | 2-4-2 | - | 7 | Yes | - | - | S - | - | |
| 8A | Heads L.E.D. | 7B | 6x40 | 0 | 2-4-2 | - | 8 | Yes | - | - | S - | - | |

SIGNAL FACE I.D.

All Heads L.E.D.



ASC/3 TIMING CHART

| FEATURE | PHASE | | | | | | | | | | | |
|-------------------------|-------|-----|---|---|---|---|---|---|---|----|----|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Min Green * | 5 | 12 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Walk * | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Max Initial * | - | 1.5 | - | - | - | - | - | - | - | - | - | - |
| Time Before Reduction * | - | 15 | - | - | - | - | - | - | - | - | - | - |
| Time To Reduce * | - | 30 | - | - | - | - | - | - | - | - | - | - |
| Minimum Gap | - | 3.0 | - | - | - | - | - | - | - | - | - | - |
| Locking Detector | - | X | - | - | - | - | - | - | - | - | - | - |
| Recall Position | - | X | - | - | - | - | - | - | - | - | - | - |
| Det Entry | - | X | - | - | - | - | - | - | - | - | - | - |
| Simultaneous Gap | - | X | - | - | - | - | - | - | - | - | - | - |

* These values may be field adjusted. Do not adjust Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

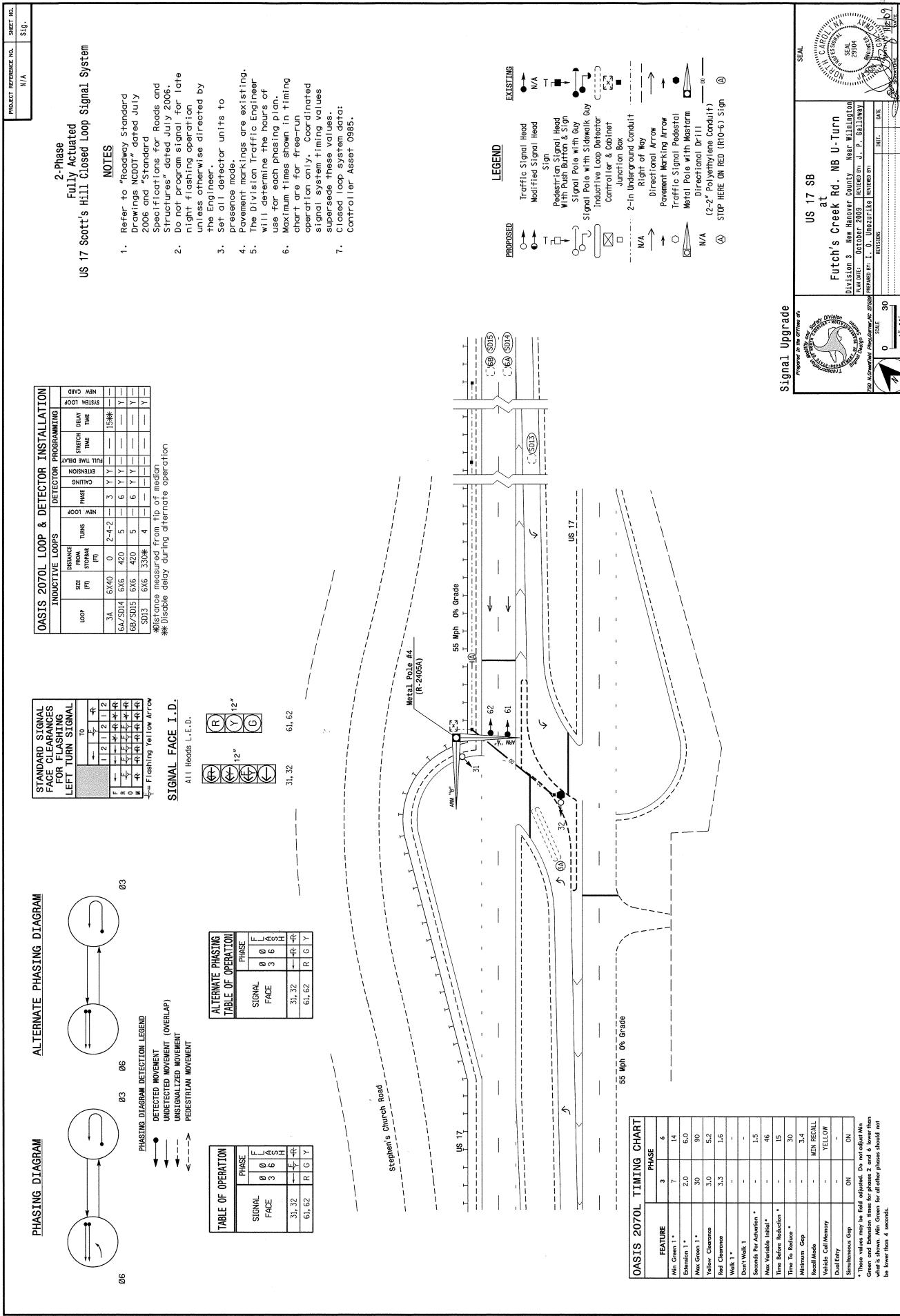
Signal Upgrade

| | |
|------------------------|---|
| PROJECT NUMBER OR NAME | US 17 Bus. (Market Street) at Porters Neck Road |
| DIVISION | Division 3 |
| NAME | New Handler |
| DATE | December 2017 |
| TIME | 10:00 AM |
| REMOVED BY | Kip J. |
| REPLACED BY | REMOVED BY |
| SALE | 40 |
| STOCK NUMBER | 0 |
| INVENTORY NUMBER | 031030 |
| DATE ISSUED | 12/12/2017 |
| EXPIRATION DATE | 12/12/2018 |
| SEAL | WILMINGTON CITY ENGINEERS & PLANNERS, INC. 2017-03-08 |

Approved
[Signature]

12/12/2017

031030



PRODUCT REFERENCE NO. N/A SHEET NO. S1g

PHASING DIAGRAM



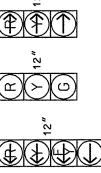
PHASING DIAGNOSTIC LEGEND



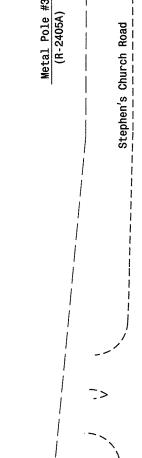
ALTERNATE PHASING TABLE OF OPERATION

| SIGNAL | FACE | PHASE | PHASE |
|--------|------|--------|-------|
| 3 | F | 3 | G |
| 6 | G | 6 | A |
| 31, 32 | H | 31, 32 | B |
| 33, 34 | I | 33, 34 | C |
| 61, 62 | J | 61, 62 | D |
| | R | | R |
| | Y | | G |
| | | | |

All Heads L.E.O.



Metal Pole #3
(R-240A)



OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

FULLY ACTUATED SCOTT'S HILL CLOSED LOOP SIGNAL SYSTEM

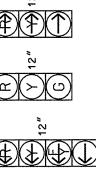
NOTES

1. Refer to "Roadway Standard Drawings NC007" dated July 2006 and Standard Specifications for Roads and Structures" dated July 2006.
2. Not all program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Set all detector units to presence mode.
4. Pavement markings are existing.
5. The Division Traffic Engineer will determine the hours of use for each phasing plan.
6. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
7. Closed loop system data: Controller Asset 0984.

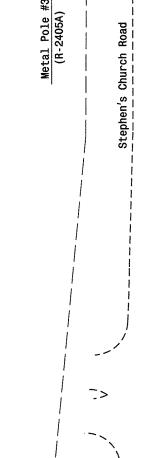
*DISTANCE MEASURED FROM TIP OF MEDIAN

**Disable delay during alternate operation

SIGNAL FACE I.D.



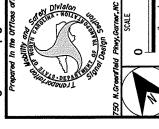
Metal Pole #3
(R-240A)



LEGEND

- | EXISTING | PROPOSED | |
|----------|----------|--|
| ● | ○ | Traffic Signal Head |
| ■ | ■ | Modified Signal Head |
| ↑ | ↑ | Sign |
| — | — | Pedestrian Signal Head With Push Button & Sign |
| ○ | ○ | Signal Pole With Guy |
| □ | □ | Inductive Loop Detector |
| — | — | Controller & Cabinet |
| — | — | Junction Box |
| — | — | 2-In Underground Conduit |
| — | — | Right of Way |
| — | — | Directional Arrow |
| — | — | Pavement Marking Arrow |
| — | — | Metal Pole With Mastarm |
| N/A | N/A | Director On Drill |
| ○ | ○ | 12-2" Polyethylene Conduit |
| ① | ① | "STOP" Sign (RH-1) |
| ② | ② | "U-TURN YIELD" RIGHT TURN" |
| ③ | ③ | "NO TURN ON RED" SIGN (RH-11) |

Signal Upgrade



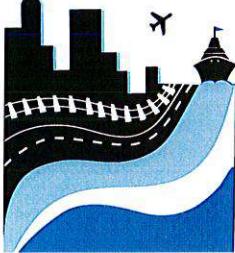
OASIS 2070 TIMING CHART

| FEATURE | PHASE | TIME |
|--------------------------|-------|------------|
| Min Green 1* | 3 | 6 |
| Extension 1* | 7 | 14 |
| Max Green 1* | 3, 0 | 90 |
| Yellow Clearance | | 5.2 |
| Red Clearance | | 1.0 |
| Walk 1* | - | - |
| Don Walk 1 | - | - |
| Seconds Per Activation * | - | 1.5 |
| Max Vehicles Trained * | - | 47 |
| Time Before Reduction * | - | 15 |
| Time To Reduce * | - | 30 |
| Minimum Gap | | 3.4 |
| Recall Mode | - | MIN RECALL |
| Vehicle Call Memory | - | YELLOW |
| Don Early | - | ON |
| Continuous Cycle | ON | ON |

* These vehicles may be held calling. Do not exceed Min Green time for all other phases. If less than 4 seconds, Min Green for all other phases should not be lower than 4 seconds.

APPENDIX D

ADJACENT DEVELOPMENT INFORMATION



WILMINGTON URBAN AREA Metropolitan Planning Organization

P.O. Box 1810
Wilmington, North Carolina 28402
910 341 3258 910 341 7801 FAX

Members:

City of
WILMINGTON
Lead Planning Agency

Town of
CAROLINA BEACH

Town of
KURE BEACH

Town of
WRIGHTSVILLE BEACH

NEW HANOVER
County

Town of
BELVILLE

Town of
LELAND

Town of
NAVASSA

BRUNSWICK
County

PENDER
County

CAPE FEAR
Public Transportation
Authority

North Carolina
BOARD OF
TRANSPORTATION

June 18, 2015

Mr. Dan Cumbo, PE
Davenport Transportation Consulting
P.O. Box 15997
Wilmington, NC 28408

**RE: Approval of the Traffic Impact Analysis (TIA) associated with the proposed
Waterstone
New Hanover County, NC**

The WMPO, NCDOT, and New Hanover County staffs have reviewed the Waterstone development TIA. We concur with the recommendations of the TIA as stated below with the included additions **in red**:

Porters Neck Road at Edgewater Club Road
• No improvements recommended

Edgewater Club Road at Saltcedar Drive
• No improvements recommended

Edgewater Club Road at Site Access 1
• Construct a 200' southbound right turn lane with appropriate taper
• **Provide 100' internal protective stem**

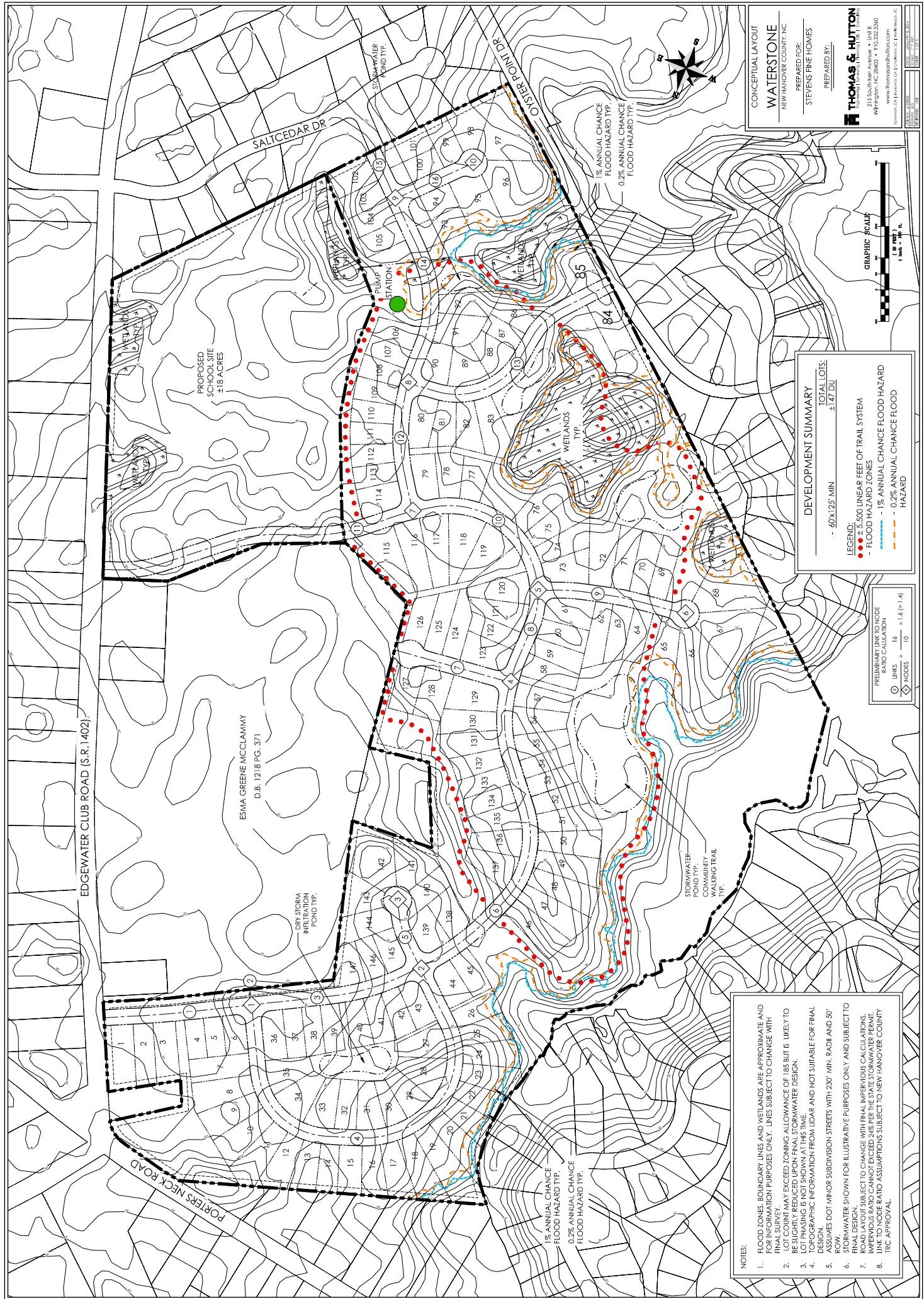
Edgewater Club Road at Site Access 2/School Access Road
• **Provide a 100' internal protective stem**

Regards,

Amy L. Kimes, PE
Construction Project Manager
Wilmington MPO

Copy:

| | | |
|--|--|---------------------------------|
| | Anthony Law, District Engineer, NCDOT | Sam Burgess, New Hanover County |
| | Katie Hite, Division Traffic Engineer, NCDOT | Bill McDow, WMPO |
| | Mike Kozlosky, Executive Director, WMPO | Ben Hughes, NCDOT |



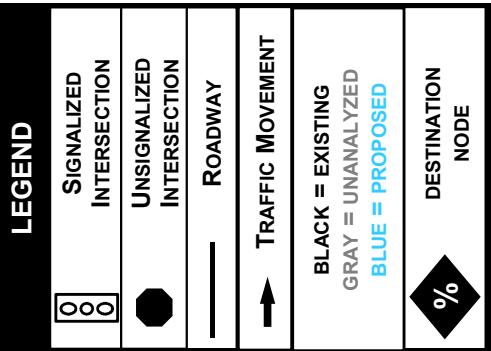


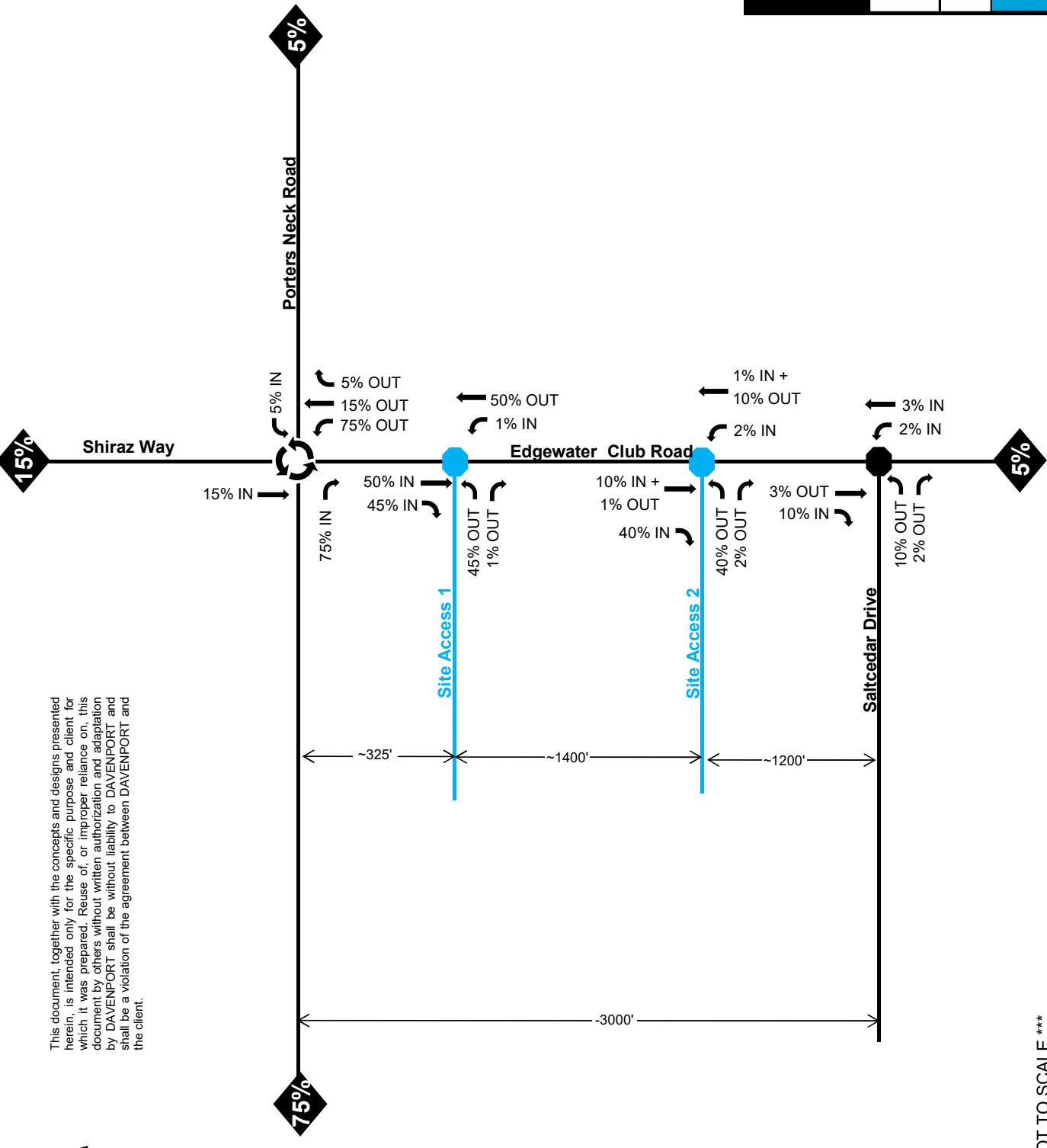
FIGURE 5
TRIP DISTRIBUTION

WATERSTONE
NEW HANOVER COUNTY, NC

PROJECT NUMBER 15-204



This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of, or improper reliance on, this document by others without written authorization and adaptation by DAVENPORT shall be without liability to DAVENPORT and shall be a violation of the agreement between DAVENPORT and the client.



*** NOT TO SCALE ***



Trip Generation Summary - Alternative 1

Project: Waterstone
 Alternative: Alternative 1

Open Date: 2/13/2015
 Analysis Date: 2/13/2015

| ITE | Land Use | Average Daily Trips | | | AM Peak Hour of Adjacent Street Traffic | | | PM Peak Hour of Adjacent Street Traffic | | |
|----------------------------------|--------------------|---------------------|------|-------|--|------|-------|--|------|-------|
| | | Enter | Exit | Total | Enter | Exit | Total | Enter | Exit | Total |
| 210 | SFHOUSE 1 | 767 | 767 | 1534 | 29 | 86 | 115 | 96 | 56 | 152 |
| | 151 Dwelling Units | | | | | | | | | |
| Unadjusted Volume | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Internal Capture Trips | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-By Trips | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Added to Adjacent Streets | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Total AM Peak Hour Internal Capture = 0 Percent

Total PM Peak Hour Internal Capture = 0 Percent

APPENDIX E

**CAPACITY ANALYSIS CALCULATIONS
PORTER'S NECK ROAD
&
EDGEWATER CLUB ROAD / SHIRAZ WAY**

LANE SUMMARY

Site: 101 [Existing (2019) AM]

Porter's Neck Road/Shiraz Way/Edgewater Club Road
Roundabout

| Lane Use and Performance | | | | | | | | | | | | | | |
|---------------------------|--------------|-----|-------|-------|-------|---------|----------|-------------|-------|--------|--------|-------|-----|--|
| | Demand Flows | | | Deg. | Lane | Average | Level of | 95% Back of | Lane | Lane | Cap. | Prob. | | |
| | Total | HV | Cap. | Satn | Util. | Delay | Service | Veh | Queue | Config | Length | Adj. | | |
| | veh/h | % | veh/h | v/c | % | sec | | | Dist | | ft | % | | |
| South: Porter's Neck Road | | | | | | | | | | | | | | |
| Lane 1 ^d | 469 | 2.0 | 1085 | 0.432 | 100 | 8.0 | LOS A | 2.6 | 66.2 | Full | 1600 | 0.0 | 0.0 | |
| Approach | 469 | 2.0 | | 0.432 | | 8.0 | LOS A | 2.6 | 66.2 | | | | | |
| East: Shiraz Way | | | | | | | | | | | | | | |
| Lane 1 ^d | 218 | 2.0 | 830 | 0.262 | 100 | 7.2 | LOS A | 1.2 | 30.2 | Full | 1600 | 0.0 | 0.0 | |
| Approach | 218 | 2.0 | | 0.262 | | 7.2 | LOS A | 1.2 | 30.2 | | | | | |
| North: Porter's Neck Road | | | | | | | | | | | | | | |
| Lane 1 ^d | 222 | 2.0 | 717 | 0.310 | 100 | 8.8 | LOS A | 1.4 | 35.0 | Full | 1600 | 0.0 | 0.0 | |
| Approach | 222 | 2.0 | | 0.310 | | 8.8 | LOS A | 1.4 | 35.0 | | | | | |
| West: Edgewater Club Road | | | | | | | | | | | | | | |
| Lane 1 ^d | 529 | 2.0 | 1243 | 0.425 | 100 | 7.1 | LOS A | 2.8 | 71.2 | Full | 1600 | 0.0 | 0.0 | |
| Approach | 529 | 2.0 | | 0.425 | | 7.1 | LOS A | 2.8 | 71.2 | | | | | |
| Intersection | 1438 | 2.0 | | 0.432 | | 7.7 | LOS A | 2.8 | 71.2 | | | | | |

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

^d Dominant lane on roundabout approach

LANE SUMMARY

Site: 101 [Existing (2019) PM]

Porter's Neck Road/Shiraz Way/Edgewater Club Road
Roundabout

| Lane Use and Performance | | | | | | | | | | | | | |
|----------------------------------|--------------|-----|-------|-------|---------|----------|-------------|-------|--------|--------|-------|-----|-----|
| | Demand Flows | | Deg. | Lane | Average | Level of | 95% Back of | Lane | Lane | Cap. | Prob. | | |
| | Total | HV | Cap. | Satn | Util. | Delay | Veh | Queue | Config | Length | Adj. | | |
| | veh/h | % | veh/h | v/c | % | sec | | Dist | | ft | % | | |
| South: Porter's Neck Road | | | | | | | | | | | | | |
| Lane 1 ^d | 262 | 2.0 | 947 | 0.277 | 100 | 6.6 | LOS A | 1.3 | 33.9 | Full | 1600 | 0.0 | 0.0 |
| Approach | 262 | 2.0 | | 0.277 | | 6.6 | LOS A | 1.3 | 33.9 | | | | |
| East: Shiraz Way | | | | | | | | | | | | | |
| Lane 1 ^d | 279 | 2.0 | 931 | 0.299 | 100 | 7.0 | LOS A | 1.5 | 37.1 | Full | 1600 | 0.0 | 0.0 |
| Approach | 279 | 2.0 | | 0.299 | | 7.0 | LOS A | 1.5 | 37.1 | | | | |
| North: Porter's Neck Road | | | | | | | | | | | | | |
| Lane 1 ^d | 113 | 2.0 | 793 | 0.143 | 100 | 6.0 | LOS A | 0.6 | 15.0 | Full | 1600 | 0.0 | 0.0 |
| Approach | 113 | 2.0 | | 0.143 | | 6.0 | LOS A | 0.6 | 15.0 | | | | |
| West: Edgewater Club Road | | | | | | | | | | | | | |
| Lane 1 ^d | 548 | 2.0 | 1317 | 0.416 | 100 | 6.7 | LOS A | 2.8 | 71.8 | Full | 1600 | 0.0 | 0.0 |
| Approach | 548 | 2.0 | | 0.416 | | 6.7 | LOS A | 2.8 | 71.8 | | | | |
| Intersection | 1202 | 2.0 | | 0.416 | | 6.7 | LOS A | 2.8 | 71.8 | | | | |

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

^d Dominant lane on roundabout approach

LANE SUMMARY

Site: 101 [Background (2023) AM]

Porter's Neck Road/Shiraz Way/Edgewater Club Road
Roundabout

| Lane Use and Performance | | | | | | | | | | | | |
|---------------------------|--------------|-------|-----------|------------|---------------|------------------|-----------------------|-------------|-------------|-----------|--------------|-----|
| | Demand Flows | Cap. | Deg. Satn | Lane Util. | Average Delay | Level of Service | 95% Back of Queue Veh | Lane Config | Lane Length | Cap. Adj. | Prob. Block. | |
| Total veh/h | HV % | veh/h | v/c | % | sec | | Veh | Dist ft | | ft | % | % |
| South: Porter's Neck Road | | | | | | | | | | | | |
| Lane 1 ^d | 579 | 2.0 | 1075 | 0.539 | 100 | 9.9 | LOS A | 3.7 | 93.7 | Full | 1600 | 0.0 |
| Approach | 579 | 2.0 | | 0.539 | | 9.9 | LOS A | 3.7 | 93.7 | | | |
| East: Shiraz Way | | | | | | | | | | | | |
| Lane 1 ^d | 228 | 2.0 | 743 | 0.306 | 100 | 8.5 | LOS A | 1.4 | 35.0 | Full | 1600 | 0.0 |
| Approach | 228 | 2.0 | | 0.306 | | 8.5 | LOS A | 1.4 | 35.0 | | | |
| North: Porter's Neck Road | | | | | | | | | | | | |
| Lane 1 ^d | 236 | 2.0 | 648 | 0.364 | 100 | 10.5 | LOS B | 1.8 | 44.8 | Full | 1600 | 0.0 |
| Approach | 236 | 2.0 | | 0.364 | | 10.5 | LOS B | 1.8 | 44.8 | | | |
| West: Edgewater Club Road | | | | | | | | | | | | |
| Lane 1 ^d | 576 | 2.0 | 1232 | 0.467 | 100 | 7.8 | LOS A | 3.3 | 82.6 | Full | 1600 | 0.0 |
| Approach | 576 | 2.0 | | 0.467 | | 7.8 | LOS A | 3.3 | 82.6 | | | |
| Intersection | 1618 | 2.0 | | 0.539 | | 9.0 | LOS A | 3.7 | 93.7 | | | |

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

^d Dominant lane on roundabout approach

SIDRA INTERSECTION 7.0 | Copyright © 2000-2017 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: RAMEY KEMP & ASSOCIATES, INC. | Processed: Tuesday, October 8, 2019 8:57:10 AM

Project: S:\2019 Projects\19282 Porter's Neck - Wilmington NC\TIA\Analysis\Base Roundabout.sip7

LANE SUMMARY

Site: 101 [Background (2023) PM]

Porter's Neck Road/Shiraz Way/Edgewater Club Road
Roundabout

| Lane Use and Performance | | | | | | | | | | | | | |
|---------------------------|--------------|-----|-------|-------|-------|---------|----------|-------------|-------|--------|--------|-------|--------|
| | Demand Flows | | | Deg. | Lane | Average | Level of | 95% Back of | Lane | Lane | Cap. | Prob. | |
| | Total | HV | Cap. | Satn | Util. | Delay | Service | Veh | Queue | Config | Length | Adj. | Block. |
| | veh/h | % | veh/h | v/c | % | sec | | | Dist | | ft | % | % |
| South: Porter's Neck Road | | | | | | | | | | | | | |
| Lane 1 ^d | 331 | 2.0 | 932 | 0.355 | 100 | 7.7 | LOS A | 1.8 | 46.2 | Full | 1600 | 0.0 | 0.0 |
| Approach | 331 | 2.0 | | 0.355 | | 7.7 | LOS A | 1.8 | 46.2 | | | | |
| East: Shiraz Way | | | | | | | | | | | | | |
| Lane 1 ^d | 228 | 2.0 | 866 | 0.263 | 100 | 6.9 | LOS A | 1.2 | 30.8 | Full | 1600 | 0.0 | 0.0 |
| Approach | 228 | 2.0 | | 0.263 | | 6.9 | LOS A | 1.2 | 30.8 | | | | |
| North: Porter's Neck Road | | | | | | | | | | | | | |
| Lane 1 ^d | 133 | 2.0 | 789 | 0.169 | 100 | 6.3 | LOS A | 0.7 | 18.0 | Full | 1600 | 0.0 | 0.0 |
| Approach | 133 | 2.0 | | 0.169 | | 6.3 | LOS A | 0.7 | 18.0 | | | | |
| West: Edgewater Club Road | | | | | | | | | | | | | |
| Lane 1 ^d | 651 | 2.0 | 1287 | 0.506 | 100 | 8.2 | LOS A | 3.9 | 99.4 | Full | 1600 | 0.0 | 0.0 |
| Approach | 651 | 2.0 | | 0.506 | | 8.2 | LOS A | 3.9 | 99.4 | | | | |
| Intersection | 1343 | 2.0 | | 0.506 | | 7.7 | LOS A | 3.9 | 99.4 | | | | |

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

^d Dominant lane on roundabout approach

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LANE SUMMARY

▼ Site: 101 [Combined (2023) AM]

Porter's Neck Road/Shiraz Way/Edgewater Club Road
Roundabout

| Lane Use and Performance | | | | | | | | | | | | | | |
|----------------------------------|--------------|-----|-------|-------|-------|---------|----------|-------------|-------|--------|--------|-------|-----|--|
| | Demand Flows | | | Deg. | Lane | Average | Level of | 95% Back of | Lane | Lane | Cap. | Prob. | | |
| | Total | HV | Cap. | Satn | Util. | Delay | Service | Veh | Queue | Config | Length | Adj. | | |
| | veh/h | % | veh/h | v/c | % | sec | | | Dist | | ft | % | | |
| South: Porter's Neck Road | | | | | | | | | | | | | | |
| Lane 1 ^d | 581 | 2.0 | 1048 | 0.555 | 100 | 10.4 | LOS B | 4.3 | 109.5 | Full | 1600 | 0.0 | 0.0 | |
| Approach | 581 | 2.0 | | 0.555 | | 10.4 | LOS B | 4.3 | 109.5 | | | | | |
| East: Shiraz Way | | | | | | | | | | | | | | |
| Lane 1 ^d | 228 | 2.0 | 723 | 0.315 | 100 | 8.8 | LOS A | 1.4 | 35.8 | Full | 1600 | 0.0 | 0.0 | |
| Approach | 228 | 2.0 | | 0.315 | | 8.8 | LOS A | 1.4 | 35.8 | | | | | |
| North: Porter's Neck Road | | | | | | | | | | | | | | |
| Lane 1 ^d | 321 | 2.0 | 648 | 0.496 | 100 | 13.4 | LOS B | 3.1 | 78.4 | Full | 1600 | 0.0 | 0.0 | |
| Approach | 321 | 2.0 | | 0.496 | | 13.4 | LOS B | 3.1 | 78.4 | | | | | |
| West: Edgewater Club Road | | | | | | | | | | | | | | |
| Lane 1 ^d | 600 | 2.0 | 1221 | 0.492 | 100 | 8.2 | LOS A | 3.5 | 89.5 | Full | 1600 | 0.0 | 0.0 | |
| Approach | 600 | 2.0 | | 0.492 | | 8.2 | LOS A | 3.5 | 89.5 | | | | | |
| Intersection | 1730 | 2.0 | | 0.555 | | 10.0 | LOS A | 4.3 | 109.5 | | | | | |

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

^d Dominant lane on roundabout approach

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LANE SUMMARY

Site: 101 [Combined (2023) PM]

Porter's Neck Road/Shiraz Way/Edgewater Club Road
Roundabout

| Lane Use and Performance | | | | | | | | | | | | | | |
|----------------------------------|--------------|-----|-------|-------|-------|---------|----------|-------------|-------|--------|--------|-------|-----|-----|
| | Demand Flows | | | Deg. | Lane | Average | Level of | 95% Back of | Lane | Lane | Cap. | Prob. | | |
| | Total | HV | Cap. | Satn | Util. | Delay | Service | Veh | Queue | Config | Length | Adj. | | |
| | veh/h | % | veh/h | v/c | % | sec | | | Dist | | ft | % | | |
| South: Porter's Neck Road | | | | | | | | | | | | | | |
| Lane 1 ^d | 340 | 2.0 | 862 | 0.394 | 100 | 8.8 | LOS A | 2.0 | 51.8 | Full | 1600 | 0.0 | 0.0 | 0.0 |
| Approach | 340 | 2.0 | | 0.394 | | 8.8 | LOS A | 2.0 | 51.8 | | | | | |
| East: Shiraz Way | | | | | | | | | | | | | | |
| Lane 1 ^d | 296 | 2.0 | 793 | 0.373 | 100 | 9.1 | LOS A | 1.9 | 47.3 | Full | 1600 | 0.0 | 0.0 | 0.0 |
| Approach | 296 | 2.0 | | 0.373 | | 9.1 | LOS A | 1.9 | 47.3 | | | | | |
| North: Porter's Neck Road | | | | | | | | | | | | | | |
| Lane 1 ^d | 182 | 2.0 | 735 | 0.248 | 100 | 7.7 | LOS A | 1.1 | 27.2 | Full | 1600 | 0.0 | 0.0 | 0.0 |
| Approach | 182 | 2.0 | | 0.248 | | 7.7 | LOS A | 1.1 | 27.2 | | | | | |
| West: Edgewater Club Road | | | | | | | | | | | | | | |
| Lane 1 ^d | 727 | 2.0 | 1283 | 0.566 | 100 | 9.2 | LOS A | 4.9 | 124.1 | Full | 1600 | 0.0 | 0.0 | 0.0 |
| Approach | 727 | 2.0 | | 0.566 | | 9.2 | LOS A | 4.9 | 124.1 | | | | | |
| Intersection | 1544 | 2.0 | | 0.566 | | 8.9 | LOS A | 4.9 | 124.1 | | | | | |

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

^d Dominant lane on roundabout approach

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APPENDIX F

CAPACITY ANALYSIS CALCULATIONS
MARKET STREET (US 17)
&
PORTER'S NECK ROAD

Lanes, Volumes, Timings

Existing (2019) AM

2: US 17 Bus. (Market Street)/US 17 (Market Street) & SR 1491 (Porter's Neck Road) 10/07/2019

| | ↑ | → | ↓ | ↗ | ↖ | ↙ | ↗ | ↖ | ↙ | ↑ | ↓ | ↗ |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↑↑ | ↑ | ↑↑ | ↑↑ | ↑ | ↑↑ | ↑↑ | ↑↑ | ↑ | ↑↑ | ↑↑ | ↑ |
| Traffic Volume (vph) | 102 | 51 | 47 | 533 | 69 | 210 | 118 | 915 | 371 | 144 | 1123 | 142 |
| Future Volume (vph) | 102 | 51 | 47 | 533 | 69 | 210 | 118 | 915 | 371 | 144 | 1123 | 142 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | | 0% | | | 3% | | | 1% | | 0% | |
| Storage Length (ft) | 200 | | | 250 | 350 | | 100 | 325 | | 0 | 325 | 425 |
| Storage Lanes | 1 | | | 1 | 1 | | 1 | 2 | | 1 | 2 | 1 |
| Taper Length (ft) | 100 | | | | 100 | | | 100 | | | 100 | |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 |
| Frt | | | | 0.850 | | 0.850 | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | | 0.950 | | | 0.950 | | | 0.950 | |
| Satd. Flow (prot) | 3433 | 1863 | 1583 | 3382 | 1835 | 1560 | 3416 | 3522 | 1575 | 3433 | 3539 | 1583 |
| Flt Permitted | 0.950 | | | | 0.950 | | | 0.950 | | | 0.950 | |
| Satd. Flow (perm) | 3433 | 1863 | 1583 | 3382 | 1835 | 1560 | 3416 | 3522 | 1575 | 3433 | 3539 | 1583 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 45 | | | | 45 | | | 45 | | | 55 |
| Link Distance (ft) | | 1072 | | | | 594 | | | 1910 | | | 1135 |
| Travel Time (s) | | 16.2 | | | | 9.0 | | | 28.9 | | | 14.1 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 113 | 57 | 52 | 592 | 77 | 233 | 131 | 1017 | 412 | 160 | 1248 | 158 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 113 | 57 | 52 | 592 | 77 | 233 | 131 | 1017 | 412 | 160 | 1248 | 158 |
| Turn Type | Prot | NA | pm+ov |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Permitted Phases | | | 4 | | | 8 | | | 2 | | | 6 |
| Detector Phase | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 12.0 | 5.0 | 5.0 | 12.0 | 5.0 |
| Minimum Split (s) | 11.0 | 11.3 | 11.5 | 11.1 | 11.2 | 11.4 | 11.5 | 17.9 | 11.1 | 11.4 | 18.0 | 11.0 |
| Total Split (s) | 22.0 | 22.0 | 26.0 | 48.0 | 48.0 | 26.0 | 26.0 | 60.0 | 48.0 | 26.0 | 60.0 | 22.0 |
| Total Split (%) | 14.1% | 14.1% | 16.7% | 30.8% | 30.8% | 16.7% | 16.7% | 38.5% | 30.8% | 16.7% | 38.5% | 14.1% |
| Maximum Green (s) | 16.0 | 15.7 | 19.5 | 41.9 | 41.8 | 19.6 | 19.5 | 54.1 | 41.9 | 19.6 | 54.0 | 16.0 |
| Yellow Time (s) | 3.2 | 3.2 | 3.1 | 3.1 | 4.3 | 3.2 | 3.1 | 4.4 | 3.1 | 3.2 | 4.5 | 3.2 |
| All-Red Time (s) | 2.8 | 3.1 | 3.4 | 3.0 | 1.9 | 3.2 | 3.4 | 1.5 | 3.0 | 3.2 | 1.5 | 2.8 |
| Lost Time Adjust (s) | -1.0 | -1.3 | -1.5 | -1.1 | -1.2 | -1.4 | -1.5 | -0.9 | -1.1 | -1.4 | -1.0 | -1.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lag | Lag | Lead | Lead | Lead | Lag | Lead | Lead | Lead | Lag | Lag | Lag |
| Lead-Lag Optimize? | Yes |
| Vehicle Extension (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 6.0 | 2.0 | 2.0 | 6.0 | 2.0 |
| Minimum Gap (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 3.0 | 2.0 | 2.0 | 3.0 | 2.0 |
| Time Before Reduce (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 15.0 | 0.0 | 0.0 | 15.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| Recall Mode | None | C-Max | None | None | C-Max | None |
| Act Effct Green (s) | 29.7 | 10.6 | 25.2 | 33.7 | 12.2 | 38.2 | 12.0 | 73.1 | 107.8 | 21.0 | 82.1 | 111.8 |
| Actuated g/C Ratio | 0.19 | 0.07 | 0.16 | 0.22 | 0.08 | 0.24 | 0.08 | 0.47 | 0.69 | 0.13 | 0.53 | 0.72 |
| v/c Ratio | 0.17 | 0.45 | 0.20 | 0.81 | 0.54 | 0.61 | 0.50 | 0.62 | 0.38 | 0.35 | 0.67 | 0.14 |
| Control Delay | 51.2 | 80.5 | 55.1 | 67.1 | 82.2 | 59.3 | 75.4 | 35.1 | 7.1 | 63.6 | 31.9 | 4.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Lanes, Volumes, Timings

Existing (2019) AM

2: US 17 Bus. (Market Street)/US 17 (Market Street) & SR 1491 (Porter's Neck Road) 10/07/2019

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Total Delay | 51.2 | 80.5 | 55.1 | 67.1 | 82.2 | 59.3 | 75.4 | 35.1 | 7.1 | 63.6 | 31.9 | 4.1 |
| LOS | D | F | E | E | F | E | E | D | A | E | C | A |
| Approach Delay | | 59.6 | | | 66.4 | | | 31.1 | | | 32.4 | |
| Approach LOS | | E | | | E | | | C | | | C | |
| Queue Length 50th (ft) | 49 | 57 | 46 | 298 | 77 | 213 | 67 | 415 | 97 | 77 | 496 | 20 |
| Queue Length 95th (ft) | 74 | 105 | 84 | 347 | 131 | 299 | 102 | 559 | 133 | 115 | 694 | 39 |
| Internal Link Dist (ft) | | 992 | | | 514 | | | 1830 | | | 1055 | |
| Turn Bay Length (ft) | 200 | | 250 | 350 | | 100 | 325 | | | 325 | | 425 |
| Base Capacity (vph) | 669 | 203 | 347 | 932 | 505 | 382 | 459 | 1649 | 1147 | 462 | 1862 | 1141 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.17 | 0.28 | 0.15 | 0.64 | 0.15 | 0.61 | 0.29 | 0.62 | 0.36 | 0.35 | 0.67 | 0.14 |

Intersection Summary

Area Type: Other

Cycle Length: 156

Actuated Cycle Length: 156

Offset: 40 (26%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 40.6

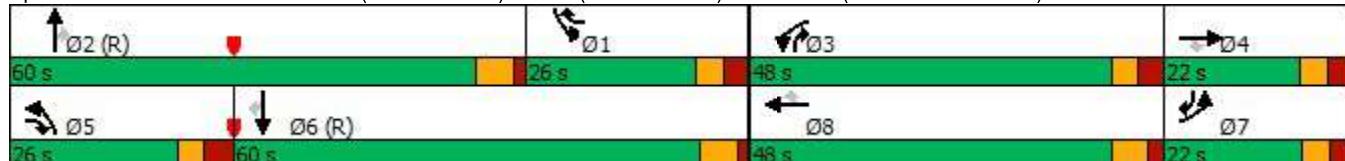
Intersection LOS: D

Intersection Capacity Utilization 69.6%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 2: US 17 Bus. (Market Street)/US 17 (Market Street) & SR 1491 (Porter's Neck Road)



Lanes, Volumes, Timings

Existing (2019) PM

2: US 17 Bus. (Market Street)/US 17 (Market Street) & SR 1491 (Porter's Neck Road) 10/09/2019

| | ↗ | → | ↘ | ↙ | ← | ↖ | ↑ | ↗ | ↘ | ↓ | ↙ | |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↑↑ | ↑ | ↑ | ↑↑ | ↑ | ↑ | ↑↑ | ↑↑ | ↑ | ↑↑ | ↑↑ | ↑ |
| Traffic Volume (vph) | 187 | 100 | 94 | 468 | 99 | 188 | 174 | 1211 | 306 | 198 | 1077 | 159 |
| Future Volume (vph) | 187 | 100 | 94 | 468 | 99 | 188 | 174 | 1211 | 306 | 198 | 1077 | 159 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | | 0% | | | 3% | | | 1% | | | 0% |
| Storage Length (ft) | 200 | | | 250 | 350 | | 100 | 325 | | 0 | 325 | 425 |
| Storage Lanes | 1 | | | 1 | 1 | | 1 | 2 | | 1 | 2 | 1 |
| Taper Length (ft) | 100 | | | | 100 | | | 100 | | | 100 | |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 |
| Fr _t | | | | 0.850 | | 0.850 | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | | 0.950 | | | 0.950 | | | 0.950 | |
| Satd. Flow (prot) | 3433 | 1863 | 1583 | 3382 | 1835 | 1560 | 3416 | 3522 | 1575 | 3433 | 3539 | 1583 |
| Flt Permitted | 0.950 | | | | 0.950 | | | 0.950 | | | 0.950 | |
| Satd. Flow (perm) | 3433 | 1863 | 1583 | 3382 | 1835 | 1560 | 3416 | 3522 | 1575 | 3433 | 3539 | 1583 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 35 | | | | 45 | | | 45 | | | 45 |
| Link Distance (ft) | | 1072 | | | | 594 | | | 1910 | | | 1135 |
| Travel Time (s) | | 20.9 | | | | 9.0 | | | 28.9 | | | 17.2 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 208 | 111 | 104 | 520 | 110 | 209 | 193 | 1346 | 340 | 220 | 1197 | 177 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 208 | 111 | 104 | 520 | 110 | 209 | 193 | 1346 | 340 | 220 | 1197 | 177 |
| Turn Type | Prot | NA | pm+ov |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Permitted Phases | | | 4 | | | 8 | | | 2 | | | 6 |
| Detector Phase | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 12.0 | 5.0 | 5.0 | 12.0 | 5.0 |
| Minimum Split (s) | 11.0 | 11.3 | 11.5 | 11.1 | 11.2 | 11.4 | 11.5 | 17.9 | 11.1 | 11.4 | 18.0 | 11.0 |
| Total Split (s) | 25.0 | 25.0 | 25.0 | 32.0 | 32.0 | 20.0 | 25.0 | 75.0 | 32.0 | 20.0 | 70.0 | 25.0 |
| Total Split (%) | 16.4% | 16.4% | 16.4% | 21.1% | 21.1% | 13.2% | 16.4% | 49.3% | 21.1% | 13.2% | 46.1% | 16.4% |
| Maximum Green (s) | 19.0 | 18.7 | 18.5 | 25.9 | 25.8 | 13.6 | 18.5 | 69.1 | 25.9 | 13.6 | 64.0 | 19.0 |
| Yellow Time (s) | 3.2 | 3.2 | 3.1 | 3.1 | 4.3 | 3.2 | 3.1 | 4.4 | 3.1 | 3.2 | 4.5 | 3.2 |
| All-Red Time (s) | 2.8 | 3.1 | 3.4 | 3.0 | 1.9 | 3.2 | 3.4 | 1.5 | 3.0 | 3.2 | 1.5 | 2.8 |
| Lost Time Adjust (s) | -1.0 | -1.3 | -1.5 | -1.1 | -1.2 | -1.4 | -1.5 | -0.9 | -1.1 | -1.4 | -1.0 | -1.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lag | Lag | Lead | Lead | Lead | Lag | Lead | Lead | Lead | Lag | Lag | Lag |
| Lead-Lag Optimize? | Yes |
| Vehicle Extension (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 6.0 | 2.0 | 2.0 | 6.0 | 2.0 |
| Minimum Gap (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 3.0 | 2.0 | 2.0 | 3.0 | 2.0 |
| Time Before Reduce (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 15.0 | 0.0 | 0.0 | 15.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| Recall Mode | None | C-Max | None | None | C-Max | None |
| Act Effct Green (s) | 26.4 | 14.9 | 34.5 | 26.2 | 14.7 | 34.7 | 14.6 | 76.0 | 102.1 | 15.0 | 76.3 | 102.7 |
| Actuated g/C Ratio | 0.17 | 0.10 | 0.23 | 0.17 | 0.10 | 0.23 | 0.10 | 0.50 | 0.67 | 0.10 | 0.50 | 0.68 |
| v/c Ratio | 0.35 | 0.61 | 0.29 | 0.89 | 0.62 | 0.59 | 0.59 | 0.76 | 0.32 | 0.65 | 0.67 | 0.17 |
| Control Delay | 56.9 | 79.5 | 49.1 | 80.0 | 80.6 | 59.0 | 72.9 | 35.3 | 6.4 | 75.7 | 32.1 | 5.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Lanes, Volumes, Timings

Existing (2019) PM

2: US 17 Bus. (Market Street)/US 17 (Market Street) & SR 1491 (Porter's Neck Road) 10/09/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Total Delay | 56.9 | 79.5 | 49.1 | 80.0 | 80.6 | 59.0 | 72.9 | 35.3 | 6.4 | 75.7 | 32.1 | 5.4 |
| LOS | E | E | D | F | F | E | E | D | A | E | C | A |
| Approach Delay | | 60.9 | | | 74.9 | | | 33.9 | | | 35.2 | |
| Approach LOS | | E | | | E | | | C | | | D | |
| Queue Length 50th (ft) | 94 | 107 | 86 | 261 | 107 | 187 | 96 | 564 | 57 | 110 | 466 | 26 |
| Queue Length 95th (ft) | 135 | 170 | 133 | #352 | 169 | 266 | 136 | 705 | 101 | 157 | 616 | 51 |
| Internal Link Dist (ft) | | 992 | | | 514 | | | 1830 | | | 1055 | |
| Turn Bay Length (ft) | 200 | | 250 | 350 | | 100 | 325 | | | 325 | | 425 |
| Base Capacity (vph) | 595 | 245 | 415 | 600 | 325 | 355 | 449 | 1760 | 1066 | 338 | 1777 | 1069 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.35 | 0.45 | 0.25 | 0.87 | 0.34 | 0.59 | 0.43 | 0.76 | 0.32 | 0.65 | 0.67 | 0.17 |

Intersection Summary

Area Type: Other

Cycle Length: 152

Actuated Cycle Length: 152

Offset: 100 (66%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 44.0

Intersection LOS: D

Intersection Capacity Utilization 71.6%

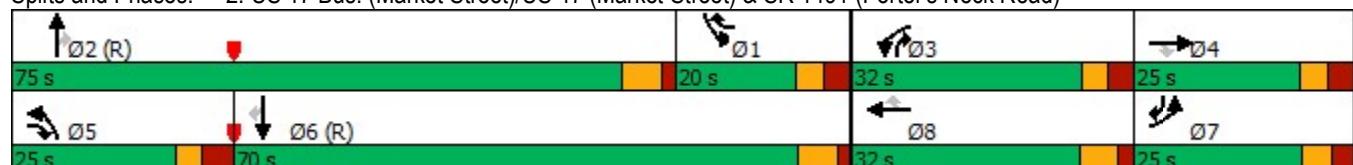
ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: US 17 Bus. (Market Street)/US 17 (Market Street) & SR 1491 (Porter's Neck Road)



Lanes, Volumes, Timings

Background (2023) AM

2: US 17 Bus. (Market Street)/US 17 (Market Street) & SR 1491 (Porter's Neck Road)

10/08/2019

| | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ |
| Traffic Volume (vph) | 106 | 53 | 49 | 598 | 72 | 241 | 123 | 952 | 405 | 153 | 1169 | 148 |
| Future Volume (vph) | 106 | 53 | 49 | 598 | 72 | 241 | 123 | 952 | 405 | 153 | 1169 | 148 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | | | | 3% | | | 1% | | | 0% | |
| Storage Length (ft) | 200 | | 250 | 350 | | 100 | 325 | | 0 | 325 | | 425 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 2 | | 1 | 2 | | 1 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 |
| Frt | | | | 0.850 | | 0.850 | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 3433 | 1863 | 1583 | 3382 | 1835 | 1560 | 3416 | 3522 | 1575 | 3433 | 3539 | 1583 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 3433 | 1863 | 1583 | 3382 | 1835 | 1560 | 3416 | 3522 | 1575 | 3433 | 3539 | 1583 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 35 | | | 45 | | | 45 | | | 45 | |
| Link Distance (ft) | | 1072 | | | 594 | | | 1910 | | | 1135 | |
| Travel Time (s) | | 20.9 | | | 9.0 | | | 28.9 | | | 17.2 | |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 118 | 59 | 54 | 664 | 80 | 268 | 137 | 1058 | 450 | 170 | 1299 | 164 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 118 | 59 | 54 | 664 | 80 | 268 | 137 | 1058 | 450 | 170 | 1299 | 164 |
| Turn Type | Prot | NA | pm+ov |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Permitted Phases | | | | 4 | | 8 | | | 2 | | | 6 |
| Detector Phase | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 12.0 | 5.0 | 5.0 | 12.0 | 5.0 |
| Minimum Split (s) | 11.0 | 11.3 | 11.5 | 11.1 | 11.2 | 11.4 | 11.5 | 17.9 | 11.1 | 11.4 | 18.0 | 11.0 |
| Total Split (s) | 22.0 | 22.0 | 26.0 | 48.0 | 48.0 | 26.0 | 26.0 | 60.0 | 48.0 | 26.0 | 60.0 | 22.0 |
| Total Split (%) | 14.1% | 14.1% | 16.7% | 30.8% | 30.8% | 16.7% | 16.7% | 38.5% | 30.8% | 16.7% | 38.5% | 14.1% |
| Maximum Green (s) | 16.0 | 15.7 | 19.5 | 41.9 | 41.8 | 19.6 | 19.5 | 54.1 | 41.9 | 19.6 | 54.0 | 16.0 |
| Yellow Time (s) | 3.2 | 3.2 | 3.1 | 3.1 | 4.3 | 3.2 | 3.1 | 4.4 | 3.1 | 3.2 | 4.5 | 3.2 |
| All-Red Time (s) | 2.8 | 3.1 | 3.4 | 3.0 | 1.9 | 3.2 | 3.4 | 1.5 | 3.0 | 3.2 | 1.5 | 2.8 |
| Lost Time Adjust (s) | -1.0 | -1.3 | -1.5 | -1.1 | -1.2 | -1.4 | -1.5 | -0.9 | -1.1 | -1.4 | -1.0 | -1.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lag | Lag | Lead | Lead | Lead | Lag | Lead | Lead | Lead | Lag | Lag | Lag |
| Lead-Lag Optimize? | Yes |
| Vehicle Extension (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 6.0 | 2.0 | 2.0 | 6.0 | 2.0 |
| Minimum Gap (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 3.0 | 2.0 | 2.0 | 3.0 | 2.0 |
| Time Before Reduce (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 15.0 | 0.0 | 0.0 | 15.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| Recall Mode | None | C-Max | None | None | C-Max | None |
| Act Effct Green (s) | 32.7 | 10.8 | 25.8 | 36.7 | 12.4 | 38.4 | 12.3 | 69.8 | 107.6 | 21.0 | 78.5 | 111.2 |
| Actuated g/C Ratio | 0.21 | 0.07 | 0.17 | 0.24 | 0.08 | 0.25 | 0.08 | 0.45 | 0.69 | 0.13 | 0.50 | 0.71 |
| v/c Ratio | 0.16 | 0.46 | 0.21 | 0.83 | 0.55 | 0.70 | 0.51 | 0.67 | 0.41 | 0.37 | 0.73 | 0.15 |
| Control Delay | 48.8 | 80.3 | 54.6 | 66.4 | 82.3 | 63.5 | 75.2 | 38.8 | 7.6 | 64.0 | 35.9 | 4.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 48.8 | 80.3 | 54.6 | 66.4 | 82.3 | 63.5 | 75.2 | 38.8 | 7.6 | 64.0 | 35.9 | 4.3 |
| LOS | D | F | D | E | F | E | E | D | A | E | D | A |
| Approach Delay | | 58.2 | | | 66.9 | | | 33.3 | | | 35.7 | |
| Approach LOS | | E | | | E | | | C | | | D | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Queue Length 50th (ft) | 50 | 59 | 47 | 334 | 80 | 251 | 70 | 457 | 110 | 82 | 556 | 21 |
| Queue Length 95th (ft) | 76 | 108 | 86 | 389 | 136 | 344 | 105 | 604 | 150 | 122 | #765 | 41 |
| Internal Link Dist (ft) | | | | | | 514 | | | 1830 | | | 1055 |
| Turn Bay Length (ft) | 200 | | | 250 | 350 | | 100 | 325 | | | 325 | 425 |
| Base Capacity (vph) | 723 | 203 | 349 | 932 | 505 | 384 | 459 | 1576 | 1121 | 462 | 1780 | 1130 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.16 | 0.29 | 0.15 | 0.71 | 0.16 | 0.70 | 0.30 | 0.67 | 0.40 | 0.37 | 0.73 | 0.15 |

Intersection Summary

Area Type: Other

Cycle Length: 156

Actuated Cycle Length: 156

Offset: 40 (26%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 42.9

Intersection LOS: D

Intersection Capacity Utilization 72.7%

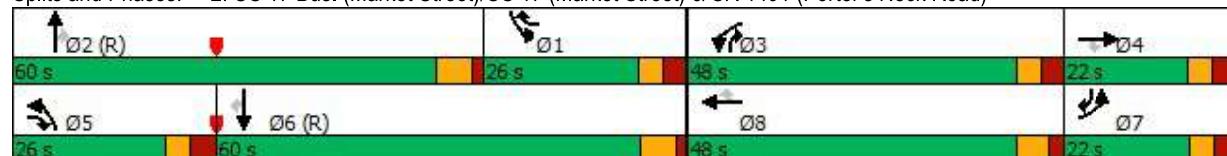
ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: US 17 Bus. (Market Street)/US 17 (Market Street) & SR 1491 (Porter's Neck Road)



Lanes, Volumes, Timings

Background (2023) PM

2: US 17 Bus. (Market Street)/US 17 (Market Street) & SR 1491 (Porter's Neck Road)

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 195 | 104 | 98 | 515 | 103 | 210 | 181 | 1260 | 366 | 230 | 1121 | 165 |
| Future Volume (vph) | 195 | 104 | 98 | 515 | 103 | 210 | 181 | 1260 | 366 | 230 | 1121 | 165 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 3% | | | 1% | | | 0% | |
| Storage Length (ft) | 200 | | 250 | 350 | | 100 | 325 | | 0 | 325 | | 425 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 2 | | 1 | 2 | | 1 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 |
| Frt | | | 0.850 | | | 0.850 | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 3433 | 1863 | 1583 | 3382 | 1835 | 1560 | 3416 | 3522 | 1575 | 3433 | 3539 | 1583 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 3433 | 1863 | 1583 | 3382 | 1835 | 1560 | 3416 | 3522 | 1575 | 3433 | 3539 | 1583 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 35 | | | 45 | | | 45 | | | 45 | |
| Link Distance (ft) | | 1072 | | | 594 | | | 1910 | | | 1135 | |
| Travel Time (s) | | 20.9 | | | 9.0 | | | 28.9 | | | 17.2 | |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 217 | 116 | 109 | 572 | 114 | 233 | 201 | 1400 | 407 | 256 | 1246 | 183 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 217 | 116 | 109 | 572 | 114 | 233 | 201 | 1400 | 407 | 256 | 1246 | 183 |
| Turn Type | Prot | NA | pm+ov |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Permitted Phases | | | 4 | | | 8 | | | 2 | | | 6 |
| Detector Phase | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 12.0 | 5.0 | 5.0 | 12.0 | 5.0 |
| Minimum Split (s) | 11.0 | 11.3 | 11.5 | 11.1 | 11.2 | 11.4 | 11.5 | 17.9 | 11.1 | 11.4 | 18.0 | 11.0 |
| Total Split (s) | 25.0 | 25.0 | 25.0 | 32.0 | 32.0 | 20.0 | 25.0 | 75.0 | 32.0 | 20.0 | 70.0 | 25.0 |
| Total Split (%) | 16.4% | 16.4% | 16.4% | 21.1% | 21.1% | 13.2% | 16.4% | 49.3% | 21.1% | 13.2% | 46.1% | 16.4% |
| Maximum Green (s) | 19.0 | 18.7 | 18.5 | 25.9 | 25.8 | 13.6 | 18.5 | 69.1 | 25.9 | 13.6 | 64.0 | 19.0 |
| Yellow Time (s) | 3.2 | 3.2 | 3.1 | 3.1 | 4.3 | 3.2 | 3.1 | 4.4 | 3.1 | 3.2 | 4.5 | 3.2 |
| All-Red Time (s) | 2.8 | 3.1 | 3.4 | 3.0 | 1.9 | 3.2 | 3.4 | 1.5 | 3.0 | 3.2 | 1.5 | 2.8 |
| Lost Time Adjust (s) | -1.0 | -1.3 | -1.5 | -1.1 | -1.2 | -1.4 | -1.5 | -0.9 | -1.1 | -1.4 | -1.0 | -1.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lag | Lag | Lead | Lead | Lead | Lag | Lead | Lead | Lead | Lag | Lag | Lag |
| Lead-Lag Optimize? | Yes |
| Vehicle Extension (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 6.0 | 2.0 | 2.0 | 6.0 | 2.0 |
| Minimum Gap (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 3.0 | 2.0 | 2.0 | 3.0 | 2.0 |
| Time Before Reduce (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 15.0 | 0.0 | 0.0 | 15.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| Recall Mode | None | C-Max | None | None | C-Max | None |
| Act Effct Green (s) | 27.2 | 15.2 | 35.1 | 27.0 | 15.0 | 35.0 | 15.0 | 74.8 | 101.8 | 15.0 | 74.9 | 102.0 |
| Actuated g/C Ratio | 0.18 | 0.10 | 0.23 | 0.18 | 0.10 | 0.23 | 0.10 | 0.49 | 0.67 | 0.10 | 0.49 | 0.67 |
| v/c Ratio | 0.35 | 0.63 | 0.30 | 0.95 | 0.63 | 0.65 | 0.60 | 0.81 | 0.39 | 0.76 | 0.71 | 0.17 |
| Control Delay | 56.7 | 79.9 | 48.9 | 88.2 | 80.7 | 61.5 | 72.8 | 37.7 | 7.0 | 81.5 | 34.2 | 5.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 56.7 | 79.9 | 48.9 | 88.2 | 80.7 | 61.5 | 72.8 | 37.7 | 7.0 | 81.5 | 34.2 | 5.6 |
| LOS | E | E | D | F | F | E | E | D | A | F | C | A |
| Approach Delay | | 60.9 | | | 80.5 | | | 35.0 | | | 38.3 | |
| Approach LOS | | E | | | F | | | D | | | D | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Queue Length 50th (ft) | 98 | 112 | 90 | 293 | 111 | 211 | 100 | 605 | 74 | 129 | 501 | 27 |
| Queue Length 95th (ft) | 141 | 177 | 139 | #409 | 173 | 295 | 140 | 752 | 126 | #187 | 656 | 53 |
| Internal Link Dist (ft) | | 992 | | | 514 | | | 1830 | | | 1055 | |
| Turn Bay Length (ft) | 200 | | 250 | 350 | | 100 | 325 | | | 325 | | 425 |
| Base Capacity (vph) | 613 | 245 | 418 | 600 | 325 | 359 | 449 | 1734 | 1055 | 338 | 1743 | 1062 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.35 | 0.47 | 0.26 | 0.95 | 0.35 | 0.65 | 0.45 | 0.81 | 0.39 | 0.76 | 0.71 | 0.17 |

Intersection Summary

Area Type: Other

Cycle Length: 152

Actuated Cycle Length: 152

Offset: 100 (66%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.95

Intersection Signal Delay: 46.6

Intersection LOS: D

Intersection Capacity Utilization 75.2%

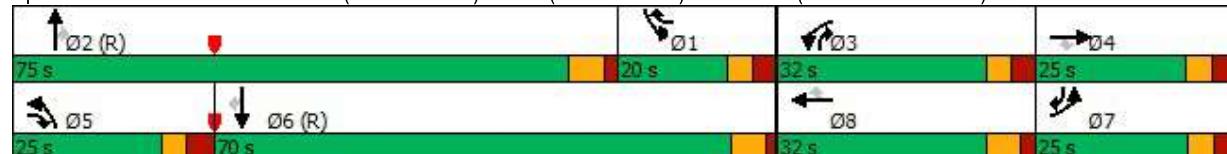
ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: US 17 Bus. (Market Street)/US 17 (Market Street) & SR 1491 (Porter's Neck Road)



Lanes, Volumes, Timings

Combined (2023) AM

2: US 17 Bus. (Market Street)/US 17 (Market Street) & SR 1491 (Porter's Neck Road) 10/08/2019

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ | ↑↑ |
| Traffic Volume (vph) | 106 | 53 | 49 | 667 | 72 | 241 | 123 | 957 | 427 | 153 | 1184 | 148 |
| Future Volume (vph) | 106 | 53 | 49 | 667 | 72 | 241 | 123 | 957 | 427 | 153 | 1184 | 148 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | 0% | | | 3% | | | 1% | | 0% | | |
| Storage Length (ft) | 200 | | 250 | 350 | | 100 | 325 | | 0 | 325 | | 425 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 2 | | 1 | 2 | | 1 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 |
| Frt | | | 0.850 | | | 0.850 | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 3433 | 1863 | 1583 | 3382 | 1835 | 1560 | 3416 | 3522 | 1575 | 3433 | 3539 | 1583 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 3433 | 1863 | 1583 | 3382 | 1835 | 1560 | 3416 | 3522 | 1575 | 3433 | 3539 | 1583 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 35 | | | | 45 | | | 45 | | | 45 |
| Link Distance (ft) | | 1072 | | | | 594 | | | 1910 | | | 1181 |
| Travel Time (s) | | 20.9 | | | | 9.0 | | | 28.9 | | | 17.9 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 118 | 59 | 54 | 741 | 80 | 268 | 137 | 1063 | 474 | 170 | 1316 | 164 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 118 | 59 | 54 | 741 | 80 | 268 | 137 | 1063 | 474 | 170 | 1316 | 164 |
| Turn Type | Prot | NA | pm+ov |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Permitted Phases | | | 4 | | | 8 | | | 2 | | | 6 |
| Detector Phase | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 12.0 | 5.0 | 5.0 | 12.0 | 5.0 |
| Minimum Split (s) | 11.0 | 11.3 | 11.5 | 11.1 | 11.2 | 11.4 | 11.5 | 17.9 | 11.1 | 11.4 | 18.0 | 11.0 |
| Total Split (s) | 22.0 | 22.0 | 26.0 | 48.0 | 48.0 | 26.0 | 26.0 | 60.0 | 48.0 | 26.0 | 60.0 | 22.0 |
| Total Split (%) | 14.1% | 14.1% | 16.7% | 30.8% | 30.8% | 16.7% | 16.7% | 38.5% | 30.8% | 16.7% | 38.5% | 14.1% |
| Maximum Green (s) | 16.0 | 15.7 | 19.5 | 41.9 | 41.8 | 19.6 | 19.5 | 54.1 | 41.9 | 19.6 | 54.0 | 16.0 |
| Yellow Time (s) | 3.2 | 3.2 | 3.1 | 3.1 | 4.3 | 3.2 | 3.1 | 4.4 | 3.1 | 3.2 | 4.5 | 3.2 |
| All-Red Time (s) | 2.8 | 3.1 | 3.4 | 3.0 | 1.9 | 3.2 | 3.4 | 1.5 | 3.0 | 3.2 | 1.5 | 2.8 |
| Lost Time Adjust (s) | -1.0 | -1.3 | -1.5 | -1.1 | -1.2 | -1.4 | -1.5 | -0.9 | -1.1 | -1.4 | -1.0 | -1.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lag | Lag | Lead | Lead | Lead | Lag | Lead | Lead | Lead | Lag | Lag | Lag |
| Lead-Lag Optimize? | Yes |
| Vehicle Extension (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 6.0 | 2.0 | 2.0 | 6.0 | 2.0 |
| Minimum Gap (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 3.0 | 2.0 | 2.0 | 3.0 | 2.0 |
| Time Before Reduce (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 15.0 | 0.0 | 0.0 | 15.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| Recall Mode | None | C-Max | None | None | C-Max | None |
| Act Effct Green (s) | 35.4 | 10.8 | 25.8 | 39.4 | 12.4 | 38.4 | 12.3 | 67.1 | 107.6 | 21.0 | 75.8 | 111.2 |
| Actuated g/C Ratio | 0.23 | 0.07 | 0.17 | 0.25 | 0.08 | 0.25 | 0.08 | 0.43 | 0.69 | 0.13 | 0.49 | 0.71 |
| v/c Ratio | 0.15 | 0.46 | 0.21 | 0.87 | 0.55 | 0.70 | 0.51 | 0.70 | 0.44 | 0.37 | 0.77 | 0.15 |
| Control Delay | 46.9 | 80.3 | 54.6 | 67.1 | 82.3 | 63.5 | 75.2 | 41.3 | 7.8 | 64.0 | 38.7 | 4.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Lanes, Volumes, Timings

Combined (2023) AM

2: US 17 Bus. (Market Street)/US 17 (Market Street) & SR 1491 (Porter's Neck Road) 10/08/2019

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Total Delay | 46.9 | 80.3 | 54.6 | 67.1 | 82.3 | 63.5 | 75.2 | 41.3 | 7.8 | 64.0 | 38.7 | 4.3 |
| LOS | D | F | D | E | F | E | E | D | A | E | D | A |
| Approach Delay | | 57.3 | | | 67.4 | | | 34.6 | | | 37.9 | |
| Approach LOS | | E | | | E | | | C | | | D | |
| Queue Length 50th (ft) | 48 | 59 | 47 | 370 | 80 | 251 | 70 | 483 | 118 | 82 | 597 | 21 |
| Queue Length 95th (ft) | 76 | 108 | 86 | 441 | 136 | 344 | 105 | 608 | 160 | 122 | #813 | 41 |
| Internal Link Dist (ft) | | 992 | | | 514 | | | 1830 | | | 1101 | |
| Turn Bay Length (ft) | 200 | | 250 | 350 | | 100 | 325 | | | 325 | | 425 |
| Base Capacity (vph) | 780 | 203 | 349 | 932 | 505 | 384 | 459 | 1515 | 1101 | 462 | 1719 | 1128 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.15 | 0.29 | 0.15 | 0.80 | 0.16 | 0.70 | 0.30 | 0.70 | 0.43 | 0.37 | 0.77 | 0.15 |

Intersection Summary

Area Type: Other

Cycle Length: 156

Actuated Cycle Length: 156

Offset: 40 (26%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 44.6

Intersection LOS: D

Intersection Capacity Utilization 75.1%

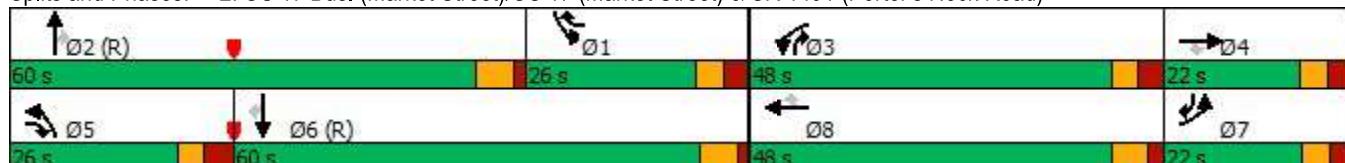
ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: US 17 Bus. (Market Street)/US 17 (Market Street) & SR 1491 (Porter's Neck Road)



Lanes, Volumes, Timings

Combined (2023) PM

2: US 17 Bus. (Market Street)/US 17 (Market Street) & SR 1491 (Porter's Neck Road) 10/08/2019

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↑↑ | ↑ | ↑↑ | ↑↑ | ↑ | ↑↑ | ↑↑ | ↑↑ | ↑ | ↑↑ | ↑↑ | ↑ |
| Traffic Volume (vph) | 195 | 104 | 98 | 555 | 103 | 210 | 181 | 1275 | 434 | 230 | 1130 | 165 |
| Future Volume (vph) | 195 | 104 | 98 | 555 | 103 | 210 | 181 | 1275 | 434 | 230 | 1130 | 165 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Grade (%) | | | | | 3% | | | 1% | | | 0% | |
| Storage Length (ft) | 200 | | | 250 | 350 | | 100 | 325 | | 0 | 325 | |
| Storage Lanes | 1 | | | 1 | 1 | | 1 | 2 | | 1 | 2 | |
| Taper Length (ft) | 100 | | | | 100 | | | 100 | | | 100 | |
| Lane Util. Factor | 0.97 | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 |
| Frt | | | | 0.850 | | 0.850 | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | | 0.950 | | | 0.950 | | | 0.950 | |
| Satd. Flow (prot) | 3433 | 1863 | 1583 | 3382 | 1835 | 1560 | 3416 | 3522 | 1575 | 3433 | 3539 | 1583 |
| Flt Permitted | 0.950 | | | | 0.950 | | | 0.950 | | | 0.950 | |
| Satd. Flow (perm) | 3433 | 1863 | 1583 | 3382 | 1835 | 1560 | 3416 | 3522 | 1575 | 3433 | 3539 | 1583 |
| Right Turn on Red | | | | No | | | No | | | No | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 35 | | | | 45 | | | 45 | | | 45 |
| Link Distance (ft) | | 1072 | | | | 594 | | | 1910 | | | 1135 |
| Travel Time (s) | | 20.9 | | | | 9.0 | | | 28.9 | | | 17.2 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 217 | 116 | 109 | 617 | 114 | 233 | 201 | 1417 | 482 | 256 | 1256 | 183 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 217 | 116 | 109 | 617 | 114 | 233 | 201 | 1417 | 482 | 256 | 1256 | 183 |
| Turn Type | Prot | NA | pm+ov |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Permitted Phases | | | 4 | | | 8 | | | 2 | | | 6 |
| Detector Phase | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 12.0 | 5.0 | 5.0 | 12.0 | 5.0 |
| Minimum Split (s) | 11.0 | 11.3 | 11.5 | 11.1 | 11.2 | 11.4 | 11.5 | 17.9 | 11.1 | 11.4 | 18.0 | 11.0 |
| Total Split (s) | 25.0 | 25.0 | 25.0 | 32.0 | 32.0 | 20.0 | 25.0 | 75.0 | 32.0 | 20.0 | 70.0 | 25.0 |
| Total Split (%) | 16.4% | 16.4% | 16.4% | 21.1% | 21.1% | 13.2% | 16.4% | 49.3% | 21.1% | 13.2% | 46.1% | 16.4% |
| Maximum Green (s) | 19.0 | 18.7 | 18.5 | 25.9 | 25.8 | 13.6 | 18.5 | 69.1 | 25.9 | 13.6 | 64.0 | 19.0 |
| Yellow Time (s) | 3.2 | 3.2 | 3.1 | 3.1 | 4.3 | 3.2 | 3.1 | 4.4 | 3.1 | 3.2 | 4.5 | 3.2 |
| All-Red Time (s) | 2.8 | 3.1 | 3.4 | 3.0 | 1.9 | 3.2 | 3.4 | 1.5 | 3.0 | 3.2 | 1.5 | 2.8 |
| Lost Time Adjust (s) | -1.0 | -1.3 | -1.5 | -1.1 | -1.2 | -1.4 | -1.5 | -0.9 | -1.1 | -1.4 | -1.0 | -1.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lag | Lag | Lead | Lead | Lead | Lag | Lead | Lead | Lead | Lag | Lag | Lag |
| Lead-Lag Optimize? | Yes |
| Vehicle Extension (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 6.0 | 2.0 | 2.0 | 6.0 | 2.0 |
| Minimum Gap (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 3.0 | 2.0 | 2.0 | 3.0 | 2.0 |
| Time Before Reduce (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 15.0 | 0.0 | 0.0 | 15.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 30.0 | 0.0 | 0.0 | 30.0 | 0.0 |
| Recall Mode | None | C-Max | None | None | C-Max | None |
| Act Effct Green (s) | 27.2 | 15.2 | 35.1 | 27.0 | 15.0 | 35.0 | 15.0 | 74.8 | 101.8 | 15.0 | 74.9 | 102.0 |
| Actuated g/C Ratio | 0.18 | 0.10 | 0.23 | 0.18 | 0.10 | 0.23 | 0.10 | 0.49 | 0.67 | 0.10 | 0.49 | 0.67 |
| v/c Ratio | 0.35 | 0.63 | 0.30 | 1.03 | 0.63 | 0.65 | 0.60 | 0.82 | 0.46 | 0.76 | 0.72 | 0.17 |
| Control Delay | 56.7 | 79.9 | 48.9 | 104.1 | 80.7 | 61.5 | 72.8 | 38.2 | 7.8 | 81.5 | 34.4 | 5.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Lanes, Volumes, Timings

Combined (2023) PM

2: US 17 Bus. (Market Street)/US 17 (Market Street) & SR 1491 (Porter's Neck Road) 10/08/2019

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|-------|------|------|------|------|------|------|------|------|
| Total Delay | 56.7 | 79.9 | 48.9 | 104.1 | 80.7 | 61.5 | 72.8 | 38.2 | 7.8 | 81.5 | 34.4 | 5.6 |
| LOS | E | E | D | F | F | E | E | D | A | F | C | A |
| Approach Delay | 60.9 | | | | 91.0 | | | 34.6 | | | 38.4 | |
| Approach LOS | E | | | | F | | | C | | | D | |
| Queue Length 50th (ft) | 98 | 112 | 90 | ~335 | 111 | 211 | 100 | 617 | 93 | 129 | 507 | 27 |
| Queue Length 95th (ft) | 141 | 177 | 139 | #459 | 173 | 295 | 140 | 765 | 159 | #187 | 664 | 53 |
| Internal Link Dist (ft) | 992 | | | | 514 | | | 1830 | | | 1055 | |
| Turn Bay Length (ft) | 200 | | 250 | 350 | | 100 | 325 | | | 325 | | 425 |
| Base Capacity (vph) | 613 | 245 | 418 | 600 | 325 | 359 | 449 | 1734 | 1055 | 338 | 1743 | 1062 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.35 | 0.47 | 0.26 | 1.03 | 0.35 | 0.65 | 0.45 | 0.82 | 0.46 | 0.76 | 0.72 | 0.17 |

Intersection Summary

Area Type: Other

Cycle Length: 152

Actuated Cycle Length: 152

Offset: 100 (66%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 48.5

Intersection LOS: D

Intersection Capacity Utilization 76.8%

ICU Level of Service D

Analysis Period (min) 15

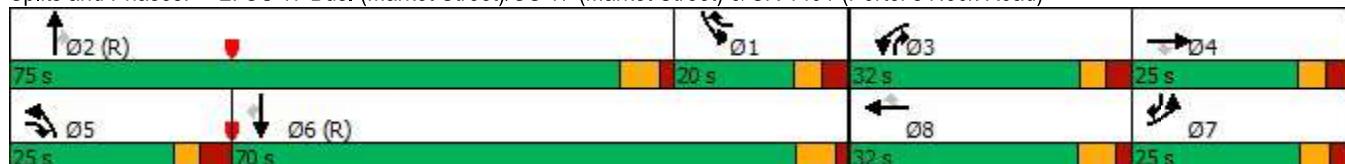
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: US 17 Bus. (Market Street)/US 17 (Market Street) & SR 1491 (Porter's Neck Road)



APPENDIX G

**CAPACITY ANALYSIS CALCULATIONS
FUTCH CREEK ROAD / MARKET STREET (SR
1400)
&
MARKET STREET (SR 2845)**

Intersection

Int Delay, s/veh 1.5

Movement EBL EBR NBL NBT SBT SBR

| | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 41 | 4 | 1 | 135 | 121 | 17 |
| Future Vol, veh/h | 41 | 4 | 1 | 135 | 121 | 17 |
| 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 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 46 | 4 | 1 | 150 | 134 | 19 |

Major/Minor Minor2 Major1 Major2

| | | | | | | |
|----------------------|-------|-------|-------|---|---|---|
| Conflicting Flow All | 296 | 144 | 153 | 0 | - | 0 |
| Stage 1 | 144 | - | - | - | - | - |
| Stage 2 | 152 | - | - | - | - | - |
| 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 | 695 | 903 | 1428 | - | - | - |
| Stage 1 | 883 | - | - | - | - | - |
| Stage 2 | 876 | - | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 694 | 903 | 1428 | - | - | - |
| Mov Cap-2 Maneuver | 694 | - | - | - | - | - |
| Stage 1 | 882 | - | - | - | - | - |
| Stage 2 | 876 | - | - | - | - | - |

Approach EB NB SB

| | | | |
|----------------------|------|-----|---|
| HCM Control Delay, s | 10.5 | 0.1 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1428 | - | 709 | - | - |
| HCM Lane V/C Ratio | 0.001 | - | 0.071 | - | - |
| HCM Control Delay (s) | 7.5 | 0 | 10.5 | - | - |
| HCM Lane LOS | A | A | B | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0.2 | - | - |

Intersection

Int Delay, s/veh 0.9

Movement EBL EBR NBL NBT SBT SBR

| | | | | | |
|--------------------------|---|---|---|------|------|
| Lane Configurations |  |  |  | | |
| Traffic Vol, veh/h | 19 | 5 | 2 | 87 | 123 |
| Future Vol, veh/h | 19 | 5 | 2 | 87 | 123 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free |
| RT Channelized | - | None | - | None | - |
| Storage Length | 0 | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 |
| Grade, % | 0 | - | - | 0 | 0 |
| Peak Hour Factor | 90 | 90 | 90 | 90 | 90 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 21 | 6 | 2 | 97 | 137 |
| | | | | | 44 |

Major/Minor Minor2 Major1 Major2

| | | | | | | |
|----------------------|-------|-------|-------|---|---|---|
| Conflicting Flow All | 260 | 159 | 181 | 0 | - | 0 |
| Stage 1 | 159 | - | - | - | - | - |
| Stage 2 | 101 | - | - | - | - | - |
| 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 | 729 | 886 | 1394 | - | - | - |
| Stage 1 | 870 | - | - | - | - | - |
| Stage 2 | 923 | - | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 728 | 886 | 1394 | - | - | - |
| Mov Cap-2 Maneuver | 728 | - | - | - | - | - |
| Stage 1 | 868 | - | - | - | - | - |
| Stage 2 | 923 | - | - | - | - | - |

Approach EB NB SB

| | | | |
|----------------------|-----|-----|---|
| HCM Control Delay, s | 9.9 | 0.2 | 0 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1394 | - | 756 | - | - |
| HCM Lane V/C Ratio | 0.002 | - | 0.035 | - | - |
| HCM Control Delay (s) | 7.6 | 0 | 9.9 | - | - |
| HCM Lane LOS | A | A | A | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0.1 | - | - |

Intersection

Int Delay, s/veh 1.5

Movement EBL EBR NBL NBT SBT SBR

| | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 43 | 4 | 1 | 140 | 126 | 18 |
| Future Vol, veh/h | 43 | 4 | 1 | 140 | 126 | 18 |
| 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 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 48 | 4 | 1 | 156 | 140 | 20 |

Major/Minor Minor2 Major1 Major2

| | | | | | | |
|----------------------|-------|-------|-------|---|---|---|
| Conflicting Flow All | 308 | 150 | 160 | 0 | - | 0 |
| Stage 1 | 150 | - | - | - | - | - |
| Stage 2 | 158 | - | - | - | - | - |
| 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 | 684 | 896 | 1419 | - | - | - |
| Stage 1 | 878 | - | - | - | - | - |
| Stage 2 | 871 | - | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 683 | 896 | 1419 | - | - | - |
| Mov Cap-2 Maneuver | 683 | - | - | - | - | - |
| Stage 1 | 877 | - | - | - | - | - |
| Stage 2 | 871 | - | - | - | - | - |

Approach EB NB SB

| | | | |
|----------------------|------|-----|---|
| HCM Control Delay, s | 10.6 | 0.1 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1419 | - | 697 | - | - |
| HCM Lane V/C Ratio | 0.001 | - | 0.075 | - | - |
| HCM Control Delay (s) | 7.5 | 0 | 10.6 | - | - |
| HCM Lane LOS | A | A | B | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0.2 | - | - |

Intersection

Int Delay, s/veh 0.9

Movement EBL EBR NBL NBT SBT SBR

| | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 20 | 5 | 2 | 91 | 128 | 42 |
| Future Vol, veh/h | 20 | 5 | 2 | 91 | 128 | 42 |
| 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 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 22 | 6 | 2 | 101 | 142 | 47 |

Major/Minor Minor2 Major1 Major2

| | | | | | | |
|----------------------|-------|-------|-------|---|---|---|
| Conflicting Flow All | 271 | 166 | 189 | 0 | - | 0 |
| Stage 1 | 166 | - | - | - | - | - |
| Stage 2 | 105 | - | - | - | - | - |
| 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 | 718 | 878 | 1385 | - | - | - |
| Stage 1 | 863 | - | - | - | - | - |
| Stage 2 | 919 | - | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 717 | 878 | 1385 | - | - | - |
| Mov Cap-2 Maneuver | 717 | - | - | - | - | - |
| Stage 1 | 861 | - | - | - | - | - |
| Stage 2 | 919 | - | - | - | - | - |

Approach EB NB SB

| | | | |
|----------------------|----|-----|---|
| HCM Control Delay, s | 10 | 0.2 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1385 | - | 744 | - | - |
| HCM Lane V/C Ratio | 0.002 | - | 0.037 | - | - |
| HCM Control Delay (s) | 7.6 | 0 | 10 | - | - |
| HCM Lane LOS | A | A | B | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0.1 | - | - |

Intersection

Int Delay, s/veh 3.4

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations

Traffic Vol, veh/h 120 4 1 140 126 42

Future Vol, veh/h 120 4 1 140 126 42

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 2 2 2 2

Mvmt Flow 133 4 1 156 140 47

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 322 164 187 0 - 0

Stage 1 164 - - - - -

Stage 2 158 - - - - -

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 672 881 1387 - - -

Stage 1 865 - - - - -

Stage 2 871 - - - - -

Platoon blocked, % - - - - - -

Mov Cap-1 Maneuver 671 881 1387 - - -

Mov Cap-2 Maneuver 671 - - - - -

Stage 1 864 - - - - -

Stage 2 871 - - - - -

Approach EB NB SB

HCM Control Delay, s 11.7 0.1 0

HCM LOS B

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h) 1387 - 676 - -

HCM Lane V/C Ratio 0.001 - 0.204 - -

HCM Control Delay (s) 7.6 0 11.7 - -

HCM Lane LOS A A B - -

HCM 95th %tile Q(veh) 0 - 0.8 - -

Intersection

Int Delay, s/veh 1.9

Movement EBL EBR NBL NBT SBT SBR

| Lane Configurations | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Traffic Vol, veh/h | 64 | 5 | 2 | 91 | 128 | 117 |
| Future Vol, veh/h | 64 | 5 | 2 | 91 | 128 | 117 |
| 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 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 71 | 6 | 2 | 101 | 142 | 130 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 312 | 207 | 272 | 0 | - | 0 |
| Stage 1 | 207 | - | - | - | - | - |
| Stage 2 | 105 | - | - | - | - | - |
| 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 | 681 | 833 | 1291 | - | - | - |
| Stage 1 | 828 | - | - | - | - | - |
| Stage 2 | 919 | - | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 680 | 833 | 1291 | - | - | - |
| Mov Cap-2 Maneuver | 680 | - | - | - | - | - |
| Stage 1 | 826 | - | - | - | - | - |
| Stage 2 | 919 | - | - | - | - | - |

| Approach | EB | NB | SB |
|----------------------|------|-----|----|
| HCM Control Delay, s | 10.9 | 0.2 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1291 | - | 689 | - | - |
| HCM Lane V/C Ratio | 0.002 | - | 0.111 | - | - |
| HCM Control Delay (s) | 7.8 | 0 | 10.9 | - | - |
| HCM Lane LOS | A | A | B | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0.4 | - | - |

APPENDIX H

CAPACITY ANALYSIS CALCULATIONS

US 17

&

**U-TURN LOCATION (NORTH OF SR 1400
MARKET STREET)**

Lanes, Volumes, Timings
4: US 17 & NB U-Turn

Existing (2019) AM
10/09/2019

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|-------------------------|-------|------|------|------|-------|-------|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 215 | 0 | 0 | 0 | 0 | 1937 |
| Future Volume (vph) | 215 | 0 | 0 | 0 | 0 | 1937 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1770 | 0 | 0 | 0 | 0 | 3539 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1770 | 0 | 0 | 0 | 0 | 3539 |
| Right Turn on Red | No | No | | No | | |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (mph) | 45 | | 55 | | | 55 |
| Link Distance (ft) | 145 | | 804 | | | 1210 |
| Travel Time (s) | 2.2 | | 10.0 | | | 15.0 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 239 | 0 | 0 | 0 | 0 | 2152 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 239 | 0 | 0 | 0 | 0 | 2152 |
| Turn Type | Prot | | | | | NA |
| Protected Phases | 3 | | | | | 6 |
| Permitted Phases | | | | | | |
| Detector Phase | 3 | | | | | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 7.0 | | | | | 14.0 |
| Minimum Split (s) | 13.3 | | | | | 20.8 |
| Total Split (s) | 27.0 | | | | | 53.0 |
| Total Split (%) | 33.8% | | | | | 66.3% |
| Maximum Green (s) | 20.7 | | | | | 46.2 |
| Yellow Time (s) | 3.0 | | | | | 5.2 |
| All-Red Time (s) | 3.3 | | | | | 1.6 |
| Lost Time Adjust (s) | -1.3 | | | | | -1.8 |
| Total Lost Time (s) | 5.0 | | | | | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 2.0 | | | | | 6.0 |
| Minimum Gap (s) | 2.0 | | | | | 3.4 |
| Time Before Reduce (s) | 0.0 | | | | | 15.0 |
| Time To Reduce (s) | 0.0 | | | | | 30.0 |
| Recall Mode | None | | | | C-Max | |
| Act Effct Green (s) | 16.3 | | | | | 53.7 |
| Actuated g/C Ratio | 0.20 | | | | | 0.67 |
| v/c Ratio | 0.66 | | | | | 0.91 |
| Control Delay | 37.8 | | | | | 19.8 |
| Queue Delay | 0.0 | | | | | 0.0 |
| Total Delay | 37.8 | | | | | 19.8 |
| LOS | D | | | | | B |
| Approach Delay | 37.8 | | | | | 19.8 |
| Approach LOS | D | | | | | B |
| Queue Length 50th (ft) | 111 | | | | | 411 |
| Queue Length 95th (ft) | 169 | | | | | #743 |
| Internal Link Dist (ft) | 65 | | 724 | | | 1130 |
| Turn Bay Length (ft) | | | | | | |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|------------------------|------|-----|-----|-----|-----|------|
| Base Capacity (vph) | 486 | | | | | 2373 |
| Starvation Cap Reductn | 0 | | | | | 0 |
| Spillback Cap Reductn | 0 | | | | | 0 |
| Storage Cap Reductn | 0 | | | | | 0 |
| Reduced v/c Ratio | 0.49 | | | | | 0.91 |

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 46 (58%), Referenced to phase 6:SBT, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 21.6

Intersection LOS: C

Intersection Capacity Utilization 104.3%

ICU Level of Service G

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: US 17 & NB U-Turn



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|-------------------------|-------|------|------|------|-------|-------|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 119 | 0 | 0 | 0 | 0 | 1565 |
| Future Volume (vph) | 119 | 0 | 0 | 0 | 0 | 1565 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1770 | 0 | 0 | 0 | 0 | 3539 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1770 | 0 | 0 | 0 | 0 | 3539 |
| Right Turn on Red | No | No | | No | | |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (mph) | 45 | | 55 | | | 55 |
| Link Distance (ft) | 145 | | 804 | | | 1210 |
| Travel Time (s) | 2.2 | | 10.0 | | | 15.0 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 132 | 0 | 0 | 0 | 0 | 1739 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 132 | 0 | 0 | 0 | 0 | 1739 |
| Turn Type | Prot | | | | | NA |
| Protected Phases | 3 | | | | | 6 |
| Permitted Phases | | | | | | |
| Detector Phase | 3 | | | | | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 7.0 | | | | | 14.0 |
| Minimum Split (s) | 13.3 | | | | | 20.8 |
| Total Split (s) | 22.0 | | | | | 48.0 |
| Total Split (%) | 31.4% | | | | | 68.6% |
| Maximum Green (s) | 15.7 | | | | | 41.2 |
| Yellow Time (s) | 3.0 | | | | | 5.2 |
| All-Red Time (s) | 3.3 | | | | | 1.6 |
| Lost Time Adjust (s) | -1.3 | | | | | -1.8 |
| Total Lost Time (s) | 5.0 | | | | | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 2.0 | | | | | 6.0 |
| Minimum Gap (s) | 2.0 | | | | | 3.4 |
| Time Before Reduce (s) | 0.0 | | | | | 15.0 |
| Time To Reduce (s) | 0.0 | | | | | 30.0 |
| Recall Mode | None | | | | C-Max | |
| Act Effect Green (s) | 11.2 | | | | | 52.5 |
| Actuated g/C Ratio | 0.16 | | | | | 0.75 |
| v/c Ratio | 0.47 | | | | | 0.66 |
| Control Delay | 31.7 | | | | | 7.8 |
| Queue Delay | 0.0 | | | | | 0.0 |
| Total Delay | 31.7 | | | | | 7.8 |
| LOS | C | | | | | A |
| Approach Delay | 31.7 | | | | | 7.8 |
| Approach LOS | C | | | | | A |



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|-------------------------|------|-----|-----|-----|-----|------|
| Queue Length 50th (ft) | 53 | | | | | 185 |
| Queue Length 95th (ft) | 95 | | | | | 321 |
| Internal Link Dist (ft) | 65 | | 724 | | | 1130 |
| Turn Bay Length (ft) | | | | | | |
| Base Capacity (vph) | 429 | | | | | 2654 |
| Starvation Cap Reductn | 0 | | | | | 0 |
| Spillback Cap Reductn | 0 | | | | | 0 |
| Storage Cap Reductn | 0 | | | | | 0 |
| Reduced v/c Ratio | 0.31 | | | | | 0.66 |

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 16 (23%), Referenced to phase 6:SBT, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 9.4

Intersection LOS: A

Intersection Capacity Utilization 113.6%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 4: US 17 & NB U-Turn



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|-------------------------|-------|------|------|------|-------|-------|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 224 | 0 | 0 | 0 | 0 | 2015 |
| Future Volume (vph) | 224 | 0 | 0 | 0 | 0 | 2015 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1770 | 0 | 0 | 0 | 0 | 3539 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1770 | 0 | 0 | 0 | 0 | 3539 |
| Right Turn on Red | No | No | | No | | |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (mph) | 45 | | 55 | | | 55 |
| Link Distance (ft) | 145 | | 804 | | | 1210 |
| Travel Time (s) | 2.2 | | 10.0 | | | 15.0 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 249 | 0 | 0 | 0 | 0 | 2239 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 249 | 0 | 0 | 0 | 0 | 2239 |
| Turn Type | Prot | | | | | NA |
| Protected Phases | 3 | | | | | 6 |
| Permitted Phases | | | | | | |
| Detector Phase | 3 | | | | | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 7.0 | | | | | 14.0 |
| Minimum Split (s) | 13.3 | | | | | 20.8 |
| Total Split (s) | 27.0 | | | | | 53.0 |
| Total Split (%) | 33.8% | | | | | 66.3% |
| Maximum Green (s) | 20.7 | | | | | 46.2 |
| Yellow Time (s) | 3.0 | | | | | 5.2 |
| All-Red Time (s) | 3.3 | | | | | 1.6 |
| Lost Time Adjust (s) | -1.3 | | | | | -1.8 |
| Total Lost Time (s) | 5.0 | | | | | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 2.0 | | | | | 6.0 |
| Minimum Gap (s) | 2.0 | | | | | 3.4 |
| Time Before Reduce (s) | 0.0 | | | | | 15.0 |
| Time To Reduce (s) | 0.0 | | | | | 30.0 |
| Recall Mode | None | | | | C-Max | |
| Act Effect Green (s) | 16.7 | | | | | 53.3 |
| Actuated g/C Ratio | 0.21 | | | | | 0.67 |
| v/c Ratio | 0.68 | | | | | 0.95 |
| Control Delay | 38.0 | | | | | 24.6 |
| Queue Delay | 0.0 | | | | | 0.0 |
| Total Delay | 38.0 | | | | | 24.6 |
| LOS | D | | | | | C |
| Approach Delay | 38.0 | | | | | 24.6 |
| Approach LOS | D | | | | | C |



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|-------------------------|------|-----|-----|-----|-----|------|
| Queue Length 50th (ft) | 115 | | | | | 466 |
| Queue Length 95th (ft) | 176 | | | | | #791 |
| Internal Link Dist (ft) | 65 | | 724 | | | 1130 |
| Turn Bay Length (ft) | | | | | | |
| Base Capacity (vph) | 486 | | | | | 2358 |
| Starvation Cap Reductn | 0 | | | | | 0 |
| Spillback Cap Reductn | 0 | | | | | 0 |
| Storage Cap Reductn | 0 | | | | | 0 |
| Reduced v/c Ratio | 0.51 | | | | | 0.95 |

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 46 (58%), Referenced to phase 6:SBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.95

Intersection Signal Delay: 26.0

Intersection LOS: C

Intersection Capacity Utilization 104.0%

ICU Level of Service G

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: US 17 & NB U-Turn



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|-------------------------|-------|------|------|------|-------|-------|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 124 | 0 | 0 | 0 | 0 | 1629 |
| Future Volume (vph) | 124 | 0 | 0 | 0 | 0 | 1629 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1770 | 0 | 0 | 0 | 0 | 3539 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1770 | 0 | 0 | 0 | 0 | 3539 |
| Right Turn on Red | No | No | | No | | |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (mph) | 45 | | 55 | | | 55 |
| Link Distance (ft) | 145 | | 804 | | | 1210 |
| Travel Time (s) | 2.2 | | 10.0 | | | 15.0 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 138 | 0 | 0 | 0 | 0 | 1810 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 138 | 0 | 0 | 0 | 0 | 1810 |
| Turn Type | Prot | | | | | NA |
| Protected Phases | 3 | | | | | 6 |
| Permitted Phases | | | | | | |
| Detector Phase | 3 | | | | | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 7.0 | | | | | 14.0 |
| Minimum Split (s) | 13.3 | | | | | 20.8 |
| Total Split (s) | 22.0 | | | | | 48.0 |
| Total Split (%) | 31.4% | | | | | 68.6% |
| Maximum Green (s) | 15.7 | | | | | 41.2 |
| Yellow Time (s) | 3.0 | | | | | 5.2 |
| All-Red Time (s) | 3.3 | | | | | 1.6 |
| Lost Time Adjust (s) | -1.3 | | | | | -1.8 |
| Total Lost Time (s) | 5.0 | | | | | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 2.0 | | | | | 6.0 |
| Minimum Gap (s) | 2.0 | | | | | 3.4 |
| Time Before Reduce (s) | 0.0 | | | | | 15.0 |
| Time To Reduce (s) | 0.0 | | | | | 30.0 |
| Recall Mode | None | | | | C-Max | |
| Act Effect Green (s) | 11.4 | | | | | 52.3 |
| Actuated g/C Ratio | 0.16 | | | | | 0.75 |
| v/c Ratio | 0.48 | | | | | 0.68 |
| Control Delay | 31.7 | | | | | 8.4 |
| Queue Delay | 0.0 | | | | | 0.0 |
| Total Delay | 31.7 | | | | | 8.4 |
| LOS | C | | | | | A |
| Approach Delay | 31.7 | | | | | 8.4 |
| Approach LOS | C | | | | | A |



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|-------------------------|------|-----|-----|-----|-----|------|
| Queue Length 50th (ft) | 55 | | | | | 204 |
| Queue Length 95th (ft) | 98 | | | | | 356 |
| Internal Link Dist (ft) | 65 | | 724 | | | 1130 |
| Turn Bay Length (ft) | | | | | | |
| Base Capacity (vph) | 429 | | | | | 2643 |
| Starvation Cap Reductn | 0 | | | | | 0 |
| Spillback Cap Reductn | 0 | | | | | 0 |
| Storage Cap Reductn | 0 | | | | | 0 |
| Reduced v/c Ratio | 0.32 | | | | | 0.68 |

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 16 (23%), Referenced to phase 6:SBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 10.1

Intersection LOS: B

Intersection Capacity Utilization 117.3%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 4: US 17 & NB U-Turn



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|-------------------------|-------|------|------|------|-------|-------|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 270 | 0 | 0 | 0 | 0 | 2025 |
| Future Volume (vph) | 270 | 0 | 0 | 0 | 0 | 2025 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1770 | 0 | 0 | 0 | 0 | 3539 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1770 | 0 | 0 | 0 | 0 | 3539 |
| Right Turn on Red | No | No | | No | | |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (mph) | 45 | | 55 | | | 55 |
| Link Distance (ft) | 145 | | 804 | | | 1210 |
| Travel Time (s) | 2.2 | | 10.0 | | | 15.0 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 300 | 0 | 0 | 0 | 0 | 2250 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 300 | 0 | 0 | 0 | 0 | 2250 |
| Turn Type | Prot | | | | | NA |
| Protected Phases | 3 | | | | | 6 |
| Permitted Phases | | | | | | |
| Detector Phase | 3 | | | | | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 7.0 | | | | | 14.0 |
| Minimum Split (s) | 13.3 | | | | | 20.8 |
| Total Split (s) | 27.0 | | | | | 53.0 |
| Total Split (%) | 33.8% | | | | | 66.3% |
| Maximum Green (s) | 20.7 | | | | | 46.2 |
| Yellow Time (s) | 3.0 | | | | | 5.2 |
| All-Red Time (s) | 3.3 | | | | | 1.6 |
| Lost Time Adjust (s) | -1.3 | | | | | -1.8 |
| Total Lost Time (s) | 5.0 | | | | | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 2.0 | | | | | 6.0 |
| Minimum Gap (s) | 2.0 | | | | | 3.4 |
| Time Before Reduce (s) | 0.0 | | | | | 15.0 |
| Time To Reduce (s) | 0.0 | | | | | 30.0 |
| Recall Mode | None | | | | C-Max | |
| Act Effect Green (s) | 18.3 | | | | 51.7 | |
| Actuated g/C Ratio | 0.23 | | | | 0.65 | |
| v/c Ratio | 0.74 | | | | 0.98 | |
| Control Delay | 39.7 | | | | 31.9 | |
| Queue Delay | 0.0 | | | | 0.0 | |
| Total Delay | 39.7 | | | | 31.9 | |
| LOS | D | | | | C | |
| Approach Delay | 39.7 | | | | 31.9 | |
| Approach LOS | D | | | | C | |



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|-------------------------|------|-----|-----|-----|-----|------|
| Queue Length 50th (ft) | 138 | | | | | 522 |
| Queue Length 95th (ft) | 213 | | | | | #797 |
| Internal Link Dist (ft) | 65 | | 724 | | | 1130 |
| Turn Bay Length (ft) | | | | | | |
| Base Capacity (vph) | 486 | | | | | 2285 |
| Starvation Cap Reductn | 0 | | | | | 0 |
| Spillback Cap Reductn | 0 | | | | | 0 |
| Storage Cap Reductn | 0 | | | | | 0 |
| Reduced v/c Ratio | 0.62 | | | | | 0.98 |

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 46 (58%), Referenced to phase 6:SBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.98

Intersection Signal Delay: 32.8

Intersection LOS: C

Intersection Capacity Utilization 110.0%

ICU Level of Service H

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: US 17 & NB U-Turn



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|-------------------------|-------|------|------|------|-------|-------|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 150 | 0 | 0 | 0 | 0 | 1659 |
| Future Volume (vph) | 150 | 0 | 0 | 0 | 0 | 1659 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 |
| Frt | | | | | | |
| Flt Protected | 0.950 | | | | | |
| Satd. Flow (prot) | 1770 | 0 | 0 | 0 | 0 | 3539 |
| Flt Permitted | 0.950 | | | | | |
| Satd. Flow (perm) | 1770 | 0 | 0 | 0 | 0 | 3539 |
| Right Turn on Red | No | No | | No | | |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (mph) | 45 | | 55 | | | 55 |
| Link Distance (ft) | 145 | | 804 | | | 1210 |
| Travel Time (s) | 2.2 | | 10.0 | | | 15.0 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 167 | 0 | 0 | 0 | 0 | 1843 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 167 | 0 | 0 | 0 | 0 | 1843 |
| Turn Type | Prot | | | | | NA |
| Protected Phases | 3 | | | | | 6 |
| Permitted Phases | | | | | | |
| Detector Phase | 3 | | | | | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 7.0 | | | | | 14.0 |
| Minimum Split (s) | 13.3 | | | | | 20.8 |
| Total Split (s) | 22.0 | | | | | 48.0 |
| Total Split (%) | 31.4% | | | | | 68.6% |
| Maximum Green (s) | 15.7 | | | | | 41.2 |
| Yellow Time (s) | 3.0 | | | | | 5.2 |
| All-Red Time (s) | 3.3 | | | | | 1.6 |
| Lost Time Adjust (s) | -1.3 | | | | | -1.8 |
| Total Lost Time (s) | 5.0 | | | | | 5.0 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 2.0 | | | | | 6.0 |
| Minimum Gap (s) | 2.0 | | | | | 3.4 |
| Time Before Reduce (s) | 0.0 | | | | | 15.0 |
| Time To Reduce (s) | 0.0 | | | | | 30.0 |
| Recall Mode | None | | | | C-Max | |
| Act Effect Green (s) | 12.3 | | | | 47.7 | |
| Actuated g/C Ratio | 0.18 | | | | 0.68 | |
| v/c Ratio | 0.54 | | | | 0.77 | |
| Control Delay | 32.0 | | | | 11.1 | |
| Queue Delay | 0.0 | | | | 0.0 | |
| Total Delay | 32.0 | | | | 11.1 | |
| LOS | C | | | | B | |
| Approach Delay | 32.0 | | | | 11.1 | |
| Approach LOS | C | | | | B | |



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|-------------------------|------|-----|-----|-----|-----|------|
| Queue Length 50th (ft) | 66 | | | | | 228 |
| Queue Length 95th (ft) | 112 | | | | | 400 |
| Internal Link Dist (ft) | 65 | | 724 | | | 1130 |
| Turn Bay Length (ft) | | | | | | |
| Base Capacity (vph) | 429 | | | | | 2409 |
| Starvation Cap Reductn | 0 | | | | | 0 |
| Spillback Cap Reductn | 0 | | | | | 0 |
| Storage Cap Reductn | 0 | | | | | 0 |
| Reduced v/c Ratio | 0.39 | | | | | 0.77 |

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 16 (23%), Referenced to phase 6:SBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 12.8

Intersection LOS: B

Intersection Capacity Utilization 121.0%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 4: US 17 & NB U-Turn



APPENDIX I

CAPACITY ANALYSIS CALCULATIONS

US 17

&

MARKET STREET (SR 1400)

Lanes, Volumes, Timings
5: US 17 & SR 1400 (Market Street)

Existing (2019) AM

10/07/2019

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|------|------|------|-------|------|-------|-------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 78 | 0 | 0 | 0 | 355 | 0 | 1259 | 133 | 0 | 0 | 0 |
| Future Volume (vph) | 0 | 78 | 0 | 0 | 0 | 355 | 0 | 1259 | 133 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 125 | 0 | 0 | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 0 | | 1 | 0 | | 0 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | 0.865 | | | 0.850 | | | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 1863 | 0 | 0 | 0 | 1611 | 0 | 3539 | 1583 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 1863 | 0 | 0 | 0 | 1611 | 0 | 3539 | 1583 | 0 | 0 | 0 |
| Right Turn on Red | No | | No | | | No | | No | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 45 | | | | 35 | | | 55 | | | 55 |
| Link Distance (ft) | | 151 | | | | 2178 | | | 171 | | | 804 |
| Travel Time (s) | | 2.3 | | | | 42.4 | | | 2.1 | | | 10.0 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 0 | 87 | 0 | 0 | 0 | 394 | 0 | 1399 | 148 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 87 | 0 | 0 | 0 | 394 | 0 | 1399 | 148 | 0 | 0 | 0 |
| Turn Type | | NA | | | | Perm | | | NA | Perm | | |
| Protected Phases | 7 | 7 | | | | | | | 2 | | | |
| Permitted Phases | | | | | | 7 | | | 2 | | | |
| Detector Phase | 7 | 7 | | | | 7 | | 2 | 2 | | | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 7.0 | 7.0 | | | | 7.0 | | 14.0 | 14.0 | | | |
| Minimum Split (s) | 11.8 | 11.8 | | | | 11.8 | | 20.3 | 20.3 | | | |
| Total Split (s) | 24.0 | 24.0 | | | | 24.0 | | 36.0 | 36.0 | | | |
| Total Split (%) | 40.0% | 40.0% | | | | 40.0% | | 60.0% | 60.0% | | | |
| Maximum Green (s) | 19.2 | 19.2 | | | | 19.2 | | 29.7 | 29.7 | | | |
| Yellow Time (s) | 3.0 | 3.0 | | | | 3.0 | | 5.2 | 5.2 | | | |
| All-Red Time (s) | 1.8 | 1.8 | | | | 1.8 | | 1.1 | 1.1 | | | |
| Lost Time Adjust (s) | | 0.2 | | | | 0.2 | | -1.3 | -1.3 | | | |
| Total Lost Time (s) | | 5.0 | | | | 5.0 | | 5.0 | 5.0 | | | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 2.0 | 2.0 | | | | 2.0 | | 6.0 | 6.0 | | | |
| Minimum Gap (s) | 2.0 | 2.0 | | | | 2.0 | | 3.4 | 3.4 | | | |
| Time Before Reduce (s) | 0.0 | 0.0 | | | | 0.0 | | 15.0 | 15.0 | | | |
| Time To Reduce (s) | 0.0 | 0.0 | | | | 0.0 | | 30.0 | 30.0 | | | |
| Recall Mode | None | None | | | | None | | C-Max | C-Max | | | |
| Act Effct Green (s) | | 17.1 | | | | 17.1 | | 32.9 | 32.9 | | | |
| Actuated g/C Ratio | | 0.28 | | | | 0.28 | | 0.55 | 0.55 | | | |
| v/c Ratio | | 0.16 | | | | 0.86 | | 0.72 | 0.17 | | | |
| Control Delay | | 15.9 | | | | 39.9 | | 13.4 | 8.1 | | | |
| Queue Delay | | 0.0 | | | | 0.0 | | 0.0 | 0.0 | | | |
| Total Delay | | 15.9 | | | | 39.9 | | 13.4 | 8.1 | | | |

Lanes, Volumes, Timings
5: US 17 & SR 1400 (Market Street)

Existing (2019) AM

10/07/2019

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|------|-----|-----|------|------|------|------|------|-----|-----|-----|
| LOS | | B | | | | D | | B | A | | | |
| Approach Delay | | 15.9 | | | 39.9 | | | | 12.9 | | | |
| Approach LOS | | | B | | | D | | | B | | | |
| Queue Length 50th (ft) | | 22 | | | | | 127 | | 195 | 26 | | |
| Queue Length 95th (ft) | | 50 | | | | | #255 | | 271 | 53 | | |
| Internal Link Dist (ft) | | 71 | | | 2098 | | | | 91 | | 724 | |
| Turn Bay Length (ft) | | | | | | | | | | | | 125 |
| Base Capacity (vph) | | 589 | | | | 510 | | 1939 | 867 | | | |
| Starvation Cap Reductn | | 0 | | | | 0 | | 0 | 0 | | | |
| Spillback Cap Reductn | | 0 | | | | 0 | | 0 | 0 | | | |
| Storage Cap Reductn | | 0 | | | | 0 | | 0 | 0 | | | |
| Reduced v/c Ratio | | 0.15 | | | | 0.77 | | 0.72 | 0.17 | | | |

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 28 (47%), Referenced to phase 2:NBT, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 18.3

Intersection LOS: B

Intersection Capacity Utilization 121.7%

ICU Level of Service H

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 5: US 17 & SR 1400 (Market Street)



Lanes, Volumes, Timings
5: US 17 & SR 1400 (Market Street)

Existing (2019) PM

10/07/2019

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|------|------|------|-------|------|-------|-------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 64 | 0 | 0 | 0 | 192 | 0 | 2118 | 176 | 0 | 0 | 0 |
| Future Volume (vph) | 0 | 64 | 0 | 0 | 0 | 192 | 0 | 2118 | 176 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 125 | 0 | 0 | |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 0 | | 1 | 0 | | 0 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | 0.865 | | | 0.850 | | | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 1863 | 0 | 0 | 0 | 1611 | 0 | 3539 | 1583 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 1863 | 0 | 0 | 0 | 1611 | 0 | 3539 | 1583 | 0 | 0 | 0 |
| Right Turn on Red | No | | No | | | No | | No | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 45 | | | | 35 | | | 55 | | | 55 |
| Link Distance (ft) | | 151 | | | | 2178 | | | 171 | | | 804 |
| Travel Time (s) | | 2.3 | | | | 42.4 | | | 2.1 | | | 10.0 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 0 | 71 | 0 | 0 | 0 | 213 | 0 | 2353 | 196 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 71 | 0 | 0 | 0 | 213 | 0 | 2353 | 196 | 0 | 0 | 0 |
| Turn Type | | NA | | | | Perm | | | NA | Perm | | |
| Protected Phases | 7 | 7 | | | | | | | 2 | | | |
| Permitted Phases | | | | | | 7 | | | 2 | | | |
| Detector Phase | 7 | 7 | | | | 7 | | 2 | 2 | | | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 7.0 | 7.0 | | | | 7.0 | | 14.0 | 14.0 | | | |
| Minimum Split (s) | 11.8 | 11.8 | | | | 11.8 | | 20.3 | 20.3 | | | |
| Total Split (s) | 22.0 | 22.0 | | | | 22.0 | | 58.0 | 58.0 | | | |
| Total Split (%) | 27.5% | 27.5% | | | | 27.5% | | 72.5% | 72.5% | | | |
| Maximum Green (s) | 17.2 | 17.2 | | | | 17.2 | | 51.7 | 51.7 | | | |
| Yellow Time (s) | 3.0 | 3.0 | | | | 3.0 | | 5.2 | 5.2 | | | |
| All-Red Time (s) | 1.8 | 1.8 | | | | 1.8 | | 1.1 | 1.1 | | | |
| Lost Time Adjust (s) | | 0.2 | | | | 0.2 | | -1.3 | -1.3 | | | |
| Total Lost Time (s) | | 5.0 | | | | 5.0 | | 5.0 | 5.0 | | | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 2.0 | 2.0 | | | | 2.0 | | 6.0 | 6.0 | | | |
| Minimum Gap (s) | 2.0 | 2.0 | | | | 2.0 | | 3.4 | 3.4 | | | |
| Time Before Reduce (s) | 0.0 | 0.0 | | | | 0.0 | | 15.0 | 15.0 | | | |
| Time To Reduce (s) | 0.0 | 0.0 | | | | 0.0 | | 30.0 | 30.0 | | | |
| Recall Mode | C-Max | C-Max | | | | C-Max | | Max | Max | | | |
| Act Effct Green (s) | 17.0 | | | | | 17.0 | | 53.0 | 53.0 | | | |
| Actuated g/C Ratio | 0.21 | | | | | 0.21 | | 0.66 | 0.66 | | | |
| v/c Ratio | 0.18 | | | | | 0.62 | | 1.00 | 0.19 | | | |
| Control Delay | 27.3 | | | | | 37.7 | | 34.5 | 5.7 | | | |
| Queue Delay | 0.0 | | | | | 0.0 | | 0.0 | 0.0 | | | |
| Total Delay | 27.3 | | | | | 37.7 | | 34.5 | 5.7 | | | |

Lanes, Volumes, Timings
5: US 17 & SR 1400 (Market Street)

Existing (2019) PM

10/07/2019

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|------|-----|-----|------|------|-----|------|------|-----|-----|-----|
| LOS | | C | | | D | | | C | A | | | |
| Approach Delay | | 27.3 | | | 37.7 | | | 32.3 | | | | |
| Approach LOS | | C | | | D | | | C | | | | |
| Queue Length 50th (ft) | | 29 | | | | 97 | | ~545 | 33 | | | |
| Queue Length 95th (ft) | | 64 | | | | 169 | | #793 | 57 | | | |
| Internal Link Dist (ft) | | 71 | | | 2098 | | | 91 | | | 724 | |
| Turn Bay Length (ft) | | | | | | | | | 125 | | | |
| Base Capacity (vph) | | 395 | | | | 342 | | 2344 | 1048 | | | |
| Starvation Cap Reductn | | 0 | | | | 0 | | 0 | 0 | | | |
| Spillback Cap Reductn | | 0 | | | | 0 | | 0 | 0 | | | |
| Storage Cap Reductn | | 0 | | | | 0 | | 0 | 0 | | | |
| Reduced v/c Ratio | | 0.18 | | | | 0.62 | | 1.00 | 0.19 | | | |

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 79 (99%), Referenced to phase 7:EBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.00

Intersection Signal Delay: 32.6

Intersection LOS: C

Intersection Capacity Utilization 122.9%

ICU Level of Service H

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 5: US 17 & SR 1400 (Market Street)



Lanes, Volumes, Timings
5: US 17 & SR 1400 (Market Street)

Background (2023) AM

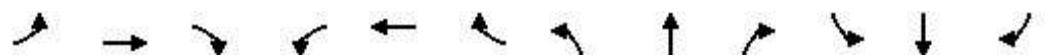
10/07/2019

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|------|------|------|-------|------|------|-------|------|------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 81 | 0 | 0 | 0 | 369 | 0 | 1332 | 138 | 0 | 0 | 0 |
| Future Volume (vph) | 0 | 81 | 0 | 0 | 0 | 369 | 0 | 1332 | 138 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 125 | 0 | 0 | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 0 | | 1 | 0 | | 0 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | 0.865 | | | 0.850 | | | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 1863 | 0 | 0 | 0 | 1611 | 0 | 3539 | 1583 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 1863 | 0 | 0 | 0 | 1611 | 0 | 3539 | 1583 | 0 | 0 | 0 |
| Right Turn on Red | No | | No | | | No | | No | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 45 | | | | 35 | | | 55 | | | 55 |
| Link Distance (ft) | | 151 | | | | 2178 | | | 171 | | | 804 |
| Travel Time (s) | | 2.3 | | | | 42.4 | | | 2.1 | | | 10.0 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 0 | 90 | 0 | 0 | 0 | 410 | 0 | 1480 | 153 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 90 | 0 | 0 | 0 | 410 | 0 | 1480 | 153 | 0 | 0 | 0 |
| Turn Type | | NA | | | | Perm | | | NA | Perm | | |
| Protected Phases | 7 | 7 | | | | | | | 2 | | | |
| Permitted Phases | | | | | | | | 7 | | | 2 | |
| Detector Phase | 7 | 7 | | | | 7 | | 2 | | | 2 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 7.0 | 7.0 | | | | 7.0 | | | 14.0 | | | 14.0 |
| Minimum Split (s) | 11.8 | 11.8 | | | | 11.8 | | | 20.3 | | | 20.3 |
| Total Split (s) | 24.0 | 24.0 | | | | 24.0 | | | 36.0 | | | 36.0 |
| Total Split (%) | 40.0% | 40.0% | | | | 40.0% | | | 60.0% | | | 60.0% |
| Maximum Green (s) | 19.2 | 19.2 | | | | 19.2 | | | 29.7 | | | 29.7 |
| Yellow Time (s) | 3.0 | 3.0 | | | | 3.0 | | | 5.2 | | | 5.2 |
| All-Red Time (s) | 1.8 | 1.8 | | | | 1.8 | | | 1.1 | | | 1.1 |
| Lost Time Adjust (s) | | 0.2 | | | | 0.2 | | | -1.3 | | | -1.3 |
| Total Lost Time (s) | | 5.0 | | | | 5.0 | | | 5.0 | | | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 2.0 | 2.0 | | | | 2.0 | | | 6.0 | | | 6.0 |
| Minimum Gap (s) | 2.0 | 2.0 | | | | 2.0 | | | 3.4 | | | 3.4 |
| Time Before Reduce (s) | 0.0 | 0.0 | | | | 0.0 | | | 15.0 | | | 15.0 |
| Time To Reduce (s) | 0.0 | 0.0 | | | | 0.0 | | | 30.0 | | | 30.0 |
| Recall Mode | None | None | | | | None | | | C-Max | | | C-Max |
| Act Effct Green (s) | | 17.4 | | | | 17.4 | | | 32.6 | | | 32.6 |
| Actuated g/C Ratio | | 0.29 | | | | 0.29 | | | 0.54 | | | 0.54 |
| v/c Ratio | | 0.17 | | | | 0.88 | | | 0.77 | | | 0.18 |
| Control Delay | | 15.9 | | | | 42.0 | | | 14.9 | | | 8.3 |
| Queue Delay | | 0.0 | | | | 0.0 | | | 0.0 | | | 0.0 |
| Total Delay | | 15.9 | | | | 42.0 | | | 14.9 | | | 8.3 |

Lanes, Volumes, Timings
5: US 17 & SR 1400 (Market Street)

Background (2023) AM

10/07/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|------|-----|-----|------|------|-----|------|------|-----|-----|-----|
| LOS | | B | | | D | | | B | A | | | |
| Approach Delay | | 15.9 | | | 42.0 | | | | 14.3 | | | |
| Approach LOS | | B | | | D | | | | B | | | |
| Queue Length 50th (ft) | | 23 | | | | 134 | | 214 | 27 | | | |
| Queue Length 95th (ft) | | 51 | | | | #269 | | 300 | 54 | | | |
| Internal Link Dist (ft) | | 71 | | | 2098 | | | 91 | | | | 724 |
| Turn Bay Length (ft) | | | | | | | | | | | | 125 |
| Base Capacity (vph) | | 589 | | | | 510 | | 1921 | 859 | | | |
| Starvation Cap Reductn | | 0 | | | | 0 | | 0 | 0 | | | |
| Spillback Cap Reductn | | 0 | | | | 0 | | 0 | 0 | | | |
| Storage Cap Reductn | | 0 | | | | 0 | | 0 | 0 | | | |
| Reduced v/c Ratio | | 0.15 | | | | 0.80 | | 0.77 | 0.18 | | | |

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 28 (47%), Referenced to phase 2:NBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 19.7

Intersection LOS: B

Intersection Capacity Utilization 126.9%

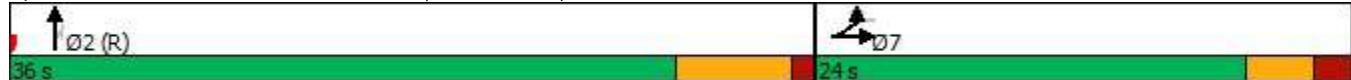
ICU Level of Service H

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 5: US 17 & SR 1400 (Market Street)



Lanes, Volumes, Timings
5: US 17 & SR 1400 (Market Street)

Background (2023) PM
10/08/2019

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|------|------|------|-------|------|------|-------|------|-------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 67 | 0 | 0 | 0 | 200 | 0 | 2218 | 183 | 0 | 0 | 0 |
| Future Volume (vph) | 0 | 67 | 0 | 0 | 0 | 200 | 0 | 2218 | 183 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 125 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 0 | | 1 | 0 | | 0 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | 0.865 | | | 0.850 | | | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 1863 | 0 | 0 | 0 | 1611 | 0 | 3539 | 1583 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 1863 | 0 | 0 | 0 | 1611 | 0 | 3539 | 1583 | 0 | 0 | 0 |
| Right Turn on Red | No | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 45 | | | | 35 | | | 55 | | | 55 |
| Link Distance (ft) | | 151 | | | | 2178 | | | 171 | | | 804 |
| Travel Time (s) | | 2.3 | | | | 42.4 | | | 2.1 | | | 10.0 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 0 | 74 | 0 | 0 | 0 | 222 | 0 | 2464 | 203 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 74 | 0 | 0 | 0 | 222 | 0 | 2464 | 203 | 0 | 0 | 0 |
| Turn Type | | NA | | | | Perm | | | NA | Perm | | |
| Protected Phases | 7 | 7 | | | | | | | 2 | | | |
| Permitted Phases | | | | | | 7 | | | | 2 | | |
| Detector Phase | 7 | 7 | | | | 7 | | | 2 | | 2 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 7.0 | 7.0 | | | | 7.0 | | | 14.0 | | 14.0 | |
| Minimum Split (s) | 11.8 | 11.8 | | | | 11.8 | | | 20.3 | | 20.3 | |
| Total Split (s) | 22.0 | 22.0 | | | | 22.0 | | | 58.0 | | 58.0 | |
| Total Split (%) | 27.5% | 27.5% | | | | 27.5% | | | 72.5% | | 72.5% | |
| Maximum Green (s) | 17.2 | 17.2 | | | | 17.2 | | | 51.7 | | 51.7 | |
| Yellow Time (s) | 3.0 | 3.0 | | | | 3.0 | | | 5.2 | | 5.2 | |
| All-Red Time (s) | 1.8 | 1.8 | | | | 1.8 | | | 1.1 | | 1.1 | |
| Lost Time Adjust (s) | | 0.2 | | | | 0.2 | | | -1.3 | | -1.3 | |
| Total Lost Time (s) | | 5.0 | | | | 5.0 | | | 5.0 | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 2.0 | 2.0 | | | | 2.0 | | | 6.0 | | 6.0 | |
| Minimum Gap (s) | 2.0 | 2.0 | | | | 2.0 | | | 3.4 | | 3.4 | |
| Time Before Reduce (s) | 0.0 | 0.0 | | | | 0.0 | | | 15.0 | | 15.0 | |
| Time To Reduce (s) | 0.0 | 0.0 | | | | 0.0 | | | 30.0 | | 30.0 | |
| Recall Mode | None | None | | | | None | | | C-Max | | C-Max | |
| Act Effct Green (s) | 14.1 | | | | | 14.1 | | | 55.9 | | 55.9 | |
| Actuated g/C Ratio | 0.18 | | | | | 0.18 | | | 0.70 | | 0.70 | |
| v/c Ratio | 0.22 | | | | | 0.78 | | | 1.00 | | 0.18 | |
| Control Delay | 28.7 | | | | | 50.2 | | | 31.9 | | 5.2 | |
| Queue Delay | 0.0 | | | | | 0.0 | | | 0.0 | | 0.0 | |
| Total Delay | 28.7 | | | | | 50.2 | | | 31.9 | | 5.2 | |
| LOS | C | | | | | D | | | C | | A | |
| Approach Delay | 28.7 | | | | 50.2 | | | 29.9 | | | | |
| Approach LOS | C | | | | D | | | C | | | | |
| Queue Length 50th (ft) | 32 | | | | | 105 | | | ~603 | | 31 | |

Lanes, Volumes, Timings
5: US 17 & SR 1400 (Market Street)

Background (2023) PM
10/08/2019

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|-----|-----|-----|------|------|-----|------|------|-----|-----|-----|
| Queue Length 95th (ft) | 66 | | | | | #178 | | #855 | 60 | | | |
| Internal Link Dist (ft) | 71 | | | | 2098 | | | 91 | | | 724 | |
| Turn Bay Length (ft) | | | | | | | | | 125 | | | |
| Base Capacity (vph) | 395 | | | | | 342 | | 2471 | 1105 | | | |
| Starvation Cap Reductn | 0 | | | | | 0 | | 0 | 0 | | | |
| Spillback Cap Reductn | 0 | | | | | 0 | | 0 | 0 | | | |
| Storage Cap Reductn | 0 | | | | | 0 | | 0 | 0 | | | |
| Reduced v/c Ratio | 0.19 | | | | | 0.65 | | 1.00 | 0.18 | | | |

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 21 (26%), Referenced to phase 2:NBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.00

Intersection Signal Delay: 31.4

Intersection LOS: C

Intersection Capacity Utilization 128.0%

ICU Level of Service H

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 5: US 17 & SR 1400 (Market Street)



Lanes, Volumes, Timings
5: US 17 & SR 1400 (Market Street)

Combined (2023) AM

10/07/2019

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|------|------|------|-------|------|-------|-------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 91 | 0 | 0 | 0 | 446 | 0 | 1332 | 152 | 0 | 0 | 0 |
| Future Volume (vph) | 0 | 91 | 0 | 0 | 0 | 446 | 0 | 1332 | 152 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 125 | 0 | 0 | |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 0 | | 1 | 0 | | 0 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | 0.865 | | | 0.850 | | | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 1863 | 0 | 0 | 0 | 1611 | 0 | 3539 | 1583 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 1863 | 0 | 0 | 0 | 1611 | 0 | 3539 | 1583 | 0 | 0 | 0 |
| Right Turn on Red | No | | No | | | No | | No | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 45 | | | | 35 | | | 55 | | | 55 |
| Link Distance (ft) | | 151 | | | | 2178 | | | 171 | | | 804 |
| Travel Time (s) | | 2.3 | | | | 42.4 | | | 2.1 | | | 10.0 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 0 | 101 | 0 | 0 | 0 | 496 | 0 | 1480 | 169 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 101 | 0 | 0 | 0 | 496 | 0 | 1480 | 169 | 0 | 0 | 0 |
| Turn Type | | NA | | | | Perm | | | NA | Perm | | |
| Protected Phases | 7 | 7 | | | | | | | 2 | | | |
| Permitted Phases | | | | | | 7 | | | 2 | | | |
| Detector Phase | 7 | 7 | | | | 7 | | 2 | 2 | | | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 7.0 | 7.0 | | | | 7.0 | | 14.0 | 14.0 | | | |
| Minimum Split (s) | 11.8 | 11.8 | | | | 11.8 | | 20.3 | 20.3 | | | |
| Total Split (s) | 24.0 | 24.0 | | | | 24.0 | | 36.0 | 36.0 | | | |
| Total Split (%) | 40.0% | 40.0% | | | | 40.0% | | 60.0% | 60.0% | | | |
| Maximum Green (s) | 19.2 | 19.2 | | | | 19.2 | | 29.7 | 29.7 | | | |
| Yellow Time (s) | 3.0 | 3.0 | | | | 3.0 | | 5.2 | 5.2 | | | |
| All-Red Time (s) | 1.8 | 1.8 | | | | 1.8 | | 1.1 | 1.1 | | | |
| Lost Time Adjust (s) | | 0.2 | | | | 0.2 | | -1.3 | -1.3 | | | |
| Total Lost Time (s) | | 5.0 | | | | 5.0 | | 5.0 | 5.0 | | | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 2.0 | 2.0 | | | | 2.0 | | 6.0 | 6.0 | | | |
| Minimum Gap (s) | 2.0 | 2.0 | | | | 2.0 | | 3.4 | 3.4 | | | |
| Time Before Reduce (s) | 0.0 | 0.0 | | | | 0.0 | | 15.0 | 15.0 | | | |
| Time To Reduce (s) | 0.0 | 0.0 | | | | 0.0 | | 30.0 | 30.0 | | | |
| Recall Mode | None | None | | | | None | | C-Max | C-Max | | | |
| Act Effct Green (s) | | 19.0 | | | | 19.0 | | 31.0 | 31.0 | | | |
| Actuated g/C Ratio | | 0.32 | | | | 0.32 | | 0.52 | 0.52 | | | |
| v/c Ratio | | 0.17 | | | | 0.97 | | 0.81 | 0.21 | | | |
| Control Delay | | 15.8 | | | | 57.9 | | 16.6 | 8.7 | | | |
| Queue Delay | | 0.0 | | | | 0.0 | | 0.0 | 0.0 | | | |
| Total Delay | | 15.8 | | | | 57.9 | | 16.6 | 8.7 | | | |

Lanes, Volumes, Timings
5: US 17 & SR 1400 (Market Street)

Combined (2023) AM

10/07/2019

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|------|-----|-----|------|------|------|------|------|-----|-----|-----|
| LOS | | B | | | | E | | B | A | | | |
| Approach Delay | | 15.8 | | | 57.9 | | | | 15.8 | | | |
| Approach LOS | | B | | | | E | | | B | | | |
| Queue Length 50th (ft) | | 26 | | | | | 174 | | 214 | 30 | | |
| Queue Length 95th (ft) | | 56 | | | | | #348 | | 300 | 60 | | |
| Internal Link Dist (ft) | | 71 | | | 2098 | | | | 91 | | | 724 |
| Turn Bay Length (ft) | | | | | | | | | | | | 125 |
| Base Capacity (vph) | | 589 | | | | 510 | | 1828 | 817 | | | |
| Starvation Cap Reductn | | 0 | | | | 0 | | 0 | 0 | | | |
| Spillback Cap Reductn | | 0 | | | | 0 | | 0 | 0 | | | |
| Storage Cap Reductn | | 0 | | | | 0 | | 0 | 0 | | | |
| Reduced v/c Ratio | | 0.17 | | | | 0.97 | | 0.81 | 0.21 | | | |

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 28 (47%), Referenced to phase 2:NBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.97

Intersection Signal Delay: 25.1

Intersection LOS: C

Intersection Capacity Utilization 133.0%

ICU Level of Service H

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 5: US 17 & SR 1400 (Market Street)



Lanes, Volumes, Timings
5: US 17 & SR 1400 (Market Street)

Combined (2023) PM

10/08/2019

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|------|------|------|-------|------|-------|-------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 97 | 0 | 0 | 0 | 244 | 0 | 2218 | 228 | 0 | 0 | 0 |
| Future Volume (vph) | 0 | 97 | 0 | 0 | 0 | 244 | 0 | 2218 | 228 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 125 | 0 | 0 | |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 0 | | 1 | 0 | | 0 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | 0.865 | | | 0.850 | | | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 1863 | 0 | 0 | 0 | 1611 | 0 | 3539 | 1583 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 1863 | 0 | 0 | 0 | 1611 | 0 | 3539 | 1583 | 0 | 0 | 0 |
| Right Turn on Red | No | | No | | | No | | No | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 45 | | | | 35 | | | 55 | | | 55 |
| Link Distance (ft) | | 151 | | | | 2178 | | | 171 | | | 804 |
| Travel Time (s) | | 2.3 | | | | 42.4 | | | 2.1 | | | 10.0 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 0 | 108 | 0 | 0 | 0 | 271 | 0 | 2464 | 253 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 108 | 0 | 0 | 0 | 271 | 0 | 2464 | 253 | 0 | 0 | 0 |
| Turn Type | | NA | | | | Perm | | | NA | Perm | | |
| Protected Phases | 7 | 7 | | | | | | | 2 | | | |
| Permitted Phases | | | | | | 7 | | | 2 | | | |
| Detector Phase | 7 | 7 | | | | 7 | | 2 | 2 | | | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 7.0 | 7.0 | | | | 7.0 | | 14.0 | 14.0 | | | |
| Minimum Split (s) | 11.8 | 11.8 | | | | 11.8 | | 20.3 | 20.3 | | | |
| Total Split (s) | 22.0 | 22.0 | | | | 22.0 | | 58.0 | 58.0 | | | |
| Total Split (%) | 27.5% | 27.5% | | | | 27.5% | | 72.5% | 72.5% | | | |
| Maximum Green (s) | 17.2 | 17.2 | | | | 17.2 | | 51.7 | 51.7 | | | |
| Yellow Time (s) | 3.0 | 3.0 | | | | 3.0 | | 5.2 | 5.2 | | | |
| All-Red Time (s) | 1.8 | 1.8 | | | | 1.8 | | 1.1 | 1.1 | | | |
| Lost Time Adjust (s) | | 0.2 | | | | 0.2 | | -1.3 | -1.3 | | | |
| Total Lost Time (s) | | 5.0 | | | | 5.0 | | 5.0 | 5.0 | | | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 2.0 | 2.0 | | | | 2.0 | | 6.0 | 6.0 | | | |
| Minimum Gap (s) | 2.0 | 2.0 | | | | 2.0 | | 3.4 | 3.4 | | | |
| Time Before Reduce (s) | 0.0 | 0.0 | | | | 0.0 | | 15.0 | 15.0 | | | |
| Time To Reduce (s) | 0.0 | 0.0 | | | | 0.0 | | 30.0 | 30.0 | | | |
| Recall Mode | None | None | | | | None | | C-Max | C-Max | | | |
| Act Effct Green (s) | 15.6 | | | | | 15.6 | | 54.4 | 54.4 | | | |
| Actuated g/C Ratio | 0.20 | | | | | 0.20 | | 0.68 | 0.68 | | | |
| v/c Ratio | 0.30 | | | | | 0.86 | | 1.02 | 0.24 | | | |
| Control Delay | 29.3 | | | | | 57.8 | | 40.2 | 5.9 | | | |
| Queue Delay | 0.0 | | | | | 0.0 | | 0.0 | 0.0 | | | |
| Total Delay | 29.3 | | | | | 57.8 | | 40.2 | 5.9 | | | |

Lanes, Volumes, Timings
5: US 17 & SR 1400 (Market Street)

Combined (2023) PM

10/08/2019

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|------|-----|-----|------|------|-----|------|------|-----|-----|-----|
| LOS | | C | | | | E | | D | A | | | |
| Approach Delay | | 29.3 | | | 57.8 | | | 37.0 | | | | |
| Approach LOS | | C | | | E | | | D | | | | |
| Queue Length 50th (ft) | | 45 | | | | 129 | | ~717 | 44 | | | |
| Queue Length 95th (ft) | | 89 | | | | #250 | | #855 | 75 | | | |
| Internal Link Dist (ft) | | 71 | | | 2098 | | | 91 | | | 724 | |
| Turn Bay Length (ft) | | | | | | | | | 125 | | | |
| Base Capacity (vph) | | 395 | | | | 342 | | 2405 | 1075 | | | |
| Starvation Cap Reductn | | 0 | | | | 0 | | 0 | 0 | | | |
| Spillback Cap Reductn | | 0 | | | | 0 | | 0 | 0 | | | |
| Storage Cap Reductn | | 0 | | | | 0 | | 0 | 0 | | | |
| Reduced v/c Ratio | | 0.27 | | | | 0.79 | | 1.02 | 0.24 | | | |

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 21 (26%), Referenced to phase 2:NBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.02

Intersection Signal Delay: 38.5

Intersection LOS: D

Intersection Capacity Utilization 131.4%

ICU Level of Service H

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 5: US 17 & SR 1400 (Market Street)



Lanes, Volumes, Timings
5: US 17 & SR 1400 (Market Street)

Background (2023) AM - Field Conditions

10/08/2019

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|------|------|------|-------|------|------|-------|------|------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 81 | 0 | 0 | 0 | 369 | 0 | 1332 | 138 | 0 | 0 | 0 |
| Future Volume (vph) | 0 | 81 | 0 | 0 | 0 | 369 | 0 | 1332 | 138 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 125 | 0 | 0 | |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 0 | | 1 | 0 | | 0 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | 0.865 | | | 0.850 | | | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 1863 | 0 | 0 | 0 | 1611 | 0 | 3539 | 1583 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 1863 | 0 | 0 | 0 | 1611 | 0 | 3539 | 1583 | 0 | 0 | 0 |
| Right Turn on Red | Yes | | Yes | | | Yes | | | Yes | | | Yes |
| | | | | | | 60 | | | 146 | | | |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 45 | | | | 35 | | | 55 | | | 55 |
| Link Distance (ft) | | 151 | | | | 2178 | | | 171 | | | 804 |
| Travel Time (s) | | 2.3 | | | | 42.4 | | | 2.1 | | | 10.0 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 0 | 90 | 0 | 0 | 0 | 410 | 0 | 1480 | 153 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 90 | 0 | 0 | 0 | 410 | 0 | 1480 | 153 | 0 | 0 | 0 |
| Turn Type | | NA | | | | Perm | | | NA | Perm | | |
| Protected Phases | 7 | 7 | | | | | | | 2 | | | |
| Permitted Phases | | | | | | | | | 7 | | | 2 |
| Detector Phase | 7 | 7 | | | | 7 | | | 2 | | | 2 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 7.0 | 7.0 | | | | 7.0 | | | 14.0 | | | 14.0 |
| Minimum Split (s) | 11.8 | 11.8 | | | | 11.8 | | | 20.3 | | | 20.3 |
| Total Split (s) | 24.0 | 24.0 | | | | 24.0 | | | 36.0 | | | 36.0 |
| Total Split (%) | 40.0% | 40.0% | | | | 40.0% | | | 60.0% | | | 60.0% |
| Maximum Green (s) | 19.2 | 19.2 | | | | 19.2 | | | 29.7 | | | 29.7 |
| Yellow Time (s) | 3.0 | 3.0 | | | | 3.0 | | | 5.2 | | | 5.2 |
| All-Red Time (s) | 1.8 | 1.8 | | | | 1.8 | | | 1.1 | | | 1.1 |
| Lost Time Adjust (s) | | 0.2 | | | | 0.2 | | | -1.3 | | | -1.3 |
| Total Lost Time (s) | | 5.0 | | | | 5.0 | | | 5.0 | | | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 2.0 | 2.0 | | | | 2.0 | | | 6.0 | | | 6.0 |
| Minimum Gap (s) | 2.0 | 2.0 | | | | 2.0 | | | 3.4 | | | 3.4 |
| Time Before Reduce (s) | 0.0 | 0.0 | | | | 0.0 | | | 15.0 | | | 15.0 |
| Time To Reduce (s) | 0.0 | 0.0 | | | | 0.0 | | | 30.0 | | | 30.0 |
| Recall Mode | None | None | | | | None | | | C-Max | | | C-Max |
| Act Effct Green (s) | 16.3 | | | | | 16.3 | | | 33.7 | | | 33.7 |
| Actuated g/C Ratio | 0.27 | | | | | 0.27 | | | 0.56 | | | 0.56 |
| v/c Ratio | 0.18 | | | | | 0.85 | | | 0.74 | | | 0.16 |
| Control Delay | 16.3 | | | | | 35.5 | | | 13.8 | | | 2.3 |
| Queue Delay | 0.0 | | | | | 0.0 | | | 0.0 | | | 0.0 |
| Total Delay | 16.3 | | | | | 35.5 | | | 13.8 | | | 2.3 |

Lanes, Volumes, Timings
5: US 17 & SR 1400 (Market Street)

Background (2023) AM - Field Conditions

10/08/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|------|-----|-----|------|------|-----|------|------|-----|-----|-----|
| LOS | | B | | | D | | B | A | | | | |
| Approach Delay | | 16.3 | | | 35.5 | | | 12.7 | | | | |
| Approach LOS | | B | | | D | | | B | | | | |
| Queue Length 50th (ft) | | 24 | | | | 114 | | 205 | 1 | | | |
| Queue Length 95th (ft) | | 51 | | | | #238 | | 300 | 23 | | | |
| Internal Link Dist (ft) | | 71 | | | 2098 | | | 91 | | | | 724 |
| Turn Bay Length (ft) | | | | | | | | | 125 | | | |
| Base Capacity (vph) | | 589 | | | | 551 | | 1987 | 953 | | | |
| Starvation Cap Reductn | | 0 | | | | 0 | | 0 | 0 | | | |
| Spillback Cap Reductn | | 0 | | | | 0 | | 0 | 0 | | | |
| Storage Cap Reductn | | 0 | | | | 0 | | 0 | 0 | | | |
| Reduced v/c Ratio | | 0.15 | | | | 0.74 | | 0.74 | 0.16 | | | |

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 4 (7%), Referenced to phase 2:NBT, Start of Green

Natural Cycle: 45

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 17.2

Intersection LOS: B

Intersection Capacity Utilization 126.9%

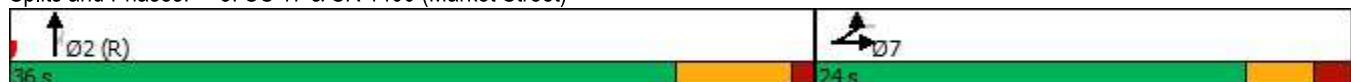
ICU Level of Service H

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 5: US 17 & SR 1400 (Market Street)



Lanes, Volumes, Timings
5: US 17 & SR 1400 (Market Street)

Background (2023) PM - Field Conditions

10/08/2019

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|------|------|------|-------|------|------|-------|------|------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 67 | 0 | 0 | 0 | 200 | 0 | 2218 | 183 | 0 | 0 | 0 |
| Future Volume (vph) | 0 | 67 | 0 | 0 | 0 | 200 | 0 | 2218 | 183 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 125 | 0 | 0 | |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 0 | | 1 | 0 | | 0 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | 0.865 | | | 0.850 | | | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 1863 | 0 | 0 | 0 | 1611 | 0 | 3539 | 1583 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 1863 | 0 | 0 | 0 | 1611 | 0 | 3539 | 1583 | 0 | 0 | 0 |
| Right Turn on Red | Yes | | Yes | | | Yes | | Yes | Yes | | | Yes |
| Satd. Flow (RTOR) | | | | | | 45 | | | 125 | | | |
| Link Speed (mph) | | 45 | | | | 35 | | | 55 | | | 55 |
| Link Distance (ft) | | 151 | | | | 2178 | | | 171 | | | 804 |
| Travel Time (s) | | 2.3 | | | | 42.4 | | | 2.1 | | | 10.0 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 0 | 74 | 0 | 0 | 0 | 222 | 0 | 2464 | 203 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 74 | 0 | 0 | 0 | 222 | 0 | 2464 | 203 | 0 | 0 | 0 |
| Turn Type | | NA | | | | Perm | | | NA | Perm | | |
| Protected Phases | 7 | 7 | | | | | | | 2 | | | |
| Permitted Phases | | | | | | | | | 7 | | | 2 |
| Detector Phase | 7 | 7 | | | | 7 | | | 2 | | | 2 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 7.0 | 7.0 | | | | 7.0 | | | 14.0 | | | 14.0 |
| Minimum Split (s) | 11.8 | 11.8 | | | | 11.8 | | | 20.3 | | | 20.3 |
| Total Split (s) | 22.0 | 22.0 | | | | 22.0 | | | 58.0 | | | 58.0 |
| Total Split (%) | 27.5% | 27.5% | | | | 27.5% | | | 72.5% | | | 72.5% |
| Maximum Green (s) | 17.2 | 17.2 | | | | 17.2 | | | 51.7 | | | 51.7 |
| Yellow Time (s) | 3.0 | 3.0 | | | | 3.0 | | | 5.2 | | | 5.2 |
| All-Red Time (s) | 1.8 | 1.8 | | | | 1.8 | | | 1.1 | | | 1.1 |
| Lost Time Adjust (s) | | 0.2 | | | | 0.2 | | | -1.3 | | | -1.3 |
| Total Lost Time (s) | | 5.0 | | | | 5.0 | | | 5.0 | | | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 2.0 | 2.0 | | | | 2.0 | | | 6.0 | | | 6.0 |
| Minimum Gap (s) | 2.0 | 2.0 | | | | 2.0 | | | 3.4 | | | 3.4 |
| Time Before Reduce (s) | 0.0 | 0.0 | | | | 0.0 | | | 15.0 | | | 15.0 |
| Time To Reduce (s) | 0.0 | 0.0 | | | | 0.0 | | | 30.0 | | | 30.0 |
| Recall Mode | None | None | | | | None | | | C-Max | | | C-Max |
| Act Effct Green (s) | 12.6 | | | | | 12.6 | | | 57.4 | | | 57.4 |
| Actuated g/C Ratio | 0.16 | | | | | 0.16 | | | 0.72 | | | 0.72 |
| v/c Ratio | 0.25 | | | | | 0.76 | | | 0.97 | | | 0.17 |
| Control Delay | 30.0 | | | | | 42.0 | | | 25.4 | | | 2.3 |
| Queue Delay | 0.0 | | | | | 0.0 | | | 0.0 | | | 0.0 |
| Total Delay | 30.0 | | | | | 42.0 | | | 25.4 | | | 2.3 |

Lanes, Volumes, Timings
5: US 17 & SR 1400 (Market Street)

Background (2023) PM - Field Conditions

10/08/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|------|-----|-----|------|------|-----|------|------|-----|-----|-----|
| LOS | | C | | | D | | | C | A | | | |
| Approach Delay | | 30.0 | | | 42.0 | | | 23.6 | | | | |
| Approach LOS | | C | | | D | | | C | | | | |
| Queue Length 50th (ft) | | 33 | | | | 85 | | 508 | 10 | | | |
| Queue Length 95th (ft) | | 66 | | | | 150 | | #855 | 33 | | | |
| Internal Link Dist (ft) | | 71 | | | 2098 | | | 91 | | | 724 | |
| Turn Bay Length (ft) | | | | | | | | | 125 | | | |
| Base Capacity (vph) | | 395 | | | | 377 | | 2538 | 1170 | | | |
| Starvation Cap Reductn | | 0 | | | | 0 | | 0 | 0 | | | |
| Spillback Cap Reductn | | 0 | | | | 0 | | 0 | 0 | | | |
| Storage Cap Reductn | | 0 | | | | 0 | | 0 | 0 | | | |
| Reduced v/c Ratio | | 0.19 | | | | 0.59 | | 0.97 | 0.17 | | | |

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 21 (26%), Referenced to phase 2:NBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.97

Intersection Signal Delay: 25.1

Intersection LOS: C

Intersection Capacity Utilization 128.0%

ICU Level of Service H

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 5: US 17 & SR 1400 (Market Street)



Lanes, Volumes, Timings
5: US 17 & SR 1400 (Market Street)

Combined (2023) AM - Field Conditions

10/08/2019

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|------|------|------|-------|------|------|-------|------|------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 91 | 0 | 0 | 0 | 446 | 0 | 1332 | 152 | 0 | 0 | 0 |
| Future Volume (vph) | 0 | 91 | 0 | 0 | 0 | 446 | 0 | 1332 | 152 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 125 | 0 | 0 | |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 0 | | 1 | 0 | | 0 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | 0.865 | | | 0.850 | | | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 1863 | 0 | 0 | 0 | 1611 | 0 | 3539 | 1583 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 1863 | 0 | 0 | 0 | 1611 | 0 | 3539 | 1583 | 0 | 0 | 0 |
| Right Turn on Red | Yes | | Yes | | | Yes | | Yes | Yes | | | Yes |
| Satd. Flow (RTOR) | | | | | | 60 | | | 162 | | | |
| Link Speed (mph) | | 45 | | | | 35 | | | 55 | | | 55 |
| Link Distance (ft) | | 151 | | | | 2178 | | | 171 | | | 804 |
| Travel Time (s) | | 2.3 | | | | 42.4 | | | 2.1 | | | 10.0 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 0 | 101 | 0 | 0 | 0 | 496 | 0 | 1480 | 169 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 101 | 0 | 0 | 0 | 496 | 0 | 1480 | 169 | 0 | 0 | 0 |
| Turn Type | | NA | | | | Perm | | | NA | Perm | | |
| Protected Phases | 7 | 7 | | | | | | | 2 | | | |
| Permitted Phases | | | | | | | | | 7 | | | 2 |
| Detector Phase | 7 | 7 | | | | 7 | | | 2 | | | 2 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 7.0 | 7.0 | | | | 7.0 | | | 14.0 | | | 14.0 |
| Minimum Split (s) | 11.8 | 11.8 | | | | 11.8 | | | 20.3 | | | 20.3 |
| Total Split (s) | 24.0 | 24.0 | | | | 24.0 | | | 36.0 | | | 36.0 |
| Total Split (%) | 40.0% | 40.0% | | | | 40.0% | | | 60.0% | | | 60.0% |
| Maximum Green (s) | 19.2 | 19.2 | | | | 19.2 | | | 29.7 | | | 29.7 |
| Yellow Time (s) | 3.0 | 3.0 | | | | 3.0 | | | 5.2 | | | 5.2 |
| All-Red Time (s) | 1.8 | 1.8 | | | | 1.8 | | | 1.1 | | | 1.1 |
| Lost Time Adjust (s) | | 0.2 | | | | 0.2 | | | -1.3 | | | -1.3 |
| Total Lost Time (s) | | 5.0 | | | | 5.0 | | | 5.0 | | | 5.0 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 2.0 | 2.0 | | | | 2.0 | | | 6.0 | | | 6.0 |
| Minimum Gap (s) | 2.0 | 2.0 | | | | 2.0 | | | 3.4 | | | 3.4 |
| Time Before Reduce (s) | 0.0 | 0.0 | | | | 0.0 | | | 15.0 | | | 15.0 |
| Time To Reduce (s) | 0.0 | 0.0 | | | | 0.0 | | | 30.0 | | | 30.0 |
| Recall Mode | None | None | | | | None | | | C-Max | | | C-Max |
| Act Effct Green (s) | | 18.2 | | | | 18.2 | | | 31.8 | | | 31.8 |
| Actuated g/C Ratio | | 0.30 | | | | 0.30 | | | 0.53 | | | 0.53 |
| v/c Ratio | | 0.18 | | | | 0.93 | | | 0.79 | | | 0.18 |
| Control Delay | | 15.9 | | | | 46.3 | | | 15.8 | | | 2.3 |
| Queue Delay | | 0.0 | | | | 0.0 | | | 0.0 | | | 0.0 |
| Total Delay | | 15.9 | | | | 46.3 | | | 15.8 | | | 2.3 |

Lanes, Volumes, Timings
5: US 17 & SR 1400 (Market Street)

Combined (2023) AM - Field Conditions

10/08/2019

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|------|-----|-----|------|------|-----|------|------|-----|-----|-----|
| LOS | | B | | | D | | B | A | | | | |
| Approach Delay | | 15.9 | | | 46.3 | | | 14.4 | | | | |
| Approach LOS | | B | | | D | | | B | | | | |
| Queue Length 50th (ft) | | 26 | | | | 150 | | 214 | 1 | | | |
| Queue Length 95th (ft) | | 56 | | | | #319 | | 300 | 25 | | | |
| Internal Link Dist (ft) | | 71 | | | 2098 | | | 91 | | | | 724 |
| Turn Bay Length (ft) | | | | | | | | | 125 | | | |
| Base Capacity (vph) | | 589 | | | | 551 | | 1873 | 914 | | | |
| Starvation Cap Reductn | | 0 | | | | 0 | | 0 | 0 | | | |
| Spillback Cap Reductn | | 0 | | | | 0 | | 0 | 0 | | | |
| Storage Cap Reductn | | 0 | | | | 0 | | 0 | 0 | | | |
| Reduced v/c Ratio | | 0.17 | | | | 0.90 | | 0.79 | 0.18 | | | |

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 4 (7%), Referenced to phase 2:NBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 21.5

Intersection LOS: C

Intersection Capacity Utilization 133.0%

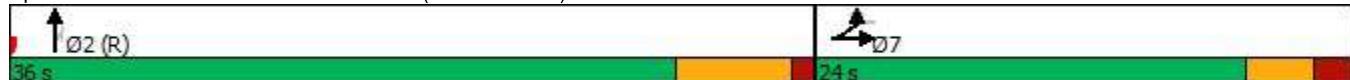
ICU Level of Service H

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 5: US 17 & SR 1400 (Market Street)



Lanes, Volumes, Timings
5: US 17 & SR 1400 (Market Street)

Combined (2023) PM - Field Conditions

10/08/2019

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|------|------|------|-------|------|-------|-------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 97 | 0 | 0 | 0 | 244 | 0 | 2218 | 228 | 0 | 0 | 0 |
| Future Volume (vph) | 0 | 97 | 0 | 0 | 0 | 244 | 0 | 2218 | 228 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 125 | 0 | 0 | |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 0 | | 1 | 0 | | 0 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | | | | 0.865 | | | 0.850 | | | |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 1863 | 0 | 0 | 0 | 1611 | 0 | 3539 | 1583 | 0 | 0 | 0 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 1863 | 0 | 0 | 0 | 1611 | 0 | 3539 | 1583 | 0 | 0 | 0 |
| Right Turn on Red | Yes | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | | | | 45 | | | 156 | | | |
| Link Speed (mph) | | 45 | | | | 35 | | | 55 | | | 55 |
| Link Distance (ft) | | 151 | | | | 2178 | | | 171 | | | 804 |
| Travel Time (s) | | 2.3 | | | | 42.4 | | | 2.1 | | | 10.0 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 0 | 108 | 0 | 0 | 0 | 271 | 0 | 2464 | 253 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 108 | 0 | 0 | 0 | 271 | 0 | 2464 | 253 | 0 | 0 | 0 |
| Turn Type | | NA | | | | Perm | | | NA | Perm | | |
| Protected Phases | 7 | 7 | | | | | | | 2 | | | |
| Permitted Phases | | | | | | | 7 | | | 2 | | |
| Detector Phase | 7 | 7 | | | | | 7 | | 2 | 2 | | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 7.0 | 7.0 | | | | 7.0 | | 14.0 | 14.0 | | | |
| Minimum Split (s) | 11.8 | 11.8 | | | | 11.8 | | 20.3 | 20.3 | | | |
| Total Split (s) | 22.0 | 22.0 | | | | 22.0 | | 58.0 | 58.0 | | | |
| Total Split (%) | 27.5% | 27.5% | | | | 27.5% | | 72.5% | 72.5% | | | |
| Maximum Green (s) | 17.2 | 17.2 | | | | 17.2 | | 51.7 | 51.7 | | | |
| Yellow Time (s) | 3.0 | 3.0 | | | | 3.0 | | 5.2 | 5.2 | | | |
| All-Red Time (s) | 1.8 | 1.8 | | | | 1.8 | | 1.1 | 1.1 | | | |
| Lost Time Adjust (s) | | 0.2 | | | | 0.2 | | -1.3 | -1.3 | | | |
| Total Lost Time (s) | | 5.0 | | | | 5.0 | | 5.0 | 5.0 | | | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 2.0 | 2.0 | | | | 2.0 | | 6.0 | 6.0 | | | |
| Minimum Gap (s) | 2.0 | 2.0 | | | | 2.0 | | 3.4 | 3.4 | | | |
| Time Before Reduce (s) | 0.0 | 0.0 | | | | 0.0 | | 15.0 | 15.0 | | | |
| Time To Reduce (s) | 0.0 | 0.0 | | | | 0.0 | | 30.0 | 30.0 | | | |
| Recall Mode | None | None | | | | None | | C-Max | C-Max | | | |
| Act Effct Green (s) | | 14.4 | | | | 14.4 | | 55.6 | 55.6 | | | |
| Actuated g/C Ratio | | 0.18 | | | | 0.18 | | 0.70 | 0.70 | | | |
| v/c Ratio | | 0.32 | | | | 0.83 | | 1.00 | 0.22 | | | |
| Control Delay | | 30.2 | | | | 47.7 | | 33.3 | 2.5 | | | |
| Queue Delay | | 0.0 | | | | 0.0 | | 0.0 | 0.0 | | | |
| Total Delay | | 30.2 | | | | 47.7 | | 33.3 | 2.5 | | | |

Lanes, Volumes, Timings
5: US 17 & SR 1400 (Market Street)

Combined (2023) PM - Field Conditions

10/08/2019

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|------|-----|-----|------|------|-----|------|------|-----|-----|-----|
| LOS | | C | | | D | | | C | A | | | |
| Approach Delay | | 30.2 | | | 47.7 | | | 30.5 | | | | |
| Approach LOS | | C | | | D | | | C | | | | |
| Queue Length 50th (ft) | | 46 | | | | 107 | | ~705 | 14 | | | |
| Queue Length 95th (ft) | | 89 | | | | #213 | | #855 | 39 | | | |
| Internal Link Dist (ft) | | 71 | | | 2098 | | | 91 | | | 724 | |
| Turn Bay Length (ft) | | | | | | | | | 125 | | | |
| Base Capacity (vph) | | 395 | | | | 377 | | 2459 | 1147 | | | |
| Starvation Cap Reductn | | 0 | | | | 0 | | 0 | 0 | | | |
| Spillback Cap Reductn | | 0 | | | | 0 | | 0 | 0 | | | |
| Storage Cap Reductn | | 0 | | | | 0 | | 0 | 0 | | | |
| Reduced v/c Ratio | | 0.27 | | | | 0.72 | | 1.00 | 0.22 | | | |

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 21 (26%), Referenced to phase 2:NBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.00

Intersection Signal Delay: 32.0

Intersection LOS: C

Intersection Capacity Utilization 131.4%

ICU Level of Service H

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 5: US 17 & SR 1400 (Market Street)



APPENDIX J

CAPACITY ANALYSIS CALCULATIONS

US 17 / U-TURN LOCATION

&

STEPHEN'S CHURCH ROAD

Lanes, Volumes, Timings

Existing (2019) AM

6: US 17 & Stephen's Church Road /NB U-Turn

10/07/2019

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|-------|-------|-------|------|------|------|------|------|------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 0 | 65 | 0 | 38 | 0 | 0 | 0 | 0 | 0 | 2058 | 8 |
| Future Volume (vph) | 0 | 0 | 65 | 0 | 38 | 0 | 0 | 0 | 0 | 0 | 2058 | 8 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 75 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | 0 | | 0 | 0 | | 1 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frt | | | | 0.865 | | | | | | | | 0.850 |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 1611 | 0 | 1863 | 0 | 0 | 0 | 0 | 0 | 3539 | 1583 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 1611 | 0 | 1863 | 0 | 0 | 0 | 0 | 0 | 3539 | 1583 |
| Right Turn on Red | | | No | No | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 35 | | | 45 | | | 55 | | | 55 | |
| Link Distance (ft) | | 260 | | | 150 | | | 1169 | | | 188 | |
| Travel Time (s) | | 5.1 | | | 2.3 | | | 14.5 | | | 2.3 | |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 0 | 0 | 72 | 0 | 42 | 0 | 0 | 0 | 0 | 0 | 2287 | 9 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 72 | 0 | 42 | 0 | 0 | 0 | 0 | 0 | 2287 | 9 |
| Turn Type | | | Perm | | NA | | | | | | NA | Perm |
| Protected Phases | | | | 3 | 3 | | | | | | 6 | |
| Permitted Phases | | | 3 | | | | | | | | | 6 |
| Detector Phase | | 3 | 3 | 3 | | | | | | | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | 7.0 | 7.0 | 7.0 | | | | | | | 14.0 | 14.0 |
| Minimum Split (s) | | 12.0 | 12.0 | 12.0 | | | | | | | 20.2 | 20.2 |
| Total Split (s) | | 20.0 | 20.0 | 20.0 | | | | | | | 60.0 | 60.0 |
| Total Split (%) | | 25.0% | 25.0% | 25.0% | | | | | | | 75.0% | 75.0% |
| Maximum Green (s) | | 15.0 | 15.0 | 15.0 | | | | | | | 53.8 | 53.8 |
| Yellow Time (s) | | 3.0 | 3.0 | 3.0 | | | | | | | 5.2 | 5.2 |
| All-Red Time (s) | | 2.0 | 2.0 | 2.0 | | | | | | | 1.0 | 1.0 |
| Lost Time Adjust (s) | | 0.0 | | 0.0 | | | | | | | -1.2 | -2.0 |
| Total Lost Time (s) | | 5.0 | | 5.0 | | | | | | | 5.0 | 4.2 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | 3.0 | 3.0 | 3.0 | | | | | | | 6.0 | 6.0 |
| Minimum Gap (s) | | 3.0 | 3.0 | 3.0 | | | | | | | 3.4 | 3.4 |
| Time Before Reduce (s) | | 0.0 | 0.0 | 0.0 | | | | | | | 15.0 | 15.0 |
| Time To Reduce (s) | | 0.0 | 0.0 | 0.0 | | | | | | | 30.0 | 30.0 |
| Recall Mode | None | None | None | | | | | | | | C-Max | C-Max |
| Act Effct Green (s) | | 9.2 | | 9.2 | | | | | | | 64.2 | 64.8 |
| Actuated g/C Ratio | | 0.12 | | 0.12 | | | | | | | 0.80 | 0.81 |
| v/c Ratio | | 0.39 | | 0.20 | | | | | | | 0.81 | 0.01 |
| Control Delay | | 38.3 | | 33.2 | | | | | | | 12.1 | 1.6 |
| Queue Delay | | 0.0 | | 0.0 | | | | | | | 0.0 | 0.0 |
| Total Delay | | 38.3 | | 33.2 | | | | | | | 12.1 | 1.6 |

Lanes, Volumes, Timings

Existing (2019) AM

6: US 17 & Stephen's Church Road /NB U-Turn

10/07/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|------|-----|------|------|-----|-----|------|-----|------|------|-----|
| LOS | | | D | | C | | | | | B | A | |
| Approach Delay | | 38.3 | | | 33.2 | | | | | 12.0 | | |
| Approach LOS | | | D | | C | | | | | B | | |
| Queue Length 50th (ft) | | | | 34 | 19 | | | | | 601 | 1 | |
| Queue Length 95th (ft) | | | | 70 | 47 | | | | | 705 | m1 | |
| Internal Link Dist (ft) | | 180 | | | 70 | | | 1089 | | 108 | | |
| Turn Bay Length (ft) | | | | | | | | | | | | 75 |
| Base Capacity (vph) | | | | 302 | 349 | | | | | 2838 | 1282 | |
| Starvation Cap Reductn | | | | 0 | 0 | | | | | 0 | 0 | |
| Spillback Cap Reductn | | | | 0 | 0 | | | | | 0 | 0 | |
| Storage Cap Reductn | | | | 0 | 0 | | | | | 0 | 0 | |
| Reduced v/c Ratio | | | | 0.24 | 0.12 | | | | | 0.81 | 0.01 | |

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 73 (91%), Referenced to phase 6:SBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 13.2

Intersection LOS: B

Intersection Capacity Utilization 71.1%

ICU Level of Service C

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: US 17 & Stephen's Church Road /NB U-Turn



Lanes, Volumes, Timings

Existing (2019) PM

6: US 17 & Stephen's Church Road /NB U-Turn

10/08/2019

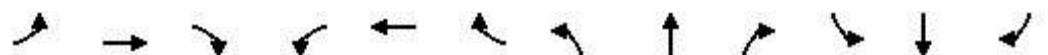
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|-------|-------|-------|------|------|------|------|------|------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 0 | 43 | 0 | 79 | 0 | 0 | 0 | 0 | 0 | 1610 | 5 |
| Future Volume (vph) | 0 | 0 | 43 | 0 | 79 | 0 | 0 | 0 | 0 | 0 | 1610 | 5 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 75 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | 0 | | 0 | 0 | | 1 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frt | | | | 0.865 | | | | | | | | 0.850 |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 1611 | 0 | 1863 | 0 | 0 | 0 | 0 | 0 | 3539 | 1583 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 1611 | 0 | 1863 | 0 | 0 | 0 | 0 | 0 | 3539 | 1583 |
| Right Turn on Red | | | No | No | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 35 | | | 45 | | | 55 | | | 55 | |
| Link Distance (ft) | | 260 | | | 150 | | | 1169 | | | 188 | |
| Travel Time (s) | | 5.1 | | | 2.3 | | | 14.5 | | | 2.3 | |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 0 | 0 | 48 | 0 | 88 | 0 | 0 | 0 | 0 | 0 | 1789 | 6 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 48 | 0 | 88 | 0 | 0 | 0 | 0 | 0 | 1789 | 6 |
| Turn Type | | | Perm | | NA | | | | | | NA | Perm |
| Protected Phases | | | | 3 | 3 | | | | | | 6 | |
| Permitted Phases | | | 3 | | | | | | | | | 6 |
| Detector Phase | | 3 | 3 | 3 | | | | | | | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | 7.0 | 7.0 | 7.0 | | | | | | | 14.0 | 14.0 |
| Minimum Split (s) | | 12.0 | 12.0 | 12.0 | | | | | | | 20.2 | 20.2 |
| Total Split (s) | | 25.0 | 25.0 | 25.0 | | | | | | | 45.0 | 45.0 |
| Total Split (%) | | 35.7% | 35.7% | 35.7% | | | | | | | 64.3% | 64.3% |
| Maximum Green (s) | | 20.0 | 20.0 | 20.0 | | | | | | | 38.8 | 38.8 |
| Yellow Time (s) | | 3.0 | 3.0 | 3.0 | | | | | | | 5.2 | 5.2 |
| All-Red Time (s) | | 2.0 | 2.0 | 2.0 | | | | | | | 1.0 | 1.0 |
| Lost Time Adjust (s) | | 0.0 | | 0.0 | | | | | | | -1.2 | -2.0 |
| Total Lost Time (s) | | 5.0 | | 5.0 | | | | | | | 5.0 | 4.2 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | 3.0 | 3.0 | 3.0 | | | | | | | 6.0 | 6.0 |
| Minimum Gap (s) | | 3.0 | 3.0 | 3.0 | | | | | | | 3.4 | 3.4 |
| Time Before Reduce (s) | | 0.0 | 0.0 | 0.0 | | | | | | | 15.0 | 15.0 |
| Time To Reduce (s) | | 0.0 | 0.0 | 0.0 | | | | | | | 30.0 | 30.0 |
| Recall Mode | None | None | None | | | | | | | | C-Max | C-Max |
| Act Effct Green (s) | | 8.9 | | 8.9 | | | | | | | 54.5 | 55.1 |
| Actuated g/C Ratio | | 0.13 | | 0.13 | | | | | | | 0.78 | 0.79 |
| v/c Ratio | | 0.23 | | 0.37 | | | | | | | 0.65 | 0.00 |
| Control Delay | | 29.5 | | 31.9 | | | | | | | 10.6 | 2.8 |
| Queue Delay | | 0.0 | | 0.0 | | | | | | | 0.0 | 0.0 |
| Total Delay | | 29.5 | | 31.9 | | | | | | | 10.6 | 2.8 |

Lanes, Volumes, Timings

Existing (2019) PM

6: US 17 & Stephen's Church Road /NB U-Turn

10/08/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|------|-----|------|------|-----|-----|------|-----|-----|------|------|
| LOS | | | C | | C | | | | | | B | A |
| Approach Delay | | 29.5 | | | 31.9 | | | | | | 10.6 | |
| Approach LOS | | | C | | C | | | | | | B | |
| Queue Length 50th (ft) | | | | 19 | 36 | | | | | | 347 | 1 |
| Queue Length 95th (ft) | | | | 46 | 72 | | | | | | 490 | m1 |
| Internal Link Dist (ft) | | 180 | | | 70 | | | 1089 | | | 108 | |
| Turn Bay Length (ft) | | | | | | | | | | | | 75 |
| Base Capacity (vph) | | | | 460 | 532 | | | | | | 2753 | 1246 |
| Starvation Cap Reductn | | | | 0 | 0 | | | | | | 0 | 0 |
| Spillback Cap Reductn | | | | 0 | 0 | | | | | | 0 | 0 |
| Storage Cap Reductn | | | | 0 | 0 | | | | | | 0 | 0 |
| Reduced v/c Ratio | | | | 0.10 | 0.17 | | | | | | 0.65 | 0.00 |

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 49 (70%), Referenced to phase 6:SBT, Start of Green

Natural Cycle: 50

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 12.0

Intersection LOS: B

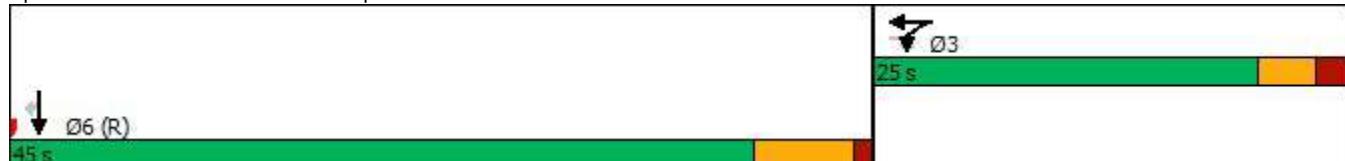
Intersection Capacity Utilization 62.5%

ICU Level of Service B

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: US 17 & Stephen's Church Road /NB U-Turn



Lanes, Volumes, Timings

6: US 17 & Stephen's Church Road /NB U-Turn

Background (2023) AM

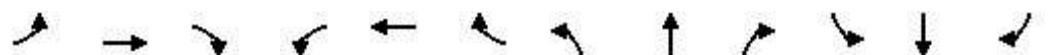
10/07/2019

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|-------|-------|-------|------|------|------|------|------|------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 0 | 68 | 0 | 40 | 0 | 0 | 0 | 0 | 0 | 2142 | 8 |
| Future Volume (vph) | 0 | 0 | 68 | 0 | 40 | 0 | 0 | 0 | 0 | 0 | 2142 | 8 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 75 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | 0 | | 0 | 0 | | 1 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frt | | | | 0.865 | | | | | | | | 0.850 |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 1611 | 0 | 1863 | 0 | 0 | 0 | 0 | 0 | 3539 | 1583 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 1611 | 0 | 1863 | 0 | 0 | 0 | 0 | 0 | 3539 | 1583 |
| Right Turn on Red | | | No | No | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 35 | | | 45 | | | 55 | | | 55 | |
| Link Distance (ft) | | 260 | | | 150 | | | 1169 | | | 188 | |
| Travel Time (s) | | 5.1 | | | 2.3 | | | 14.5 | | | 2.3 | |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 0 | 0 | 76 | 0 | 44 | 0 | 0 | 0 | 0 | 0 | 2380 | 9 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 76 | 0 | 44 | 0 | 0 | 0 | 0 | 0 | 2380 | 9 |
| Turn Type | | | Perm | | NA | | | | | | NA | Perm |
| Protected Phases | | | | 3 | 3 | | | | | | 6 | |
| Permitted Phases | | | 3 | | | | | | | | | 6 |
| Detector Phase | | | 3 | 3 | 3 | | | | | | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | 7.0 | 7.0 | 7.0 | | | | | | | 14.0 | 14.0 |
| Minimum Split (s) | | 12.0 | 12.0 | 12.0 | | | | | | | 20.2 | 20.2 |
| Total Split (s) | | 20.0 | 20.0 | 20.0 | | | | | | | 60.0 | 60.0 |
| Total Split (%) | | 25.0% | 25.0% | 25.0% | | | | | | | 75.0% | 75.0% |
| Maximum Green (s) | | 15.0 | 15.0 | 15.0 | | | | | | | 53.8 | 53.8 |
| Yellow Time (s) | | 3.0 | 3.0 | 3.0 | | | | | | | 5.2 | 5.2 |
| All-Red Time (s) | | 2.0 | 2.0 | 2.0 | | | | | | | 1.0 | 1.0 |
| Lost Time Adjust (s) | | 0.0 | | 0.0 | | | | | | | -1.2 | -2.0 |
| Total Lost Time (s) | | 5.0 | | 5.0 | | | | | | | 5.0 | 4.2 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | 3.0 | 3.0 | 3.0 | | | | | | | 6.0 | 6.0 |
| Minimum Gap (s) | | 3.0 | 3.0 | 3.0 | | | | | | | 3.4 | 3.4 |
| Time Before Reduce (s) | | 0.0 | 0.0 | 0.0 | | | | | | | 15.0 | 15.0 |
| Time To Reduce (s) | | 0.0 | 0.0 | 0.0 | | | | | | | 30.0 | 30.0 |
| Recall Mode | None | None | None | | | | | | | | C-Max | C-Max |
| Act Effct Green (s) | | 9.4 | | 9.4 | | | | | | | 64.0 | 64.6 |
| Actuated g/C Ratio | | 0.12 | | 0.12 | | | | | | | 0.80 | 0.81 |
| v/c Ratio | | 0.40 | | 0.20 | | | | | | | 0.84 | 0.01 |
| Control Delay | | 38.4 | | 33.1 | | | | | | | 12.9 | 1.6 |
| Queue Delay | | 0.0 | | 0.0 | | | | | | | 0.0 | 0.0 |
| Total Delay | | 38.4 | | 33.1 | | | | | | | 12.9 | 1.6 |

Lanes, Volumes, Timings
6: US 17 & Stephen's Church Road /NB U-Turn

Background (2023) AM

10/07/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|------|-----|------|------|-----|-----|------|-----|-----|------|------|
| LOS | | | D | | C | | | | | | B | A |
| Approach Delay | | 38.4 | | | 33.1 | | | | | | 12.9 | |
| Approach LOS | | | D | | C | | | | | | B | |
| Queue Length 50th (ft) | | | | 36 | 20 | | | | | | 626 | 1 |
| Queue Length 95th (ft) | | | | 73 | 47 | | | | | | m703 | m1 |
| Internal Link Dist (ft) | | 180 | | | 70 | | | 1089 | | | 108 | |
| Turn Bay Length (ft) | | | | | | | | | | | | 75 |
| Base Capacity (vph) | | | | 302 | 349 | | | | | | 2831 | 1279 |
| Starvation Cap Reductn | | | | 0 | 0 | | | | | | 0 | 0 |
| Spillback Cap Reductn | | | | 0 | 0 | | | | | | 0 | 0 |
| Storage Cap Reductn | | | | 0 | 0 | | | | | | 0 | 0 |
| Reduced v/c Ratio | | | | 0.25 | 0.13 | | | | | | 0.84 | 0.01 |

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 73 (91%), Referenced to phase 6:SBT, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 14.0

Intersection LOS: B

Intersection Capacity Utilization 113.5%

ICU Level of Service H

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: US 17 & Stephen's Church Road /NB U-Turn



Lanes, Volumes, Timings

6: US 17 & Stephen's Church Road /NB U-Turn

Background (2023) PM

10/08/2019

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|-------|-------|-------|------|------|------|------|------|------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 0 | 45 | 0 | 82 | 0 | 0 | 0 | 0 | 0 | 1681 | 5 |
| Future Volume (vph) | 0 | 0 | 45 | 0 | 82 | 0 | 0 | 0 | 0 | 0 | 1681 | 5 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 75 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | 0 | | 0 | 0 | | 1 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frt | | | | 0.865 | | | | | | | | 0.850 |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 1611 | 0 | 1863 | 0 | 0 | 0 | 0 | 0 | 3539 | 1583 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 1611 | 0 | 1863 | 0 | 0 | 0 | 0 | 0 | 3539 | 1583 |
| Right Turn on Red | | | No | No | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 35 | | | 45 | | | 55 | | | 55 | |
| Link Distance (ft) | | 260 | | | 150 | | | 1169 | | | 188 | |
| Travel Time (s) | | 5.1 | | | 2.3 | | | 14.5 | | | 2.3 | |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 0 | 0 | 50 | 0 | 91 | 0 | 0 | 0 | 0 | 0 | 1868 | 6 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 50 | 0 | 91 | 0 | 0 | 0 | 0 | 0 | 1868 | 6 |
| Turn Type | | | Perm | | NA | | | | | | NA | Perm |
| Protected Phases | | | | 3 | 3 | | | | | | 6 | |
| Permitted Phases | | | 3 | | | | | | | | | 6 |
| Detector Phase | | 3 | 3 | 3 | | | | | | | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | 7.0 | 7.0 | 7.0 | | | | | | | 14.0 | 14.0 |
| Minimum Split (s) | | 12.0 | 12.0 | 12.0 | | | | | | | 20.2 | 20.2 |
| Total Split (s) | | 25.0 | 25.0 | 25.0 | | | | | | | 45.0 | 45.0 |
| Total Split (%) | | 35.7% | 35.7% | 35.7% | | | | | | | 64.3% | 64.3% |
| Maximum Green (s) | | 20.0 | 20.0 | 20.0 | | | | | | | 38.8 | 38.8 |
| Yellow Time (s) | | 3.0 | 3.0 | 3.0 | | | | | | | 5.2 | 5.2 |
| All-Red Time (s) | | 2.0 | 2.0 | 2.0 | | | | | | | 1.0 | 1.0 |
| Lost Time Adjust (s) | | 0.0 | | 0.0 | | | | | | | -1.2 | -2.0 |
| Total Lost Time (s) | | 5.0 | | 5.0 | | | | | | | 5.0 | 4.2 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | 3.0 | 3.0 | 3.0 | | | | | | | 6.0 | 6.0 |
| Minimum Gap (s) | | 3.0 | 3.0 | 3.0 | | | | | | | 3.4 | 3.4 |
| Time Before Reduce (s) | | 0.0 | 0.0 | 0.0 | | | | | | | 15.0 | 15.0 |
| Time To Reduce (s) | | 0.0 | 0.0 | 0.0 | | | | | | | 30.0 | 30.0 |
| Recall Mode | None | None | None | | | | | | | | C-Max | C-Max |
| Act Effct Green (s) | | 9.1 | | 9.1 | | | | | | | 54.3 | 55.0 |
| Actuated g/C Ratio | | 0.13 | | 0.13 | | | | | | | 0.78 | 0.79 |
| v/c Ratio | | 0.24 | | 0.38 | | | | | | | 0.68 | 0.00 |
| Control Delay | | 29.4 | | 31.9 | | | | | | | 10.9 | 2.6 |
| Queue Delay | | 0.0 | | 0.0 | | | | | | | 0.0 | 0.0 |
| Total Delay | | 29.4 | | 31.9 | | | | | | | 10.9 | 2.6 |

Lanes, Volumes, Timings
6: US 17 & Stephen's Church Road /NB U-Turn

Background (2023) PM

10/08/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|------|-----|------|------|------|-----|------|-----|-----|------|------|
| LOS | | | C | | C | | | | | | B | A |
| Approach Delay | | 29.4 | | | 31.9 | | | | | | 10.9 | |
| Approach LOS | | | C | | C | | | | | | B | |
| Queue Length 50th (ft) | | | | 20 | | 37 | | | | | 379 | 1 |
| Queue Length 95th (ft) | | | | 47 | | 74 | | | | | 510 | m1 |
| Internal Link Dist (ft) | | 180 | | | 70 | | | 1089 | | | 108 | |
| Turn Bay Length (ft) | | | | | | | | | | | | 75 |
| Base Capacity (vph) | | | | 460 | | 532 | | | | | 2747 | 1243 |
| Starvation Cap Reductn | | | | 0 | | 0 | | | | | 0 | 0 |
| Spillback Cap Reductn | | | | 0 | | 0 | | | | | 0 | 0 |
| Storage Cap Reductn | | | | 0 | | 0 | | | | | 0 | 0 |
| Reduced v/c Ratio | | | | 0.11 | | 0.17 | | | | | 0.68 | 0.00 |

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 49 (70%), Referenced to phase 6:SBT, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 12.3

Intersection LOS: B

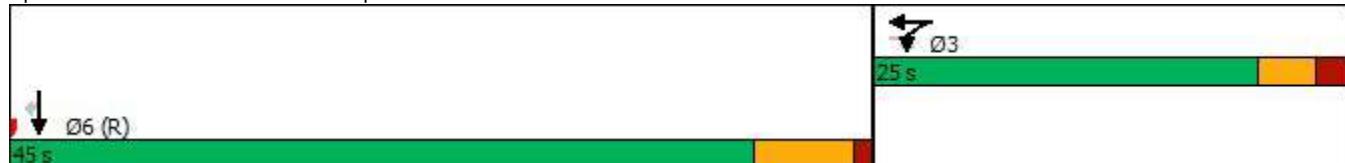
Intersection Capacity Utilization 127.8%

ICU Level of Service H

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: US 17 & Stephen's Church Road /NB U-Turn



Lanes, Volumes, Timings

Combined (2023) AM

6: US 17 & Stephen's Church Road /NB U-Turn

10/07/2019

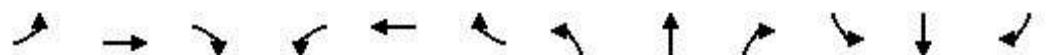
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|-------|-------|-------|------|------|------|------|------|------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 0 | 68 | 0 | 40 | 0 | 0 | 0 | 0 | 0 | 2188 | 8 |
| Future Volume (vph) | 0 | 0 | 68 | 0 | 40 | 0 | 0 | 0 | 0 | 0 | 2188 | 8 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 75 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | 0 | | 0 | 0 | | 1 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frt | | | | 0.865 | | | | | | | | 0.850 |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 1611 | 0 | 1863 | 0 | 0 | 0 | 0 | 0 | 3539 | 1583 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 1611 | 0 | 1863 | 0 | 0 | 0 | 0 | 0 | 3539 | 1583 |
| Right Turn on Red | | | No | No | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 35 | | | 45 | | | 55 | | | 55 | |
| Link Distance (ft) | | 260 | | | 150 | | | 1169 | | | 188 | |
| Travel Time (s) | | 5.1 | | | 2.3 | | | 14.5 | | | 2.3 | |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 0 | 0 | 76 | 0 | 44 | 0 | 0 | 0 | 0 | 0 | 2431 | 9 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 76 | 0 | 44 | 0 | 0 | 0 | 0 | 0 | 2431 | 9 |
| Turn Type | | | Perm | | NA | | | | | | NA | Perm |
| Protected Phases | | | | 3 | 3 | | | | | | 6 | |
| Permitted Phases | | | 3 | | | | | | | | | 6 |
| Detector Phase | | | 3 | 3 | 3 | | | | | | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | | 7.0 | 7.0 | 7.0 | | | | | | | 14.0 | 14.0 |
| Minimum Split (s) | | 12.0 | 12.0 | 12.0 | | | | | | | 20.2 | 20.2 |
| Total Split (s) | | 20.0 | 20.0 | 20.0 | | | | | | | 60.0 | 60.0 |
| Total Split (%) | | 25.0% | 25.0% | 25.0% | | | | | | | 75.0% | 75.0% |
| Maximum Green (s) | | 15.0 | 15.0 | 15.0 | | | | | | | 53.8 | 53.8 |
| Yellow Time (s) | | 3.0 | 3.0 | 3.0 | | | | | | | 5.2 | 5.2 |
| All-Red Time (s) | | 2.0 | 2.0 | 2.0 | | | | | | | 1.0 | 1.0 |
| Lost Time Adjust (s) | | 0.0 | | 0.0 | | | | | | | -1.2 | -2.0 |
| Total Lost Time (s) | | 5.0 | | 5.0 | | | | | | | 5.0 | 4.2 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | 3.0 | 3.0 | 3.0 | | | | | | | 6.0 | 6.0 |
| Minimum Gap (s) | | 3.0 | 3.0 | 3.0 | | | | | | | 3.4 | 3.4 |
| Time Before Reduce (s) | | 0.0 | 0.0 | 0.0 | | | | | | | 15.0 | 15.0 |
| Time To Reduce (s) | | 0.0 | 0.0 | 0.0 | | | | | | | 30.0 | 30.0 |
| Recall Mode | None | None | None | | | | | | | | C-Max | C-Max |
| Act Effct Green (s) | | 9.4 | | 9.4 | | | | | | | 64.0 | 64.6 |
| Actuated g/C Ratio | | 0.12 | | 0.12 | | | | | | | 0.80 | 0.81 |
| v/c Ratio | | 0.40 | | 0.20 | | | | | | | 0.86 | 0.01 |
| Control Delay | | 38.4 | | 33.1 | | | | | | | 12.2 | 1.5 |
| Queue Delay | | 0.0 | | 0.0 | | | | | | | 0.0 | 0.0 |
| Total Delay | | 38.4 | | 33.1 | | | | | | | 12.2 | 1.5 |

Lanes, Volumes, Timings

Combined (2023) AM

6: US 17 & Stephen's Church Road /NB U-Turn

10/07/2019



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|------|-----|------|------|-----|-----|------|-----|------|------|-----|
| LOS | | | D | | C | | | | | B | A | |
| Approach Delay | | 38.4 | | | 33.1 | | | | | 12.2 | | |
| Approach LOS | | | D | | C | | | | | B | | |
| Queue Length 50th (ft) | | | | 36 | 20 | | | | | 629 | 1 | |
| Queue Length 95th (ft) | | | | 73 | 47 | | | | | m689 | m1 | |
| Internal Link Dist (ft) | | 180 | | | 70 | | | 1089 | | 108 | | |
| Turn Bay Length (ft) | | | | | | | | | | | 75 | |
| Base Capacity (vph) | | | | 302 | 349 | | | | | 2831 | 1279 | |
| Starvation Cap Reductn | | | | 0 | 0 | | | | | 0 | 0 | |
| Spillback Cap Reductn | | | | 0 | 0 | | | | | 0 | 0 | |
| Storage Cap Reductn | | | | 0 | 0 | | | | | 0 | 0 | |
| Reduced v/c Ratio | | | | 0.25 | 0.13 | | | | | 0.86 | 0.01 | |

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 73 (91%), Referenced to phase 6:SBT, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 13.3

Intersection LOS: B

Intersection Capacity Utilization 115.2%

ICU Level of Service H

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: US 17 & Stephen's Church Road /NB U-Turn



Lanes, Volumes, Timings
6: US 17 & Stephen's Church Road /NB U-Turn

Combined (2023) PM

10/08/2019

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|-------|-------|-------|------|------|------|------|------|------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 0 | 45 | 0 | 82 | 0 | 0 | 0 | 0 | 0 | 1702 | 5 |
| Future Volume (vph) | 0 | 0 | 45 | 0 | 82 | 0 | 0 | 0 | 0 | 0 | 1702 | 5 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 75 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | 0 | | 0 | 0 | | 1 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frt | | | | 0.865 | | | | | | | | 0.850 |
| Flt Protected | | | | | | | | | | | | |
| Satd. Flow (prot) | 0 | 0 | 1611 | 0 | 1863 | 0 | 0 | 0 | 0 | 0 | 3539 | 1583 |
| Flt Permitted | | | | | | | | | | | | |
| Satd. Flow (perm) | 0 | 0 | 1611 | 0 | 1863 | 0 | 0 | 0 | 0 | 0 | 3539 | 1583 |
| Right Turn on Red | | | No | No | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 35 | | | 45 | | | 55 | | | 55 | |
| Link Distance (ft) | | 260 | | | 150 | | | 1169 | | | 188 | |
| Travel Time (s) | | 5.1 | | | 2.3 | | | 14.5 | | | 2.3 | |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 0 | 0 | 50 | 0 | 91 | 0 | 0 | 0 | 0 | 0 | 1891 | 6 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 0 | 50 | 0 | 91 | 0 | 0 | 0 | 0 | 0 | 1891 | 6 |
| Turn Type | | | Perm | | NA | | | | | | NA | Perm |
| Protected Phases | | | | 3 | 3 | | | | | | 6 | |
| Permitted Phases | | | 3 | | | | | | | | | 6 |
| Detector Phase | | | 3 | 3 | 3 | | | | | | | 6 |
| Switch Phase | | | | | | | | | | | | 6 |
| Minimum Initial (s) | | 7.0 | 7.0 | 7.0 | | | | | | | 14.0 | 14.0 |
| Minimum Split (s) | | 12.0 | 12.0 | 12.0 | | | | | | | 20.2 | 20.2 |
| Total Split (s) | | 25.0 | 25.0 | 25.0 | | | | | | | 45.0 | 45.0 |
| Total Split (%) | | 35.7% | 35.7% | 35.7% | | | | | | | 64.3% | 64.3% |
| Maximum Green (s) | | 20.0 | 20.0 | 20.0 | | | | | | | 38.8 | 38.8 |
| Yellow Time (s) | | 3.0 | 3.0 | 3.0 | | | | | | | 5.2 | 5.2 |
| All-Red Time (s) | | 2.0 | 2.0 | 2.0 | | | | | | | 1.0 | 1.0 |
| Lost Time Adjust (s) | | 0.0 | | 0.0 | | | | | | | -1.2 | -2.0 |
| Total Lost Time (s) | | 5.0 | | 5.0 | | | | | | | 5.0 | 4.2 |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | 3.0 | 3.0 | 3.0 | | | | | | | 6.0 | 6.0 |
| Minimum Gap (s) | | 3.0 | 3.0 | 3.0 | | | | | | | 3.4 | 3.4 |
| Time Before Reduce (s) | | 0.0 | 0.0 | 0.0 | | | | | | | 15.0 | 15.0 |
| Time To Reduce (s) | | 0.0 | 0.0 | 0.0 | | | | | | | 30.0 | 30.0 |
| Recall Mode | None | None | None | | | | | | | | C-Max | C-Max |
| Act Effct Green (s) | | 9.1 | | 9.1 | | | | | | | 54.3 | 55.0 |
| Actuated g/C Ratio | | 0.13 | | 0.13 | | | | | | | 0.78 | 0.79 |
| v/c Ratio | | 0.24 | | 0.38 | | | | | | | 0.69 | 0.00 |
| Control Delay | | 29.4 | | 31.9 | | | | | | | 10.0 | 2.2 |
| Queue Delay | | 0.0 | | 0.0 | | | | | | | 0.0 | 0.0 |
| Total Delay | | 29.4 | | 31.9 | | | | | | | 10.0 | 2.2 |
| LOS | | C | | C | | | | | | | A | A |
| Approach Delay | 29.4 | | | 31.9 | | | | | | | 9.9 | |
| Approach LOS | C | | | C | | | | | | | A | |
| Queue Length 50th (ft) | | 20 | | 37 | | | | | | | 378 | 1 |

Lanes, Volumes, Timings
6: US 17 & Stephen's Church Road /NB U-Turn

Combined (2023) PM

10/08/2019

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-----|-----|------|-----|-----|------|-----|-----|------|-----|------|------|
| Queue Length 95th (ft) | | | | 47 | | 74 | | | | | 510 | m1 |
| Internal Link Dist (ft) | | 180 | | | | 70 | | | 1089 | | | 108 |
| Turn Bay Length (ft) | | | | | | | | | | | | 75 |
| Base Capacity (vph) | | | 460 | | | 532 | | | | | 2747 | 1243 |
| Starvation Cap Reductn | | | 0 | | | 0 | | | | | 0 | 0 |
| Spillback Cap Reductn | | | 0 | | | 0 | | | | | 0 | 0 |
| Storage Cap Reductn | | | 0 | | | 0 | | | | | 0 | 0 |
| Reduced v/c Ratio | | | 0.11 | | | 0.17 | | | | | 0.69 | 0.00 |

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 49 (70%), Referenced to phase 6:SBT, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 11.4

Intersection LOS: B

Intersection Capacity Utilization 129.7%

ICU Level of Service H

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: US 17 & Stephen's Church Road /NB U-Turn



APPENDIX K

CAPACITY ANALYSIS CALCULATIONS

SHIRAZ WAY

&

SITE DRIVE 1

Intersection

Int Delay, s/veh 2.5

| Movement | SEL | SER | NEL | NET | SWT | SWR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | W | | A | B | | |
| Traffic Vol, veh/h | 4 | 77 | 24 | 82 | 208 | 4 |
| Future Vol, veh/h | 4 | 77 | 24 | 82 | 208 | 4 |
| 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 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 4 | 86 | 27 | 91 | 231 | 4 |

| Major/Minor | Minor2 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|---|
| Conflicting Flow All | 378 | 233 | 235 | 0 | - |
| Stage 1 | 233 | - | - | - | - |
| Stage 2 | 145 | - | - | - | - |
| 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 | 624 | 806 | 1332 | - | - |
| Stage 1 | 806 | - | - | - | - |
| Stage 2 | 882 | - | - | - | - |
| Platoon blocked, % | | | | - | - |
| Mov Cap-1 Maneuver | 611 | 806 | 1332 | - | - |
| Mov Cap-2 Maneuver | 611 | - | - | - | - |
| Stage 1 | 789 | - | - | - | - |
| Stage 2 | 882 | - | - | - | - |

| Approach | SE | NE | SW |
|----------------------|------|-----|----|
| HCM Control Delay, s | 10.1 | 1.8 | 0 |
| HCM LOS | B | | |

| Minor Lane/Major Mvmt | NEL | NET | SELn1 | SWT | SWR |
|-----------------------|------|-----|-------|-----|-----|
| Capacity (veh/h) | 1332 | - | 793 | - | - |
| HCM Lane V/C Ratio | 0.02 | - | 0.113 | - | - |
| HCM Control Delay (s) | 7.8 | 0 | 10.1 | - | - |
| HCM Lane LOS | A | A | B | - | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 0.4 | - | - |

Intersection

Int Delay, s/veh 2.8

| Movement | SEL | SER | NEL | NET | SWT | SWR |
|---|------|------|------|------|------|------|
| Lane Configurations  | | | | | | |
| Traffic Vol, veh/h | 4 | 44 | 76 | 138 | 108 | 4 |
| Future Vol, veh/h | 4 | 44 | 76 | 138 | 108 | 4 |
| 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 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 4 | 49 | 84 | 153 | 120 | 4 |

| Major/Minor | Minor2 | Major1 | Major2 | | | |
|----------------------|--------|--------|--------|---|---|---|
| Conflicting Flow All | 443 | 122 | 124 | 0 | - | 0 |
| Stage 1 | 122 | - | - | - | - | - |
| Stage 2 | 321 | - | - | - | - | - |
| 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 | 572 | 929 | 1463 | - | - | - |
| Stage 1 | 903 | - | - | - | - | - |
| Stage 2 | 735 | - | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 536 | 929 | 1463 | - | - | - |
| Mov Cap-2 Maneuver | 536 | - | - | - | - | - |
| Stage 1 | 846 | - | - | - | - | - |
| Stage 2 | 735 | - | - | - | - | - |

| Approach | SE | NE | SW |
|----------------------|-----|-----|----|
| HCM Control Delay, s | 9.4 | 2.7 | 0 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NEL | NET | SELn1 | SWT | SWR |
|-----------------------|-------|-----|-------|-----|-----|
| Capacity (veh/h) | 1463 | - | 876 | - | - |
| HCM Lane V/C Ratio | 0.058 | - | 0.061 | - | - |
| HCM Control Delay (s) | 7.6 | 0 | 9.4 | - | - |
| HCM Lane LOS | A | A | A | - | - |
| HCM 95th %tile Q(veh) | 0.2 | - | 0.2 | - | - |

APPENDIX L

CAPACITY ANALYSIS CALCULATIONS

MARKET STREET (SR 2845)

&

SITE DRIVE 2

Intersection

Int Delay, s/veh 5.2

| Movement | NWL | NWR | NET | NER | SWL | SWT |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | W | B | A | | | |
| Traffic Vol, veh/h | 4 | 77 | 43 | 4 | 24 | 19 |
| Future Vol, veh/h | 4 | 77 | 43 | 4 | 24 | 19 |
| 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 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 4 | 86 | 48 | 4 | 27 | 21 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 125 | 50 | 0 | 0 | 52 |
| Stage 1 | 50 | - | - | - | - |
| Stage 2 | 75 | - | - | - | - |
| 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 | 870 | 1018 | - | - | 1554 |
| Stage 1 | 972 | - | - | - | - |
| Stage 2 | 948 | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 854 | 1018 | - | - | 1554 |
| Mov Cap-2 Maneuver | 854 | - | - | - | - |
| Stage 1 | 972 | - | - | - | - |
| Stage 2 | 931 | - | - | - | - |

| Approach | NW | NE | SW |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 8.9 | 0 | 4.1 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NET | NERNWLn1 | SWL | SWT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 1008 | 1554 |
| HCM Lane V/C Ratio | - | - | 0.089 | 0.017 |
| HCM Control Delay (s) | - | - | 8.9 | 7.4 |
| HCM Lane LOS | - | - | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.3 | 0.1 |

Intersection

Int Delay, s/veh 4.9

| Movement | NWL | NWR | NET | NER | SWL | SWT |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | W | B | A | | | |
| Traffic Vol, veh/h | 4 | 44 | 30 | 4 | 75 | 44 |
| Future Vol, veh/h | 4 | 44 | 30 | 4 | 75 | 44 |
| 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 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 4 | 49 | 33 | 4 | 83 | 49 |

| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 250 | 35 | 0 | 0 | 37 |
| Stage 1 | 35 | - | - | - | - |
| Stage 2 | 215 | - | - | - | - |
| 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 | 739 | 1038 | - | - | 1574 |
| Stage 1 | 987 | - | - | - | - |
| Stage 2 | 821 | - | - | - | - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 699 | 1038 | - | - | 1574 |
| Mov Cap-2 Maneuver | 699 | - | - | - | - |
| Stage 1 | 987 | - | - | - | - |
| Stage 2 | 777 | - | - | - | - |

| Approach | NW | NE | SW |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 8.8 | 0 | 4.7 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NET | NERNWLn1 | SWL | SWT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 998 | 1574 |
| HCM Lane V/C Ratio | - | - | 0.053 | 0.053 |
| HCM Control Delay (s) | - | - | 8.8 | 7.4 |
| HCM Lane LOS | - | - | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0.2 |

APPENDIX M

SIMTRAFFIC QUEUING REPORT

Queuing and Blocking Report

Base

10/07/2019

Intersection: 1: SR 1402 (Edgewater Club Road)/SR 2932 (Shiraz Way) & SR 1491 (Porter's Neck Road)

| Movement | EB | WB | NB | SB |
|-----------------------|------|------|------|------|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 102 | 73 | 116 | 98 |
| Average Queue (ft) | 20 | 25 | 43 | 36 |
| 95th Queue (ft) | 68 | 58 | 90 | 72 |
| Link Distance (ft) | 1374 | 1060 | 1174 | 1161 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 2: US 17 Bus. (Market Street)/US 17 (Market Street) & SR 1491 (Porter's Neck Road)

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB | NB |
|-----------------------|-----|------|------|-----|-----|-----|-----|-----|-----|-----|------|------|
| | L | L | T | R | L | L | T | R | L | L | T | T |
| Directions Served | L | L | T | R | L | L | T | R | L | L | 398 | 385 |
| Maximum Queue (ft) | 95 | 146 | 139 | 121 | 320 | 328 | 322 | 200 | 116 | 175 | 241 | 229 |
| Average Queue (ft) | 17 | 69 | 55 | 44 | 206 | 215 | 154 | 132 | 37 | 78 | 362 | 357 |
| 95th Queue (ft) | 61 | 127 | 112 | 94 | 297 | 306 | 301 | 213 | 89 | 143 | 1851 | 1851 |
| Link Distance (ft) | | 1012 | 1012 | | | 499 | 499 | | | | | |
| Upstream Blk Time (%) | | | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | | | |
| Storage Bay Dist (ft) | 200 | | | | 250 | 350 | | | 100 | 325 | 325 | |
| Storage Blk Time (%) | | 0 | | | | 0 | 0 | 14 | 26 | 0 | 0 | 2 |
| Queuing Penalty (veh) | | 0 | | | | 0 | 1 | 30 | 18 | 0 | 0 | 3 |

Intersection: 2: US 17 Bus. (Market Street)/US 17 (Market Street) & SR 1491 (Porter's Neck Road)

| Movement | NB | SB | SB | SB | SB | SB |
|-----------------------|------|-----|-----|------|------|-----|
| | R | L | L | T | T | R |
| Directions Served | R | L | L | T | T | R |
| Maximum Queue (ft) | 177 | 192 | 276 | 428 | 404 | 90 |
| Average Queue (ft) | 78 | 103 | 40 | 257 | 228 | 26 |
| 95th Queue (ft) | 146 | 171 | 149 | 385 | 361 | 67 |
| Link Distance (ft) | 1851 | | | 1085 | 1085 | |
| Upstream Blk Time (%) | | | | | | |
| Queuing Penalty (veh) | | | | | | |
| Storage Bay Dist (ft) | | 325 | 325 | | | 425 |
| Storage Blk Time (%) | | 0 | 3 | 0 | | |
| Queuing Penalty (veh) | | 0 | 4 | 0 | | |

Queuing and Blocking Report

Base

10/07/2019

Intersection: 3: SR 1400 (Futch Creek Road) /SR 1400 (Market Street) & SR 2845 (Market Street)

| Movement | EB | NB |
|-----------------------|------|------|
| Directions Served | LR | LT |
| Maximum Queue (ft) | 50 | 3 |
| Average Queue (ft) | 24 | 0 |
| 95th Queue (ft) | 48 | 3 |
| Link Distance (ft) | 1955 | 1006 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 4: US 17 & NB U-Turn

| Movement | WB | SB | SB |
|-----------------------|-----|------|------|
| Directions Served | L | T | T |
| Maximum Queue (ft) | 156 | 447 | 427 |
| Average Queue (ft) | 120 | 189 | 166 |
| 95th Queue (ft) | 169 | 372 | 346 |
| Link Distance (ft) | 94 | 1182 | 1182 |
| Upstream Blk Time (%) | 22 | | |
| Queuing Penalty (veh) | 48 | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

Intersection: 5: US 17 & SR 1400 (Market Street)

| Movement | EB | WB | NB | NB | NB |
|-----------------------|----|------|----|-----|----|
| Directions Served | LT | R | T | T | R |
| Maximum Queue (ft) | 98 | 291 | 84 | 86 | 68 |
| Average Queue (ft) | 42 | 165 | 64 | 62 | 29 |
| 95th Queue (ft) | 82 | 263 | 73 | 78 | 66 |
| Link Distance (ft) | 89 | 2072 | | | |
| Upstream Blk Time (%) | 1 | | 0 | 0 | 0 |
| Queuing Penalty (veh) | 1 | | 0 | 0 | 0 |
| Storage Bay Dist (ft) | | | | 125 | |
| Storage Blk Time (%) | | | | 0 | 0 |
| Queuing Penalty (veh) | | | | 0 | 0 |

Queuing and Blocking Report

Base

10/07/2019

Intersection: 6: US 17 & Stephen's Church Road /NB U-Turn

| Movement | EB | WB | SB | SB | SB |
|-----------------------|-----|----|-----|-----|----|
| Directions Served | R | LT | T | T | R |
| Maximum Queue (ft) | 113 | 86 | 177 | 163 | 10 |
| Average Queue (ft) | 43 | 25 | 69 | 59 | 0 |
| 95th Queue (ft) | 90 | 63 | 153 | 138 | 5 |
| Link Distance (ft) | 208 | 83 | 126 | 126 | |
| Upstream Blk Time (%) | 0 | 1 | 1 | 1 | |
| Queuing Penalty (veh) | 0 | 0 | 11 | 7 | |
| Storage Bay Dist (ft) | | | | | 75 |
| Storage Blk Time (%) | | | | 2 | |
| Queuing Penalty (veh) | | | | 0 | |

Intersection: 14: US 17 & NB U-Turn

| Movement | NB |
|-----------------------|-----|
| Directions Served | L |
| Maximum Queue (ft) | 93 |
| Average Queue (ft) | 13 |
| 95th Queue (ft) | 58 |
| Link Distance (ft) | |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | 305 |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

Intersection: 15: US 17 & SR 1400 (Market Street)

| Movement | SB | SB |
|-----------------------|-----|-----|
| Directions Served | T | T |
| Maximum Queue (ft) | 32 | 28 |
| Average Queue (ft) | 2 | 1 |
| 95th Queue (ft) | 22 | 21 |
| Link Distance (ft) | 761 | 761 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Queuing and Blocking Report

Base

10/07/2019

Intersection: 16: US 17 & NB U-Turn

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)

Network Summary

Network wide Queuing Penalty: 124

Queuing and Blocking Report

Existing (2019) PM

10/07/2019

Intersection: 1: SR 1402 (Edgewater Club Road)/SR 2932 (Shiraz Way) & SR 1491 (Porter's Neck Road)

| Movement | EB | WB | NB | SB |
|-----------------------|------|------|------|------|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 68 | 82 | 84 | 58 |
| Average Queue (ft) | 8 | 30 | 30 | 17 |
| 95th Queue (ft) | 39 | 68 | 65 | 47 |
| Link Distance (ft) | 1374 | 1060 | 1174 | 1161 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 2: US 17 Bus. (Market Street)/US 17 (Market Street) & SR 1491 (Porter's Neck Road)

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB | NB |
|-----------------------|-----|------|------|-----|-----|-----|-----|-----|-----|-----|------|------|
| | L | L | T | R | L | L | T | R | L | L | T | T |
| Directions Served | L | L | T | R | L | L | T | R | L | L | T | T |
| Maximum Queue (ft) | 171 | 201 | 193 | 169 | 300 | 308 | 323 | 200 | 159 | 353 | 456 | 452 |
| Average Queue (ft) | 64 | 119 | 95 | 72 | 194 | 196 | 159 | 130 | 65 | 118 | 287 | 283 |
| 95th Queue (ft) | 159 | 187 | 175 | 139 | 280 | 281 | 302 | 216 | 137 | 233 | 411 | 414 |
| Link Distance (ft) | | 1012 | 1012 | | | 499 | 499 | | | | 1851 | 1851 |
| Upstream Blk Time (%) | | | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | | | |
| Storage Bay Dist (ft) | 200 | | | 250 | 350 | | | 100 | 325 | 325 | | |
| Storage Blk Time (%) | 0 | 0 | 0 | | 0 | 0 | 18 | 26 | | 0 | 4 | |
| Queuing Penalty (veh) | 0 | 0 | 0 | | 0 | 0 | 34 | 26 | | 0 | 7 | |

Intersection: 2: US 17 Bus. (Market Street)/US 17 (Market Street) & SR 1491 (Porter's Neck Road)

| Movement | NB | SB | SB | SB | SB | SB |
|-----------------------|------|-----|-----|------|------|-----|
| | R | L | L | T | T | R |
| Directions Served | R | L | L | T | T | R |
| Maximum Queue (ft) | 151 | 347 | 409 | 594 | 547 | 132 |
| Average Queue (ft) | 62 | 244 | 197 | 309 | 267 | 31 |
| 95th Queue (ft) | 120 | 378 | 424 | 574 | 516 | 93 |
| Link Distance (ft) | 1851 | | | 1085 | 1085 | |
| Upstream Blk Time (%) | | | | | | |
| Queuing Penalty (veh) | | | | | | |
| Storage Bay Dist (ft) | | 325 | 325 | | | 425 |
| Storage Blk Time (%) | | 18 | 5 | 3 | 0 | |
| Queuing Penalty (veh) | | 97 | 30 | 5 | 0 | |

Queuing and Blocking Report

Existing (2019) PM

10/07/2019

Intersection: 3: SR 1400 (Futch Creek Road) /SR 1400 (Market Street) & SR 2845 (Market Street)

| Movement | EB | NB |
|-----------------------|------|------|
| Directions Served | LR | LT |
| Maximum Queue (ft) | 39 | 3 |
| Average Queue (ft) | 17 | 0 |
| 95th Queue (ft) | 41 | 3 |
| Link Distance (ft) | 1955 | 1006 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 4: US 17 & NB U-Turn

| Movement | WB | SB | SB |
|-----------------------|-----|------|------|
| Directions Served | L | T | T |
| Maximum Queue (ft) | 143 | 173 | 168 |
| Average Queue (ft) | 78 | 88 | 62 |
| 95th Queue (ft) | 128 | 155 | 135 |
| Link Distance (ft) | 94 | 1182 | 1182 |
| Upstream Blk Time (%) | 7 | | |
| Queuing Penalty (veh) | 9 | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

Intersection: 5: US 17 & SR 1400 (Market Street)

| Movement | EB | WB | NB | NB | NB |
|-----------------------|----|------|----|-----|----|
| Directions Served | LT | R | T | T | R |
| Maximum Queue (ft) | 86 | 189 | 83 | 85 | 73 |
| Average Queue (ft) | 36 | 92 | 64 | 63 | 27 |
| 95th Queue (ft) | 73 | 160 | 73 | 73 | 66 |
| Link Distance (ft) | 89 | 2072 | | | |
| Upstream Blk Time (%) | 0 | | 0 | 0 | 0 |
| Queuing Penalty (veh) | 0 | | 0 | 0 | 0 |
| Storage Bay Dist (ft) | | | | 125 | |
| Storage Blk Time (%) | | | | 0 | 0 |
| Queuing Penalty (veh) | | | | 0 | 0 |

Queuing and Blocking Report
Existing (2019) PM

10/07/2019

Intersection: 6: US 17 & Stephen's Church Road /NB U-Turn

| Movement | EB | WB | SB | SB | SB |
|-----------------------|-----|----|-----|-----|----|
| Directions Served | R | LT | T | T | R |
| Maximum Queue (ft) | 61 | 94 | 199 | 202 | 46 |
| Average Queue (ft) | 19 | 30 | 159 | 159 | 3 |
| 95th Queue (ft) | 48 | 71 | 209 | 211 | 27 |
| Link Distance (ft) | 208 | 83 | 126 | 126 | |
| Upstream Blk Time (%) | | 0 | 12 | 12 | 0 |
| Queuing Penalty (veh) | | 0 | 98 | 98 | 0 |
| Storage Bay Dist (ft) | | | | 75 | |
| Storage Blk Time (%) | | | 20 | | |
| Queuing Penalty (veh) | | | 1 | | |

Intersection: 14: US 17 & NB U-Turn

| Movement | NB |
|-----------------------|-----|
| Directions Served | L |
| Maximum Queue (ft) | 12 |
| Average Queue (ft) | 0 |
| 95th Queue (ft) | 6 |
| Link Distance (ft) | |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | 305 |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

Intersection: 15: US 17 & SR 1400 (Market Street)

| Movement | SB | SB |
|-----------------------|-----|-----|
| Directions Served | T | T |
| Maximum Queue (ft) | 145 | 160 |
| Average Queue (ft) | 20 | 22 |
| 95th Queue (ft) | 85 | 90 |
| Link Distance (ft) | 761 | 761 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | 0 | |
| Queuing Penalty (veh) | 0 | |

Intersection: 16: US 17 & NB U-Turn

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)

Network Summary

Network wide Queuing Penalty: 408

Queuing and Blocking Report

Background (2023) AM

10/07/2019

Intersection: 1: SR 1402 (Edgewater Club Road)/SR 2932 (Shiraz Way) & SR 1491 (Porter's Neck Road)

| Movement | EB | WB | NB | SB |
|-----------------------|------|------|------|------|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 152 | 95 | 180 | 111 |
| Average Queue (ft) | 41 | 34 | 65 | 45 |
| 95th Queue (ft) | 112 | 71 | 141 | 86 |
| Link Distance (ft) | 1374 | 1060 | 1174 | 1161 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 2: US 17 Bus. (Market Street)/US 17 (Market Street) & SR 1491 (Porter's Neck Road)

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB | NB |
|-----------------------|-----|------|------|-----|-----|-----|-----|-----|-----|------|------|-----|
| Directions Served | L | L | T | R | L | L | T | R | L | L | T | T |
| Maximum Queue (ft) | 127 | 150 | 135 | 122 | 356 | 370 | 407 | 200 | 136 | 244 | 425 | 409 |
| Average Queue (ft) | 19 | 69 | 54 | 45 | 232 | 242 | 201 | 154 | 39 | 85 | 264 | 256 |
| 95th Queue (ft) | 70 | 128 | 108 | 100 | 326 | 341 | 380 | 234 | 95 | 166 | 380 | 380 |
| Link Distance (ft) | | 1012 | 1012 | | | 499 | 499 | | | 1851 | 1851 | |
| Upstream Blk Time (%) | | | | | | 0 | 0 | | | | | |
| Queuing Penalty (veh) | | | | | | 0 | 0 | | | | | |
| Storage Bay Dist (ft) | 200 | | | 250 | 350 | | | 100 | 325 | 325 | | |
| Storage Blk Time (%) | | | | | 0 | 1 | 15 | 37 | | | 3 | |
| Queuing Penalty (veh) | | | | | 1 | 2 | 35 | 26 | | | 4 | |

Intersection: 2: US 17 Bus. (Market Street)/US 17 (Market Street) & SR 1491 (Porter's Neck Road)

| Movement | NB | SB | SB | SB | SB | SB |
|-----------------------|------|-----|-----|------|------|----|
| Directions Served | R | L | L | T | T | R |
| Maximum Queue (ft) | 200 | 231 | 376 | 490 | 456 | 80 |
| Average Queue (ft) | 99 | 125 | 66 | 287 | 255 | 26 |
| 95th Queue (ft) | 175 | 208 | 224 | 438 | 409 | 65 |
| Link Distance (ft) | 1851 | | | 1085 | 1085 | |
| Upstream Blk Time (%) | | | | | | |
| Queuing Penalty (veh) | | | | | | |
| Storage Bay Dist (ft) | 325 | 325 | | | 425 | |
| Storage Blk Time (%) | 0 | 0 | 6 | 0 | | |
| Queuing Penalty (veh) | 0 | 0 | 10 | 0 | | |

Queuing and Blocking Report

Background (2023) AM

10/07/2019

Intersection: 3: SR 1400 (Futch Creek Road) /SR 1400 (Market Street) & SR 2845 (Market Street)

| Movement | EB |
|-----------------------|------|
| Directions Served | LR |
| Maximum Queue (ft) | 62 |
| Average Queue (ft) | 26 |
| 95th Queue (ft) | 50 |
| Link Distance (ft) | 1955 |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

Intersection: 4: US 17 & NB U-Turn

| Movement | WB | SB | SB |
|-----------------------|-----|------|------|
| Directions Served | L | T | T |
| Maximum Queue (ft) | 157 | 571 | 555 |
| Average Queue (ft) | 120 | 229 | 205 |
| 95th Queue (ft) | 168 | 484 | 459 |
| Link Distance (ft) | 94 | 1182 | 1182 |
| Upstream Blk Time (%) | 23 | | |
| Queuing Penalty (veh) | 53 | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

Intersection: 5: US 17 & SR 1400 (Market Street)

| Movement | EB | WB | NB | NB | NB |
|-----------------------|----|------|-----|-----|-----|
| Directions Served | LT | R | T | T | R |
| Maximum Queue (ft) | 87 | 326 | 164 | 158 | 95 |
| Average Queue (ft) | 38 | 172 | 132 | 97 | 50 |
| 95th Queue (ft) | 74 | 286 | 183 | 160 | 106 |
| Link Distance (ft) | 89 | 2072 | 95 | 95 | |
| Upstream Blk Time (%) | 0 | | 18 | 7 | 0 |
| Queuing Penalty (veh) | 0 | | 133 | 51 | 0 |
| Storage Bay Dist (ft) | | | | 125 | |
| Storage Blk Time (%) | | | | 7 | 0 |
| Queuing Penalty (veh) | | | | 10 | 3 |

Queuing and Blocking Report

Background (2023) AM

10/07/2019

Intersection: 6: US 17 & Stephen's Church Road /NB U-Turn

| Movement | EB | WB | SB | SB | SB |
|-----------------------|-----|----|-----|-----|----|
| Directions Served | R | LT | T | T | R |
| Maximum Queue (ft) | 101 | 70 | 176 | 168 | 22 |
| Average Queue (ft) | 39 | 25 | 63 | 57 | 1 |
| 95th Queue (ft) | 80 | 57 | 142 | 133 | 14 |
| Link Distance (ft) | 208 | 83 | 126 | 126 | |
| Upstream Blk Time (%) | | 0 | 1 | 1 | 0 |
| Queuing Penalty (veh) | | 0 | 11 | 8 | 0 |
| Storage Bay Dist (ft) | | | | | 75 |
| Storage Blk Time (%) | | | | 2 | |
| Queuing Penalty (veh) | | | | 0 | |

Intersection: 14: US 17 & NB U-Turn

| Movement | NB |
|-----------------------|-----|
| Directions Served | L |
| Maximum Queue (ft) | 90 |
| Average Queue (ft) | 13 |
| 95th Queue (ft) | 54 |
| Link Distance (ft) | |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | 305 |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

Intersection: 15: US 17 & SR 1400 (Market Street)

| Movement | SB | SB |
|-----------------------|-----|-----|
| Directions Served | T | T |
| Maximum Queue (ft) | 36 | 36 |
| Average Queue (ft) | 2 | 1 |
| 95th Queue (ft) | 20 | 17 |
| Link Distance (ft) | 761 | 761 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 16: US 17 & NB U-Turn

| Movement | NB | NB |
|-----------------------|------|------|
| Directions Served | T | T |
| Maximum Queue (ft) | 150 | 116 |
| Average Queue (ft) | 36 | 11 |
| 95th Queue (ft) | 119 | 70 |
| Link Distance (ft) | 1100 | 1100 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Network Summary

Network wide Queuing Penalty: 348

Queuing and Blocking Report

Background (2023) PM

10/07/2019

Intersection: 1: SR 1402 (Edgewater Club Road)/SR 2932 (Shiraz Way) & SR 1491 (Porter's Neck Road)

| Movement | EB | B24 | WB | NB | SB |
|-----------------------|------|-----|------|------|------|
| Directions Served | LTR | T | LTR | LTR | LTR |
| Maximum Queue (ft) | 76 | 48 | 99 | 207 | 69 |
| Average Queue (ft) | 12 | 2 | 41 | 72 | 25 |
| 95th Queue (ft) | 49 | 51 | 78 | 149 | 57 |
| Link Distance (ft) | 1374 | 499 | 1060 | 1174 | 1161 |
| Upstream Blk Time (%) | | 0 | | | |
| Queuing Penalty (veh) | | 0 | | | |
| Storage Bay Dist (ft) | | | | | |
| Storage Blk Time (%) | | | | | |
| Queuing Penalty (veh) | | | | | |

Intersection: 2: US 17 Bus. (Market Street)/US 17 (Market Street) & SR 1491 (Porter's Neck Road)

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | B24 | NB | NB | NB |
|-----------------------|-----|------|------|-----|-----|-----|-----|-----|------|-----|-----|------|
| Directions Served | L | L | T | R | L | L | T | R | T | L | L | T |
| Maximum Queue (ft) | 176 | 207 | 199 | 177 | 446 | 552 | 471 | 200 | 288 | 168 | 380 | 496 |
| Average Queue (ft) | 68 | 120 | 92 | 82 | 360 | 400 | 265 | 171 | 34 | 66 | 125 | 311 |
| 95th Queue (ft) | 160 | 187 | 165 | 152 | 498 | 591 | 469 | 237 | 183 | 139 | 263 | 446 |
| Link Distance (ft) | | 1012 | 1012 | | | 499 | 499 | | 2846 | | | 1851 |
| Upstream Blk Time (%) | | | | | | 7 | 1 | | | | | |
| Queuing Penalty (veh) | | | | | | 27 | 5 | | | | | |
| Storage Bay Dist (ft) | 200 | | | 250 | 350 | | | 100 | | 325 | 325 | |
| Storage Blk Time (%) | 0 | 0 | 0 | | 25 | 32 | 17 | 54 | | 0 | 0 | 7 |
| Queuing Penalty (veh) | 0 | 0 | 0 | | 77 | 99 | 43 | 55 | | 0 | 0 | 13 |

Intersection: 2: US 17 Bus. (Market Street)/US 17 (Market Street) & SR 1491 (Porter's Neck Road)

| Movement | NB | NB | SB | SB | SB | SB | SB |
|-----------------------|------|------|-----|-----|------|------|-----|
| Directions Served | T | R | L | L | T | T | R |
| Maximum Queue (ft) | 496 | 175 | 370 | 423 | 983 | 930 | 141 |
| Average Queue (ft) | 301 | 64 | 312 | 316 | 487 | 428 | 32 |
| 95th Queue (ft) | 444 | 126 | 442 | 529 | 967 | 890 | 95 |
| Link Distance (ft) | 1851 | 1851 | | | 1085 | 1085 | |
| Upstream Blk Time (%) | | | | | 2 | 0 | |
| Queuing Penalty (veh) | | | | | 0 | 0 | |
| Storage Bay Dist (ft) | | 325 | 325 | | | 425 | |
| Storage Blk Time (%) | | 53 | 18 | 4 | 0 | | |
| Queuing Penalty (veh) | | 301 | 103 | 9 | 1 | | |

Queuing and Blocking Report

Background (2023) PM

10/07/2019

Intersection: 3: SR 1400 (Futch Creek Road) /SR 1400 (Market Street) & SR 2845 (Market Street)

| Movement | EB | NB |
|-----------------------|------|------|
| Directions Served | LR | LT |
| Maximum Queue (ft) | 33 | 8 |
| Average Queue (ft) | 17 | 0 |
| 95th Queue (ft) | 41 | 5 |
| Link Distance (ft) | 1955 | 1006 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 4: US 17 & NB U-Turn

| Movement | WB | SB | SB |
|-----------------------|-----|------|------|
| Directions Served | L | T | T |
| Maximum Queue (ft) | 146 | 185 | 177 |
| Average Queue (ft) | 79 | 93 | 70 |
| 95th Queue (ft) | 131 | 165 | 143 |
| Link Distance (ft) | 94 | 1182 | 1182 |
| Upstream Blk Time (%) | 8 | | |
| Queuing Penalty (veh) | 10 | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

Intersection: 5: US 17 & SR 1400 (Market Street)

| Movement | EB | WB | NB | NB | NB |
|-----------------------|----|------|-----|-----|-----|
| Directions Served | LT | R | T | T | R |
| Maximum Queue (ft) | 99 | 197 | 185 | 182 | 95 |
| Average Queue (ft) | 37 | 98 | 157 | 157 | 57 |
| 95th Queue (ft) | 82 | 173 | 169 | 168 | 124 |
| Link Distance (ft) | 89 | 2072 | 95 | 95 | |
| Upstream Blk Time (%) | 1 | | 34 | 33 | 1 |
| Queuing Penalty (veh) | 0 | | 414 | 400 | 0 |
| Storage Bay Dist (ft) | | | | 125 | |
| Storage Blk Time (%) | | | 33 | 1 | |
| Queuing Penalty (veh) | | | 60 | 9 | |

Intersection: 6: US 17 & Stephen's Church Road /NB U-Turn

| Movement | EB | WB | SB | SB | SB |
|-----------------------|-----|----|-----|-----|----|
| Directions Served | R | LT | T | T | R |
| Maximum Queue (ft) | 62 | 80 | 201 | 201 | 64 |
| Average Queue (ft) | 21 | 30 | 166 | 167 | 3 |
| 95th Queue (ft) | 52 | 67 | 211 | 210 | 27 |
| Link Distance (ft) | 208 | 83 | 126 | 126 | |
| Upstream Blk Time (%) | | 0 | 15 | 15 | 0 |
| Queuing Penalty (veh) | | 0 | 127 | 130 | 0 |
| Storage Bay Dist (ft) | | | | | 75 |
| Storage Blk Time (%) | | | | | 23 |
| Queuing Penalty (veh) | | | | | 1 |

Intersection: 14: US 17 & NB U-Turn

| Movement | NB |
|-----------------------|-----|
| Directions Served | L |
| Maximum Queue (ft) | 25 |
| Average Queue (ft) | 1 |
| 95th Queue (ft) | 15 |
| Link Distance (ft) | |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | 305 |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

Intersection: 15: US 17 & SR 1400 (Market Street)

| Movement | SB | SB | SB |
|-----------------------|-----|-----|-----|
| Directions Served | L | T | T |
| Maximum Queue (ft) | 36 | 200 | 193 |
| Average Queue (ft) | 3 | 40 | 40 |
| 95th Queue (ft) | 55 | 174 | 171 |
| Link Distance (ft) | | 761 | 761 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | 299 | | |
| Storage Blk Time (%) | | 1 | |
| Queuing Penalty (veh) | | 1 | |

Intersection: 16: US 17 & NB U-Turn

| Movement | NB | NB | NB |
|-----------------------|-----|------|------|
| Directions Served | L | T | T |
| Maximum Queue (ft) | 649 | 1147 | 1154 |
| Average Queue (ft) | 303 | 943 | 932 |
| 95th Queue (ft) | 837 | 1461 | 1461 |
| Link Distance (ft) | | 1100 | 1100 |
| Upstream Blk Time (%) | | 29 | 26 |
| Queuing Penalty (veh) | | 0 | 0 |
| Storage Bay Dist (ft) | 550 | | |
| Storage Blk Time (%) | | 37 | |
| Queuing Penalty (veh) | | 31 | |

Network Summary

Network wide Queuing Penalty: 1915

Queuing and Blocking Report

Combined (2023) AM

10/07/2019

Intersection: 1: SR 1402 (Edgewater Club Road)/SR 2932 (Shiraz Way) & SR 1491 (Porter's Neck Road)

| Movement | EB | WB | NB | SB |
|-----------------------|------|------|------|-----|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 150 | 107 | 244 | 119 |
| Average Queue (ft) | 46 | 38 | 77 | 56 |
| 95th Queue (ft) | 117 | 79 | 179 | 101 |
| Link Distance (ft) | 1374 | 1060 | 1174 | 234 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 2: US 17 Bus. (Market Street)/US 17 (Market Street) & SR 1491 (Porter's Neck Road)

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | B24 | NB | NB | NB |
|-----------------------|-----|------|------|-----|-----|-----|-----|-----|------|-----|-----|------|
| | L | L | T | R | L | L | T | R | T | L | L | T |
| Directions Served | L | L | T | R | L | L | T | R | T | L | L | T |
| Maximum Queue (ft) | 102 | 144 | 128 | 130 | 376 | 378 | 458 | 200 | 5 | 138 | 238 | 426 |
| Average Queue (ft) | 18 | 69 | 52 | 48 | 259 | 267 | 210 | 154 | 0 | 41 | 84 | 259 |
| 95th Queue (ft) | 71 | 129 | 106 | 102 | 358 | 365 | 400 | 233 | 6 | 103 | 172 | 382 |
| Link Distance (ft) | | 1012 | 1012 | | | 499 | 499 | | 2846 | | | 1851 |
| Upstream Blk Time (%) | | | | | | | | | 1 | | | |
| Queuing Penalty (veh) | | | | | | | | | 2 | | | |
| Storage Bay Dist (ft) | 200 | | | 250 | 350 | | | 100 | | 325 | 325 | |
| Storage Blk Time (%) | | 0 | | | 1 | 1 | 15 | 40 | | 0 | 0 | 3 |
| Queuing Penalty (veh) | | 0 | | | 2 | 5 | 36 | 29 | | 0 | 0 | 4 |

Intersection: 2: US 17 Bus. (Market Street)/US 17 (Market Street) & SR 1491 (Porter's Neck Road)

| Movement | NB | NB | SB | SB | SB | SB | SB |
|-----------------------|------|------|-----|-----|------|------|-----|
| | T | R | L | L | T | T | R |
| Directions Served | T | R | L | L | T | T | R |
| Maximum Queue (ft) | 426 | 202 | 232 | 380 | 544 | 517 | 130 |
| Average Queue (ft) | 248 | 99 | 129 | 78 | 310 | 277 | 39 |
| 95th Queue (ft) | 380 | 177 | 207 | 273 | 492 | 463 | 149 |
| Link Distance (ft) | 1851 | 1851 | | | 1085 | 1085 | |
| Upstream Blk Time (%) | | | | | | | |
| Queuing Penalty (veh) | | | | | | | |
| Storage Bay Dist (ft) | | 325 | 325 | | | | 425 |
| Storage Blk Time (%) | | | 0 | 7 | 1 | | |
| Queuing Penalty (veh) | | | 0 | 14 | 2 | | |

Queuing and Blocking Report
Combined (2023) AM

10/07/2019

Intersection: 3: SR 1400 (Futch Creek Road) /SR 1400 (Market Street) & SR 2845 (Market Street)

| Movement | EB | NB |
|-----------------------|------|------|
| Directions Served | LR | LT |
| Maximum Queue (ft) | 87 | 5 |
| Average Queue (ft) | 39 | 0 |
| 95th Queue (ft) | 65 | 4 |
| Link Distance (ft) | 1539 | 1006 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 4: US 17 & NB U-Turn

| Movement | WB | SB | SB |
|-----------------------|-----|------|------|
| Directions Served | L | T | T |
| Maximum Queue (ft) | 165 | 751 | 709 |
| Average Queue (ft) | 129 | 320 | 294 |
| 95th Queue (ft) | 177 | 651 | 617 |
| Link Distance (ft) | 94 | 1182 | 1182 |
| Upstream Blk Time (%) | 29 | | |
| Queuing Penalty (veh) | 77 | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

Intersection: 5: US 17 & SR 1400 (Market Street)

| Movement | EB | WB | NB | NB | NB |
|-----------------------|----|------|-----|-----|-----|
| Directions Served | LT | R | T | T | R |
| Maximum Queue (ft) | 92 | 531 | 175 | 166 | 95 |
| Average Queue (ft) | 39 | 269 | 144 | 115 | 59 |
| 95th Queue (ft) | 73 | 502 | 181 | 177 | 111 |
| Link Distance (ft) | 89 | 2072 | 95 | 95 | |
| Upstream Blk Time (%) | 0 | | 25 | 12 | 1 |
| Queuing Penalty (veh) | 0 | | 187 | 88 | 0 |
| Storage Bay Dist (ft) | | | | | 125 |
| Storage Blk Time (%) | | | | 12 | 1 |
| Queuing Penalty (veh) | | | | 18 | 5 |

Queuing and Blocking Report
Combined (2023) AM

10/07/2019

Intersection: 6: US 17 & Stephen's Church Road /NB U-Turn

| Movement | EB | WB | SB | SB | SB |
|-----------------------|-----|----|-----|-----|----|
| Directions Served | R | LT | T | T | R |
| Maximum Queue (ft) | 100 | 71 | 156 | 142 | 20 |
| Average Queue (ft) | 44 | 23 | 59 | 57 | 1 |
| 95th Queue (ft) | 87 | 57 | 129 | 122 | 13 |
| Link Distance (ft) | 208 | 83 | 126 | 126 | |
| Upstream Blk Time (%) | | 0 | 0 | 0 | 0 |
| Queuing Penalty (veh) | | 0 | 5 | 4 | 0 |
| Storage Bay Dist (ft) | | | | | 75 |
| Storage Blk Time (%) | | | | 2 | |
| Queuing Penalty (veh) | | | | 0 | |

Intersection: 7: SR 2932 (Shiraz Way) & Site Drive 1

| Movement | SE | NE |
|-----------------------|------|-----|
| Directions Served | LR | LT |
| Maximum Queue (ft) | 60 | 35 |
| Average Queue (ft) | 31 | 5 |
| 95th Queue (ft) | 53 | 24 |
| Link Distance (ft) | 1058 | 234 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 8: SR 2845 (Market Street) & Site Drive 2

| Movement | NW |
|-----------------------|------|
| Directions Served | LR |
| Maximum Queue (ft) | 58 |
| Average Queue (ft) | 30 |
| 95th Queue (ft) | 51 |
| Link Distance (ft) | 1370 |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

Queuing and Blocking Report

Combined (2023) AM

10/07/2019

Intersection: 14: US 17 & NB U-Turn

| Movement | NB |
|-----------------------|-----|
| Directions Served | L |
| Maximum Queue (ft) | 125 |
| Average Queue (ft) | 23 |
| 95th Queue (ft) | 83 |
| Link Distance (ft) | |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | 305 |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

Intersection: 15: US 17 & SR 1400 (Market Street)

| Movement | SB | SB |
|-----------------------|-----|-----|
| Directions Served | T | T |
| Maximum Queue (ft) | 11 | 62 |
| Average Queue (ft) | 0 | 2 |
| 95th Queue (ft) | 12 | 61 |
| Link Distance (ft) | 761 | 761 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 16: US 17 & NB U-Turn

| Movement | NB | NB |
|-----------------------|------|------|
| Directions Served | T | T |
| Maximum Queue (ft) | 210 | 189 |
| Average Queue (ft) | 61 | 28 |
| 95th Queue (ft) | 166 | 121 |
| Link Distance (ft) | 1100 | 1100 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Network Summary

Network wide Queuing Penalty: 479

Queuing and Blocking Report

Combined (2023) PM

10/07/2019

Intersection: 1: SR 1402 (Edgewater Club Road)/SR 2932 (Shiraz Way) & SR 1491 (Porter's Neck Road)

| Movement | EB | WB | NB | SB |
|-----------------------|------|------|------|-----|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 104 | 102 | 276 | 83 |
| Average Queue (ft) | 15 | 44 | 101 | 31 |
| 95th Queue (ft) | 64 | 79 | 212 | 66 |
| Link Distance (ft) | 1374 | 1060 | 1174 | 234 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 2: US 17 Bus. (Market Street)/US 17 (Market Street) & SR 1491 (Porter's Neck Road)

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | B24 | NB | NB | NB |
|-----------------------|-----|------|------|-----|-----|-----|-----|-----|------|-----|-----|------|
| | L | L | T | R | L | L | T | R | T | L | L | T |
| Directions Served | L | L | T | R | L | L | T | R | T | L | L | T |
| Maximum Queue (ft) | 170 | 190 | 199 | 166 | 363 | 365 | 437 | 200 | 22 | 162 | 425 | 783 |
| Average Queue (ft) | 53 | 110 | 100 | 79 | 246 | 253 | 218 | 158 | 1 | 75 | 190 | 461 |
| 95th Queue (ft) | 141 | 176 | 177 | 146 | 338 | 348 | 391 | 234 | 13 | 145 | 425 | 748 |
| Link Distance (ft) | | 1012 | 1012 | | | 499 | 499 | | 2846 | | | 1851 |
| Upstream Blk Time (%) | | | | | | | | 0 | | | | |
| Queuing Penalty (veh) | | | | | | | | 2 | | | | |
| Storage Bay Dist (ft) | 200 | | | 250 | 350 | | | 100 | | 325 | 325 | |
| Storage Blk Time (%) | 0 | 0 | 0 | | 0 | 1 | 23 | 38 | | 0 | 0 | 24 |
| Queuing Penalty (veh) | 0 | 0 | 0 | | 1 | 2 | 59 | 39 | | 0 | 0 | 45 |

Intersection: 2: US 17 Bus. (Market Street)/US 17 (Market Street) & SR 1491 (Porter's Neck Road)

| Movement | NB | NB | SB | SB | SB | SB | SB |
|-----------------------|------|------|-----|-----|------|------|-----|
| | T | R | L | L | T | T | R |
| Directions Served | T | R | L | L | T | T | R |
| Maximum Queue (ft) | 771 | 193 | 282 | 412 | 558 | 530 | 135 |
| Average Queue (ft) | 452 | 87 | 174 | 123 | 325 | 293 | 40 |
| 95th Queue (ft) | 733 | 160 | 290 | 343 | 505 | 473 | 142 |
| Link Distance (ft) | 1851 | 1851 | | | 1085 | 1085 | |
| Upstream Blk Time (%) | | | | | | | |
| Queuing Penalty (veh) | | | | | | | |
| Storage Bay Dist (ft) | | 325 | 325 | | | | 425 |
| Storage Blk Time (%) | | 3 | 1 | 9 | 1 | | |
| Queuing Penalty (veh) | | 20 | 4 | 19 | 2 | | |

Queuing and Blocking Report

Combined (2023) PM

10/07/2019

Intersection: 3: SR 1400 (Futch Creek Road) /SR 1400 (Market Street) & SR 2845 (Market Street)

| Movement | EB | NB |
|-----------------------|------|------|
| Directions Served | LR | LT |
| Maximum Queue (ft) | 59 | 8 |
| Average Queue (ft) | 30 | 0 |
| 95th Queue (ft) | 50 | 6 |
| Link Distance (ft) | 1539 | 1006 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 4: US 17 & NB U-Turn

| Movement | WB | SB | SB |
|-----------------------|-----|------|------|
| Directions Served | L | T | T |
| Maximum Queue (ft) | 156 | 222 | 185 |
| Average Queue (ft) | 88 | 104 | 78 |
| 95th Queue (ft) | 141 | 184 | 155 |
| Link Distance (ft) | 94 | 1182 | 1182 |
| Upstream Blk Time (%) | 10 | | |
| Queuing Penalty (veh) | 16 | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

Intersection: 5: US 17 & SR 1400 (Market Street)

| Movement | EB | WB | NB | NB | NB |
|-----------------------|-----|------|-----|-----|-----|
| Directions Served | LT | R | T | T | R |
| Maximum Queue (ft) | 112 | 217 | 179 | 182 | 95 |
| Average Queue (ft) | 51 | 113 | 156 | 157 | 67 |
| 95th Queue (ft) | 95 | 187 | 167 | 170 | 128 |
| Link Distance (ft) | 89 | 2072 | 95 | 95 | |
| Upstream Blk Time (%) | 1 | | 36 | 34 | 1 |
| Queuing Penalty (veh) | 1 | | 449 | 426 | 0 |
| Storage Bay Dist (ft) | | | | | 125 |
| Storage Blk Time (%) | | | | 34 | 1 |
| Queuing Penalty (veh) | | | | 78 | 14 |

Queuing and Blocking Report
Combined (2023) PM

10/07/2019

Intersection: 6: US 17 & Stephen's Church Road /NB U-Turn

| Movement | EB | WB | SB | SB | SB |
|-----------------------|-----|-----|-----|-----|----|
| Directions Served | R | LT | T | T | R |
| Maximum Queue (ft) | 90 | 109 | 160 | 157 | 14 |
| Average Queue (ft) | 30 | 43 | 72 | 67 | 1 |
| 95th Queue (ft) | 68 | 89 | 145 | 139 | 7 |
| Link Distance (ft) | 208 | 83 | 126 | 126 | |
| Upstream Blk Time (%) | | 2 | 1 | 1 | |
| Queuing Penalty (veh) | | 2 | 6 | 5 | |
| Storage Bay Dist (ft) | | | | | 75 |
| Storage Blk Time (%) | | | | | 3 |
| Queuing Penalty (veh) | | | | | 0 |

Intersection: 7: SR 2932 (Shiraz Way) & Site Drive 1

| Movement | SE | NE |
|-----------------------|------|-----|
| Directions Served | LR | LT |
| Maximum Queue (ft) | 56 | 45 |
| Average Queue (ft) | 25 | 8 |
| 95th Queue (ft) | 48 | 32 |
| Link Distance (ft) | 1058 | 234 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 8: SR 2845 (Market Street) & Site Drive 2

| Movement | NW | SW |
|-----------------------|------|------|
| Directions Served | LR | LT |
| Maximum Queue (ft) | 50 | 22 |
| Average Queue (ft) | 25 | 1 |
| 95th Queue (ft) | 45 | 10 |
| Link Distance (ft) | 1370 | 1539 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Queuing and Blocking Report

Combined (2023) PM

10/07/2019

Intersection: 14: US 17 & NB U-Turn

| Movement | NB |
|-----------------------|-----|
| Directions Served | L |
| Maximum Queue (ft) | 32 |
| Average Queue (ft) | 2 |
| 95th Queue (ft) | 18 |
| Link Distance (ft) | |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | 305 |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

Intersection: 15: US 17 & SR 1400 (Market Street)

| Movement | SB | SB |
|-----------------------|-----|-----|
| Directions Served | T | T |
| Maximum Queue (ft) | 3 | 4 |
| Average Queue (ft) | 0 | 0 |
| 95th Queue (ft) | 3 | 3 |
| Link Distance (ft) | 761 | 761 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 16: US 17 & NB U-Turn

| Movement | NB | NB | NB |
|-----------------------|-----|------|------|
| Directions Served | L | T | T |
| Maximum Queue (ft) | 650 | 1149 | 1145 |
| Average Queue (ft) | 333 | 999 | 991 |
| 95th Queue (ft) | 868 | 1425 | 1427 |
| Link Distance (ft) | | 1100 | 1100 |
| Upstream Blk Time (%) | | 36 | 35 |
| Queuing Penalty (veh) | | 0 | 0 |
| Storage Bay Dist (ft) | 550 | | |
| Storage Blk Time (%) | | 45 | |
| Queuing Penalty (veh) | | 37 | |

Network Summary

Network wide Queuing Penalty: 1227

Intersection: 5: US 17 & SR 1400 (Market Street)

| Movement | EB | WB | NB | NB | NB |
|-----------------------|-----|------|-----|-----|----|
| Directions Served | LT | R | T | T | R |
| Maximum Queue (ft) | 101 | 218 | 171 | 161 | 95 |
| Average Queue (ft) | 41 | 107 | 119 | 88 | 35 |
| 95th Queue (ft) | 84 | 185 | 182 | 159 | 84 |
| Link Distance (ft) | 89 | 2072 | 95 | 95 | |
| Upstream Blk Time (%) | 1 | | 12 | 5 | 0 |
| Queuing Penalty (veh) | 1 | | 89 | 38 | 0 |
| Storage Bay Dist (ft) | | | | 125 | |
| Storage Blk Time (%) | | | | 5 | 0 |
| Queuing Penalty (veh) | | | | 7 | 1 |

Queuing and Blocking Report
Background (2023) PM - Field Conditions

10/08/2019

Intersection: 5: US 17 & SR 1400 (Market Street)

| Movement | EB | WB | NB | NB | NB |
|-----------------------|----|------|-----|-----|-----|
| Directions Served | LT | R | T | T | R |
| Maximum Queue (ft) | 94 | 196 | 183 | 184 | 95 |
| Average Queue (ft) | 40 | 96 | 141 | 133 | 47 |
| 95th Queue (ft) | 78 | 171 | 200 | 202 | 113 |
| Link Distance (ft) | 89 | 2072 | 95 | 95 | |
| Upstream Blk Time (%) | 1 | | 18 | 15 | 0 |
| Queuing Penalty (veh) | 0 | | 223 | 185 | 0 |
| Storage Bay Dist (ft) | | | | | 125 |
| Storage Blk Time (%) | | | | 15 | 0 |
| Queuing Penalty (veh) | | | | 28 | 5 |

Queuing and Blocking Report
Combined (2023) AM - Field Conditions

10/08/2019

Intersection: 5: US 17 & SR 1400 (Market Street)

| Movement | EB | WB | NB | NB | NB |
|-----------------------|-----|------|-----|-----|-----|
| Directions Served | LT | R | T | T | R |
| Maximum Queue (ft) | 102 | 272 | 170 | 158 | 95 |
| Average Queue (ft) | 40 | 138 | 134 | 100 | 47 |
| 95th Queue (ft) | 84 | 237 | 184 | 170 | 100 |
| Link Distance (ft) | 89 | 2072 | 95 | 95 | |
| Upstream Blk Time (%) | 1 | | 17 | 7 | 0 |
| Queuing Penalty (veh) | 1 | | 131 | 55 | 0 |
| Storage Bay Dist (ft) | | | | | 125 |
| Storage Blk Time (%) | | | | 7 | 0 |
| Queuing Penalty (veh) | | | | 11 | 2 |

Queuing and Blocking Report
Combined (2023) PM - Field Conditions

10/08/2019

Intersection: 5: US 17 & SR 1400 (Market Street)

| Movement | EB | WB | NB | NB | NB |
|-----------------------|----|------|-----|-----|-----|
| Directions Served | LT | R | T | T | R |
| Maximum Queue (ft) | 94 | 157 | 154 | 155 | 95 |
| Average Queue (ft) | 71 | 108 | 154 | 143 | 60 |
| 95th Queue (ft) | 95 | 174 | 155 | 181 | 105 |
| Link Distance (ft) | 89 | 2072 | 95 | 95 | |
| Upstream Blk Time (%) | 6 | | 30 | 24 | 1 |
| Queuing Penalty (veh) | 6 | | 366 | 289 | 0 |
| Storage Bay Dist (ft) | | | | | 125 |
| Storage Blk Time (%) | | | | 24 | 1 |
| Queuing Penalty (veh) | | | | 54 | 7 |