

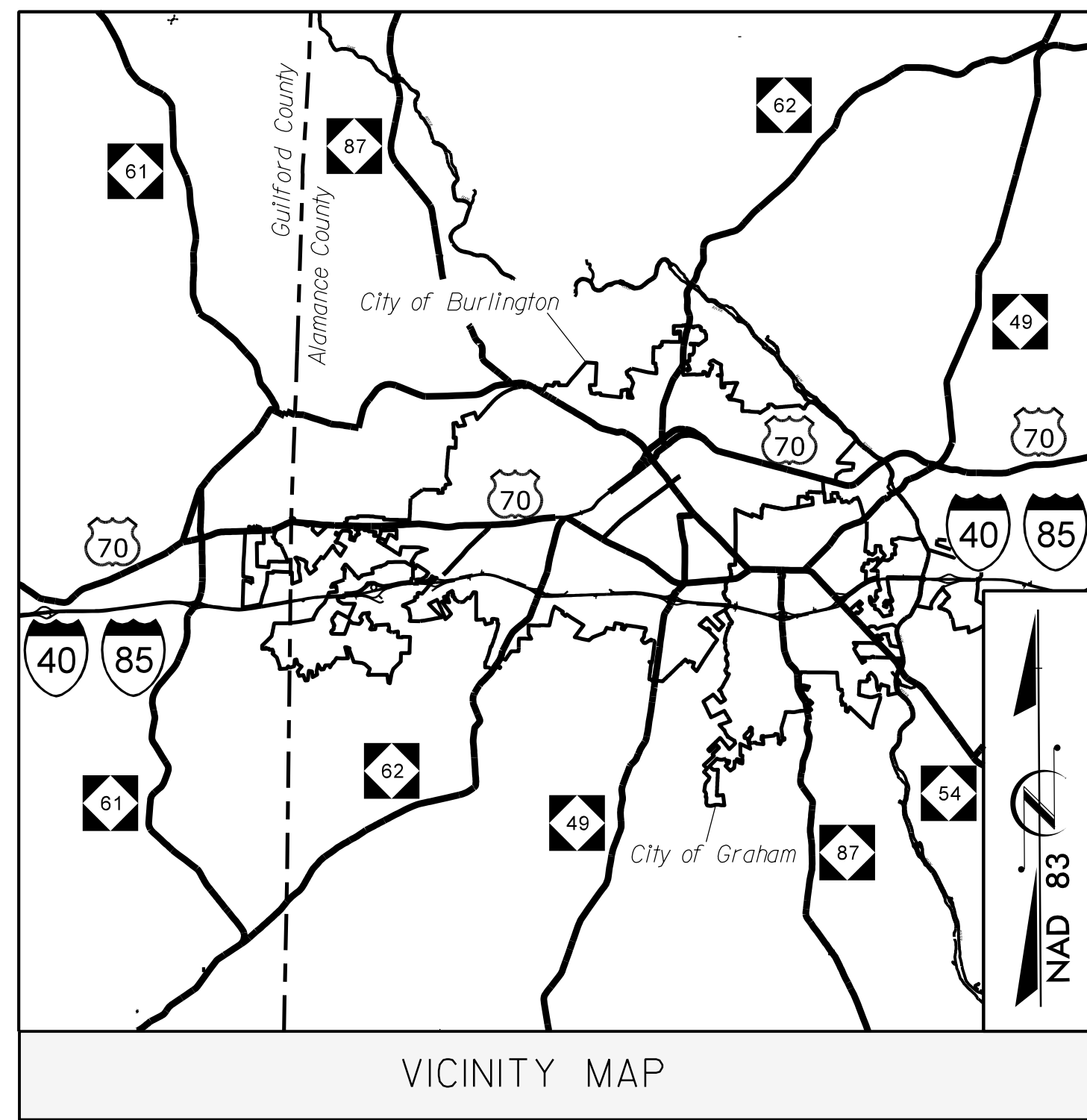
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TIP PROJECT: U-6015

CONTRACT: C204111



VICINITY MAP

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED IMPROVEMENTS
CITIES OF BURLINGTON & GRAHAM
COMPUTERIZED TRAFFIC SIGNAL SYSTEM

REPLACEMENT OF EXISTING SIGNAL SYSTEM WITH A NEW COMPUTERIZED TRAFFIC SIGNAL SYSTEM.

RELATED WORK INCLUDES:

UPGRADING LOCAL INTERSECTION CONTROLLERS, CABINETS, AND SYSTEM DETECTORS WITH LIMITED SIGNAL WIRING AND SIGNAL HEAD UPGRADES WHEN NECESSARY; UPGRADE AND EXPANSION OF CCTV MONITORING NETWORK; INSTALLING CENTRAL EQUIPMENT AND CENTRAL SOFTWARE; AND INSTALLATION OF AN ETHERNET COMMUNICATIONS NETWORK COMPRISED OF FIBER-OPTIC CABLE AND WIRELESS TECHNOLOGY WITH ALL RELATED EQUIPMENT.

| STATE | STATE PROJECT REFERENCE NO. | SHEET NO. | TOTAL SHEETS |
|-----------------|-----------------------------|-------------|--------------|
| N.C. | U-6015 | FS-1.00 | |
| STATE PROJ. NO. | F.A. PROJ. NO. | DESCRIPTION | |
| 47160.1.1 | | PE | |
| 47160.3.1 | STBG-0701 (036) | CONST | |
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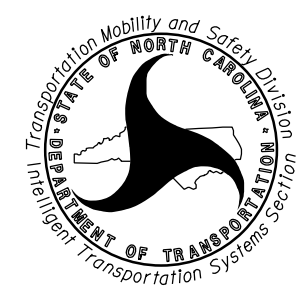


Volume II of III
Fiber-Optic Splicing

2018 STANDARD SPECIFICATIONS

LETTING DATE: SEPTEMBER 18, 2018

PROJECT LENGTH = 55 MILES



750 Greenfield Parkway, Garner, NC 27529

NC DOT CONTACTS:
TRANSPORTATION MOBILITY & SAFETY DIVISION
INTELLIGENT TRANSPORTATION SYSTEMS SECTION
SHERRY YOW - METRO SYSTEMS PROJECT ENGINEER
WILLIAM B. HAIRSTON, III - PROJECT DESIGN ENGINEER
CYNTHIA MULDROW - DESIGN ENGINEER

ATKINS

1616 EAST MILLBROOK ROAD, SUITE 160
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEES #F-0326

MELISSA B. TOTH, PE - ATKINS PROJECT MANAGER
H. ALFRED BADGETT, PE - ATKINS SENIOR PROJECT ENGINEER
BRADFORD SLOCUM, PE - ATKINS PROJECT ENGINEER
ANTHONY M. ENCARNACION, PE - ATKINS PROJECT ENGINEER



DocuSigned by:
Bradford J. Slocum 15/2018
SIGNATURE DATE

INDEX OF SHEETS

Volume I

| | |
|--------------------------|--|
| ITS-1.00 | TITLE SHEET – COMMUNICATIONS & CCTV FIELD INFRASTRUCTURE, BUILDING MODIFICATIONS AND SPECIAL DETAILS |
| ITS-2.00 | INDEX OF SHEETS AND ROADWAY STANDARD DRAWINGS |
| ITS-3.00 THRU ITS-3.02 | BLOCK DIAGRAMS |
| ITS-4.00 THRU ITS-4.06 | SYSTEM DETECTORS AND CONTROL ZONES |
| ITS-5.00 | CCTV CAMERA INSTALLATION, WOOD POLES |
| ITS-5.01 THRU ITS-5.03 | CCTV CAMERA INSTALLATION, METAL POLES |
| ITS-5.04 | ELECTRICAL SERVICE GROUNDING |
| ITS-5.05 | CCTV CABINET ASSEMBLY LAYOUT |
| ITS-5.06 | SIGNAL CABINET DETAIL, POLE-MOUNTED |
| ITS-5.07 | RISER DETAIL |
| ITS-5.08 | FOUNDATION MODIFICATION DETAIL |
| ITS-5.09 | BASE ADAPTER DETAIL |
| ITS-5.10 | GROUND MOUNTED ELECTRICAL SERVICE DETAIL |
| ITS-5.11 | OVERHEAD ELECTRICAL SERVICE DETAIL |
| ITS-5.12 | AERIAL FIBER-OPTIC CABLE STORAGE & SPLICE ENCLOSURES |
| ITS-5.13 | BASE-MOUNTED CABINET FOUNDATION DETAIL |
| ITS-5.14 | TERMINAL SPLICE CABINET DETAIL |
| ITS-5.15 | CCTV AND RADIO BUILDING MOUNTING |
| ITS-5.16 THRU ITS-5.25 | TCC DETAILS |
| CRP-1.000 THRU CRP-1.017 | SUMMARY OF WORK BY CABLE ROUTING PLANS |
| CRP-2.000 | CCTV INSTALLATION SUMMARY |
| CRP-3.000 THRU CRP-3.002 | CABLE ROUTING PLANS KEY SHEET |
| CRP-4.000 | LEGEND/GENERAL NOTES/ABBREVIATIONS |
| CRP-5.000 | CONSTRUCTION NOTES |
| CRP-6.001 THRU CRP-6.199 | CABLE ROUTING PLANS |
| TMP-7.01 THRU TMP-7.04 | TRANSPORTATION MANAGEMENT PLAN |

Volume II

| | |
|------------------------|---|
| FS 1.00 | TITLE SHEET (FIBER-OPTIC SPLICING) |
| FS 1.01 | INDEX OF SHEETS AND ROADWAY STANDARD DRAWINGS |
| FS 2.00 | COMMS. CABLE SCHEMATICS SHEET LAYOUT |
| FS 2.01 THRU FS 2.04 | COMMS. CABLE SCHEMATICS |
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| FS 3.00 | FIBER-OPTIC CABLE USAGE SUMMARY |
| FS 4.000 | FIBER-OPTIC SPLICING DETAILS KEY SHEET |
| FS 4.001 THRU FS 4.120 | FIBER-OPTIC SPLICING DETAILS |

Volume III – Part 1

| | |
|---------------------------|---|
| SIG. 1.00 | TITLE SHEET (TRAFFIC SIGNAL DESIGNS) |
| SIG. 1.01 | INDEX OF SHEETS AND ROADWAY STANDARD DRAWINGS |
| SIG. 1.02 | SIGNAL PLANS INDEX SHEET |
| SIG. 2.00 THRU SIG. 2.26 | SUMMARY OF WORK BY INTERSECTION |
| SIG. 3.00 THRU SIG. 100.1 | TRAFFIC SIGNAL PLANS |

Volume III – Part 2

| | |
|----------------------------|--------------------------------------|
| SIG. 101.A | TITLE SHEET (TRAFFIC SIGNAL DESIGNS) |
| SIG. 101.0 THRU SIG. 208.1 | TRAFFIC SIGNAL PLANS |

ROADWAY STANDARD DRAWINGS

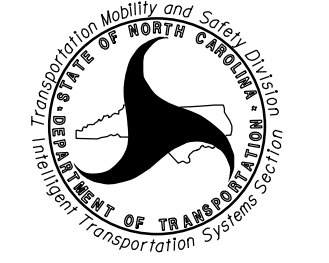
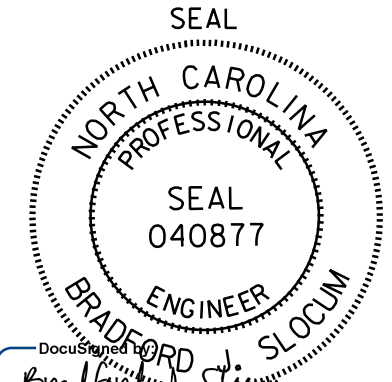
THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" CONTRACT SERVICES UNIT – N.C. DEPARTMENT OF TRANSPORTATION – RALEIGH, N.C., DATED JANUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE ARE HEREBY CONSIDERED A PART OF THESE PLANS:

| STD. NO. | TITLE |
|----------|--|
| 848.01 | CONCRETE SIDEWALK |
| 1101.01 | WORK ZONE ADVANCE WARNING SIGNS |
| 1101.02 | TEMPORARY LANE CLOSURES |
| 1101.03 | TEMPORARY ROAD CLOSURES |
| 1101.04 | TEMPORARY SHOULDER CLOSURES |
| 1101.11 | TRAFFIC CONTROL DESIGN TABLES |
| 1110.02 | PORTABLE WORK ZONE SIGNS |
| 1115.01 | FLASHING ARROW BOARDS |
| 1130.01 | DRUMS |
| 1135.01 | CONES |
| 1145.01 | BARRICADES |
| 1150.01 | FLAGGERS |
| 1165.01 | TRUCK MOUNTED ATTENUATOR |
| 1180.01 | SKINNY DRUMS |
| 1205.01 | PAVEMENT MARKINGS – LINE TYPES AND OFFSETS |
| 1205.02 | PAVEMENT MARKINGS – TWO-LANE AND MULTI-LANE ROADWAYS |
| 1205.04 | PAVEMENT MARKINGS – INTERSECTIONS |
| 1205.05 | PAVEMENT MARKINGS – TURN LANES |
| 1205.07 | PAVEMENT MARKINGS – PEDESTRIAN CROSSWALKS |
| 1205.08 | PAVEMENT MARKINGS – SYMBOLS AND WORD MESSAGES |
| 1700.01 | ELECTRICAL SERVICE OPTIONS |
| 1700.02 | ELECTRICAL SERVICE GROUNDING |
| 1705.01 | SIGNAL HEADS – SIGNAL HEADS |
| 1705.02 | SIGNAL HEADS – MOUNTING |
| 1705.03 | SIGNAL HEADS – WIRE COLOR CONVENTIONS |
| 1705.04 | SIGNAL HEADS – PEDESTRIAN PUSHBUTTON PLACEMENT |
| 1715.01 | UNDERGROUND CONDUIT – TRENCHING |
| 1716.01 | JUNCTION BOXES |
| 1720.01 | WOOD POLES |
| 1721.01 | GUY ASSEMBLIES |
| 1725.01 | INDUCTIVE DETECTION LOOPS |
| 1730.01 | FIBER-OPTIC CABLE – SPARE CABLE STORAGE |
| 1736.01 | SPREAD SPECTRUM RADIO |
| 1743.01 | PEDESTALS – PEDESTRIAN PUSHBUTTON (TYPE I) |
| 1743.04 | PEDESTALS – FOUNDATIONS |
| 1751.01 | CONTROLLERS AND CABINETS – CABINET COMPONENT LAYOUT |
| 1751.02 | CONTROLLERS AND CABINETS – POWER, GROUND AND AUXILIARY |

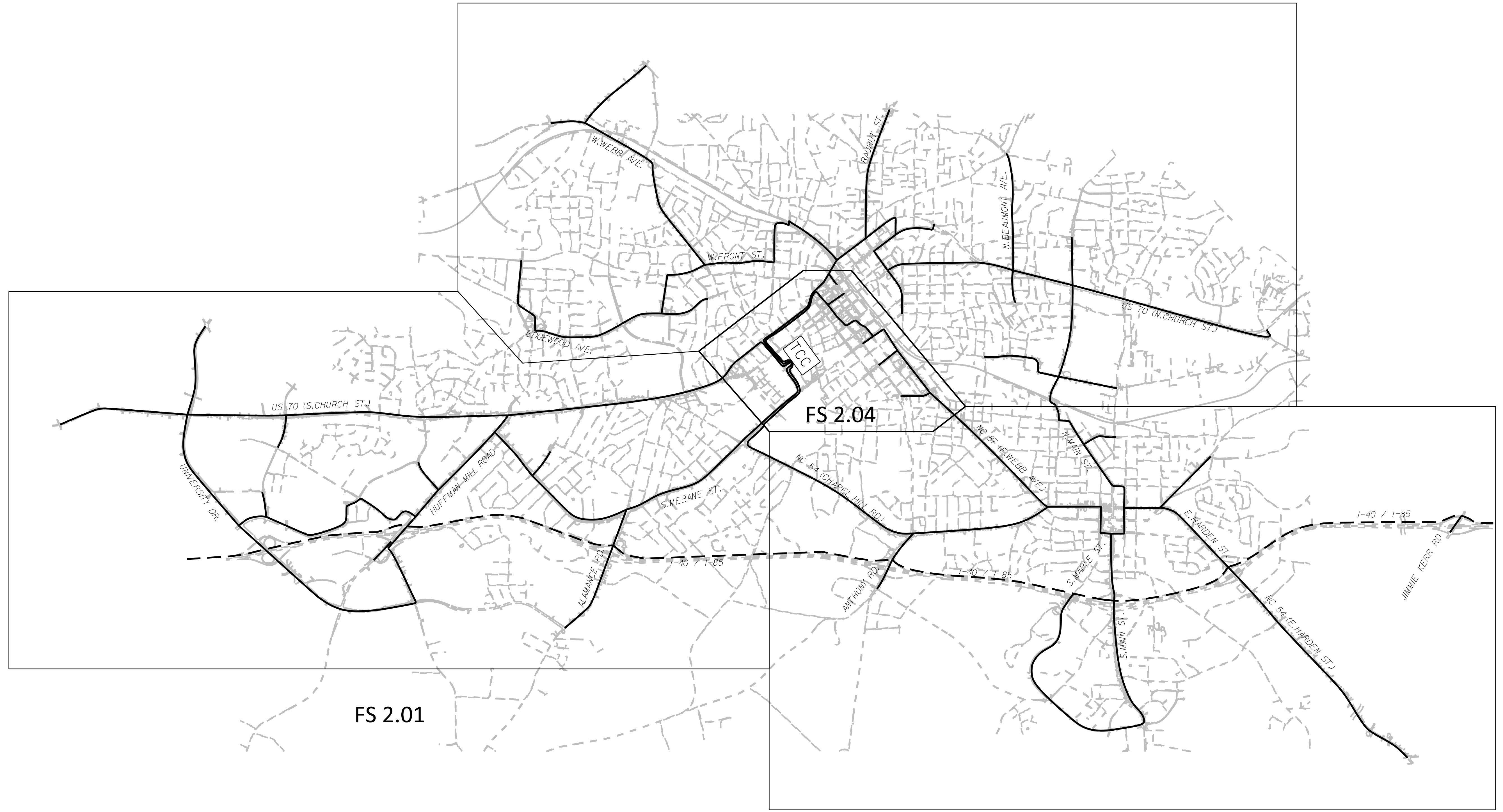
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 (919) 876-6888 NCBES #F-0326

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| | | | |
|---|---|--|---|
|  | Burlington-Graham Signal System Index of Sheets and Roadway Standard Drawings Division 7 Alamance County Burlington & Graham | |  |
| | PLAN DATE: June 2018 PREPARED BY: BJ SLOCUM | REVIEWED BY: HA BADGETT REVIEWED BY: DL JONES | |

FS 2.03



FS 2.01

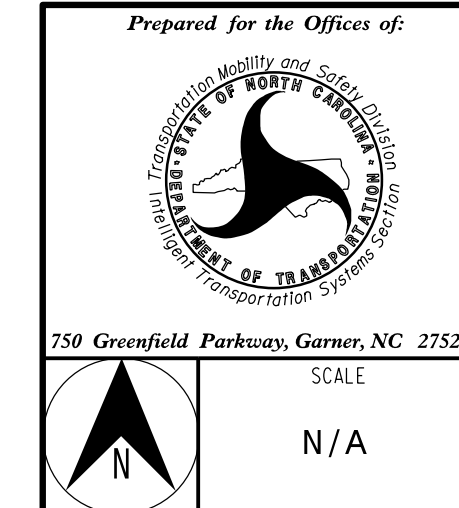
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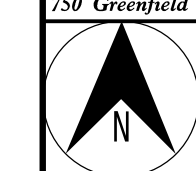
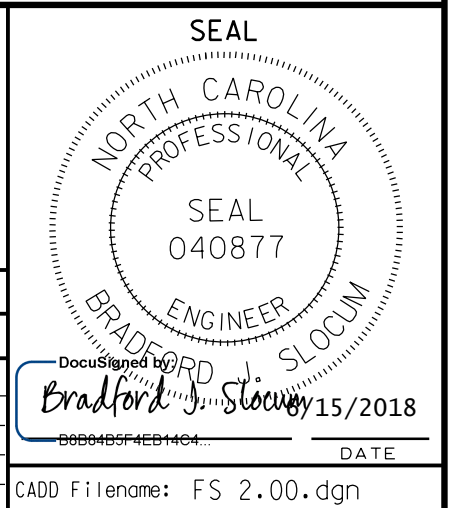
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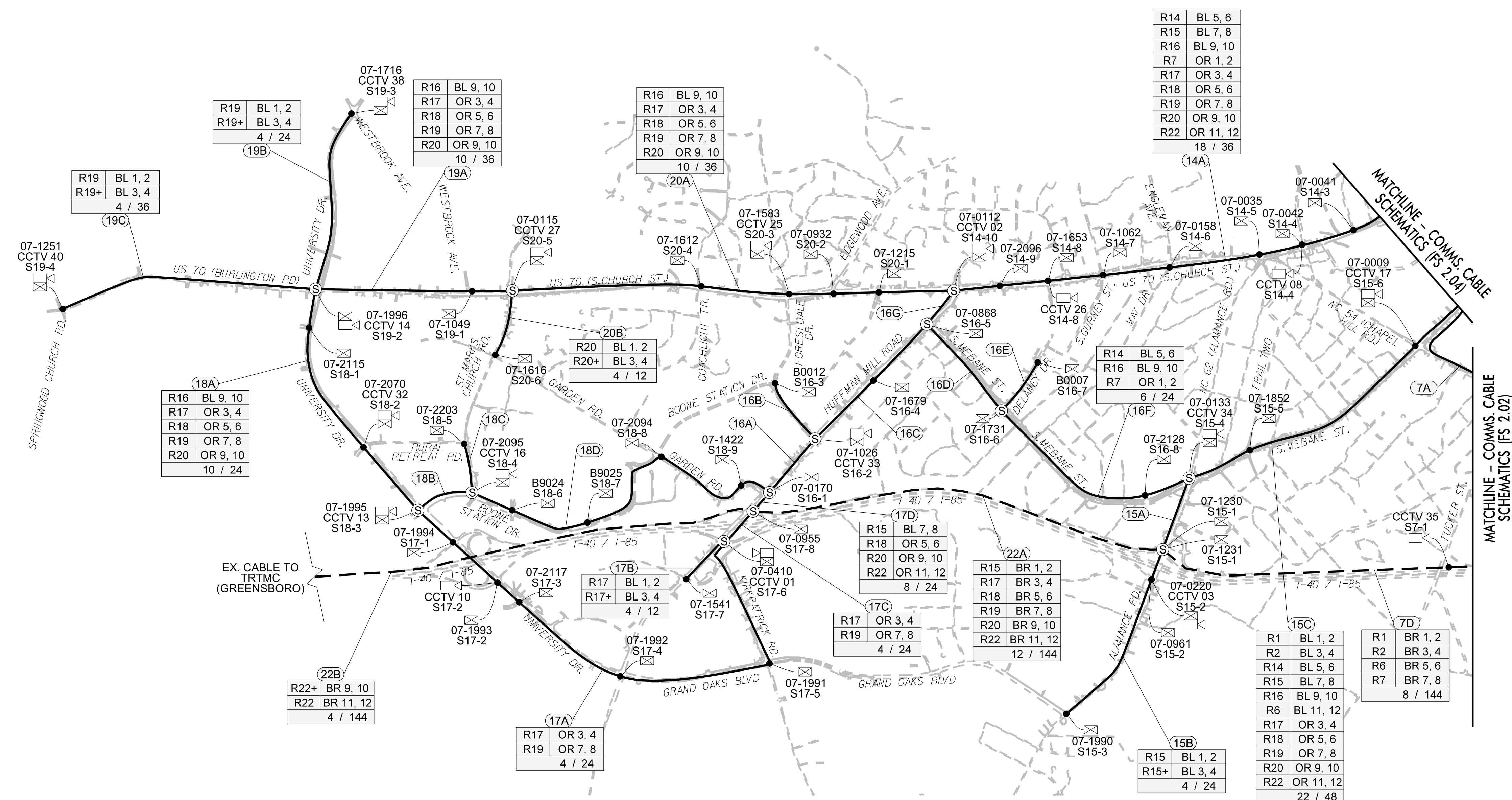


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|---|-------------------------|------------------------|
| Burlington-Graham Signal System Comms. Cable Schematics Sheet Layout | | Burlington & Graham |
| Division 7 Alamance County | | Alamance County |
| PLAN DATE: June 2018 | REVIEWED BY: HA BADGETT | |
| PREPARED BY: BJ SLOCUM | REVIEWED BY: DL JONES | |
| REVISIONS | INIT. | DATE |
| | | |
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SCALE
N/A

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 Bradford J. Slocum 15/2018
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|--|--|--|---|--|---|---|
| 7A R21 BL 1, 2 R3 BL 5, 6 R4 BL 7, 8 R5 BL 9, 10 R7 OR 1, 2 R8 OR 3, 4 R9 OR 5, 6 R10 OR 7, 8 R11 OR 9, 10 R23 OR 11, 12 R12 GR 1, 2 R13 GR 5, 6 24 / 48 | 15A R1 BL 1, 2 R2 BL 3, 4 R15 BL 7, 8 R6 BL 11, 12 R7 OR 1, 2 R17 OR 3, 4 R18 OR 5, 6 R19 OR 7, 8 R20 OR 9, 10 R22 OR 11, 12 20 / 48 | 16A R15 BL 7, 8 R16 BL 9, 10 R22 OR 11, 12 6 / 24 | 16B R16 BL 1, 2 R16+ BL 3, 4 4 / 12 | 16C R15 BL 7, 8 R16 BL 9, 10 R22 OR 11, 12 6 / 24 | 16D R14 BL 5, 6 R16 BL 9, 10 R7 OR 1, 2 6 / 24 | 16E R16 BL 1, 2 R16+ BL 3, 4 4 / 12 |
| 16G R14 BL 5, 6 R15 BL 7, 8 R7 OR 1, 2 R22 OR 11, 12 8 / 24 | 18B R16 BL 9, 10 R18 OR 5, 6 R20 OR 9, 10 6 / 24 | 18C R18 BL 1, 2 R18+ BL 3, 4 4 / 12 | 18D R16 BL 9, 10 R18 OR 5, 6 R20 OR 9, 10 6 / 24 | | | |

LEGEND

- ⊕ CABLE-TO-CABLE SPLICE
- DROP SPLICE TO CCTV CABINET
- ⊗ DROP SPLICE TO SIGNAL CABINET
- ⊗ DROP SPLICE TO SIGNAL CABINET (SHARED SWITCH WITH CCTV)
- ⊗ DROP SPLICE TO BUILDING (STORE CABLE OUTSIDE BUILDING PER CL SHEET)
- NEW FIBER-OPTIC CABLE
- - - EXISTING FIBER-OPTIC CABLE
- S### SPLICE NUMBER
- B#### CITY SIGNAL INVENTORY NUMBER
- 07-#### STATE SIGNAL INVENTORY NUMBER
- CCTV ## CCTV ID
- CABLE ID
- RING NUMBER: R16 BL 1, 2; R16+ BL 3, 4; 4 / 12
- FIBER PAIRS ASSIGNED TO RING
- TOTAL FIBERS IN CABLE
- LIT FIBERS IN CABLE (PER THIS PROJECT)
- + DENOTES SECONDARY PATH
- FIBER BUFFER TUBES: BL - BLUE, OR - ORANGE, GR - GREEN, BR - BROWN

NOTES:

- CABLE ROUTES AND SPLICE LOCATIONS SHOWN ON THIS SHEET ARE SHOWN SCHEMATICALLY AND NOT NECESSARILY AT THEIR EXACT LOCATIONS. SEE CABLE LAYOUT PLANS FOR EXACT LOCATIONS.
- CCTV 9 AND CCTV 11 TO BE REMOVED AND NOT SHOWN ON CABLE SCHEMATICS FOR CLARITY.
- CABLE ID NUMBERS REPRESENT UNIQUE CABLE NAMES BETWEEN TWO CABLE-TO-CABLE SPLICES, OR BETWEEN A CABLE-TO-CABLE SPLICE AND THE END OF A CABLE RUN; CABLE ID NUMBERS DO NOT CHANGE BETWEEN SIMPLE DROP CABLE SPLICES.

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(919) 876-6888 NCBEES #F-0326

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Prepared for the Offices of:

 State of North Carolina
 Department of Transportation
 Transportation Systems

Burlington-Graham Signal System Comms. Cable Schematics (1 of 4)

Division 7 Alamance County Burlington & Graham

PLAN DATE: June 2018 REVIEWED BY: HA BADGETT

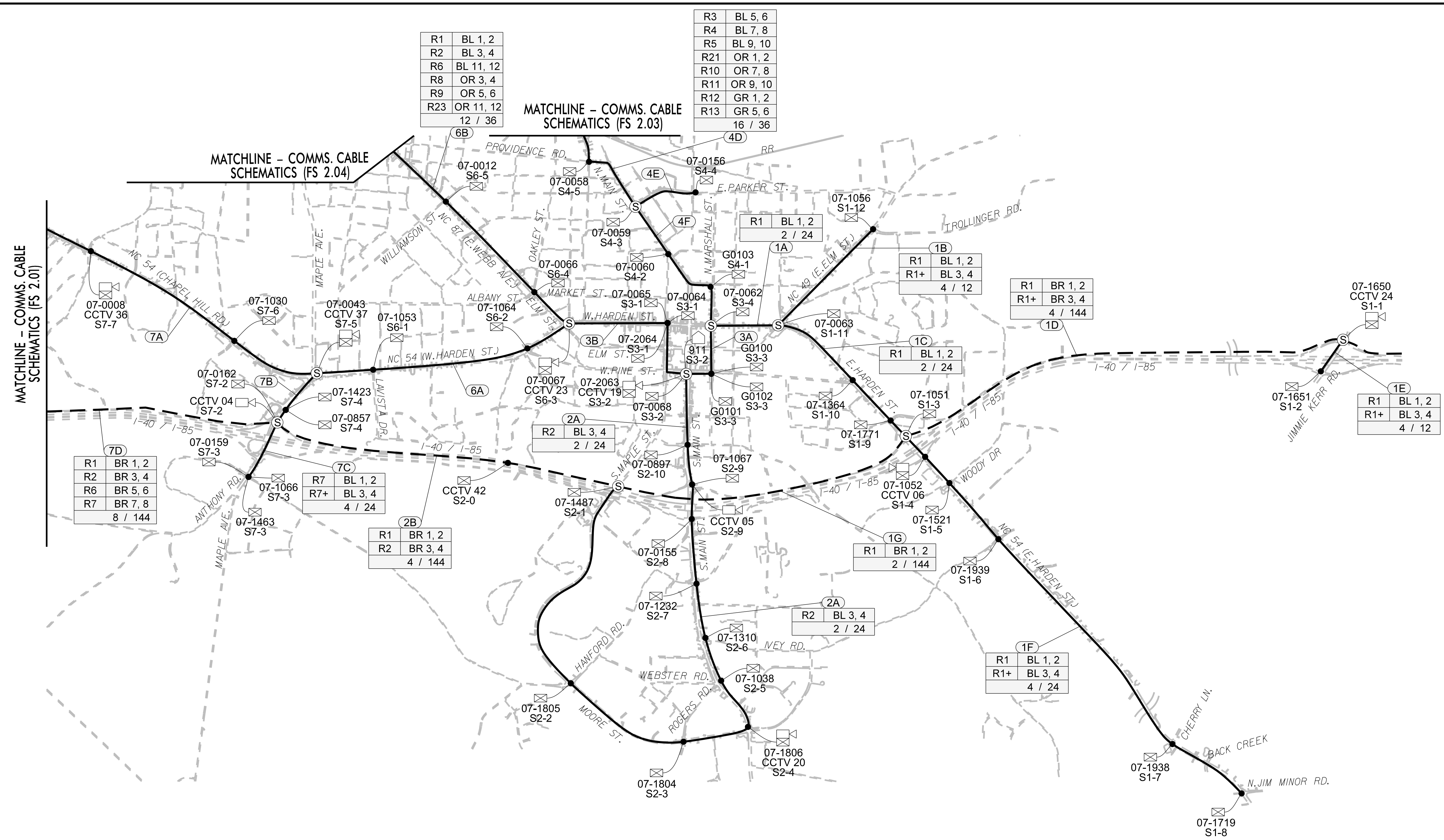
PREPARED BY: BJ SLOCUM REVIEWED BY: DL JONES

REVISIONS: _____ INIT. DATE

750 Greenfield Parkway, Garner, NC 27529
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 BRADFORD J. SLOCUM
 DATE 15/2018
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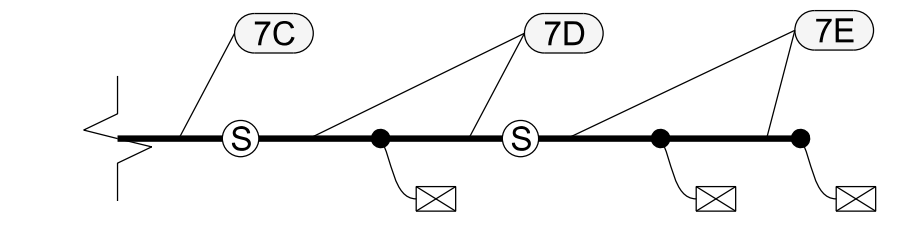
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Matchline tables for various sections: 3A, 3B, 4E, 4F, 6A, 7A, 7B, 7C, 7D, 7E, 7F. Each table lists ring numbers (R1-R13) and buffer tube types (BL, BR, OR, GR) with counts.

LEGEND: Symbols for cable-to-cable splice, drop splices to CCTV and signal cabinets, new/existing fiber-optic cables, splice numbers, city/state signal inventory numbers, and CCTV IDs. Includes a table for FIBER BUFFER TUBES (BL, OR, GR, BR) and a note about secondary paths.

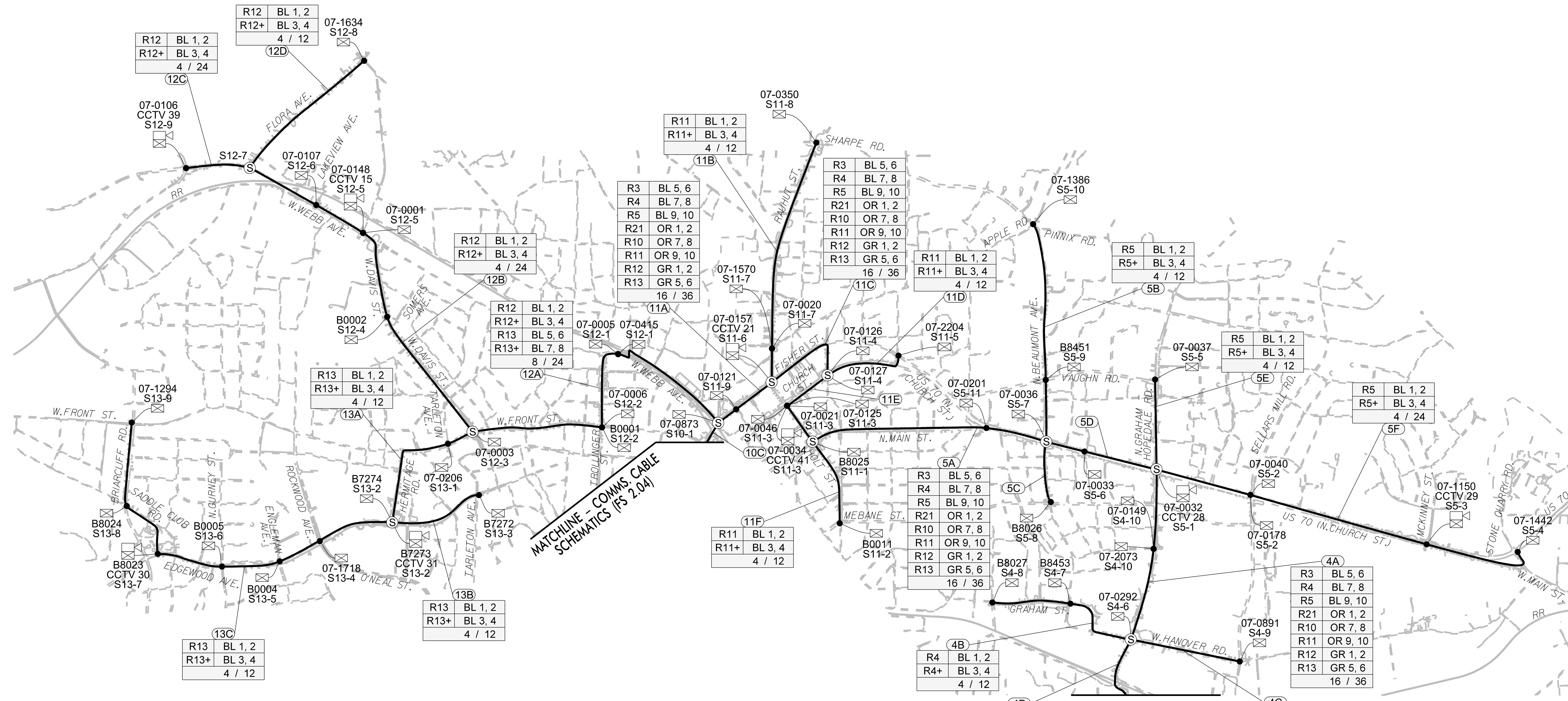
- NOTES: 1. CABLE ROUTES AND SPLICE LOCATIONS SHOWN ON THIS SHEET ARE SHOWN SCHEMATICALLY AND NOT NECESSARILY AT THEIR EXACT LOCATIONS. SEE CABLE LAYOUT PLANS FOR EXACT LOCATIONS. 2. CCTV 9 AND CCTV 11 TO BE REMOVED AND NOT SHOWN ON CABLE SCHEMATICS FOR CLARITY. 3. CABLE ID NUMBERS REPRESENT UNIQUE CABLE NAMES BETWEEN TWO CABLE-TO-CABLE SPLICES, OR BETWEEN A CABLE-TO-CABLE SPLICE AND THE END OF A CABLE RUN; CABLE ID NUMBERS DO NOT CHANGE BETWEEN SIMPLE DROP CABLE SPLICES.



ATKINS 1616 EAST MILLBROOK ROAD, SUITE 160 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

Project title block: Burlington-Graham Signal System Comms. Cable Schematics (2 of 4). Includes division information, plan date (June 2018), reviewer (HA BADGETT), and a professional seal for Bradford J. Slocum, Engineer.

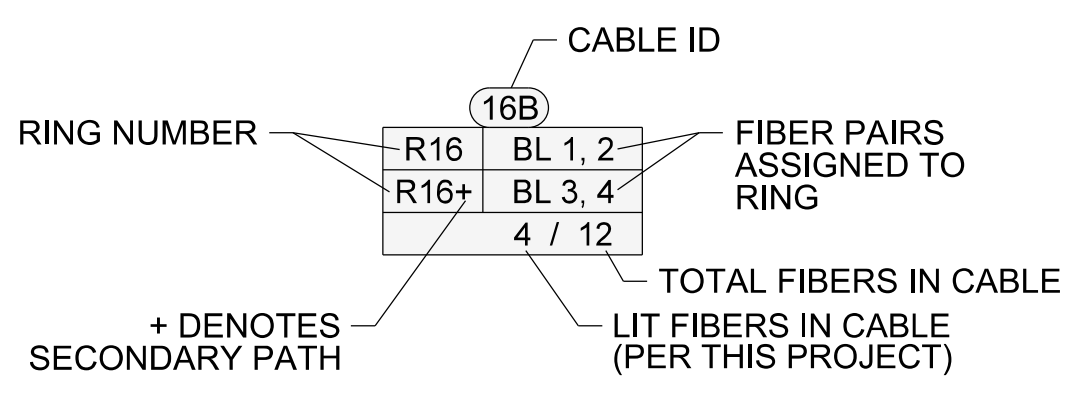
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LEGEND

- ⊙ CABLE-TO-CABLE SPLICE
- □ DROP SPLICE TO CCTV CABINET
- □ DROP SPLICE TO SIGNAL CABINET
- □ DROP SPLICE TO SIGNAL CABINET (SHARED SWITCH WITH CCTV)
- □ DROP SPLICE TO BUILDING (STORE CABLE OUTSIDE BUILDING PER CL SHEET)
- NEW FIBER-OPTIC CABLE
- - - EXISTING FIBER-OPTIC CABLE
- S### SPLICE NUMBER
- B#### CITY SIGNAL INVENTORY NUMBER
- 07-#### STATE SIGNAL INVENTORY NUMBER
- CCTV ## CCTV ID

| | | | |
|-------------------------------------|--|--|--|
| (5C) | (5D) | (10C) | (11E) |
| R5 BL 1, 2 R5+ BL 3, 4 4 / 12 | R3 BL 5, 6 R4 BL 7, 8 R5 BL 9, 10 R21 OR 1, 2 R10 OR 7, 8 R11 OR 9, 10 R12 GR 1, 2 R13 GR 5, 6 16 / 36 | R3 BL 5, 6 R4 BL 7, 8 R5 BL 9, 10 R21 OR 1, 2 R10 OR 7, 8 R11 OR 9, 10 R12 GR 1, 2 R13 GR 5, 6 16 / 36 | R3 BL 5, 6 R4 BL 7, 8 R5 BL 9, 10 R21 OR 1, 2 R10 OR 7, 8 R11 OR 9, 10 R12 GR 1, 2 R13 GR 5, 6 16 / 36 |

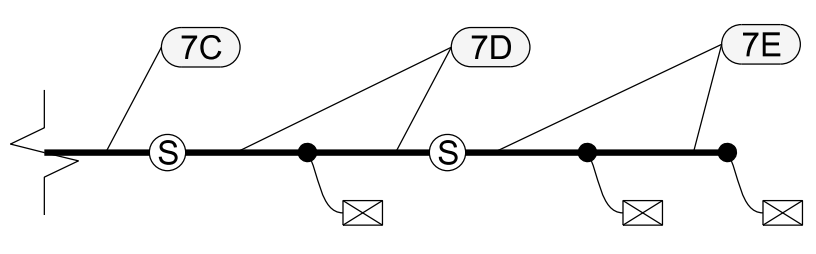


FIBER BUFFER TUBES

- BL - BLUE
- OR - ORANGE
- GR - GREEN
- BR - BROWN

NOTES:

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MATCHLINE - COMMS. CABLE SCHEMATICS (FS 2.02)

| | | | | | | | | |
|------------|------------|-------------|-------------|-------------|--------------|-------------|-------------|---------|
| R3 BL 5, 6 | R4 BL 7, 8 | R5 BL 9, 10 | R21 OR 1, 2 | R10 OR 7, 8 | R11 OR 9, 10 | R12 GR 1, 2 | R13 GR 5, 6 | 16 / 36 |
|------------|------------|-------------|-------------|-------------|--------------|-------------|-------------|---------|

| | | |
|------------|-------------|--------|
| R4 BL 1, 2 | R4+ BL 3, 4 | 4 / 12 |
|------------|-------------|--------|

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RALEIGH, NORTH CAROLINA 27609
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 DEPARTMENT OF TRANSPORTATION
 750 Greenfield Parkway, Garner, NC 27529

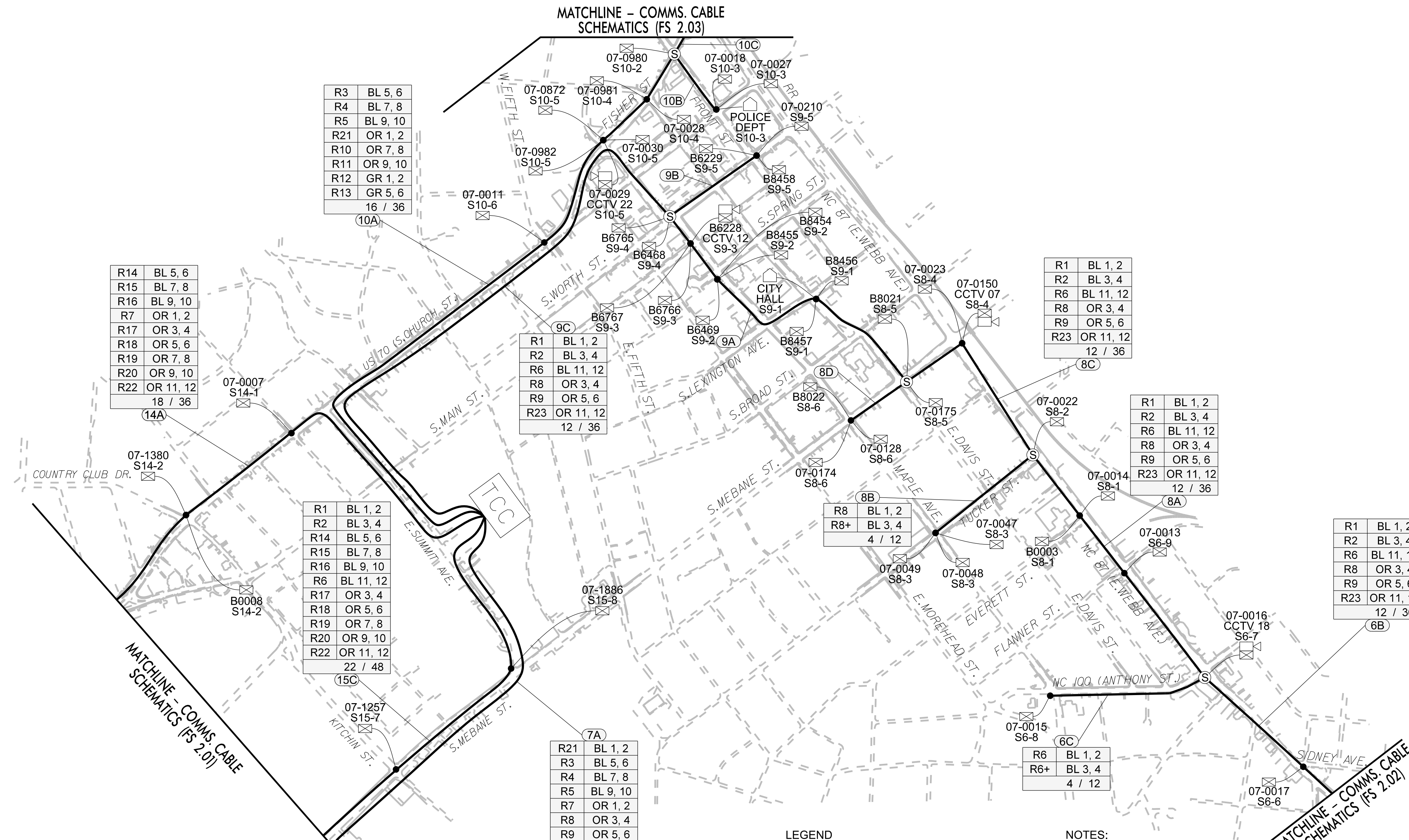
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| Burlington-Graham Signal System Comms. Cable Schematics (3 of 4) | | Burlington & Graham | |
| Division 7 | Alamance County | | |
| PLAN DATE: June 2018 | REVIEWED BY: HA BADGETT | | |
| PREPARED BY: BJ SLOCUM | REVIEWED BY: DL JONES | | |
| REVISIONS | | INIT. | DATE |
| | | | |

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ENGINEER
SEAL
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BRADFORD J. SLOCUM
15/2018
DATE

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MATCHLINE - COMMS. CABLE SCHEMATICS (FS 2.03)



8D

| | |
|--------|---------|
| R8 | BL 1, 2 |
| R8+ | BL 3, 4 |
| 4 / 12 | |

9A

| | |
|---------|-----------|
| R1 | BL 1, 2 |
| R2 | BL 3, 4 |
| R6 | BL 11, 12 |
| R8 | OR 3, 4 |
| R9 | OR 5, 6 |
| R23 | OR 11, 12 |
| 12 / 36 | |

9B

| | |
|--------|---------|
| R9 | BL 1, 2 |
| R9+ | BL 3, 4 |
| 4 / 12 | |

10B

| | |
|--------|---------|
| R10 | BL 1, 2 |
| R10+ | BL 3, 4 |
| R21 | BL 5, 6 |
| R21+ | BL 7, 8 |
| 8 / 12 | |

10C

| | |
|---------|----------|
| R3 | BL 5, 6 |
| R4 | BL 7, 8 |
| R5 | BL 9, 10 |
| R21 | OR 1, 2 |
| R10 | OR 7, 8 |
| R11 | OR 9, 10 |
| R12 | GR 1, 2 |
| R13 | GR 5, 6 |
| 16 / 36 | |

7A

| | |
|---------|-----------|
| R21 | BL 1, 2 |
| R3 | BL 5, 6 |
| R4 | BL 7, 8 |
| R5 | BL 9, 10 |
| R7 | OR 1, 2 |
| R8 | OR 3, 4 |
| R9 | OR 5, 6 |
| R10 | OR 7, 8 |
| R11 | OR 9, 10 |
| R23 | OR 11, 12 |
| R12 | GR 1, 2 |
| R13 | GR 5, 6 |
| 24 / 48 | |

8C

| | |
|---------|-----------|
| R1 | BL 1, 2 |
| R2 | BL 3, 4 |
| R6 | BL 11, 12 |
| R8 | OR 3, 4 |
| R9 | OR 5, 6 |
| R23 | OR 11, 12 |
| 12 / 36 | |

8A

| | |
|---------|-----------|
| R1 | BL 1, 2 |
| R2 | BL 3, 4 |
| R6 | BL 11, 12 |
| R8 | OR 3, 4 |
| R9 | OR 5, 6 |
| R23 | OR 11, 12 |
| 12 / 36 | |

6B

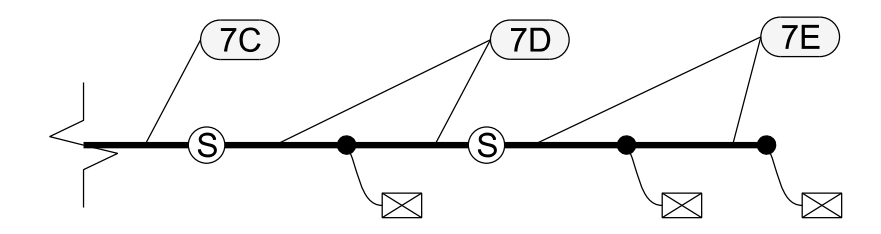
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|---------|-----------|
| R1 | BL 1, 2 |
| R2 | BL 3, 4 |
| R6 | BL 11, 12 |
| R8 | OR 3, 4 |
| R9 | OR 5, 6 |
| R23 | OR 11, 12 |
| 12 / 36 | |

LEGEND

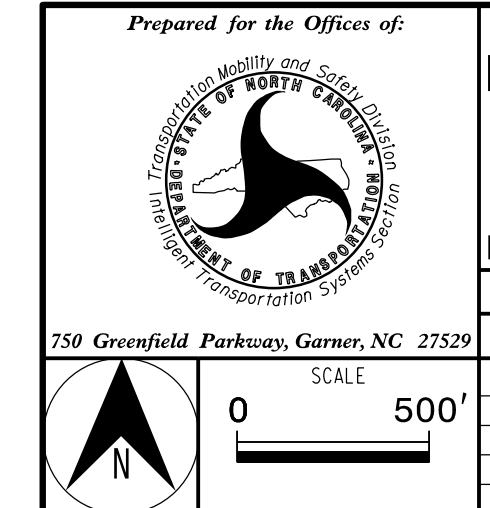
- Ⓢ CABLE-TO-CABLE SPLICE
 - DROP SPLICE TO CCTV CABINET
 - DROP SPLICE TO SIGNAL CABINET
 - DROP SPLICE TO SIGNAL CABINET (SHARED SWITCH WITH CCTV)
 - DROP SPLICE TO BUILDING (STORE CABLE OUTSIDE BUILDING PER CL SHEET)
 - NEW FIBER-OPTIC CABLE
 - - - EXISTING FIBER-OPTIC CABLE
 - S#-### SPLICE NUMBER
 - B##### CITY SIGNAL INVENTORY NUMBER
 - 07-##### STATE SIGNAL INVENTORY NUMBER
 - CCTV # CCTV ID
 - CABLE ID
- RING NUMBER
- | | |
|--------|---------|
| R16 | BL 1, 2 |
| R16+ | BL 3, 4 |
| 4 / 12 | |
- FIBER PAIRS ASSIGNED TO RING
- TOTAL FIBERS IN CABLE
- LIT FIBERS IN CABLE (PER THIS PROJECT)
- + DENOTES SECONDARY PATH
- FIBER BUFFER TUBES
- | | | |
|----|---|--------|
| BL | - | BLUE |
| OR | - | ORANGE |
| GR | - | GREEN |
| BR | - | BROWN |

NOTES:

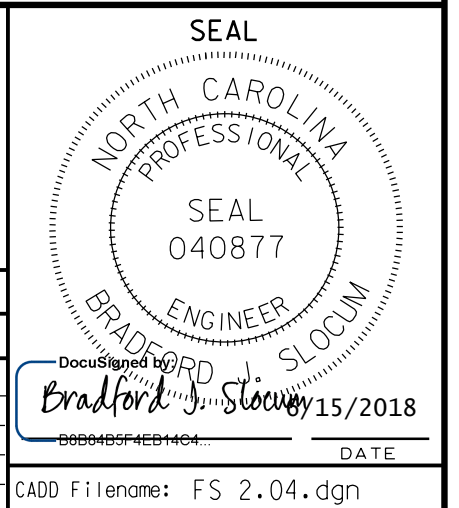
1. CABLE ROUTES AND SPLICE LOCATIONS SHOWN ON THIS SHEET ARE SHOWN SCHEMATICALLY AND NOT NECESSARILY AT THEIR EXACT LOCATIONS. SEE CABLE LAYOUT PLANS FOR EXACT LOCATIONS.
2. CCTV 9 AND CCTV 11 TO BE REMOVED AND NOT SHOWN ON CABLE SCHEMATICS FOR CLARITY.
3. CABLE ID NUMBERS REPRESENT UNIQUE CABLE NAMES BETWEEN TWO CABLE-TO-CABLE SPLICES, OR BETWEEN A CABLE-TO-CABLE SPLICE AND THE END OF A CABLE RUN; CABLE ID NUMBERS DO NOT CHANGE BETWEEN SIMPLE DROP CABLE SPLICES.



ATKINS 1616 EAST MILLBROOK ROAD, SUITE 160 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326



| | | |
|------------------------|-------------------------|---------------------|
| Division 7 | Alamance County | Burlington & Graham |
| PLAN DATE: June 2018 | REVIEWED BY: HA BADGETT | |
| PREPARED BY: BJ SLOCUM | REVIEWED BY: DL JONES | |
| REVISIONS | INIT. | DATE |
| | | |
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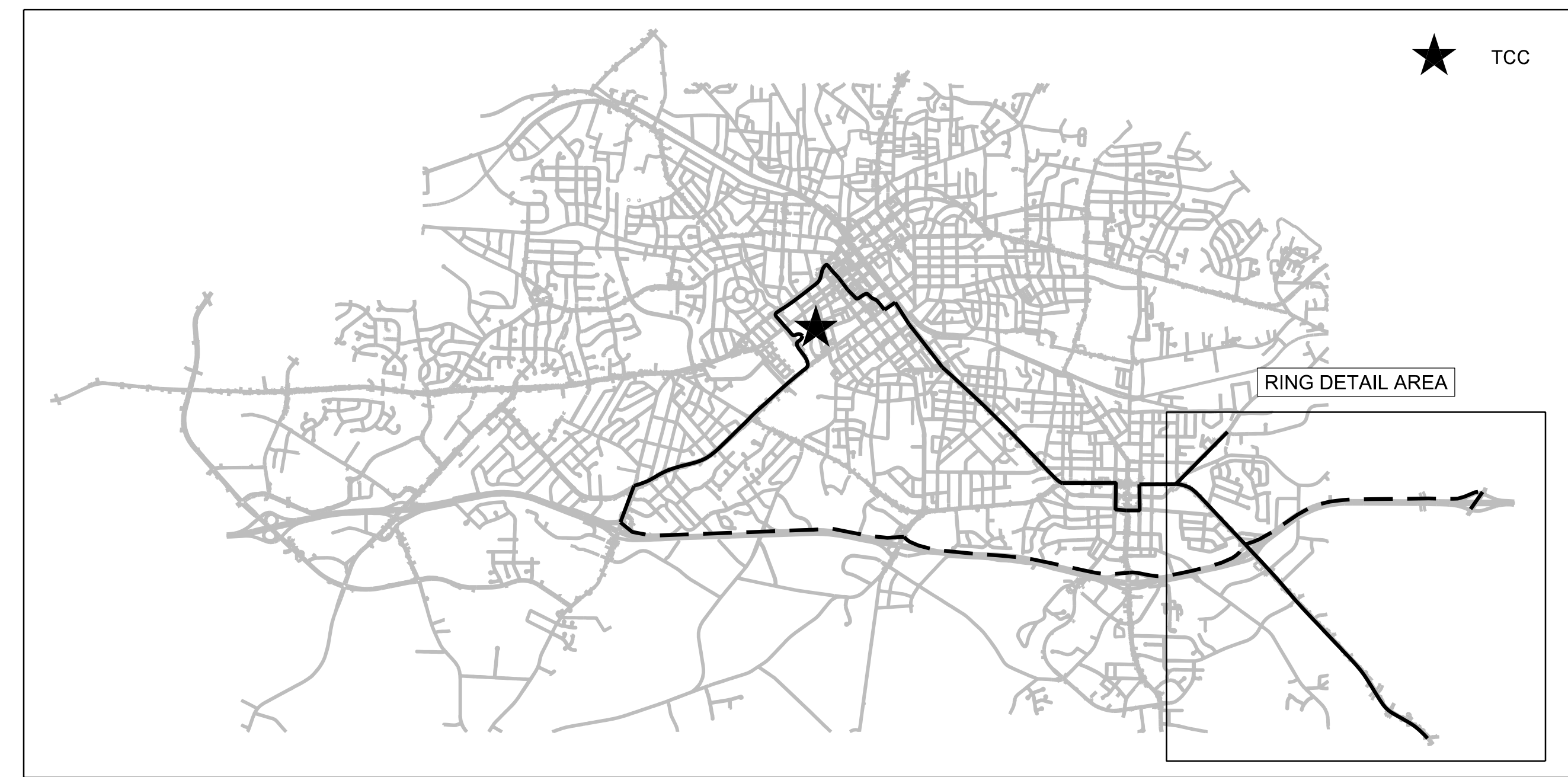
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RING 1 DETAIL



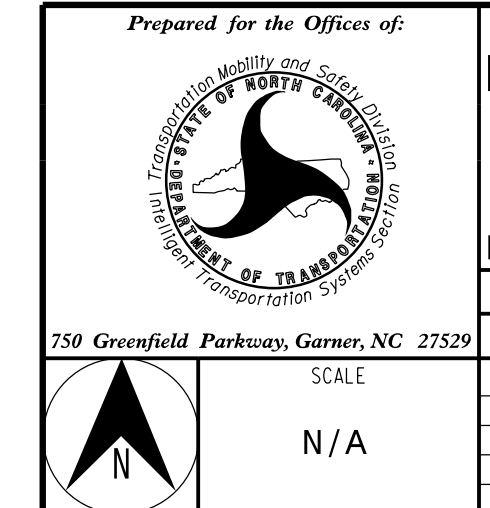
RING 1 OVERALL ROUTE



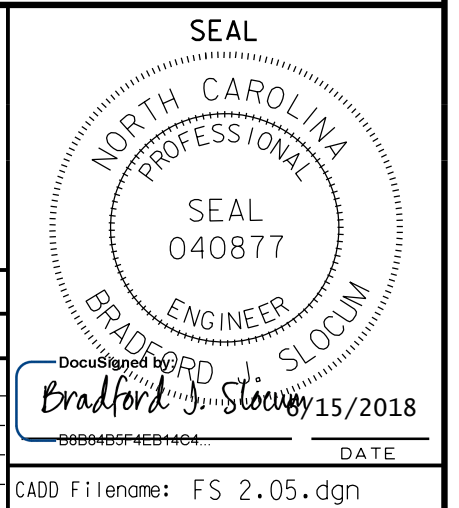
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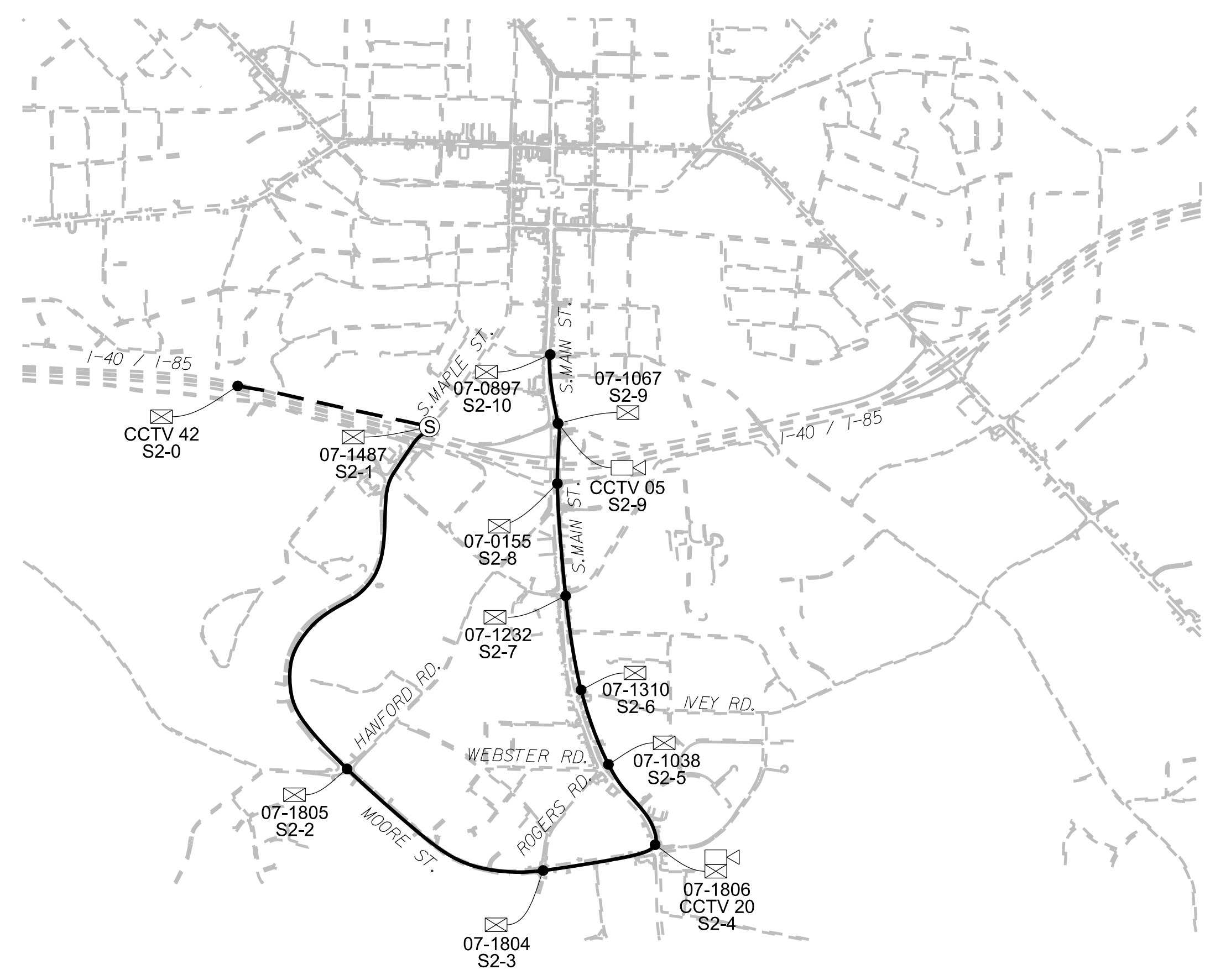
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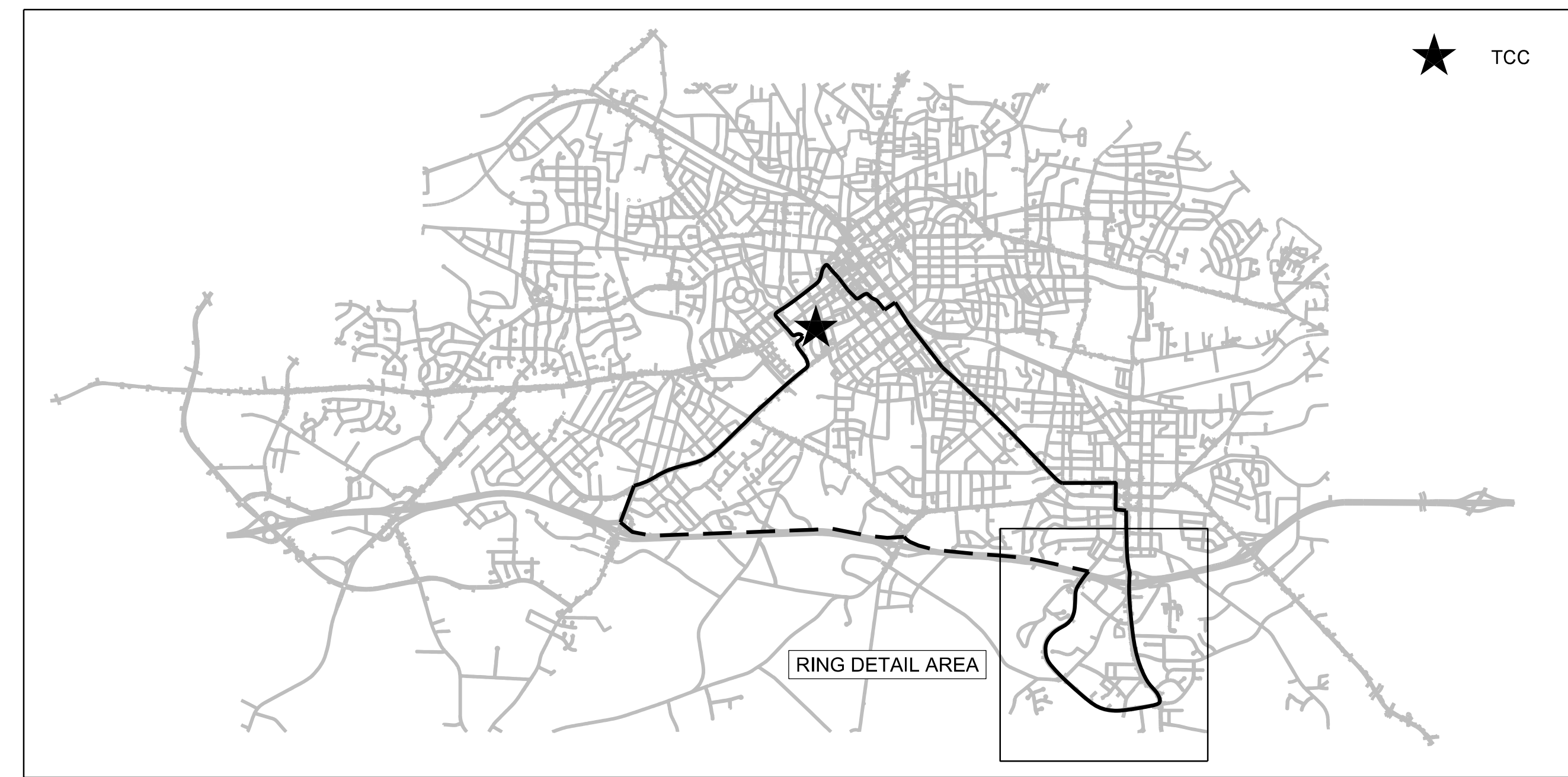
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|---|-------------------------|------------------------|
| Burlington-Graham Signal System Fiber-Optic Ring Schematics (Ring 1) | | Burlington & Graham |
| Division 7 | Alamance County | |
| PLAN DATE: June 2018 | REVIEWED BY: HA BADGETT | |
| PREPARED BY: BJ SLOCUM | REVIEWED BY: DL JONES | |
| REVISIONS | INIT. | DATE |
| | | |
| | | |



RING 2 DETAIL




RING 2 OVERALL ROUTE



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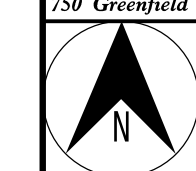
ATKINS 1616 EAST MILLBROOK ROAD, SUITE 160
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBES #F-0326

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 750 Greenfield Parkway, Garner, NC 27529

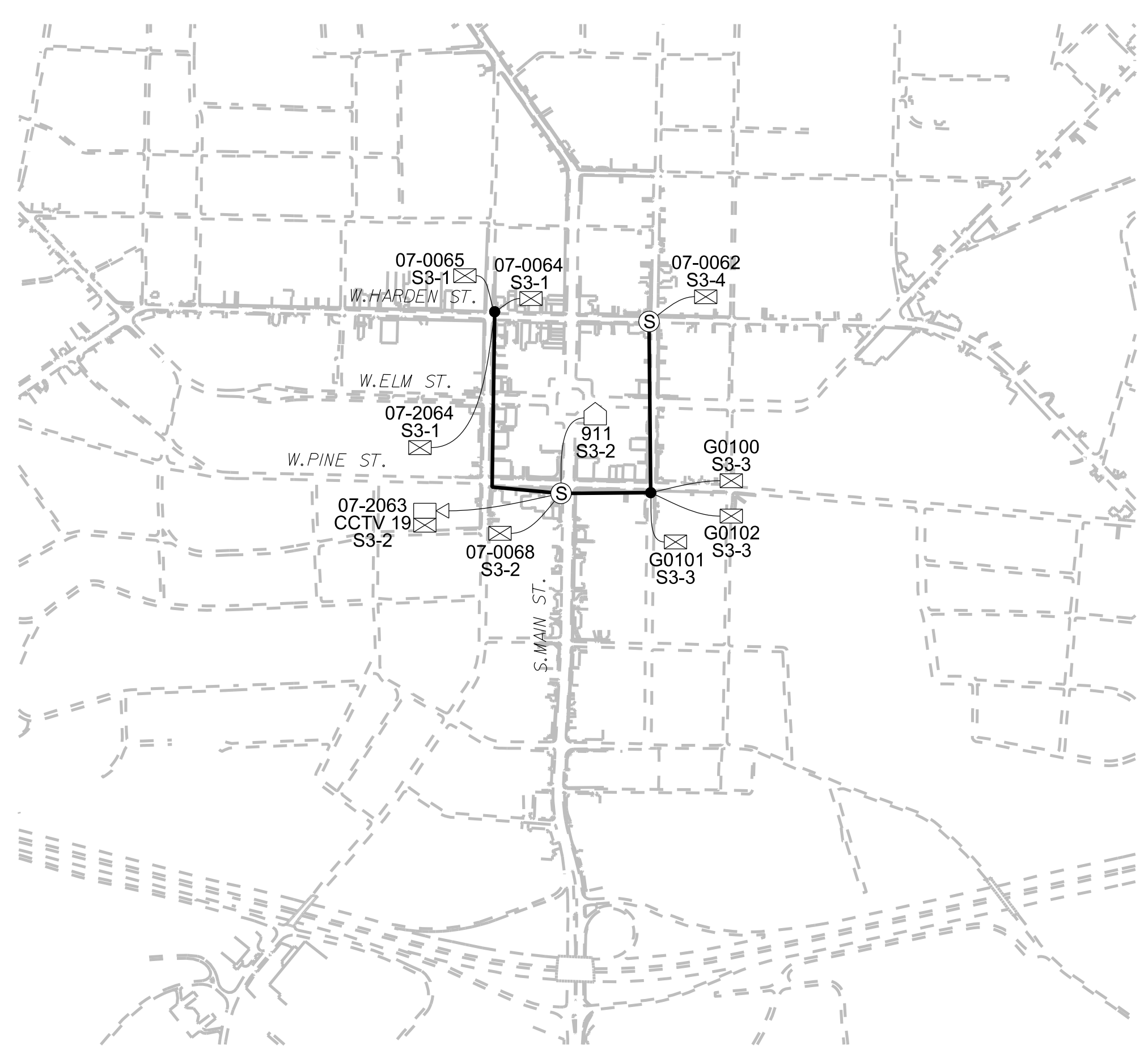
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| Burlington-Graham Signal System Fiber-Optic Ring Schematics (Ring 2) | | Burlington & Graham |
| Division 7 | Alamance County | |
| PLAN DATE: June 2018 | REVIEWED BY: HA BADGETT | |
| PREPARED BY: BJ SLOCUM | REVIEWED BY: DL JONES | |
| REVISIONS | INIT. | DATE |
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SEAL
 NORTH CAROLINA
 PROFESSIONAL
 SEAL
 040877
 ENGINEER
 BRADFORD J. SLOCUM
 15/2018
 DATE
 CADD File name: FS 2.06.dgn

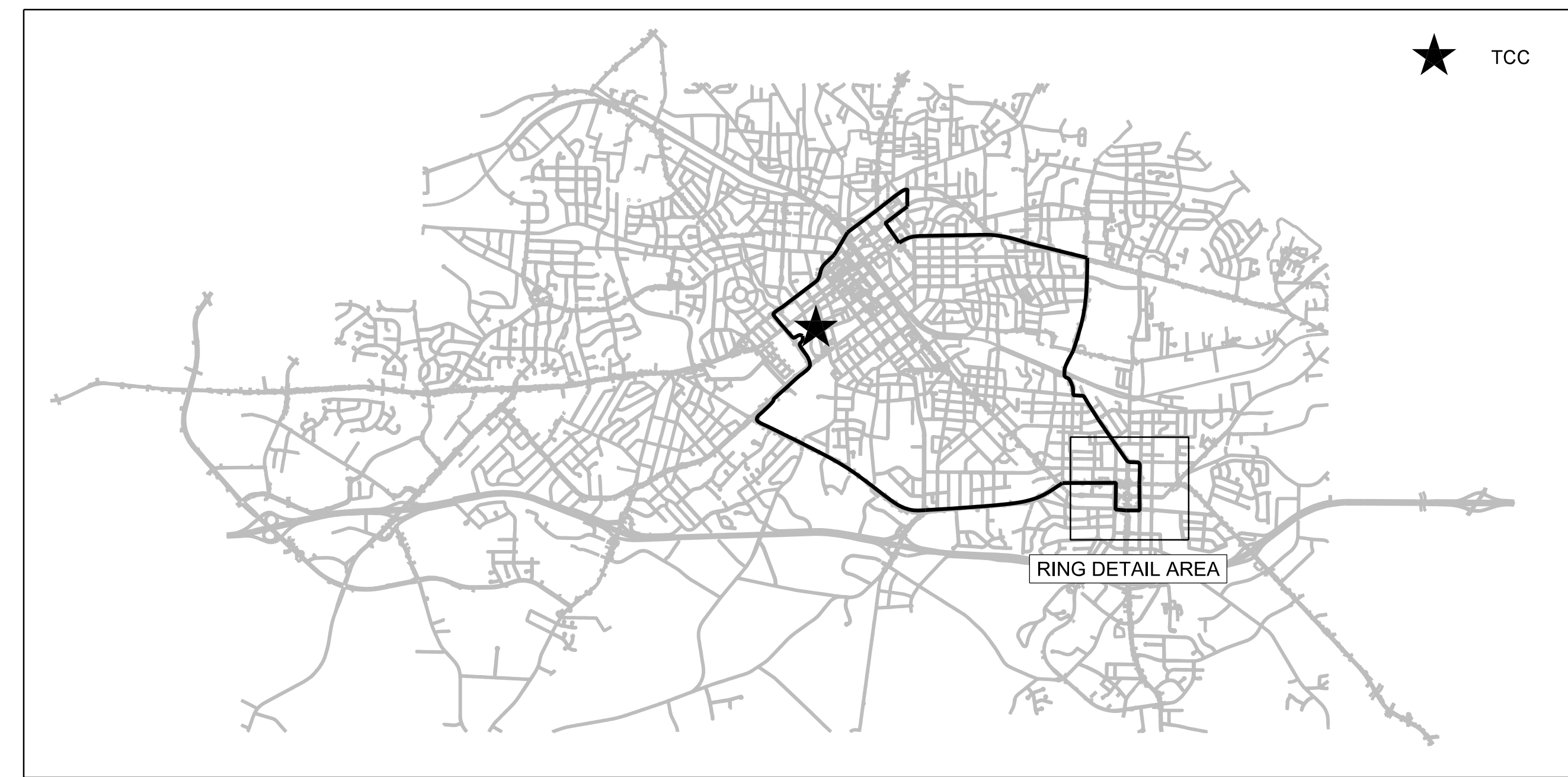


SCALE
N/A

RING 3 DETAIL



RING 3 OVERALL ROUTE



- NOTES:
- COUNTY 911 CENTER IS ON RING 21. CONNECTION SHOWN ON THIS SHEET AS ITS DROP CABLE SPLICES TO TRUNK CABLE AT S3-1. SEE FIBER-OPTIC RING SCHEMATICS (RINGS 21, 22, 23) FOR OVERALL RING ROUTE.

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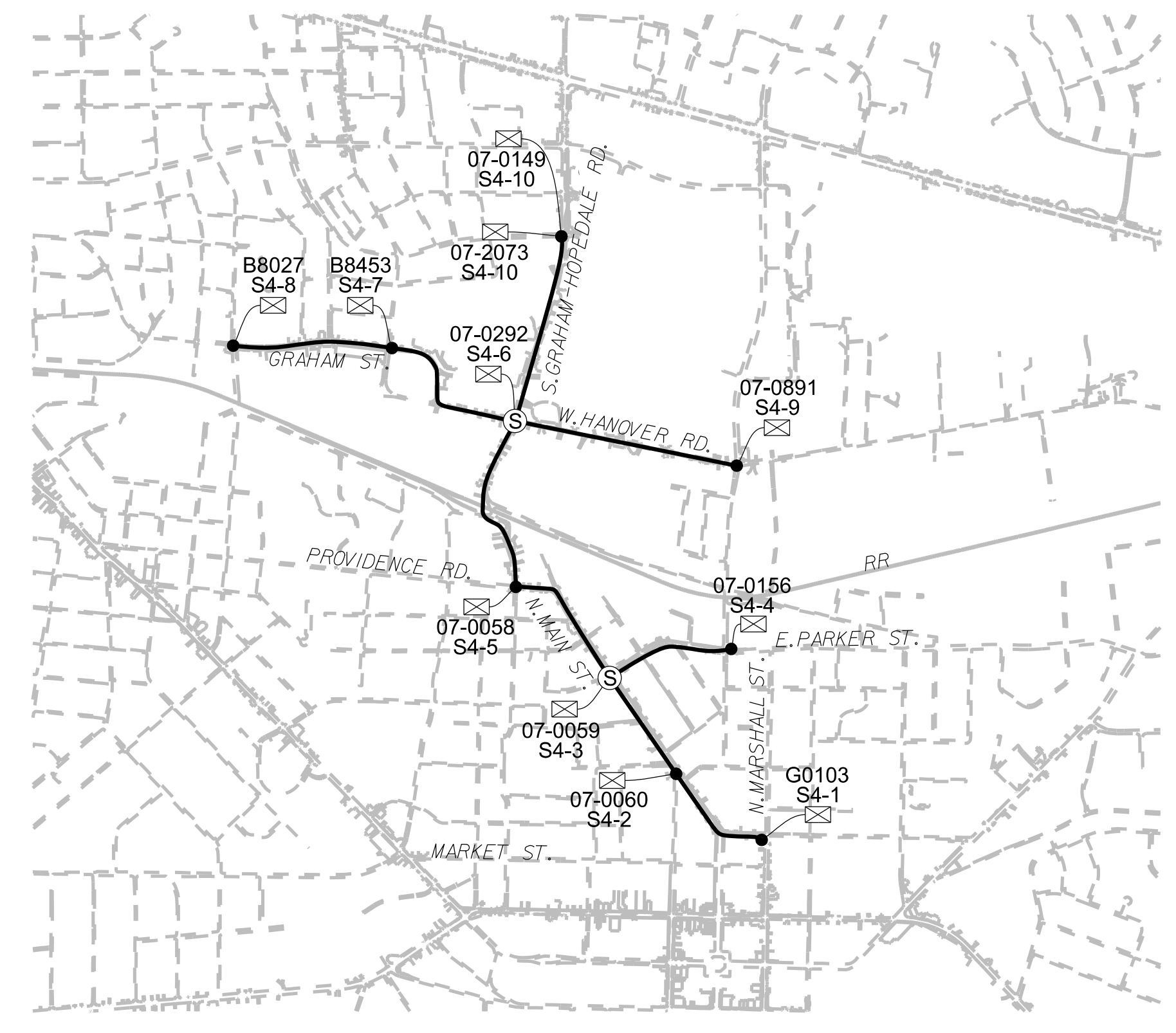
 750 Greenfield Parkway, Garner, NC 27529

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| Burlington-Graham Signal System Fiber-Optic Ring Schematics (Ring 3) | | Burlington & Graham |
| Division 7 | Alamance County | |
| PLAN DATE: June 2018 | REVIEWED BY: HA BADGETT | |
| PREPARED BY: BJ SLOCUM | REVIEWED BY: DL JONES | |
| REVISIONS | INIT. | DATE |
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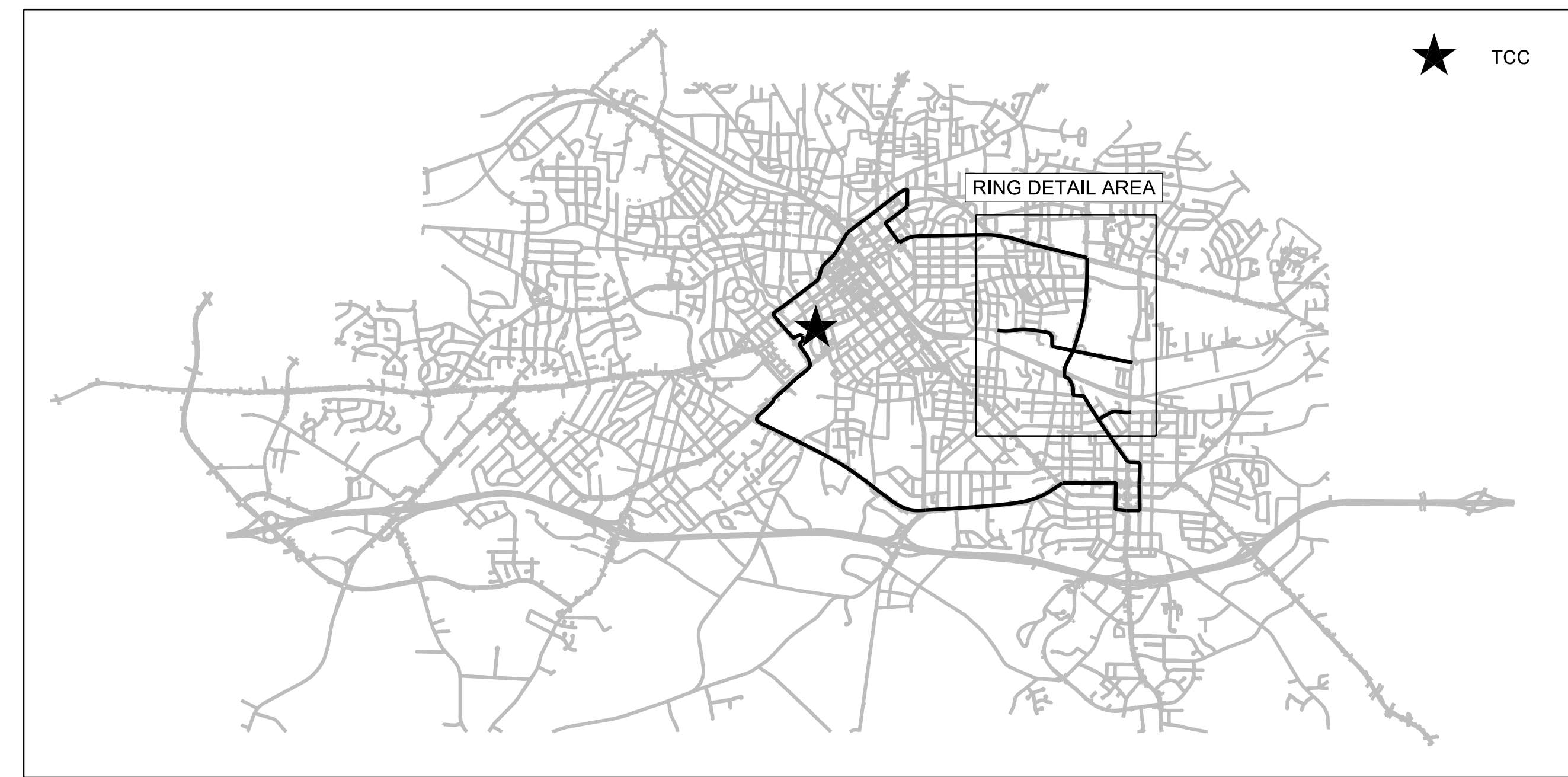
SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 040877
 BRADFORD J. SLOCUM
 ENGINEER
 15/2018
 DATE

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 SLOCUM33 AT LUS355433

RING 4 DETAIL




RING 4 OVERALL ROUTE



14 JUN 2018 10:06
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SLOCUM AT LUS355433

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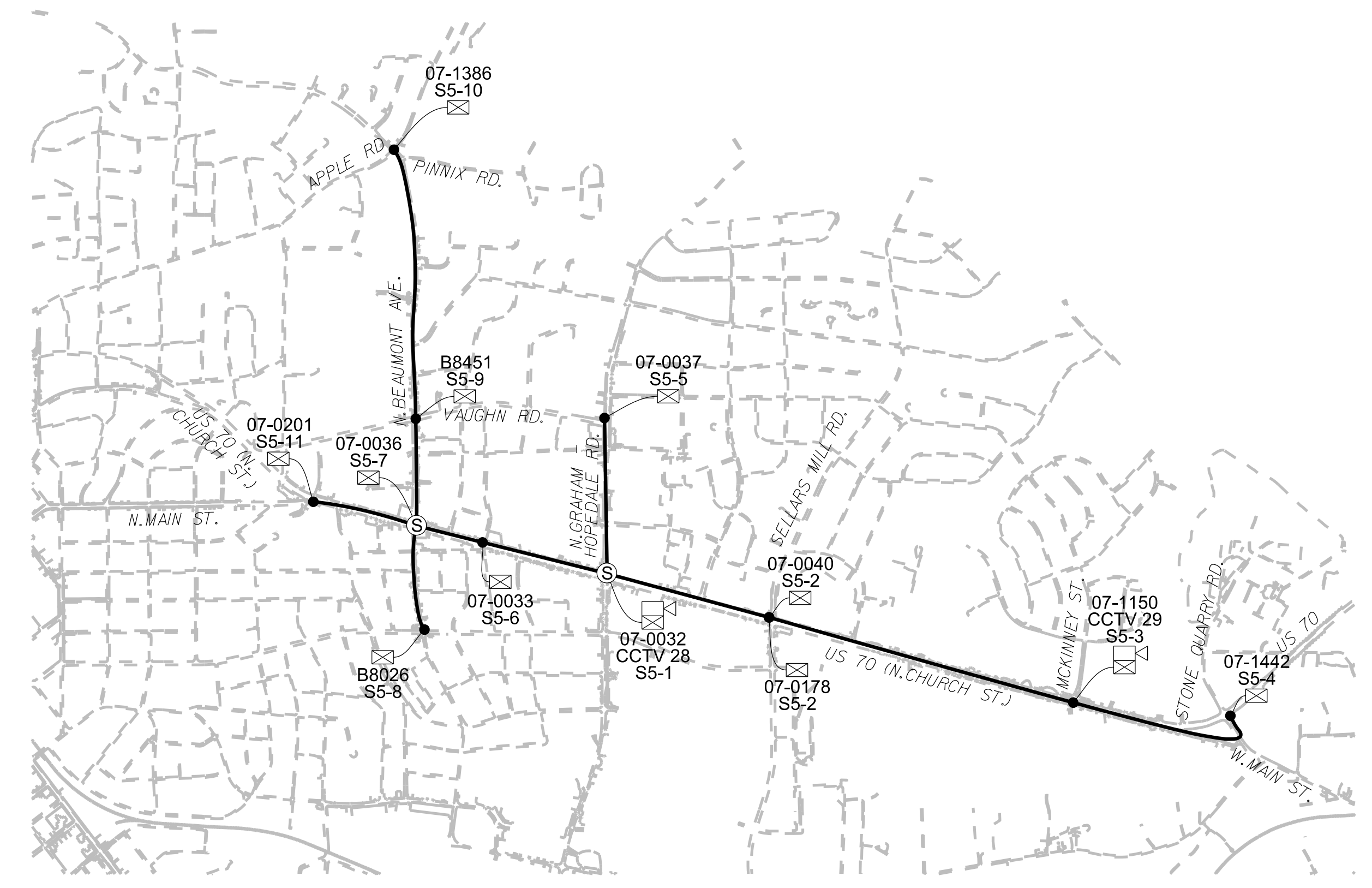
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UNLESS ALL SIGNATURES COMPLETED

Prepared for the Offices of:

 NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 750 Greenfield Parkway, Garner, NC 27529

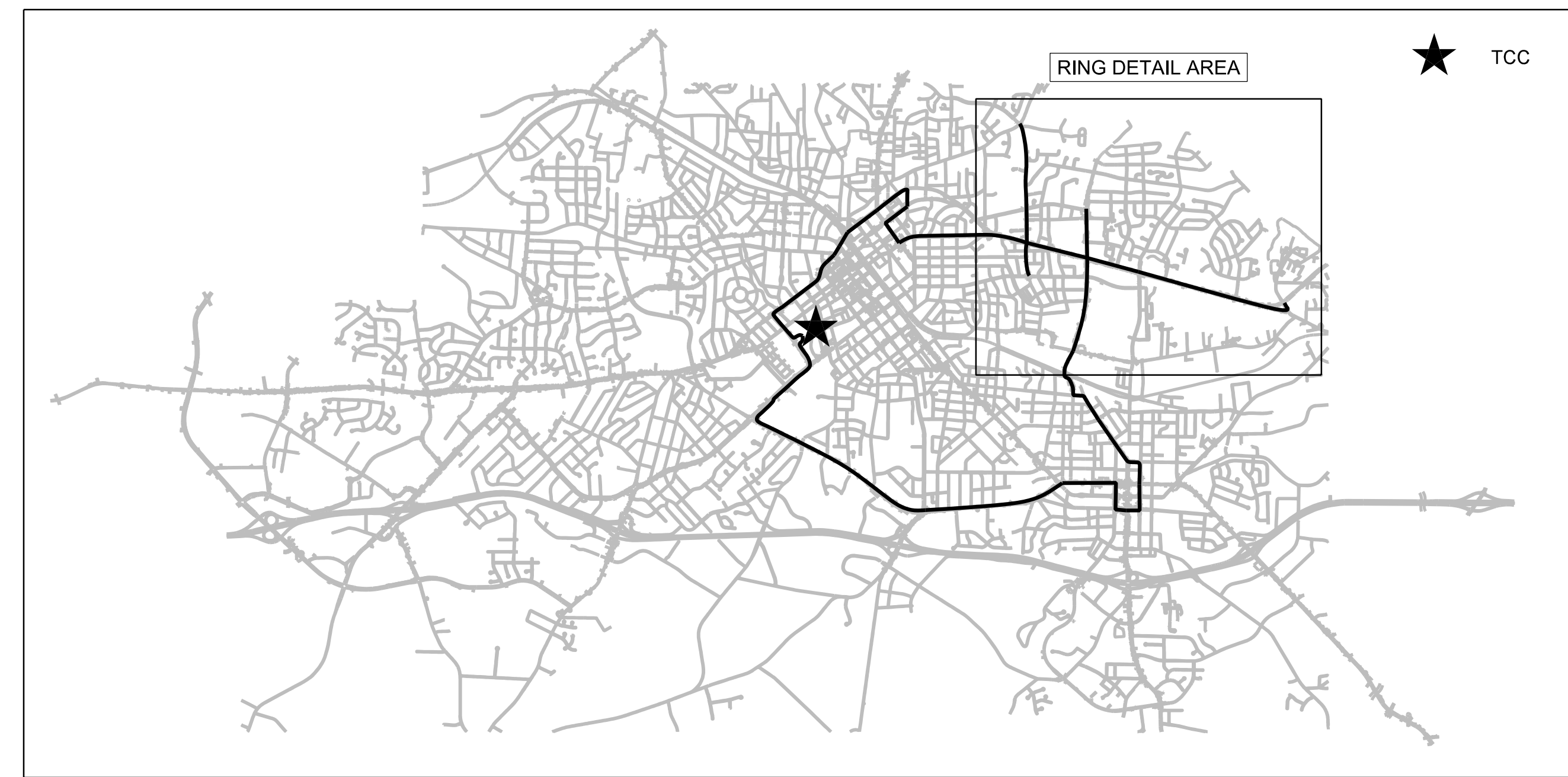
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| Burlington-Graham Signal System Fiber-Optic Ring Schematics (Ring 4) | | Burlington & Graham |
| Division 7 Alamance County | | |
| PLAN DATE: June 2018 | REVIEWED BY: HA BADGETT | |
| PREPARED BY: BJ SLOCUM | REVIEWED BY: DL JONES | |
| REVISIONS | INIT. | DATE |
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 NORTH CAROLINA
 PROFESSIONAL
 SEAL
 040877
 ENGINEER
 BRADFORD J. SLOCUM
 15/2018
 DATE

RING 5 DETAIL



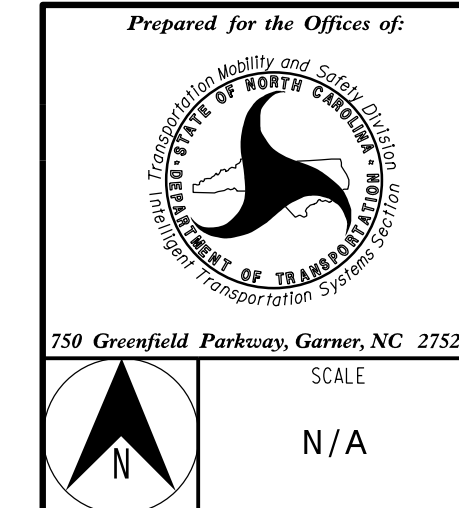
RING 5 OVERALL ROUTE



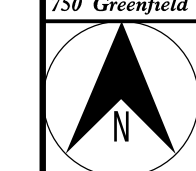
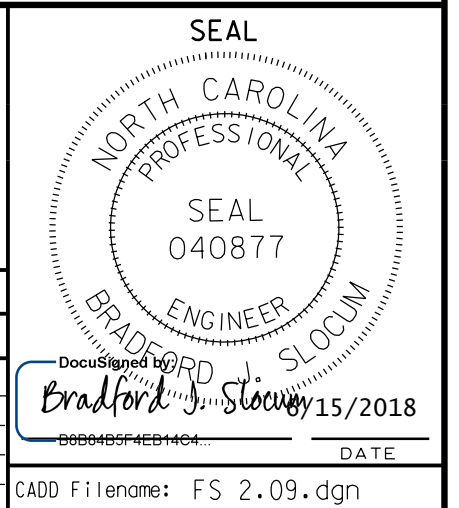
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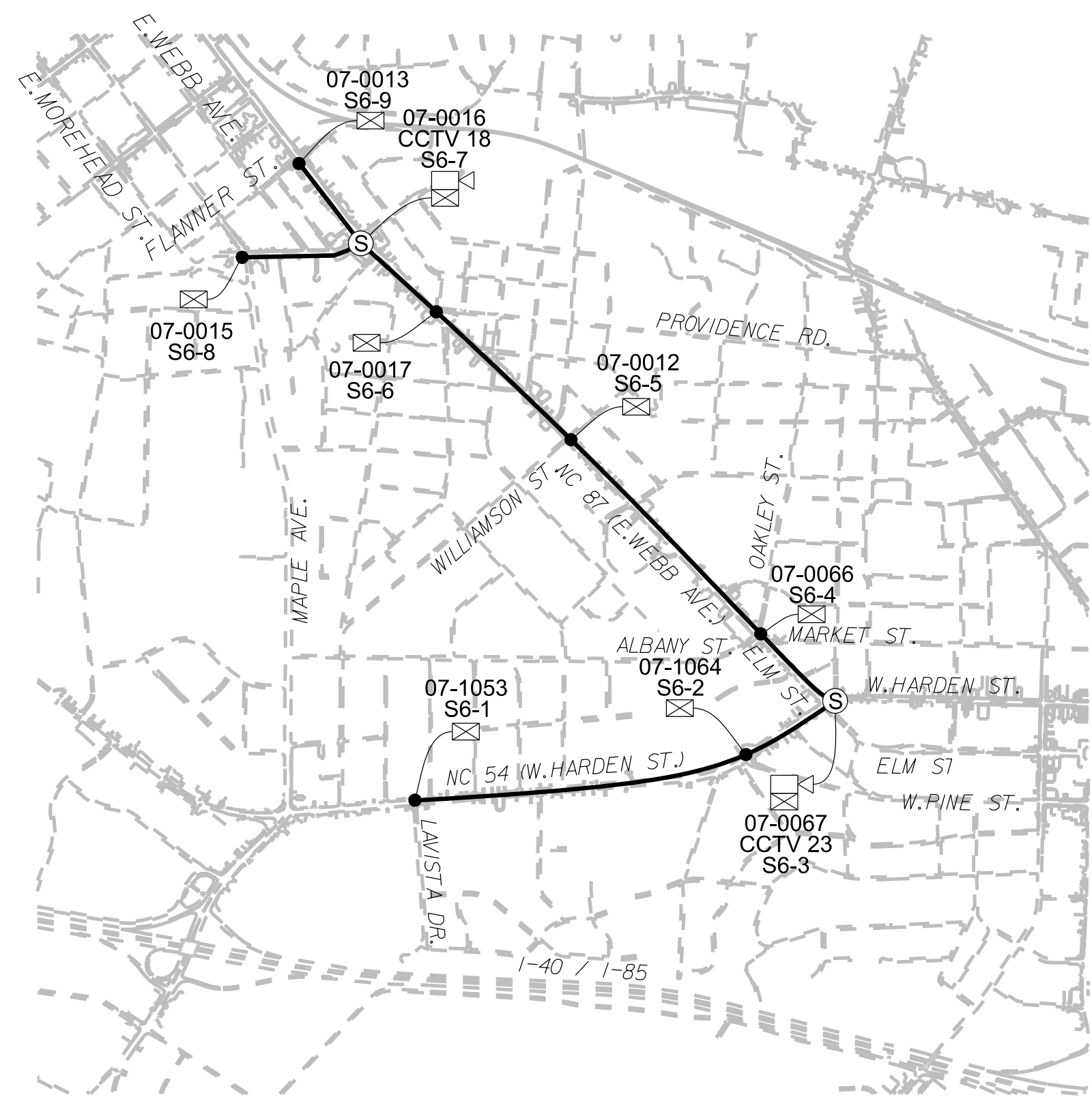


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| Burlington-Graham Signal System Fiber-Optic Ring Schematics (Ring 5) | | Burlington & Graham |
| Division 7 Alamance County | | |
| PLAN DATE: June 2018 | REVIEWED BY: HA BADGETT | |
| PREPARED BY: BJ SLOCUM | REVIEWED BY: DL JONES | |
| REVISIONS | INIT. | DATE |
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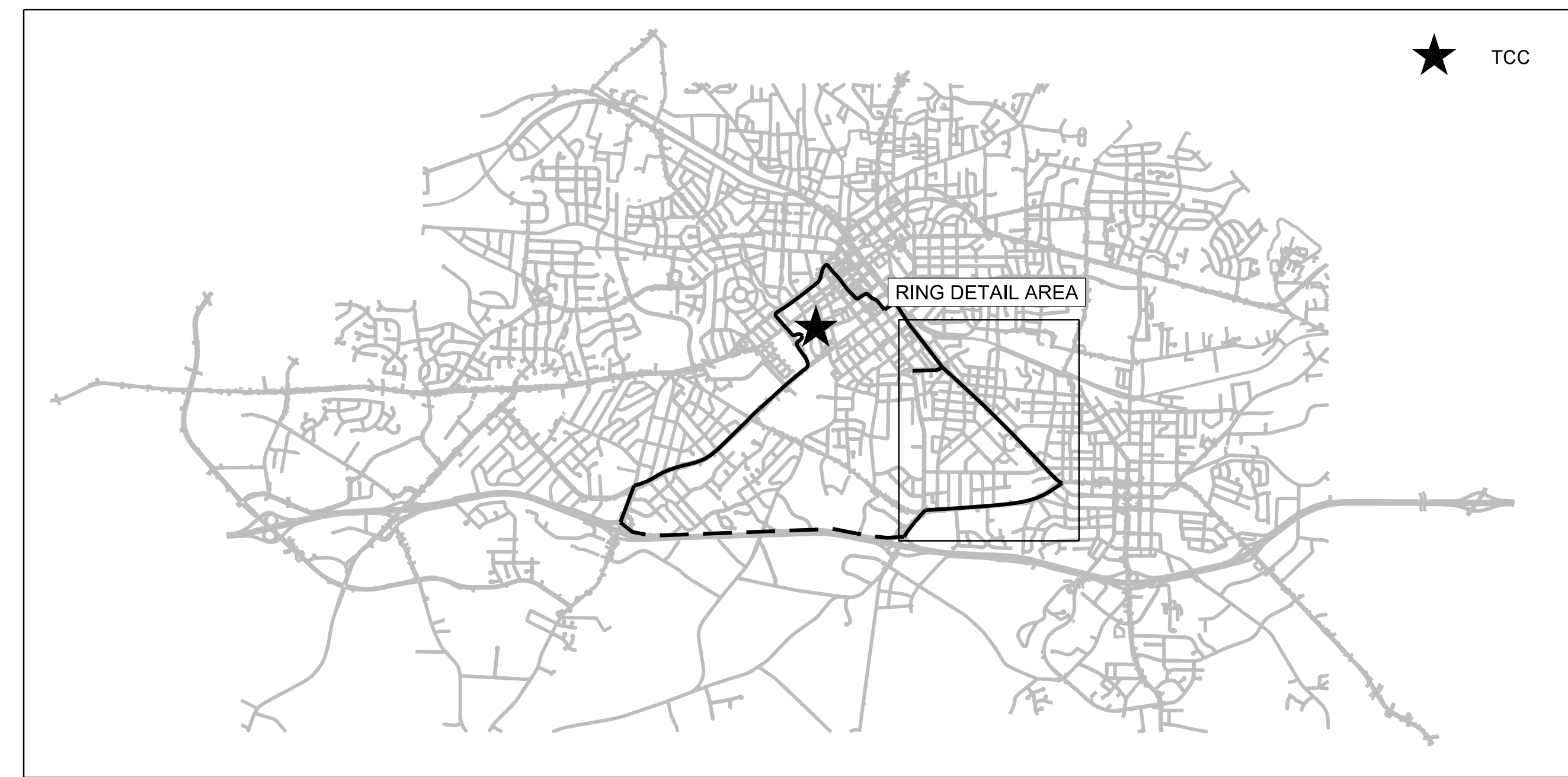


SCALE
N/A

RING 6 DETAIL



RING 6 OVERALL ROUTE



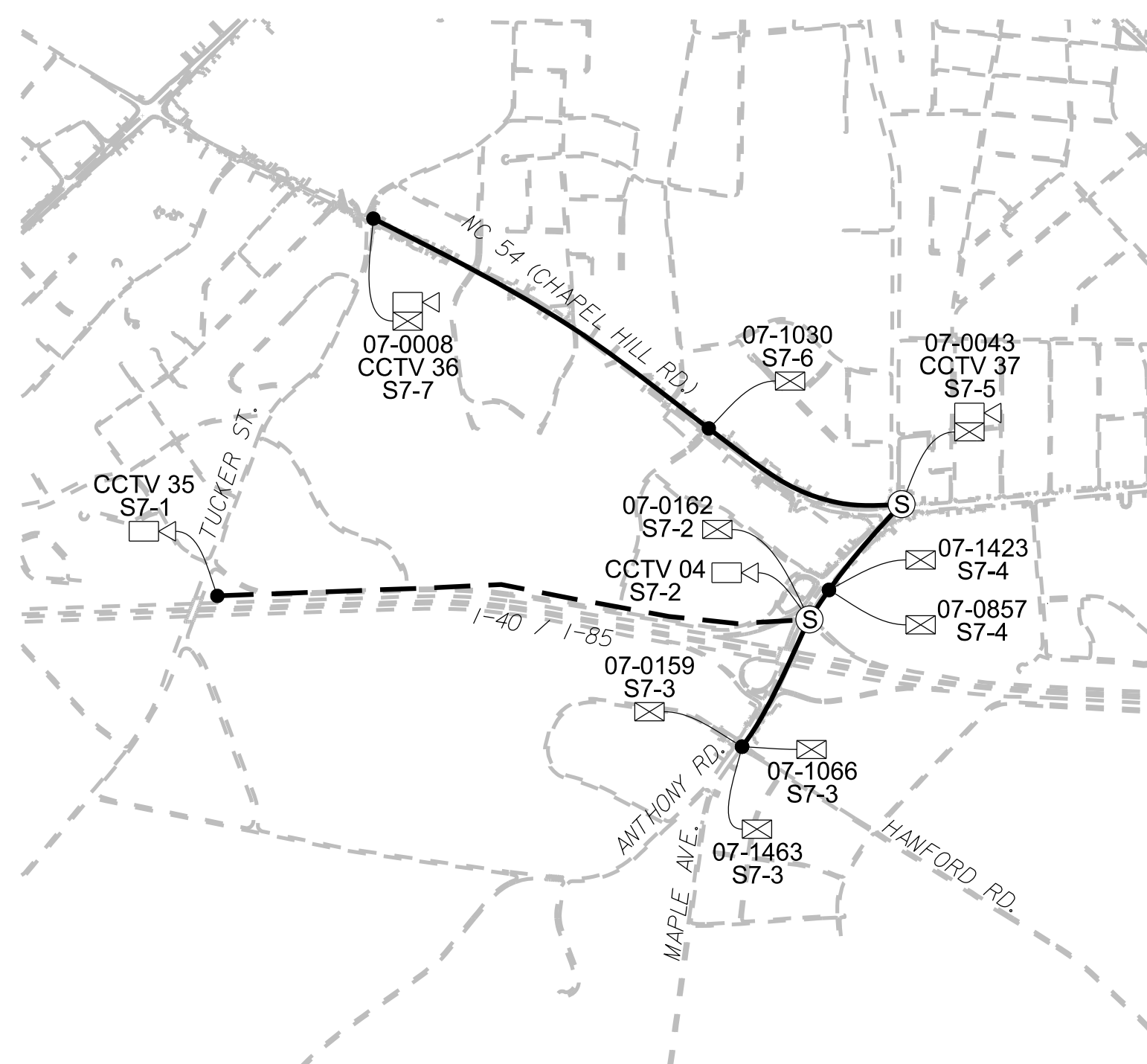
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 RALEIGH, NORTH CAROLINA 27609
 (919) 876-6888 NCBES #F-0326

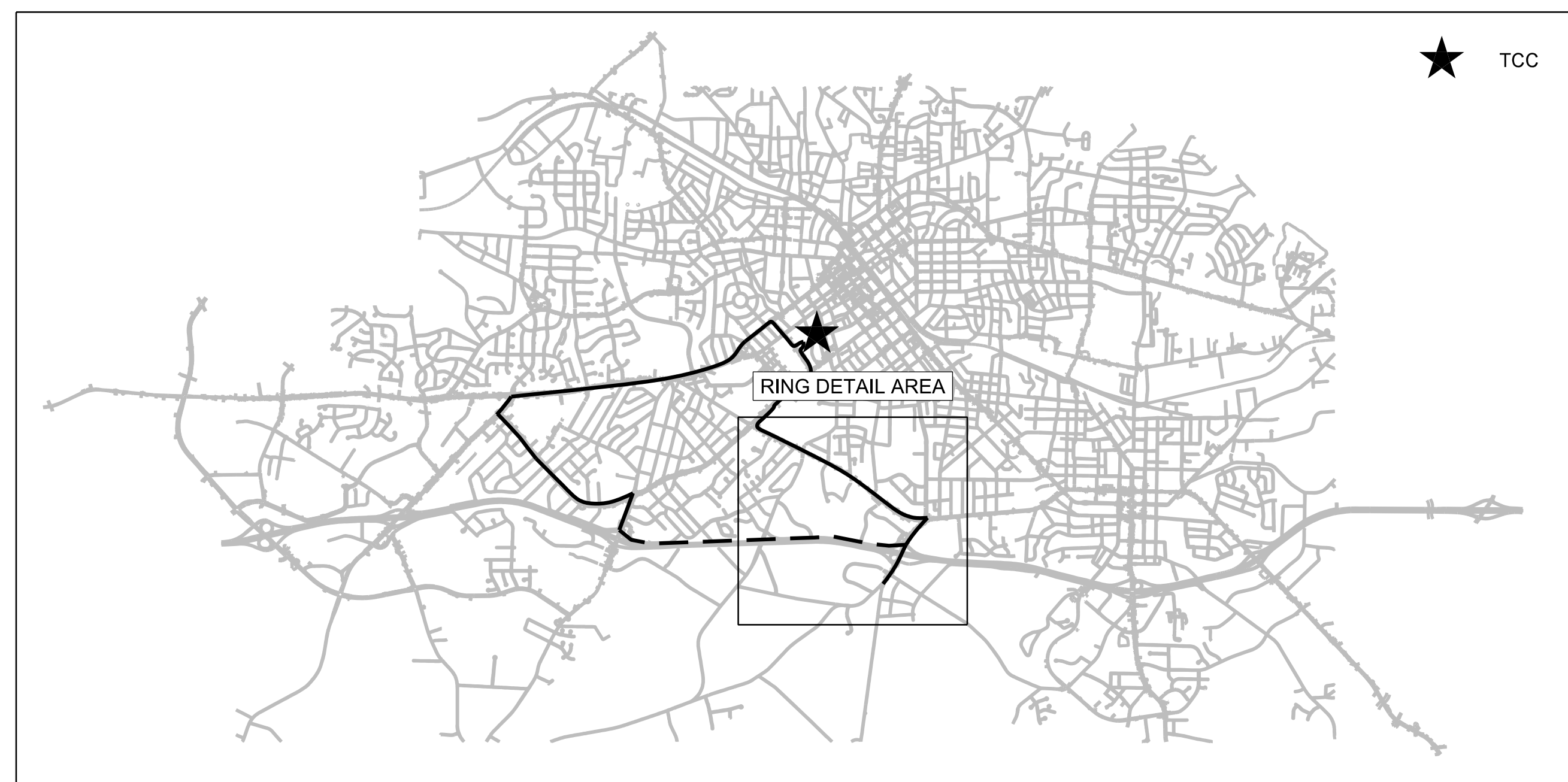
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| Prepared for the Offices of: NORTH CAROLINA DEPARTMENT OF TRANSPORTATION 750 Greenfield Parkway, Garner, NC 27529 | Burlington-Graham Signal System Fiber-Optic Ring Schematics (Ring 6) | | SEAL NORTH CAROLINA PROFESSIONAL SEAL 040877 ENGINEER BRADFORD J. SLOCUM 15/2018 |
| | Division 7 Alamance County | Burlington & Graham | |
| SCALE N/A | REVIEWED BY: HA BADGETT REVIEWED BY: DL JONES | DATE: _____ DATE: _____ | SEAL NORTH CAROLINA PROFESSIONAL SEAL 040877 ENGINEER BRADFORD J. SLOCUM 15/2018 |

RING 7 DETAIL




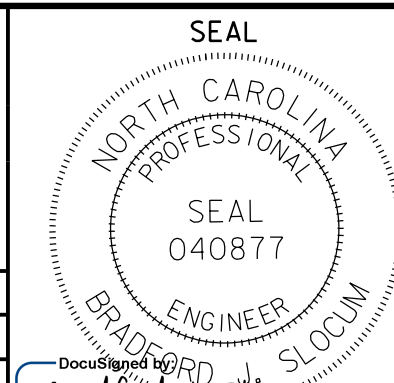

RING 7 OVERALL ROUTE



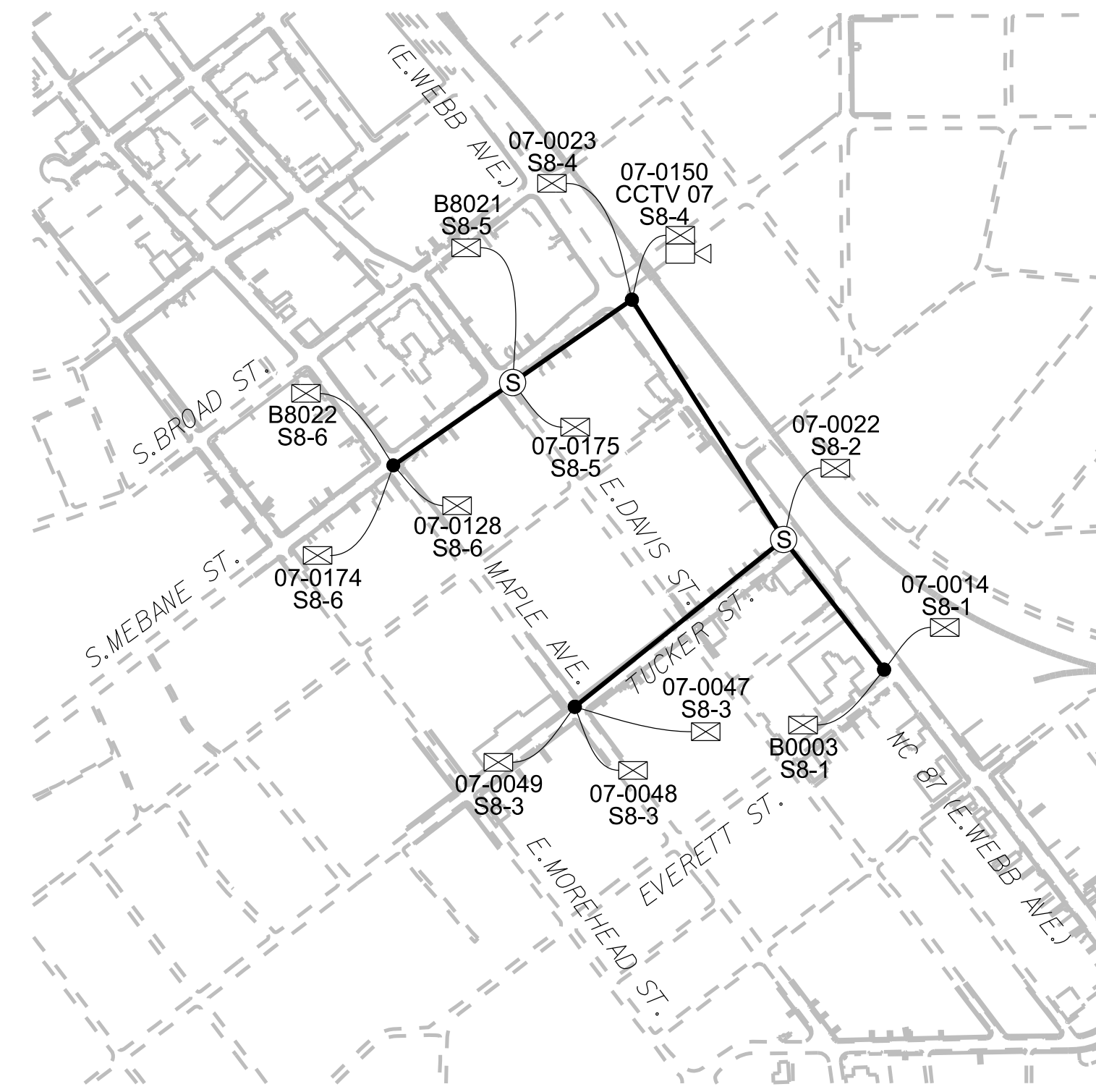
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ATKINS 1616 EAST MILLBROOK ROAD, SUITE 160
 RALEIGH, NORTH CAROLINA 27609
 (919) 876-6888 NCBEES #F-0326

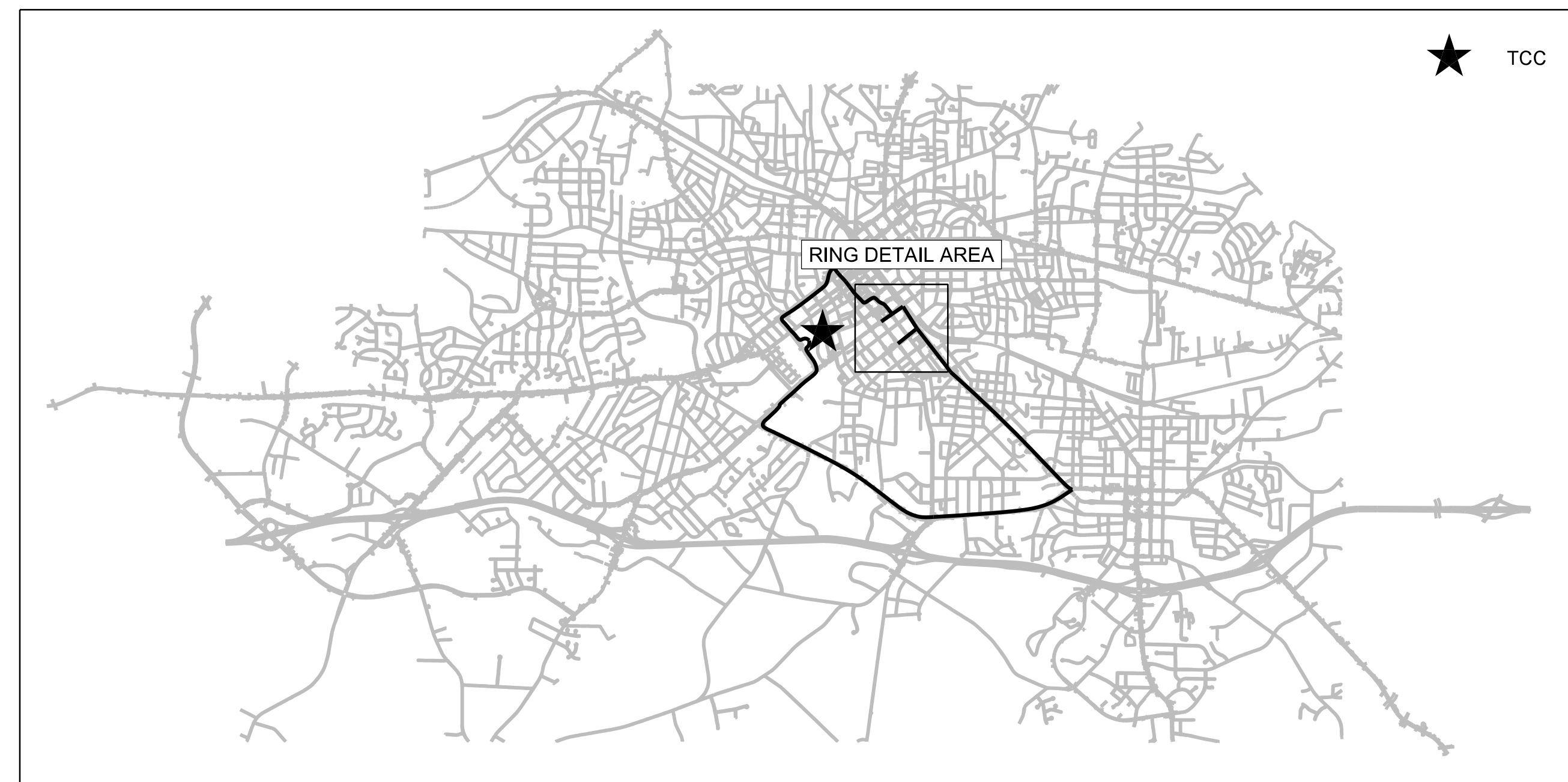
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 UNLESS ALL SIGNATURES COMPLETED**

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|  Prepared for the Offices of: NORTH CAROLINA DEPARTMENT OF TRANSPORTATION Transportation Systems | Burlington-Graham Signal System Fiber-Optic Ring Schematics (Ring 7) Division 7 Alameda County Burlington & Graham | |  SEAL NORTH CAROLINA PROFESSIONAL SEAL 040877 ENGINEER BRADFORD J. SLOSUM |
| | PLAN DATE: June 2018 PREPARED BY: BJ SLOCUM | REVIEWED BY: HA BADGETT REVIEWED BY: DL JONES | |
| 750 Greenfield Parkway, Garner, NC 27529  | SCALE N/A | DATE 15/2018 CADD Filename: FS 2.11.dgn | |

RING 8 DETAIL



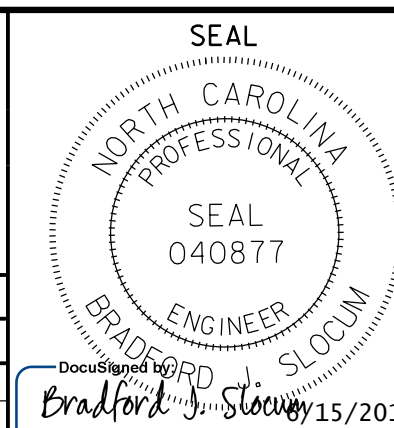

RING 8 OVERALL ROUTE



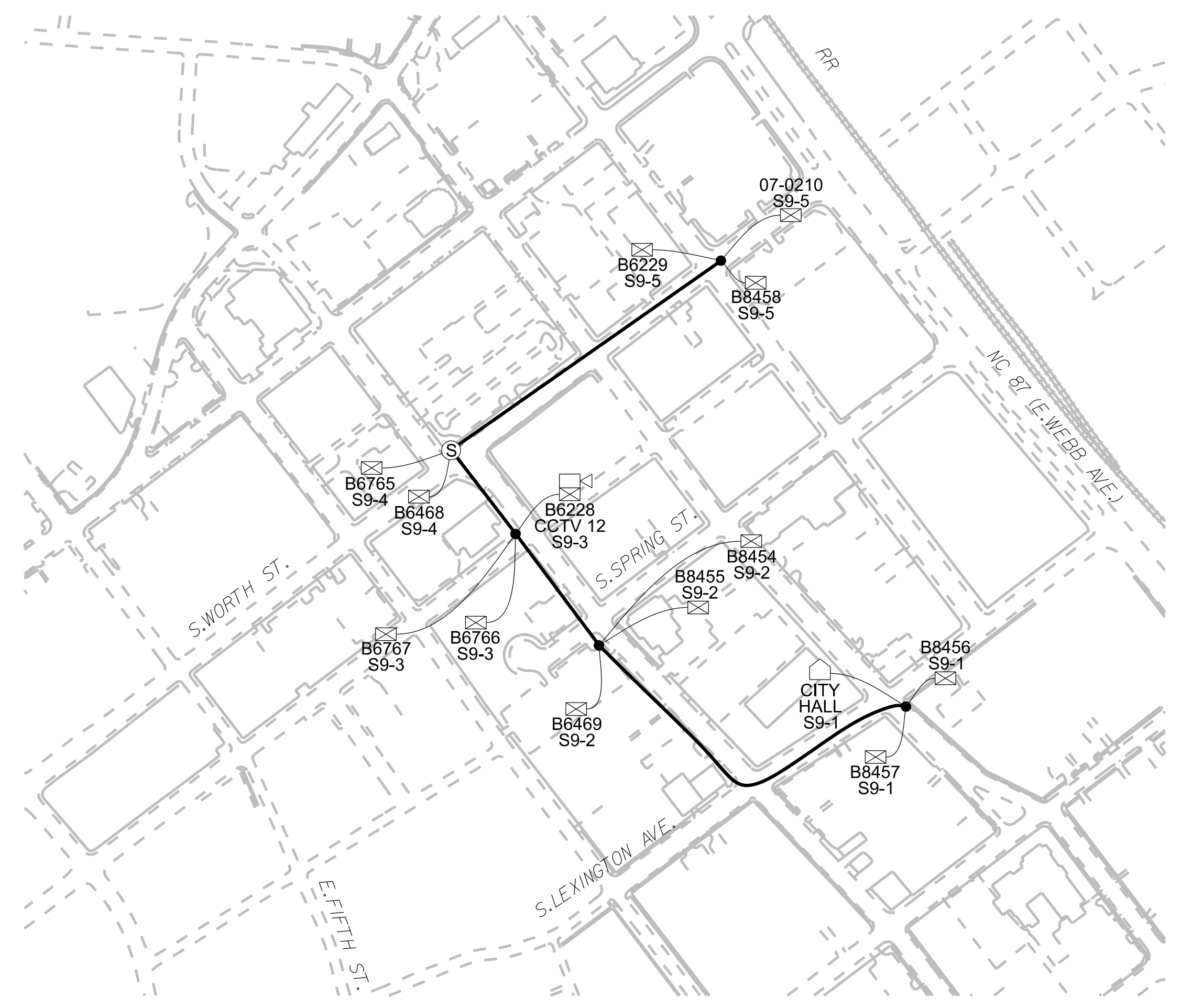
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 (919) 876-6888 NCBEES #F-0326

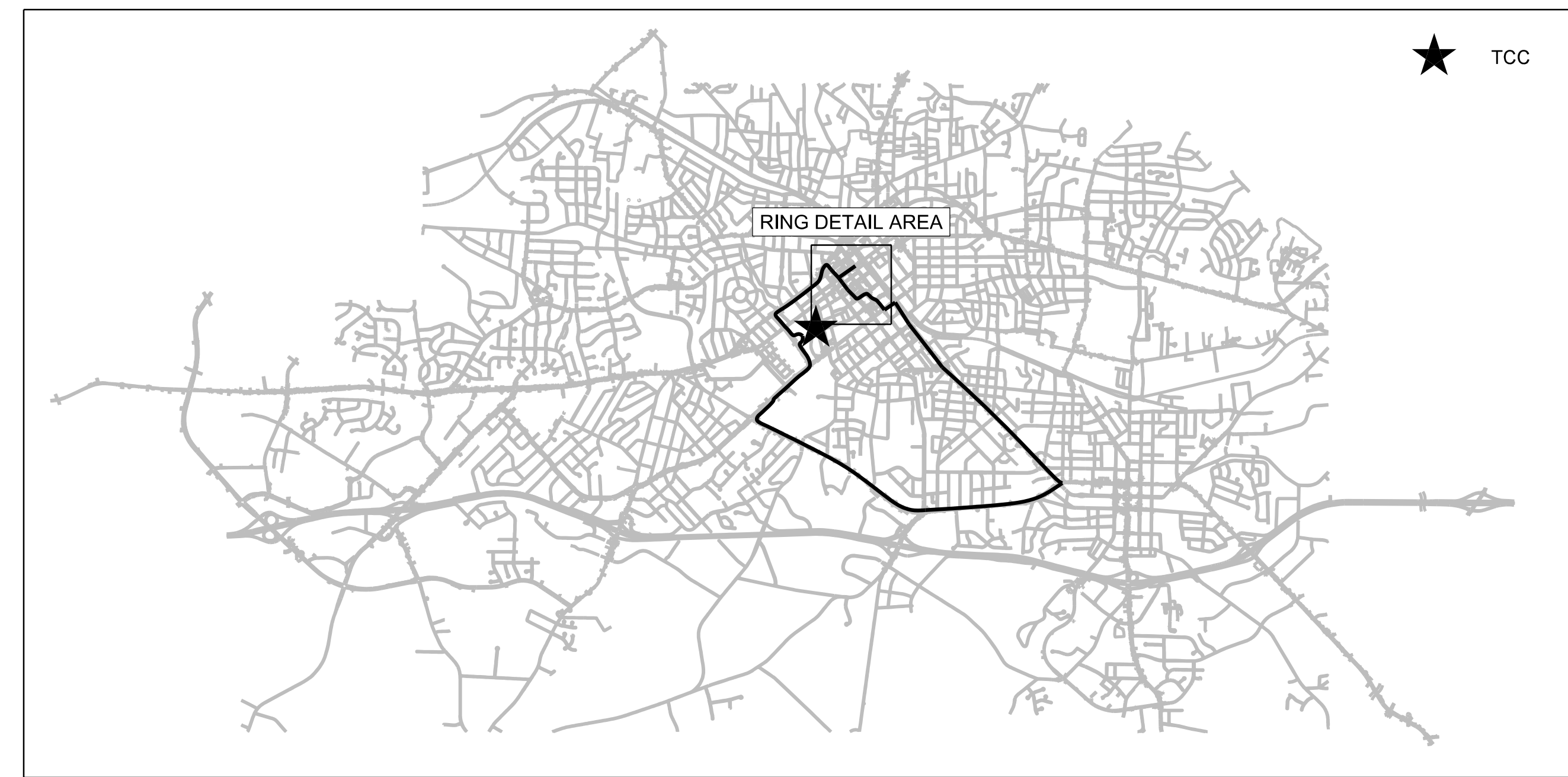
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 UNLESS ALL SIGNATURES COMPLETED**

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|  | Prepared for the Offices of:  TRANSPORTATION SYSTEMS DIVISION DEPARTMENT OF TRANSPORTATION STATE OF NORTH CAROLINA | | SEAL NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 040877 BRADFORD J. SLOCUM 15/2018 | |
| | Burlington-Graham Signal System Fiber-Optic Ring Schematics (Ring 8) | | | |
| | Division 7 Alamance County Burlington & Graham | | PLAN DATE: June 2018 REVIEWED BY: HA BADGETT | |
| PREPARED BY: BJ SLOCUM | | REVIEWED BY: DL JONES | | |
| SCALE: N/A | | REVISIONS INIT. DATE | | |
| 750 Greenfield Parkway, Garner, NC 27529 | | CAD0 File name: FS 2.12.dgn | | |

RING 9 DETAIL



RING 9 OVERALL ROUTE



- NOTES:
- BURLINGTON CITY HALL IS ON RING 23. CONNECTION SHOWN ON THIS SHEET AS ITS DROP CABLE SPLICES TO TRUNK CABLE AT S9-1. SEE FIBER-OPTIC RING SCHEMATICS (RINGS 21, 22, 23) FOR OVERALL RING ROUTE.

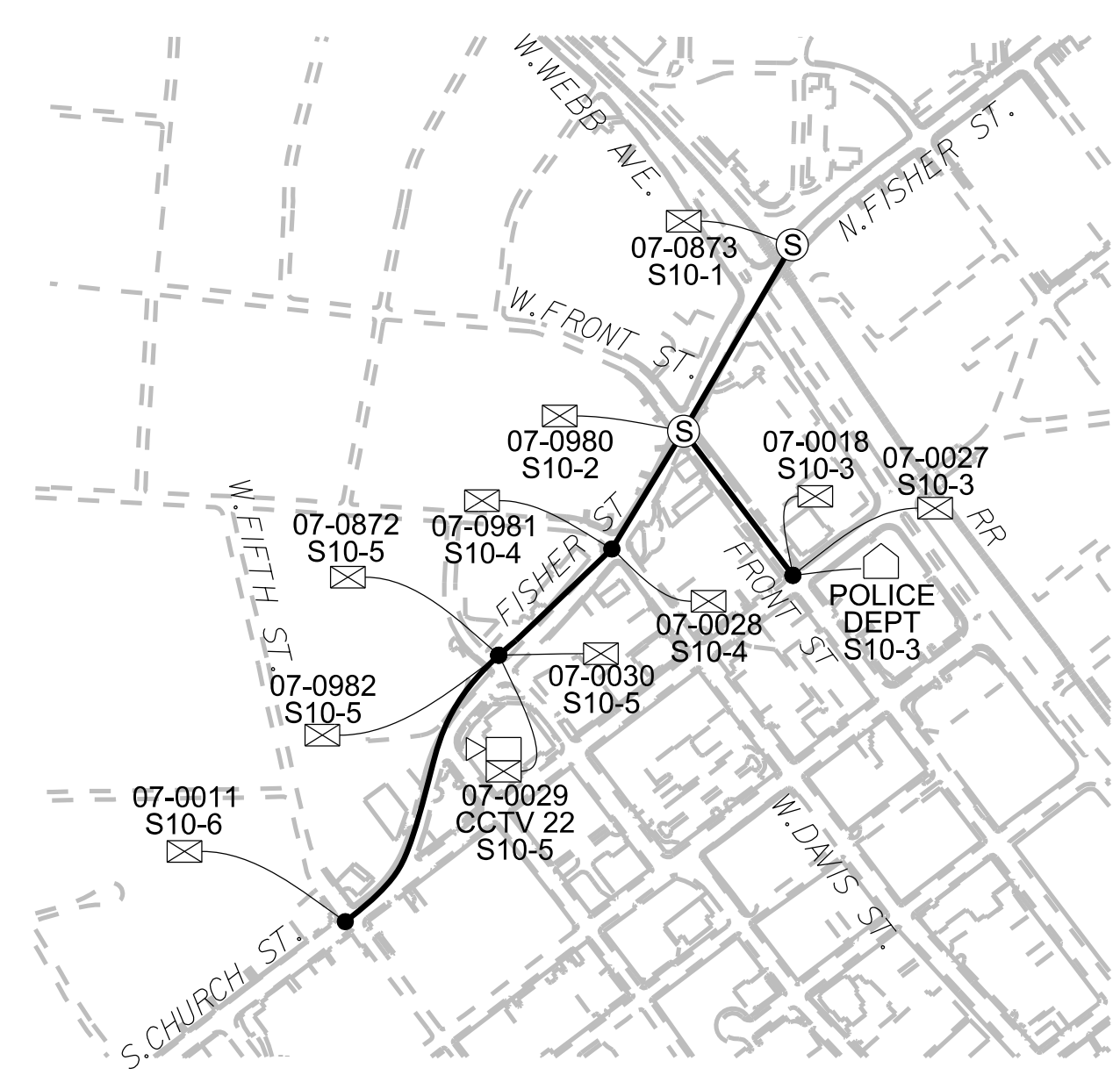
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 RALEIGH, NORTH CAROLINA 27609
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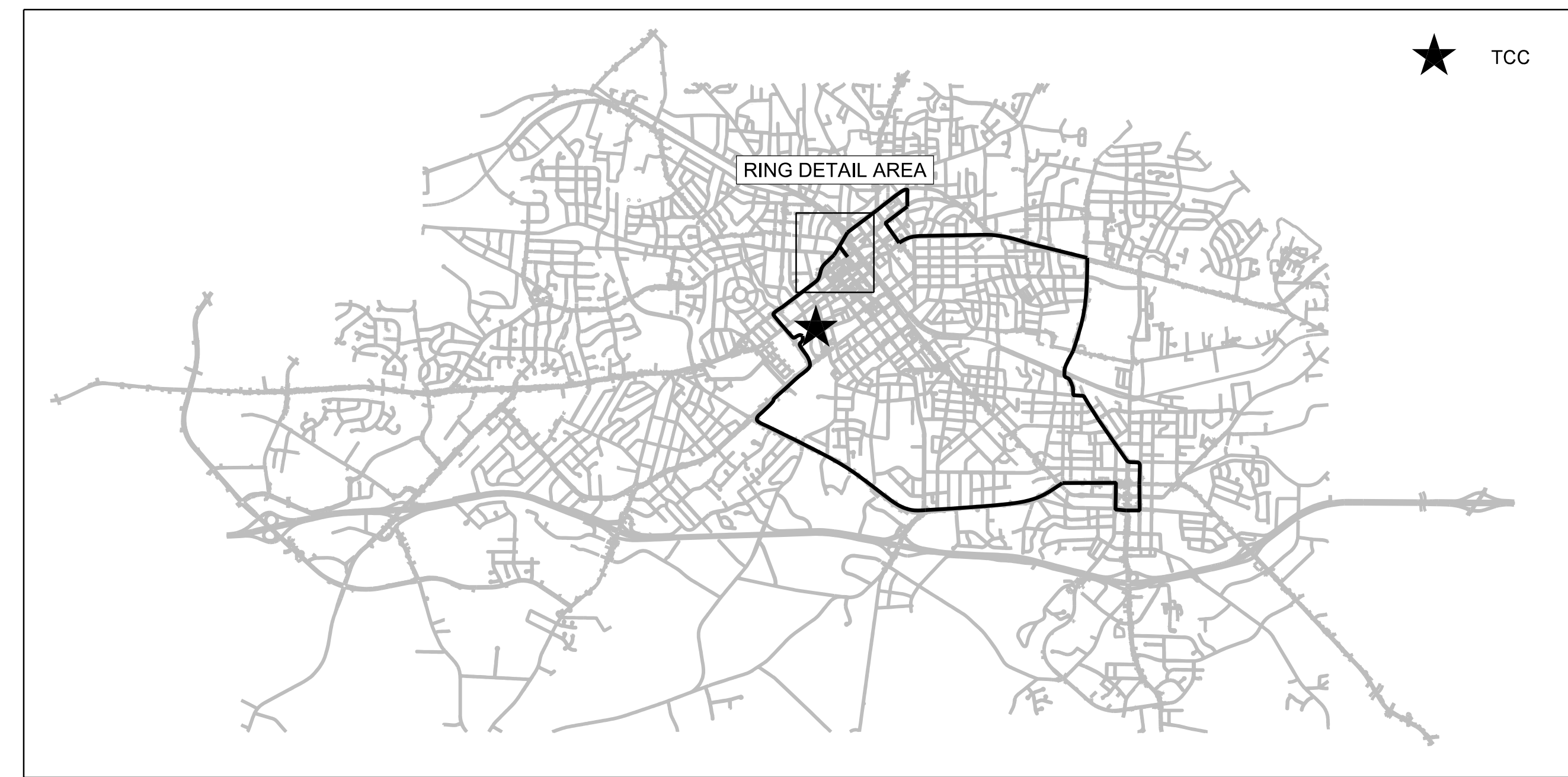
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| | Burlington-Graham Signal System Fiber-Optic Ring Schematics (Ring 9) | | |
| | Division 7 Alameda County Burlington & Graham | Prepared by: BJ SLOCUM Reviewed by: HA BADGETT | |
| PLAN DATE: June 2018 PREPARED BY: BJ SLOCUM | REVIEWED BY: HA BADGETT REVIEWED BY: DL JONES | REVISIONS INIT. DATE | SEAL NORTH CAROLINA PROFESSIONAL SEAL 040877 ENGINEER Bradford J. Slocum 15/2018 DATE |

14 JUN 2018 10:09
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 SLOCUMS AT LUS355433

RING 10 DETAIL



RING 10 OVERALL ROUTE



- NOTES:
- POLICE DEPARTMENT IS ON RING 21. CONNECTION SHOWN ON THIS SHEET AS ITS DROP CABLE SPLICES TO TRUNK CABLE AT S10-3. SEE FIBER-OPTIC RING SCHEMATICS (RINGS 21, 22, 23) FOR OVERALL RING ROUTE.

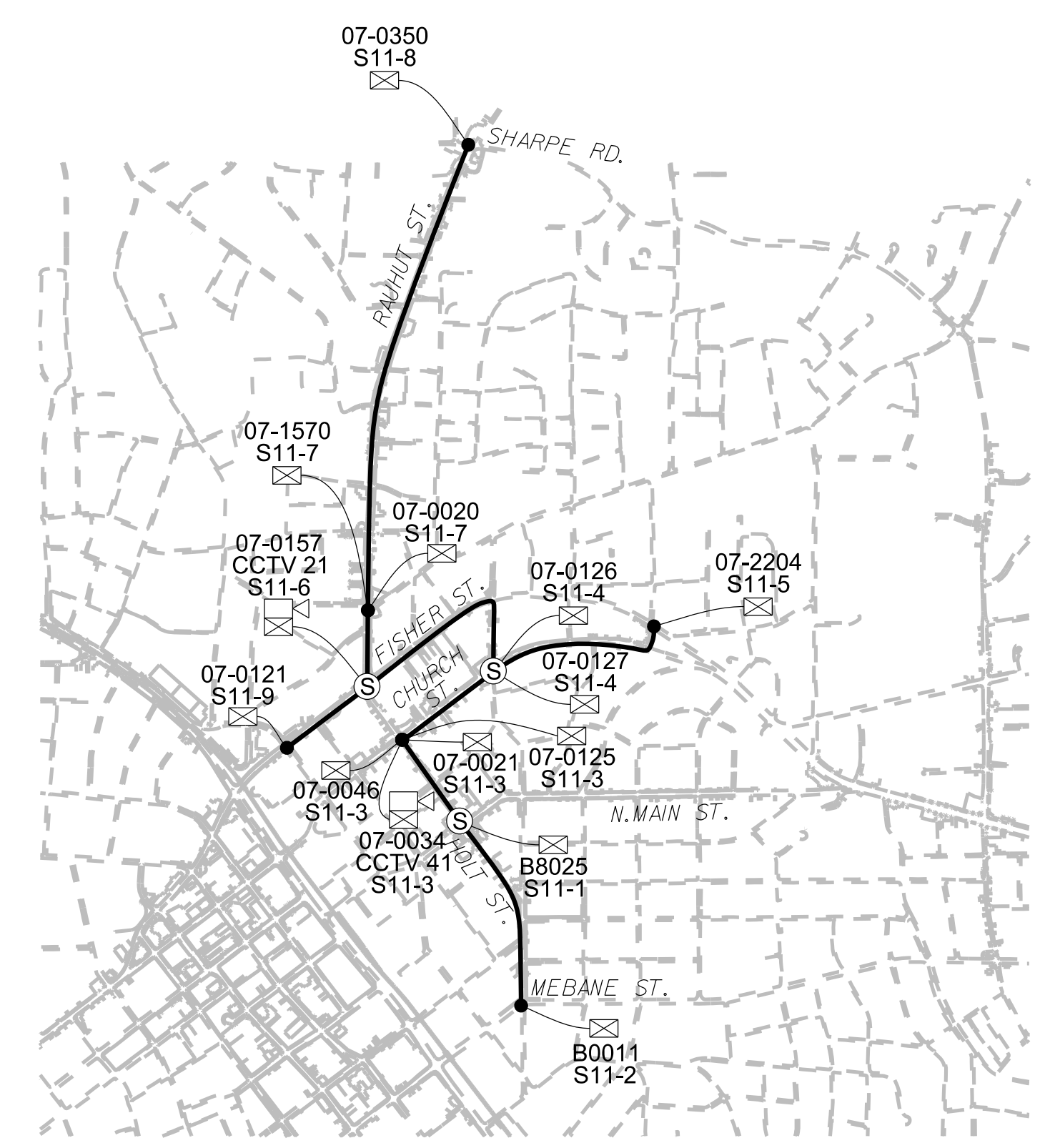
ATKINS 1616 EAST MILLBROOK ROAD, SUITE 160
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 (919) 876-6888 NCBES #F-0326

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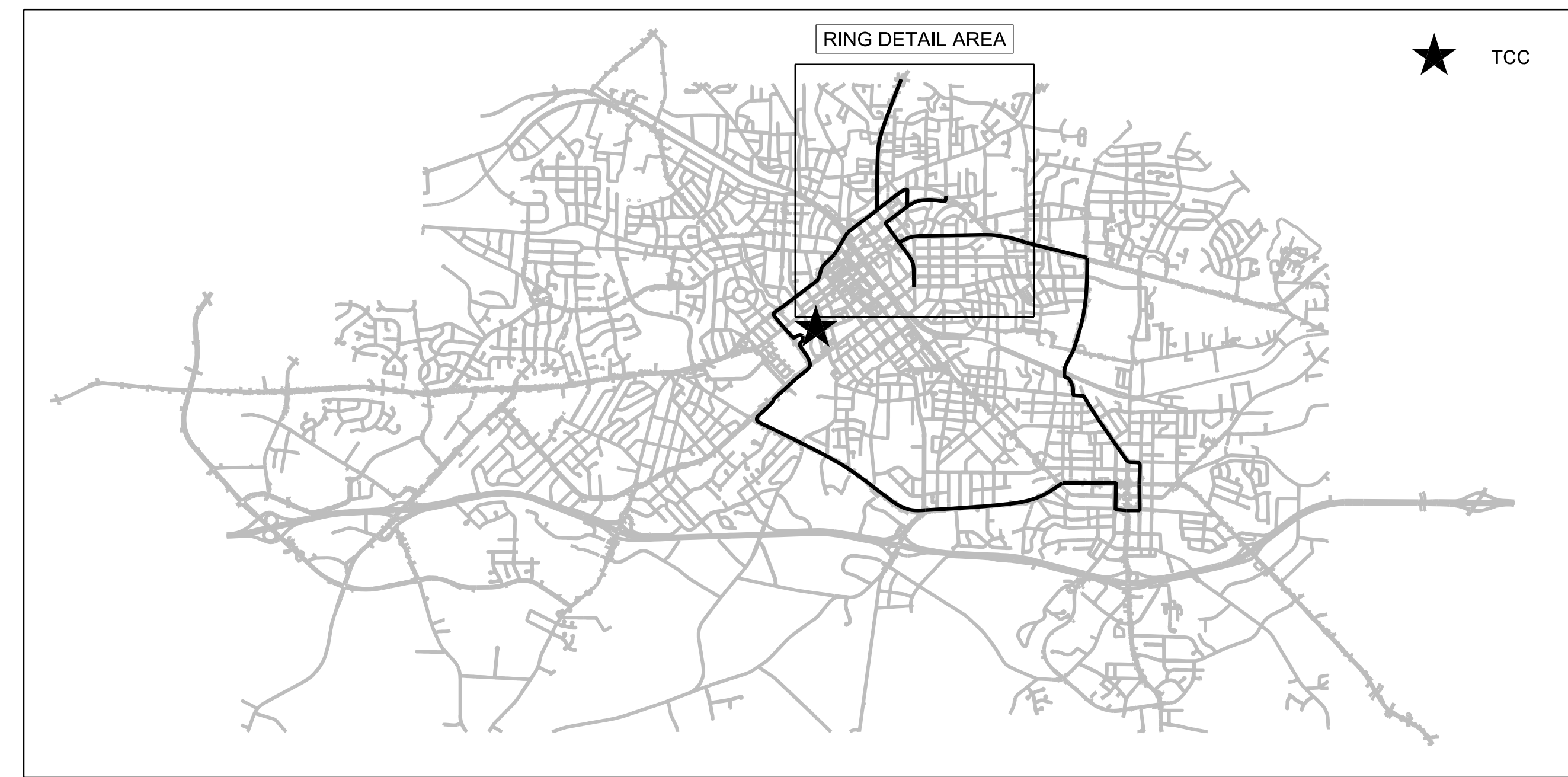
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| <small>750 Greenfield Parkway, Garner, NC 27529</small> | Burlington-Graham Signal System Fiber-Optic Ring Schematics (Ring 10) Division 7 Alamance County Burlington & Graham | | <small>BRADFORD J. SLOCUM ENGINEER 15/2018</small> |
| | PLAN DATE: June 2018 PREPARED BY: BJ SLOCUM | REVIEWED BY: HA BADGETT REVIEWED BY: DL JONES | |
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RING 11 DETAIL



RING 11 OVERALL ROUTE



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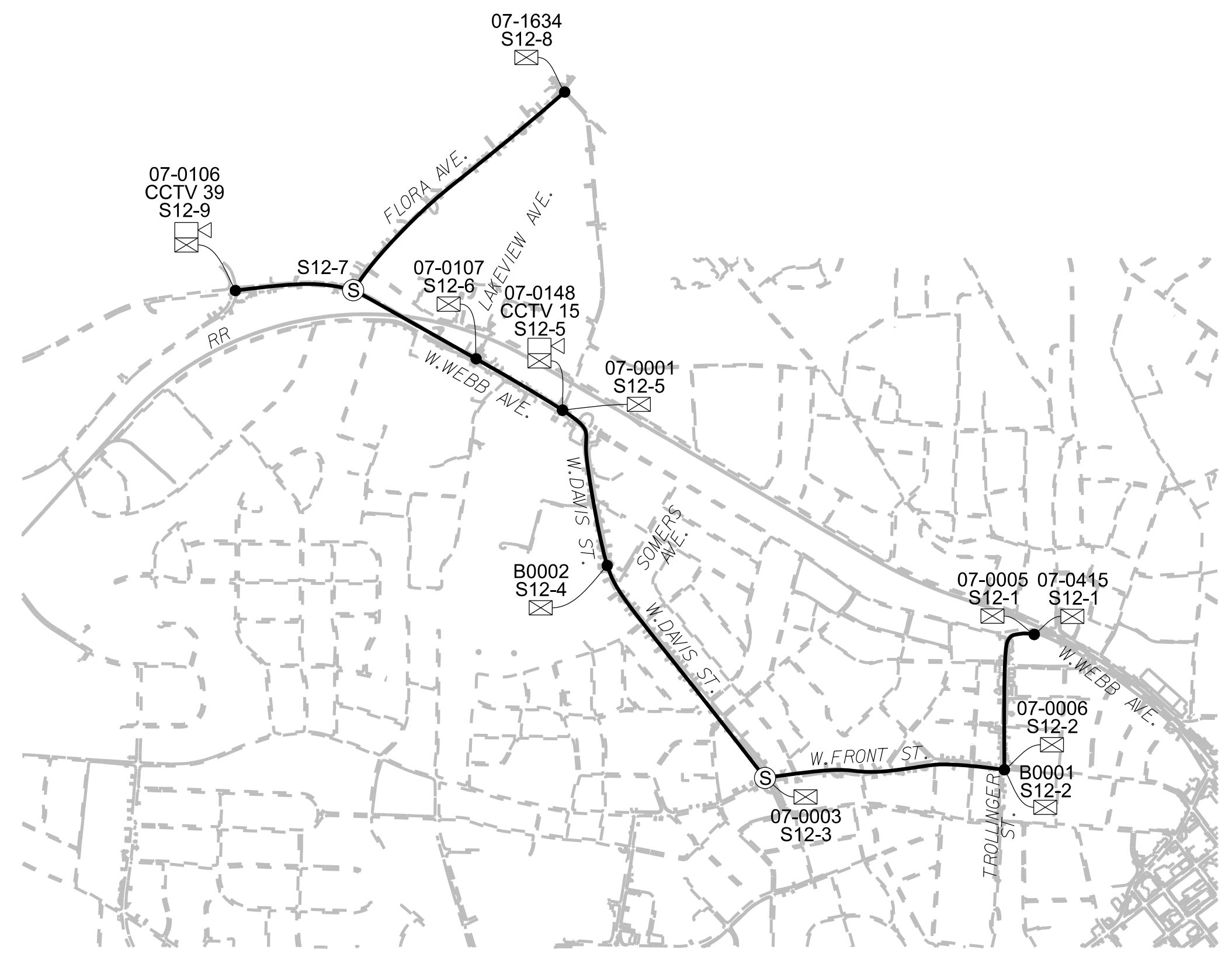
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(919) 876-6888 NCBEEES #F-0326

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UNLESS ALL SIGNATURES COMPLETED

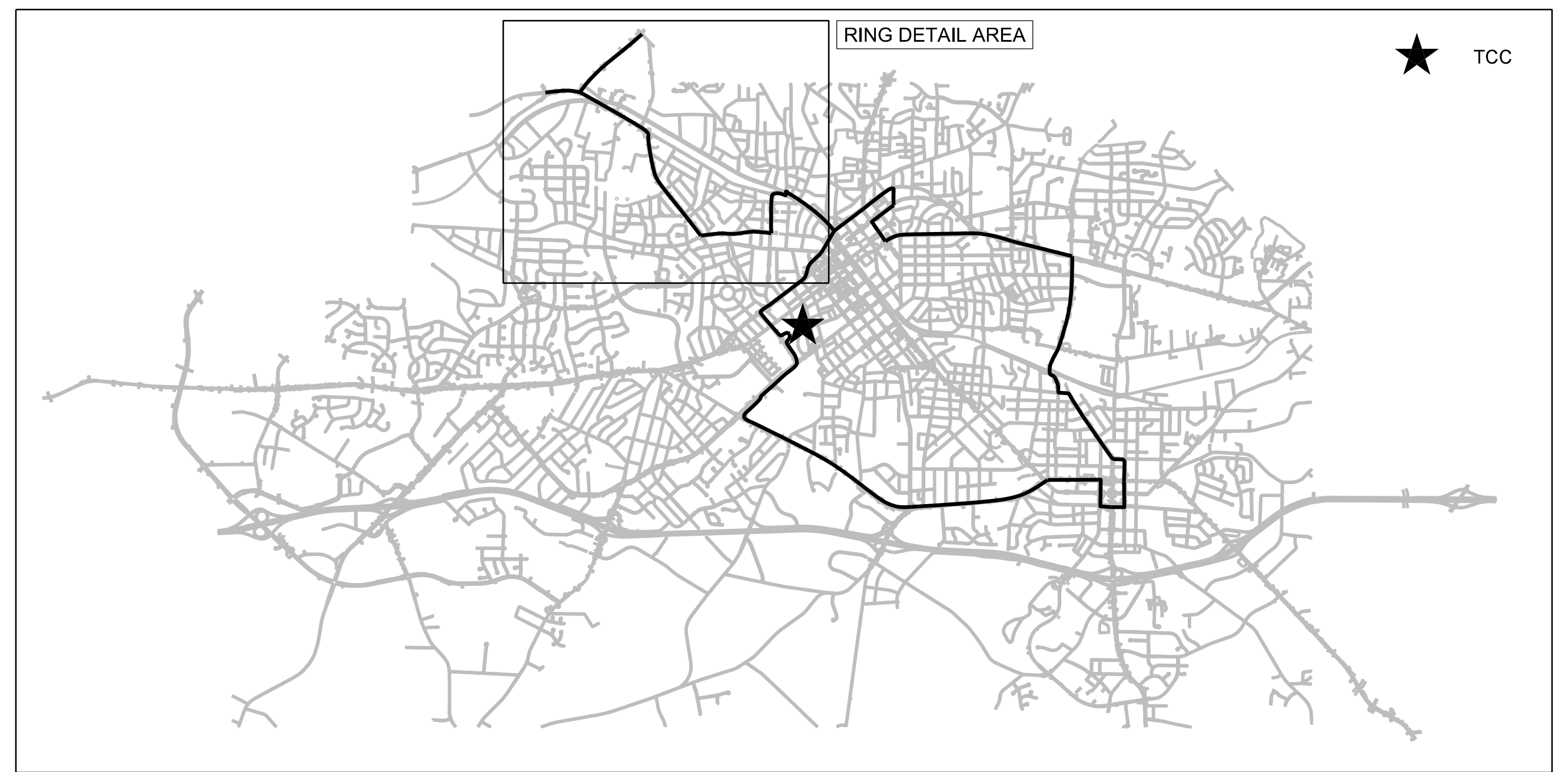
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| | Burlington-Graham Signal System Fiber-Optic Ring Schematics (Ring 11) | | |
| | Division 7 Alameda County | Burlington & Graham | |

DocuSign
 Bradford J. Slocum
 15/2018
 DATE
 CADD File name: FS 2.15.dgn

RING 12 DETAIL



RING 12 OVERALL ROUTE



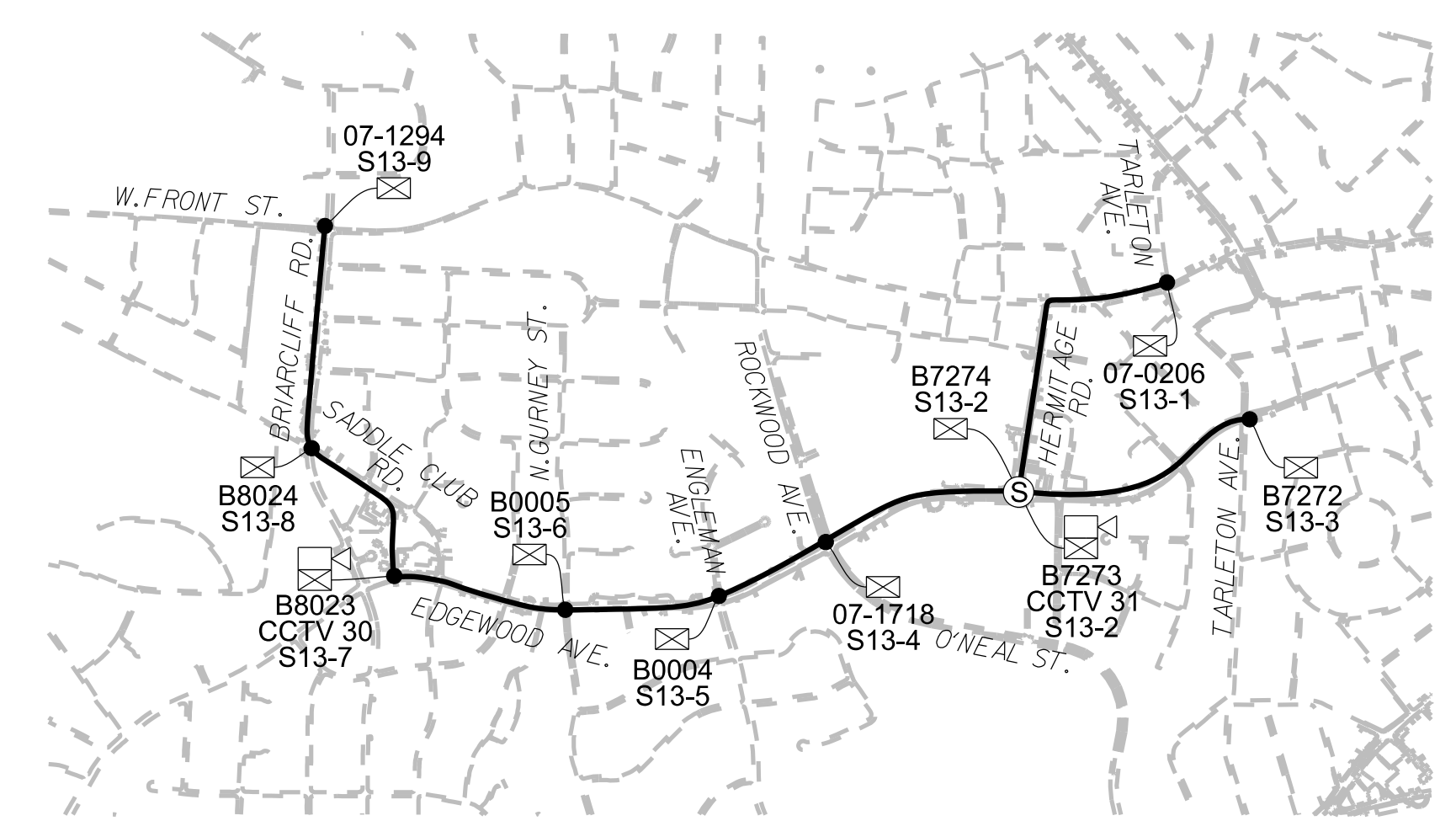
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 (919) 876-6888 NCBEE# F-0326

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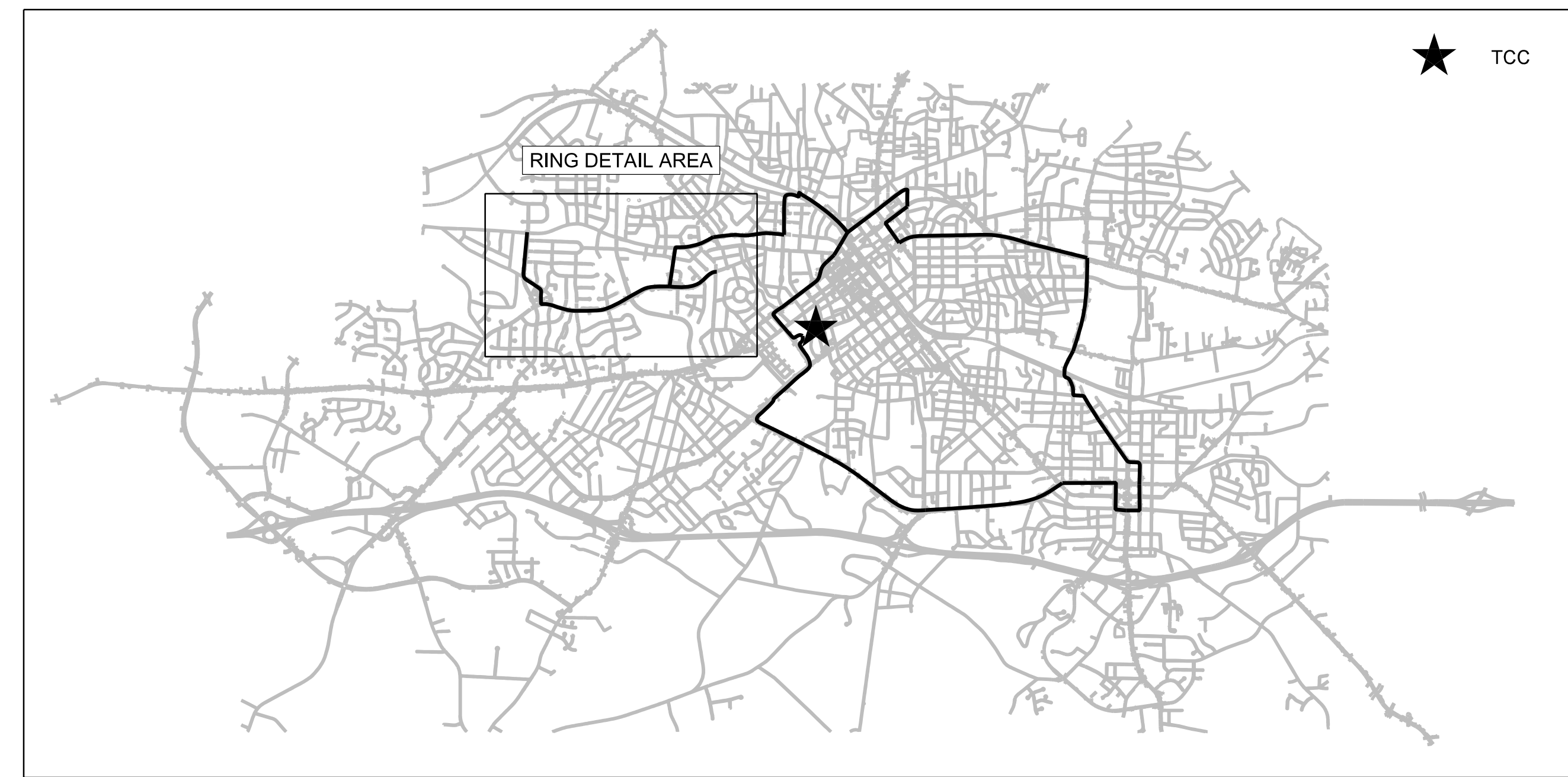
| | Prepared for the Offices of: BURLINGTON-GRAHAM SIGNAL SYSTEM Fiber-Optic Ring Schematics (Ring 12) Division 7 Alameda County Burlington & Graham | | | | | | | | | | | |
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| | PLAN DATE: June 2018 PREPARED BY: BJ SLOCUM | REVIEWED BY: HA BADGETT REVIEWED BY: DL JONES | | SEAL NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 040877 BRADFORD J. SLOCUM 15/2018 | | | | | | | | |
| 750 Greenfield Parkway, Garner, NC 27529 | SCALE N/A | <table border="1"> <thead> <tr> <th>REVISIONS</th> <th>INIT.</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table> | REVISIONS | INIT. | DATE | | | | | | | DATE 15/2018 |
| REVISIONS | INIT. | DATE | | | | | | | | | | |
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 SLOCUM, BRADFORD J. AT LUS355433

RING 13 DETAIL



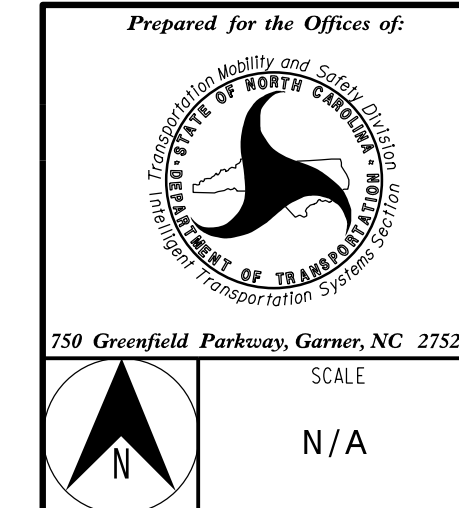
RING 13 OVERALL ROUTE



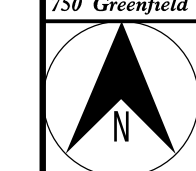
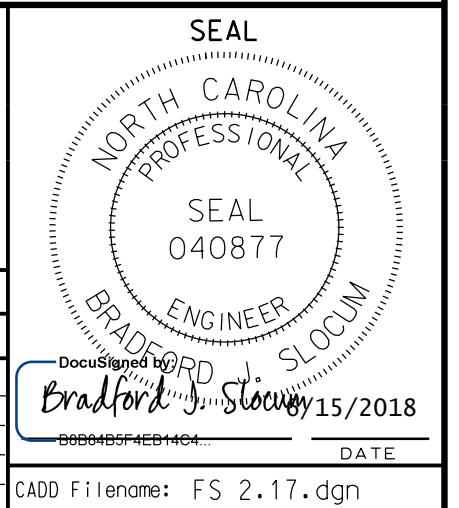
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ATKINS 1616 EAST MILLBROOK ROAD, SUITE 160
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBES #F-0326

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



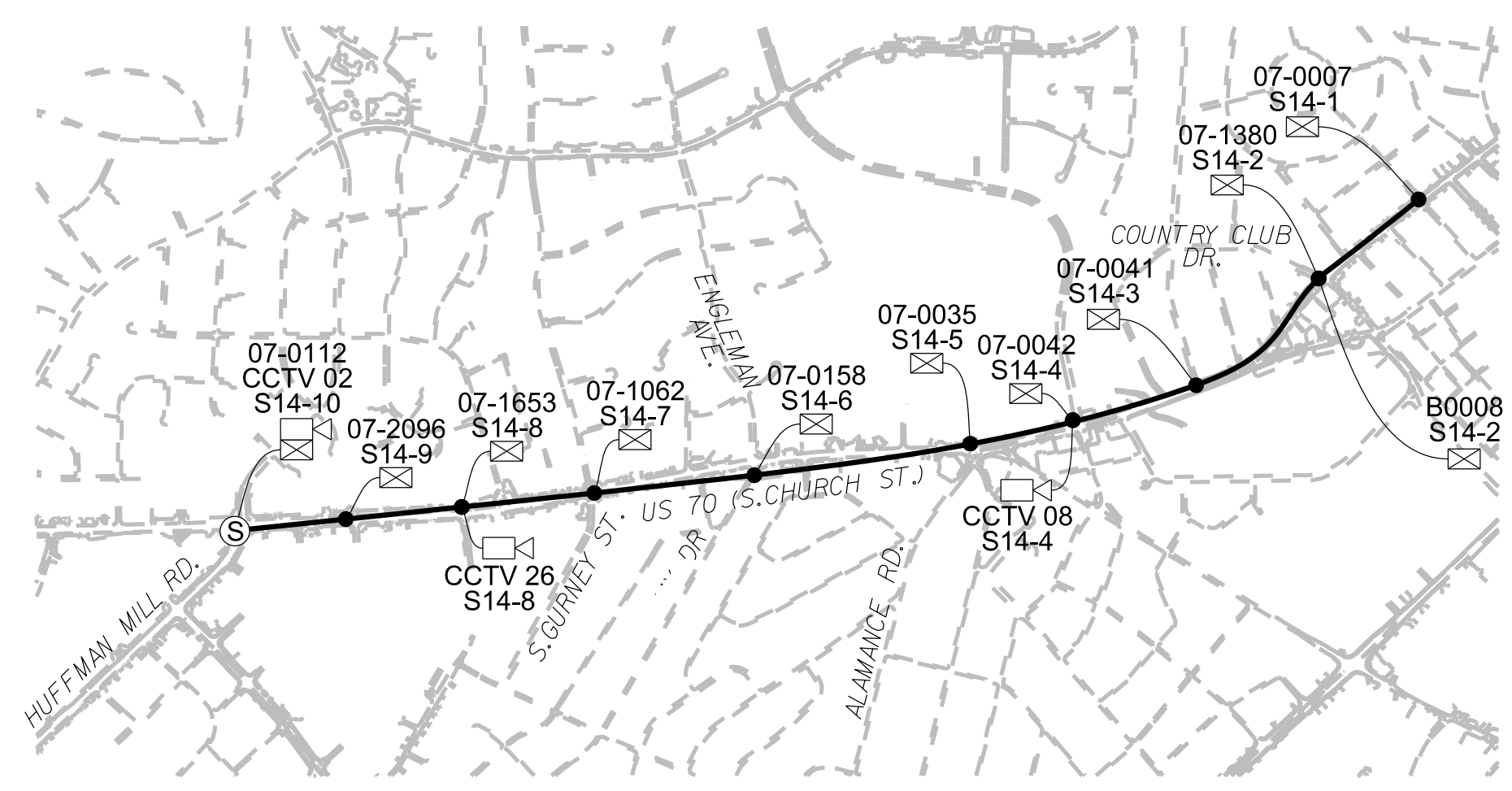
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| Burlington-Graham Signal System Fiber-Optic Ring Schematics (Ring 13) | | Burlington & Graham |
| Division 7 Alameda County | | |
| PLAN DATE: June 2018 | REVIEWED BY: HA BADGETT | |
| PREPARED BY: BJ SLOCUM | REVIEWED BY: DL JONES | |
| REVISIONS | INIT. | DATE |
| | | |
| | | |



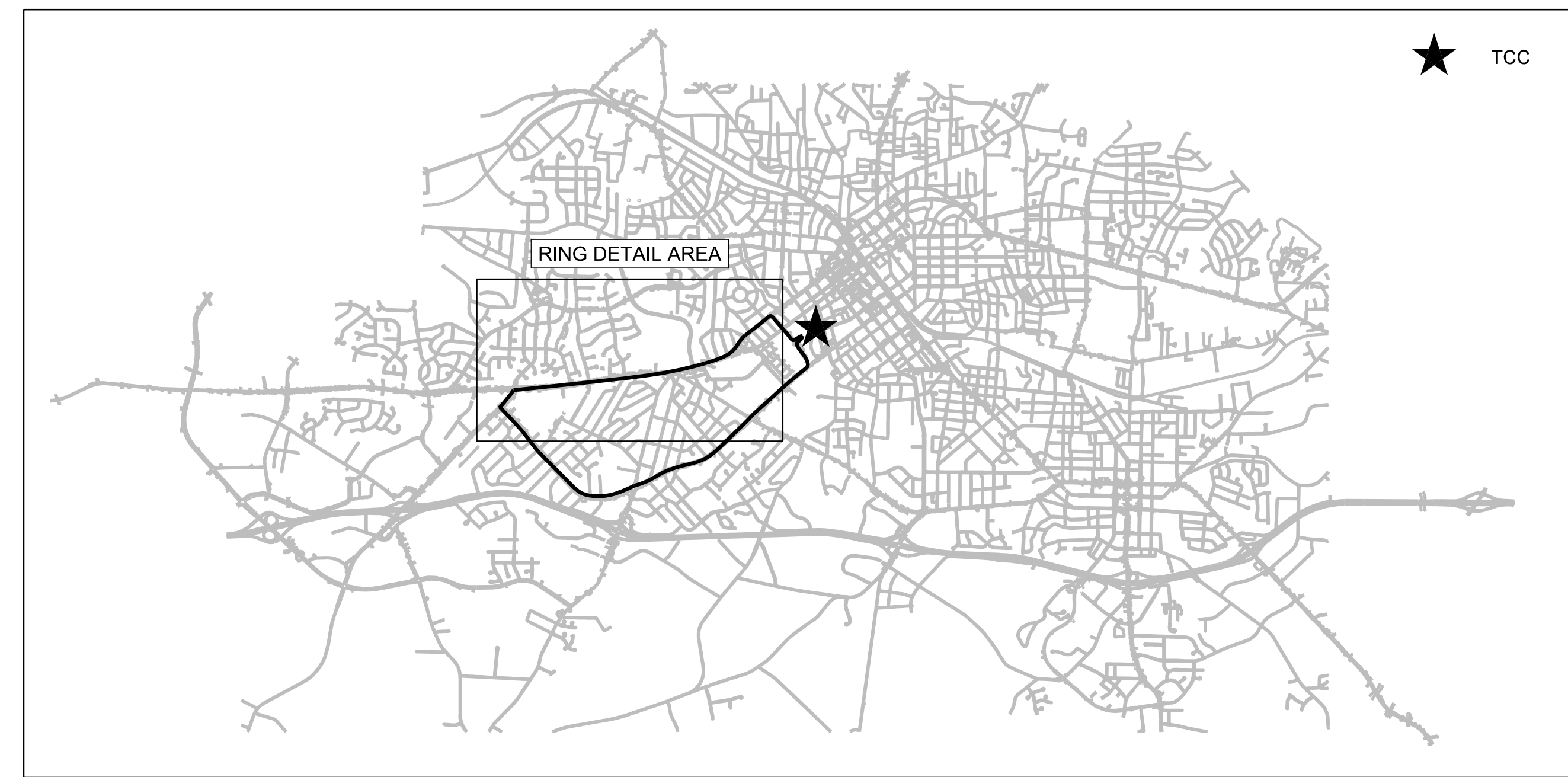
SCALE
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DATE
15/2018
CADD Filename: FS 2.17.dgn

RING 14 DETAIL



RING 14 OVERALL ROUTE



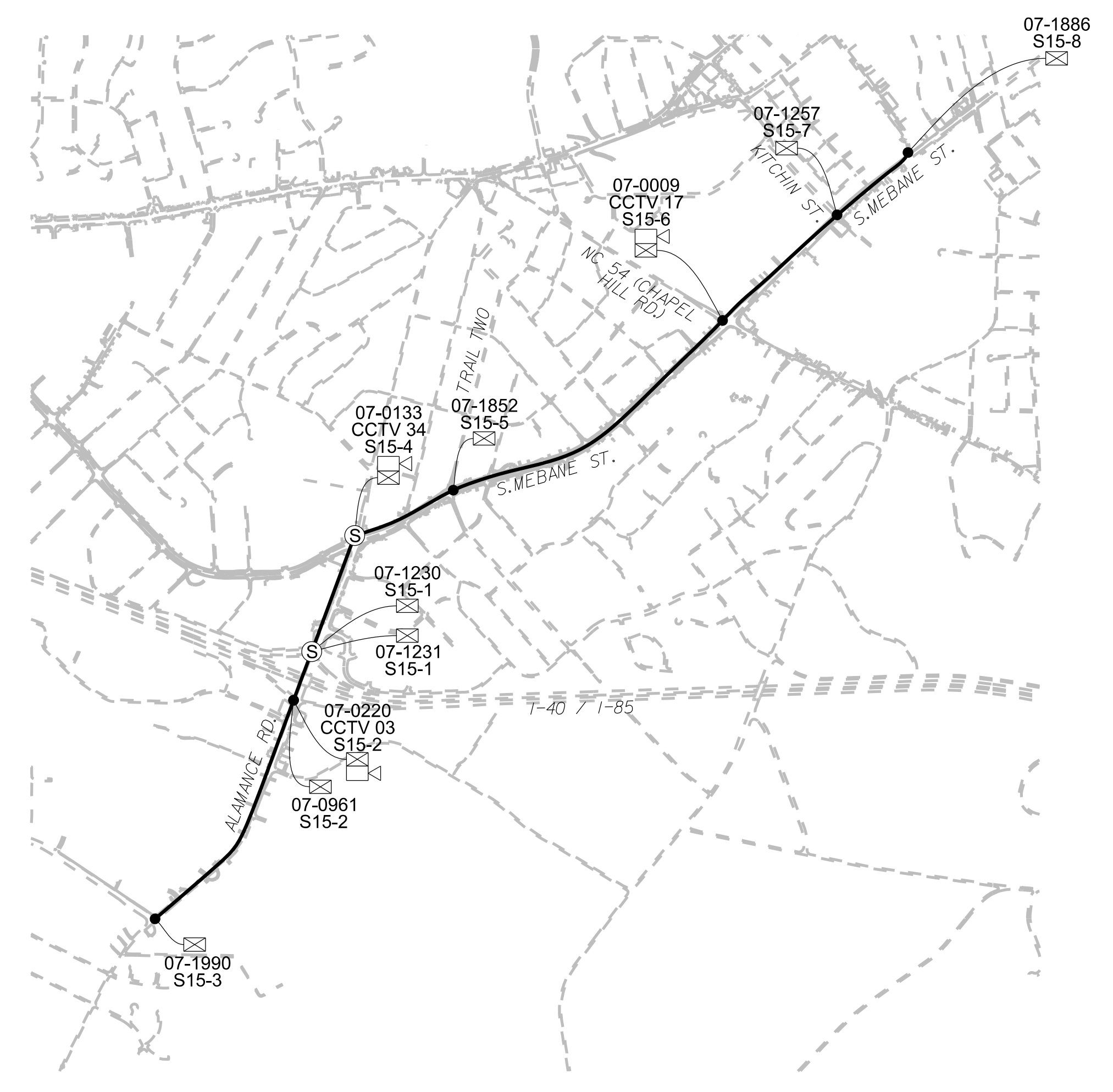
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RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBES #F-0326

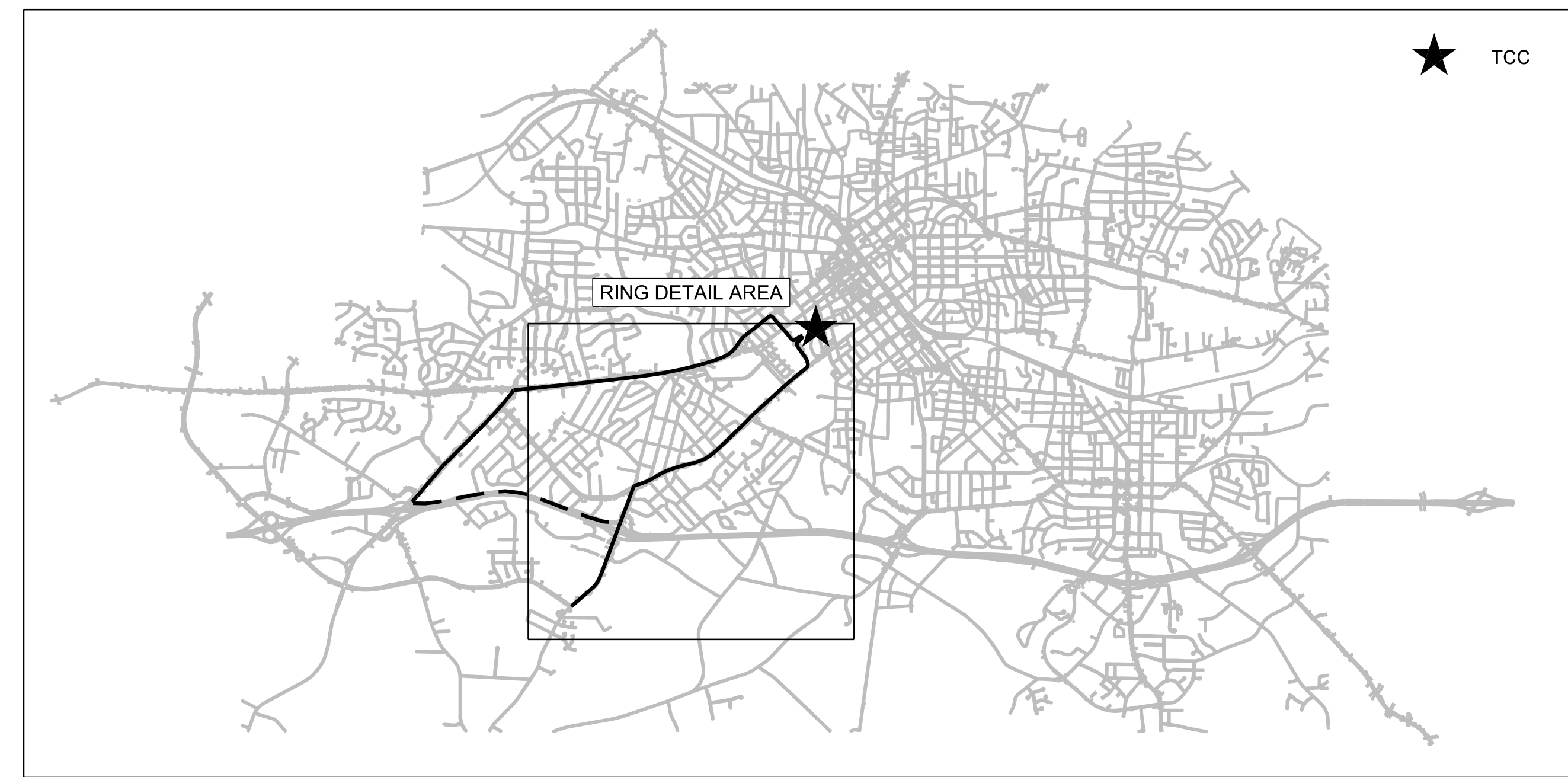
**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

| | | | |
|---|---|--|---|
| Prepared for the Offices of: NORTH CAROLINA DEPARTMENT OF TRANSPORTATION 750 Greenfield Parkway, Garner, NC 27529 | Burlington-Graham Signal System Fiber-Optic Ring Schematics (Ring 14) Division 7 Alameda County Burlington & Graham | | SEAL NORTH CAROLINA PROFESSIONAL SEAL 040877 ENGINEER BRADFORD J. SLOCUM 15/2018 |
| | PLAN DATE: June 2018 PREPARED BY: BJ SLOCUM | REVIEWED BY: HA BADGETT REVIEWED BY: DL JONES | |

RING 15 DETAIL



RING 15 OVERALL ROUTE



14 JUN 2018 10:13
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RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBES #F-0326

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

| | | | |
|--|--|---|--|
| | Burlington-Graham Signal System Fiber-Optic Ring Schematics (Ring 15) | | |
| | Division 7 Prepared by: BJ SLOCUM Scale: N/A | Burlington & Graham Reviewed by: HA BADGETT Date: 15/2018 | |

750 Greenfield Parkway, Garner, NC 27529

Prepared for the Offices of:

750 Greenfield Parkway, Garner, NC 27529

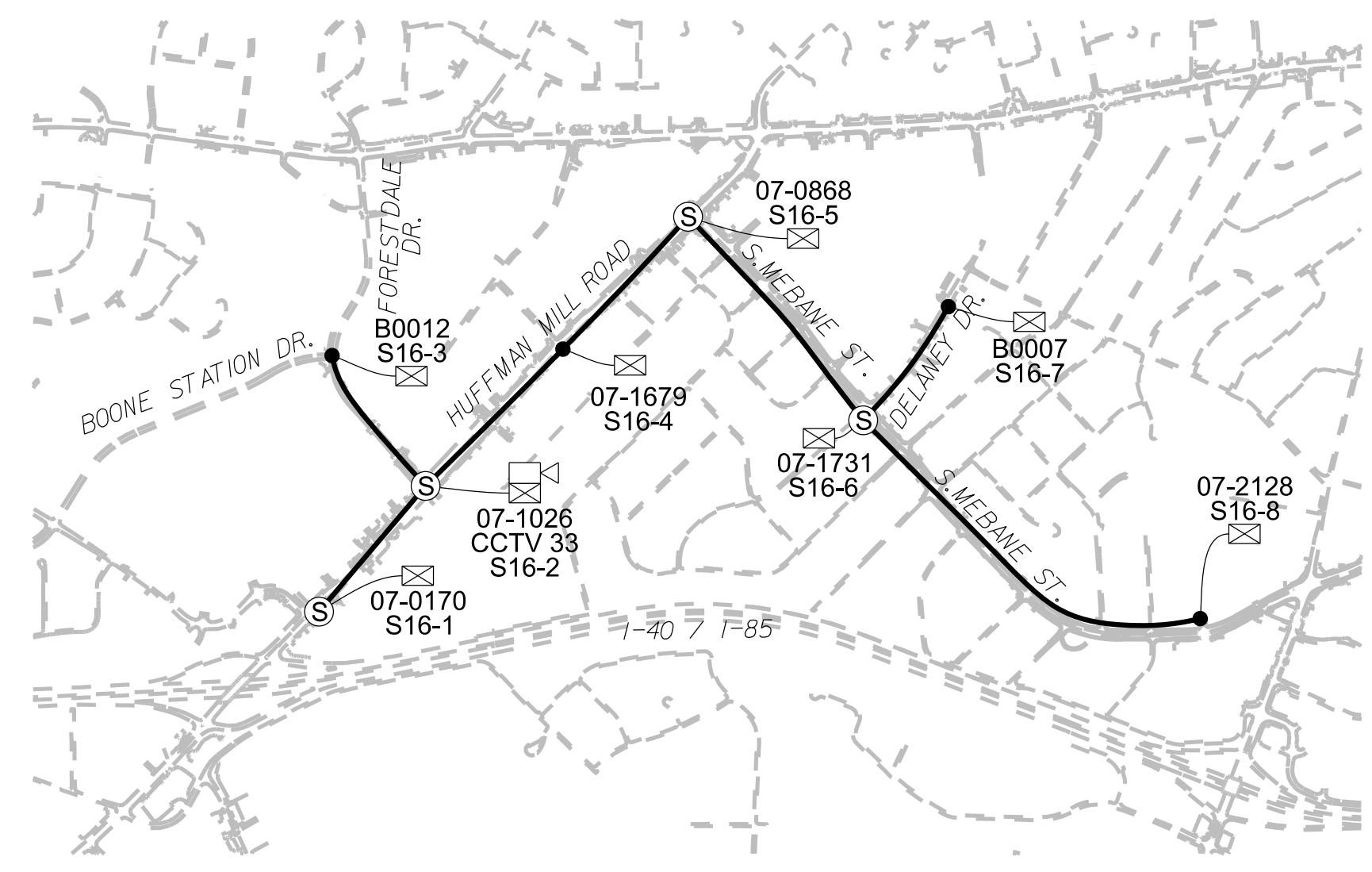
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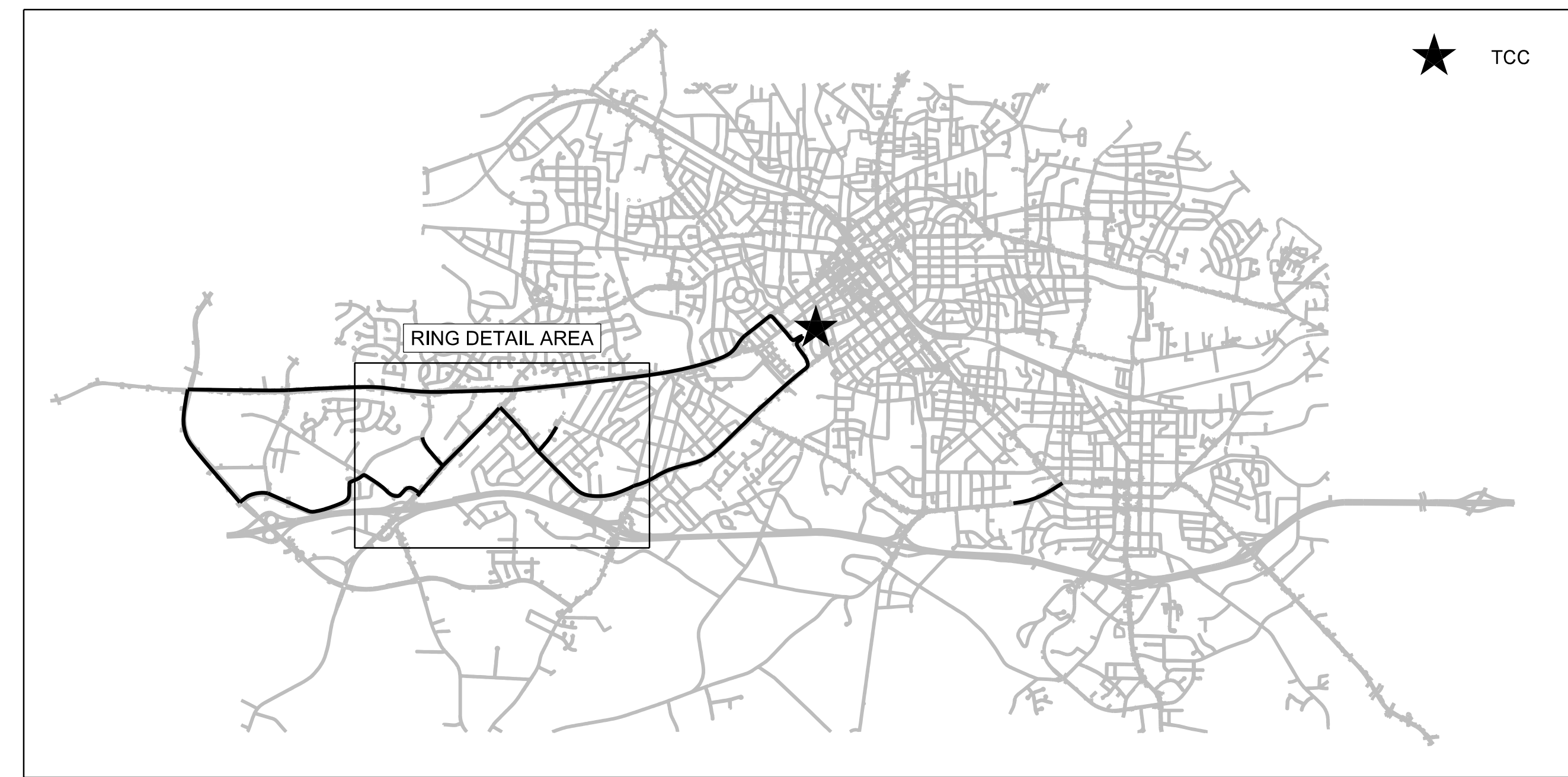
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CADD File name: FS 2.19.dgn

RING 16 DETAIL




RING 16 OVERALL ROUTE



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RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBES #F-0326

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UNLESS ALL SIGNATURES COMPLETED

Prepared for the Offices of:

 DEPARTMENT OF TRANSPORTATION
 State of North Carolina
 750 Greenfield Parkway, Garner, NC 27529

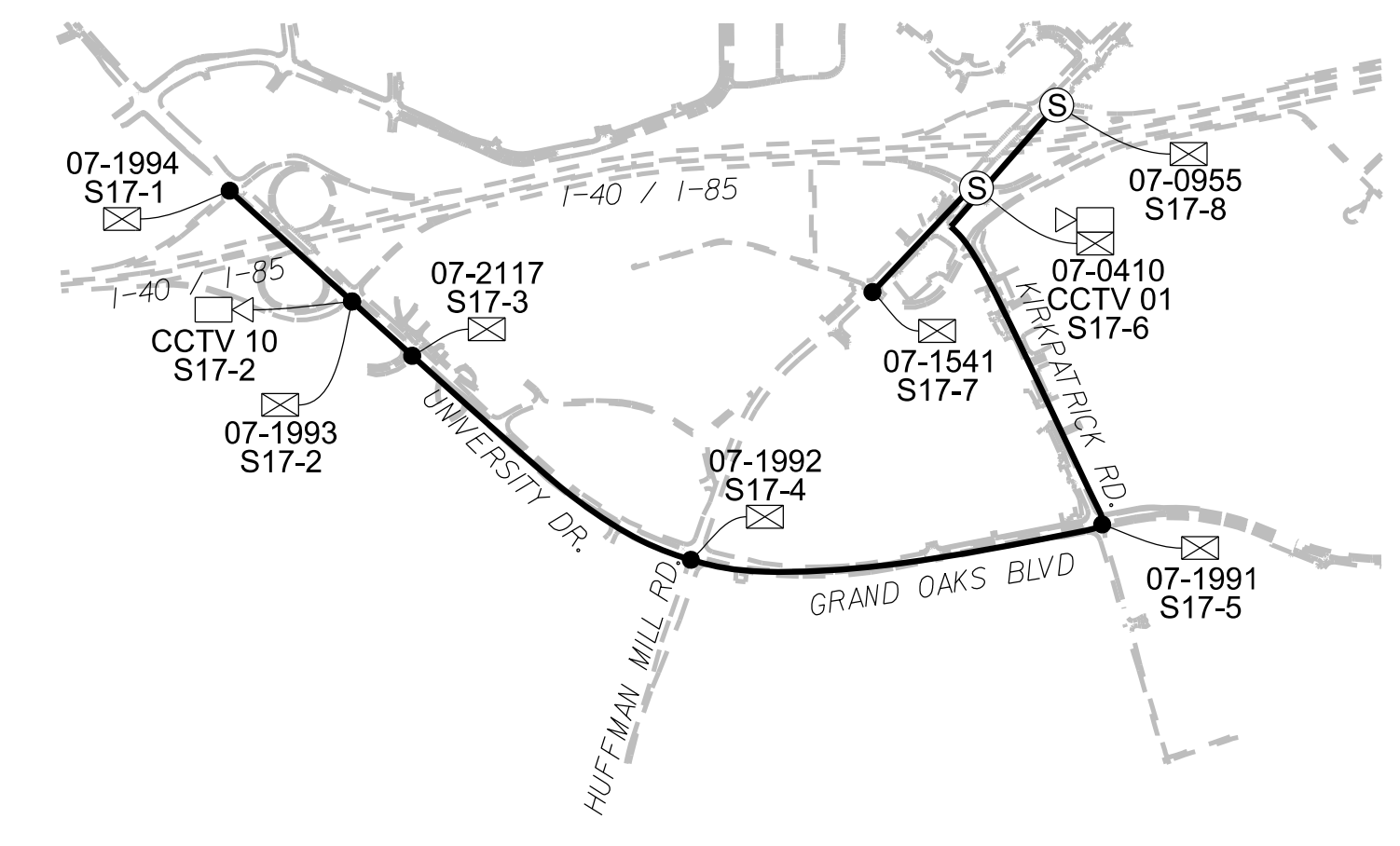
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| Burlington-Graham Signal System Fiber-Optic Ring Schematics (Ring 16) | | Burlington & Graham |
| Division 7 Alamance County | | |
| PLAN DATE: June 2018 | REVIEWED BY: HA BADGETT | |
| PREPARED BY: BJ SLOCUM | REVIEWED BY: DL JONES | |
| REVISIONS | INIT. | DATE |
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SEAL
 NORTH CAROLINA
 PROFESSIONAL
 SEAL
 040877
 ENGINEER
 BRADFORD J. SLOCUM
 15/2018
 DATE
 CADD File name: FS 2.20.dgn

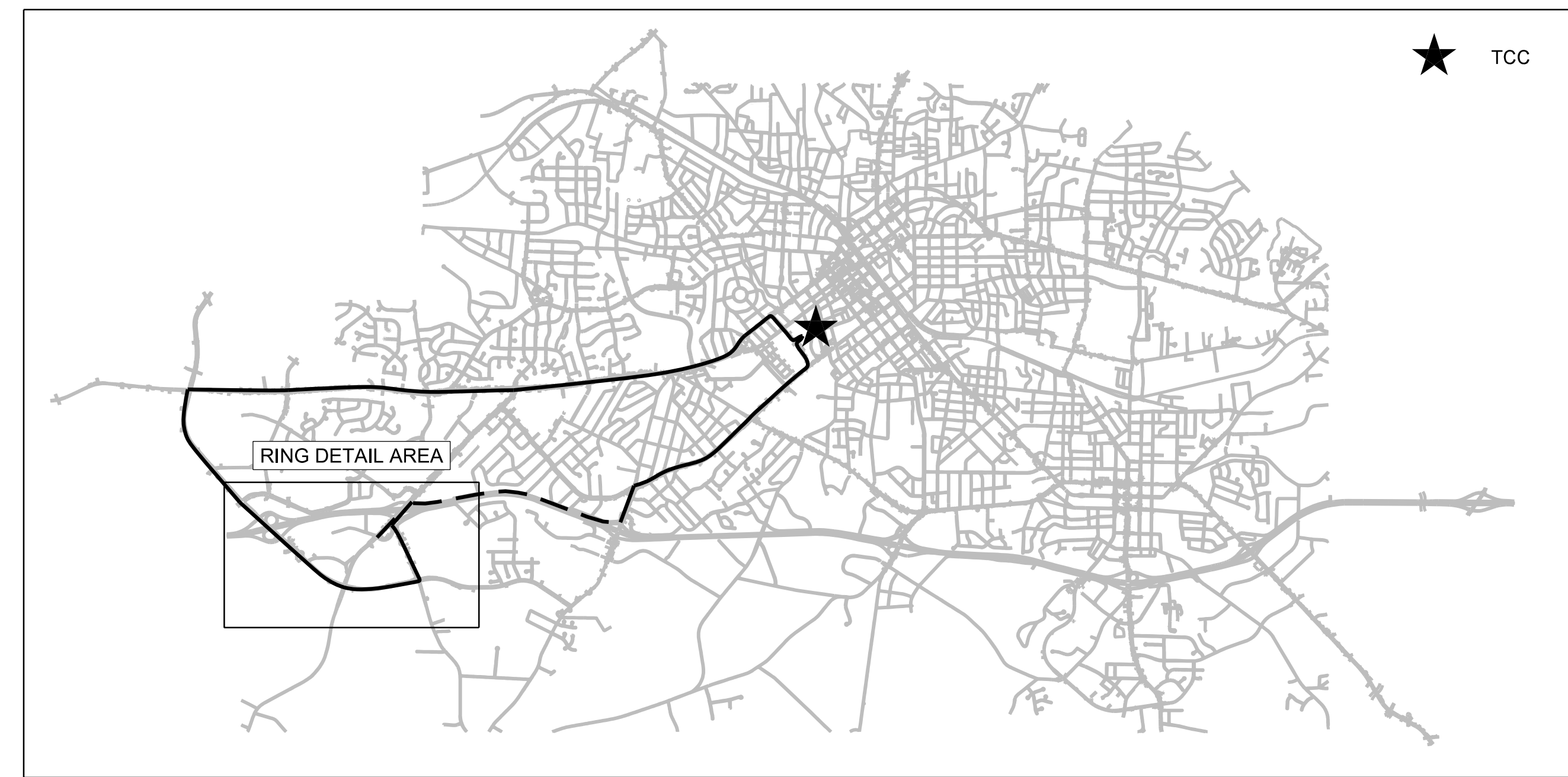


SCALE
N/A

RING 17 DETAIL



RING 17 OVERALL ROUTE



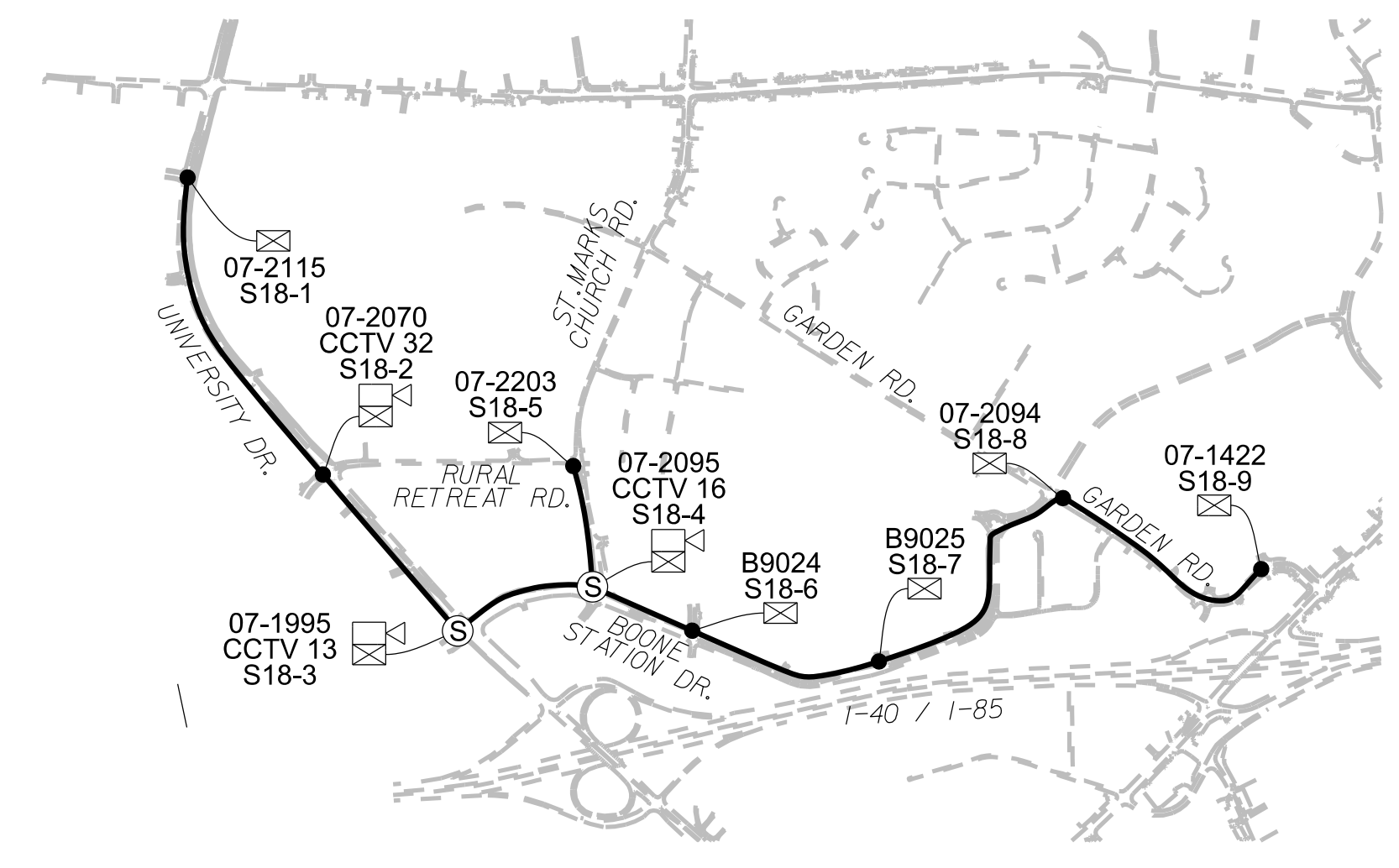
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 RALEIGH, NORTH CAROLINA 27609
 (919) 876-6888 NCBEES #F-0326

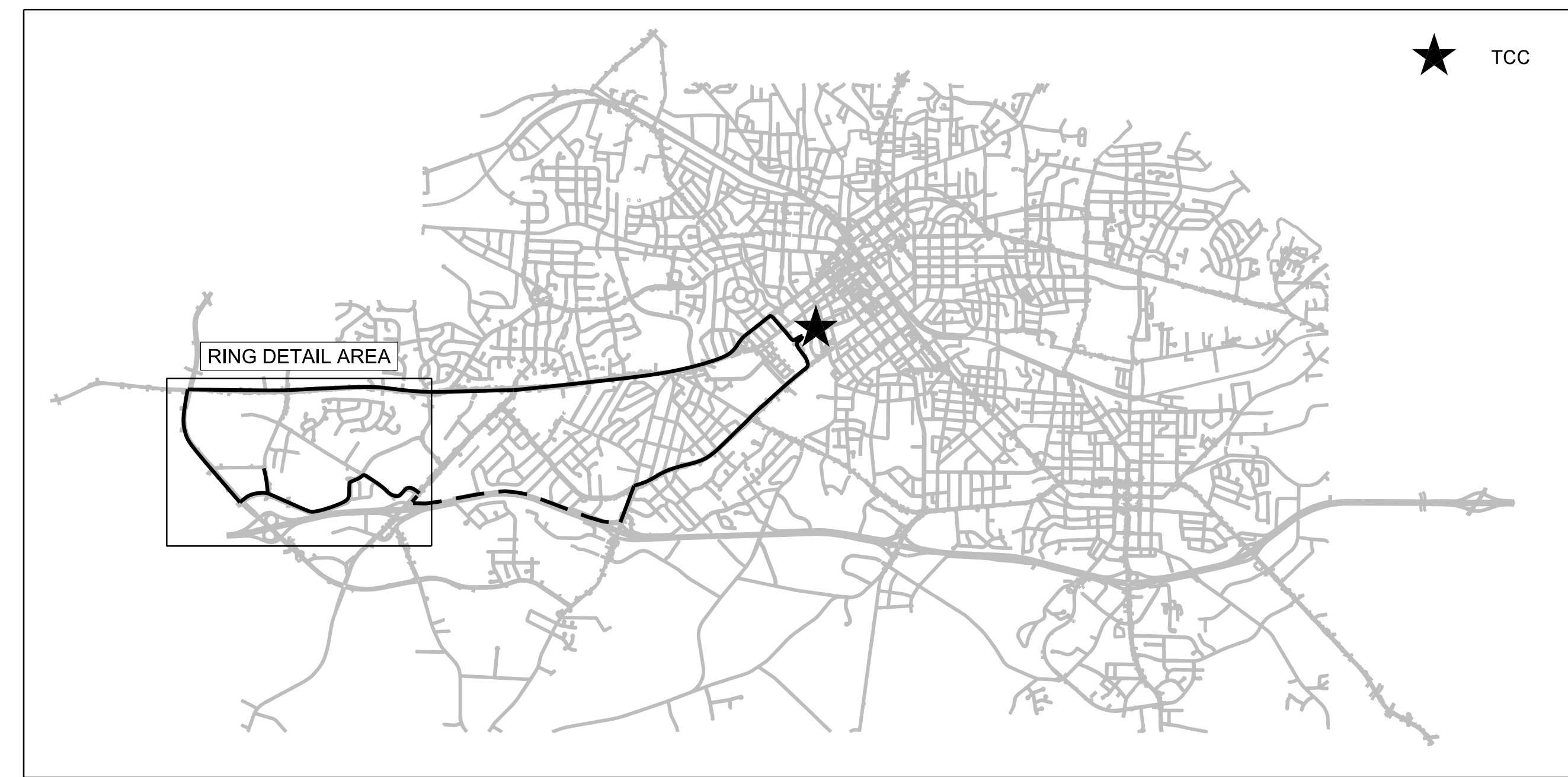
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

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| Prepared for the Offices of: NORTH CAROLINA DEPARTMENT OF TRANSPORTATION 750 Greenfield Parkway, Garner, NC 27529 | Burlington-Graham Signal System Fiber-Optic Ring Schematics (Ring 17) Division 7 Alameda County Burlington & Graham | | |
| | PLAN DATE: June 2018 PREPARED BY: BJ SLOCUM | REVIEWED BY: HA BADGETT REVIEWED BY: DL JONES | |
| SCALE N/A | DATE 15/2018 | | SEAL NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 040877 BRADFORD J. SLOCUM DATE 15/2018 CADD File name: FS 2.21.dgn |

RING 18 DETAIL



RING 18 OVERALL ROUTE



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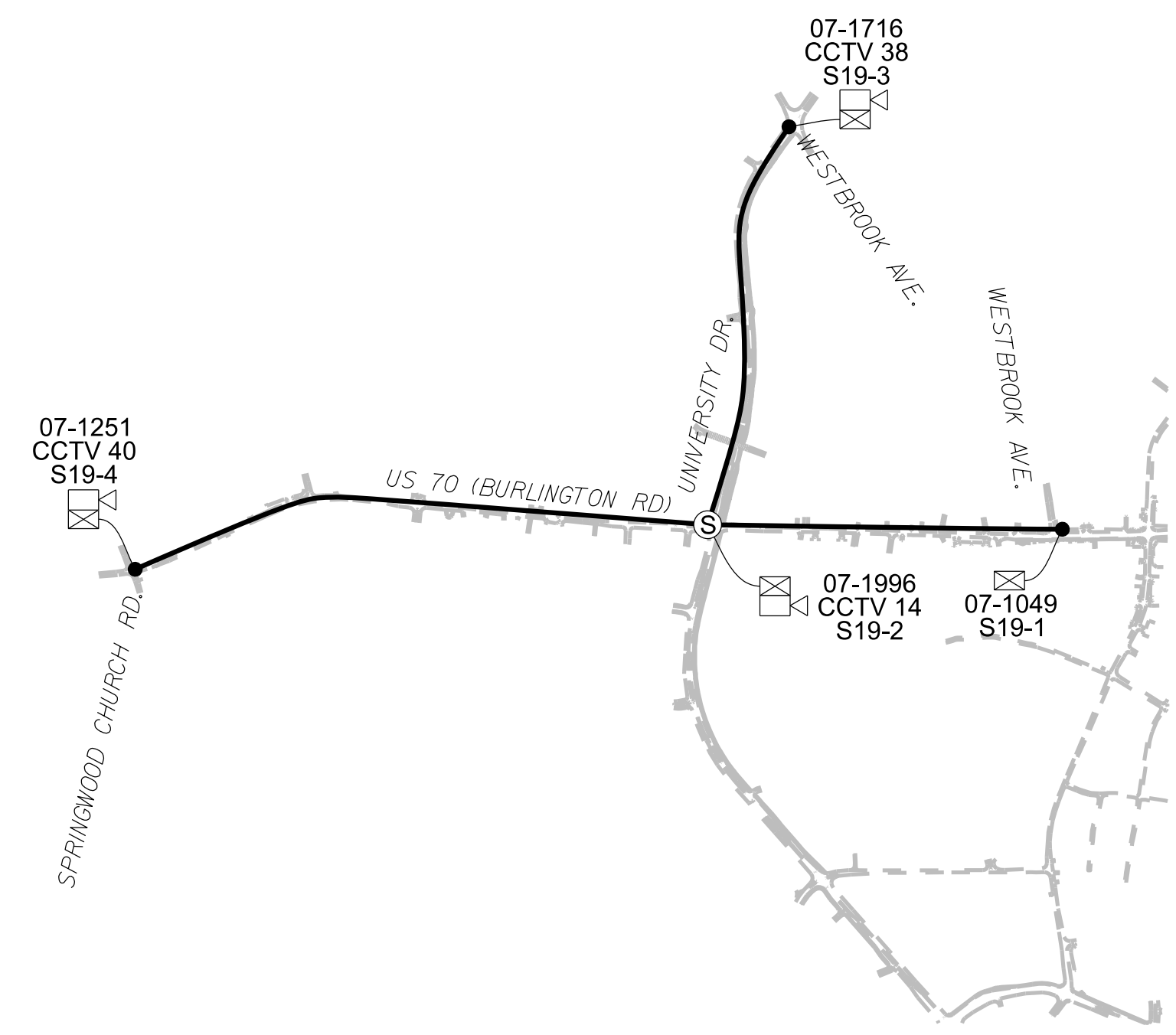
ATKINS 1616 EAST MILLBROOK ROAD, SUITE 160
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBES #F-0326

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

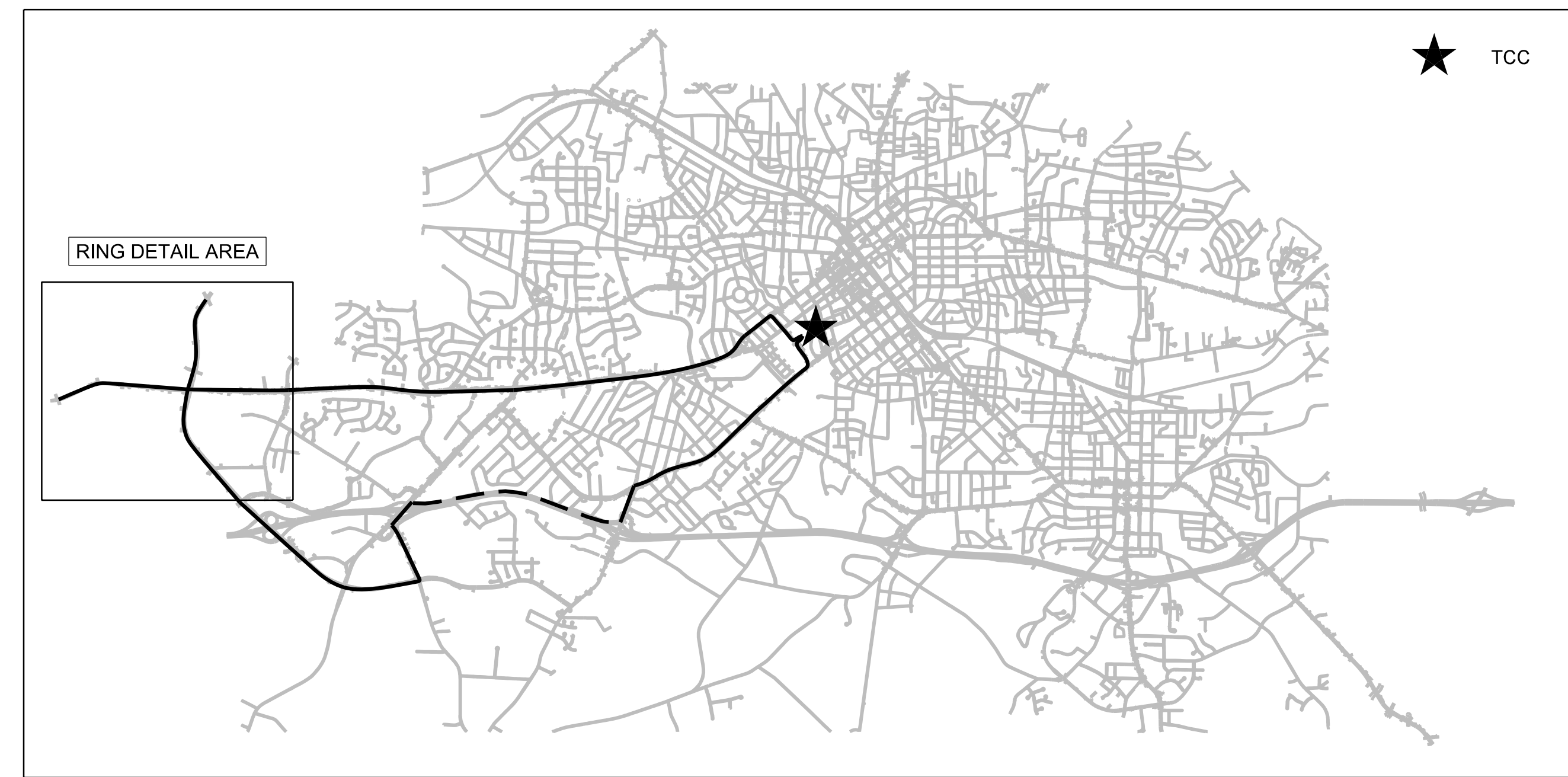
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| | Burlington-Graham Signal System Fiber-Optic Ring Schematics (Ring 18) | | |
| | Division 7 Alamance County | Burlington & Graham | |

DocuSign
Bradford J. Slocum
15/2018
DATE
CADD File name: FS 2.22.dgn

RING 19 DETAIL




RING 19 OVERALL ROUTE



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RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEES #F-0326

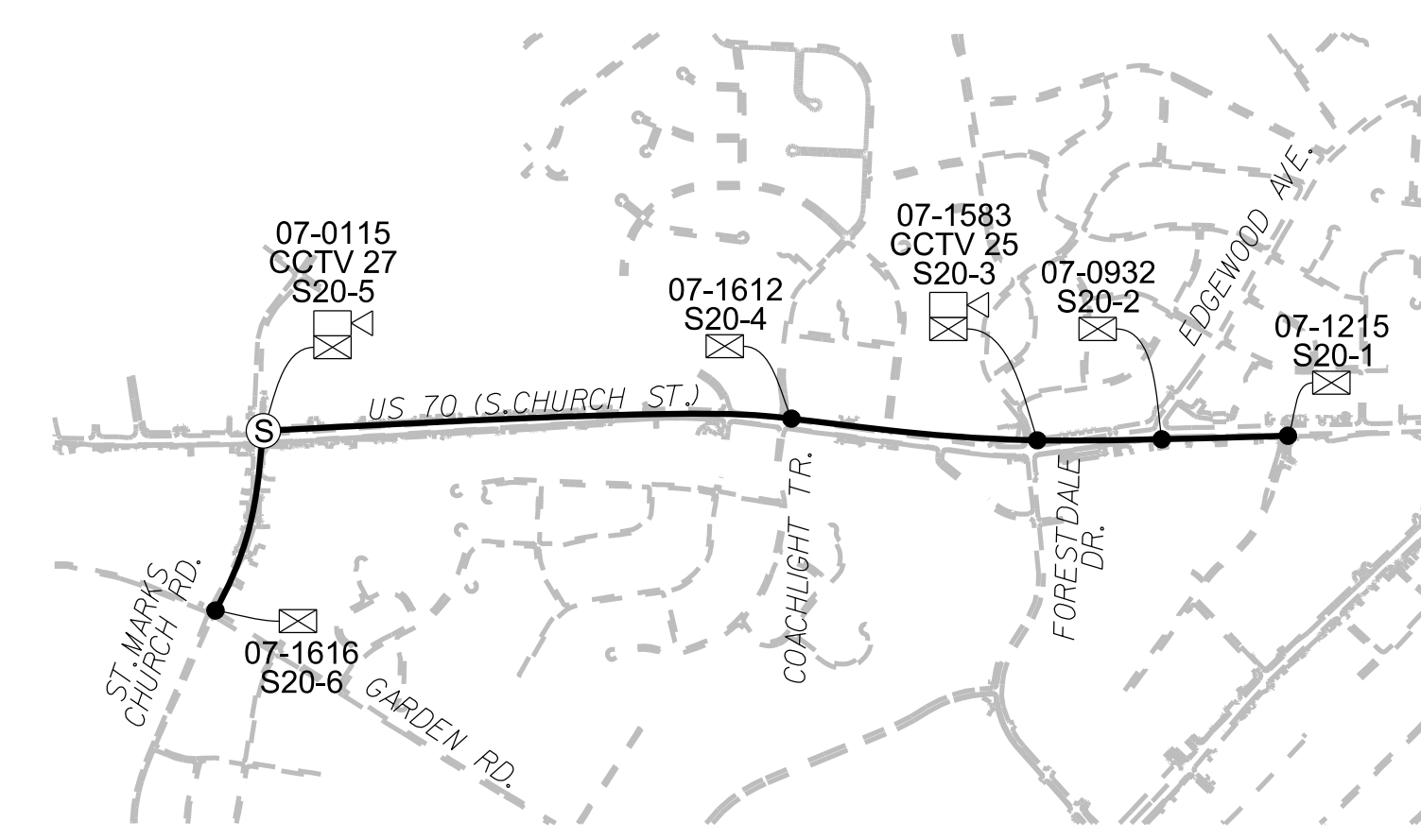
**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

Prepared for the Offices of:

 750 Greenfield Parkway, Garner, NC 27529

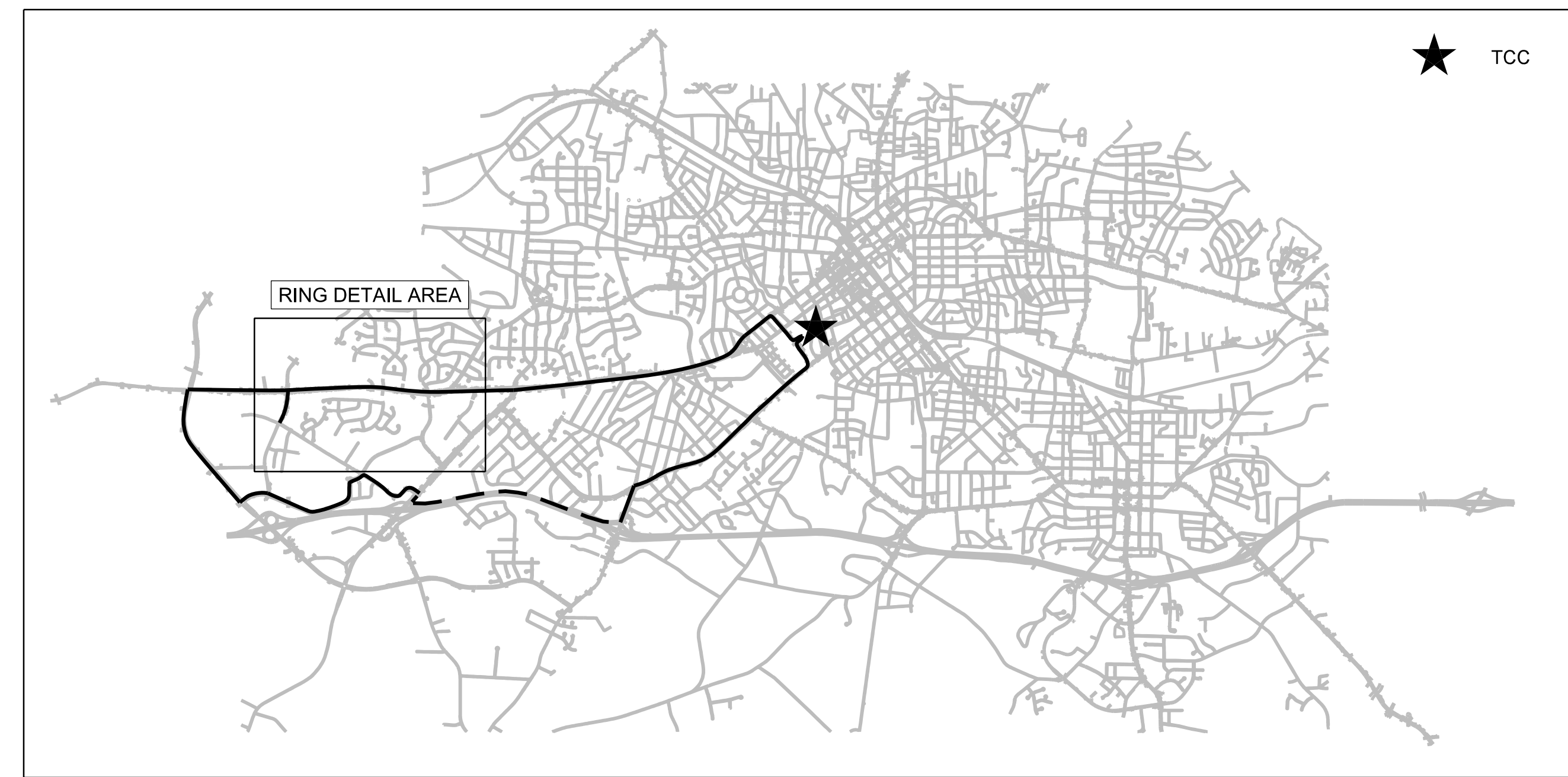
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| Burlington-Graham Signal System Fiber-Optic Ring Schematics (Ring 19) | | Burlington & Graham |
| Division 7 Alamance County | | |
| PLAN DATE: June 2018 | REVIEWED BY: HA BADGETT | |
| PREPARED BY: BJ SLOCUM | REVIEWED BY: DL JONES | |
| REVISIONS | INIT. | DATE |
| | | |
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 NORTH CAROLINA
 PROFESSIONAL
 SEAL
 040877
 ENGINEER
 BRADFORD J. SLOCUM
 15/2018
 DATE

RING 20 DETAIL



RING 20 OVERALL ROUTE



14 JUN 2018 10:17
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SLOCUM AT LUS355433

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Prepared for the Offices of:

750 Greenfield Parkway, Garner, NC 27529

| | | |
|---|-------------------------|---------------------|
| Burlington-Graham Signal System Fiber-Optic Ring Schematics (Ring 20) | | Burlington & Graham |
| Division 7 Alamance County | | |
| PLAN DATE: June 2018 | REVIEWED BY: HA BADGETT | |
| PREPARED BY: BJ SLOCUM | REVIEWED BY: DL JONES | |
| REVISIONS | INIT. | DATE |
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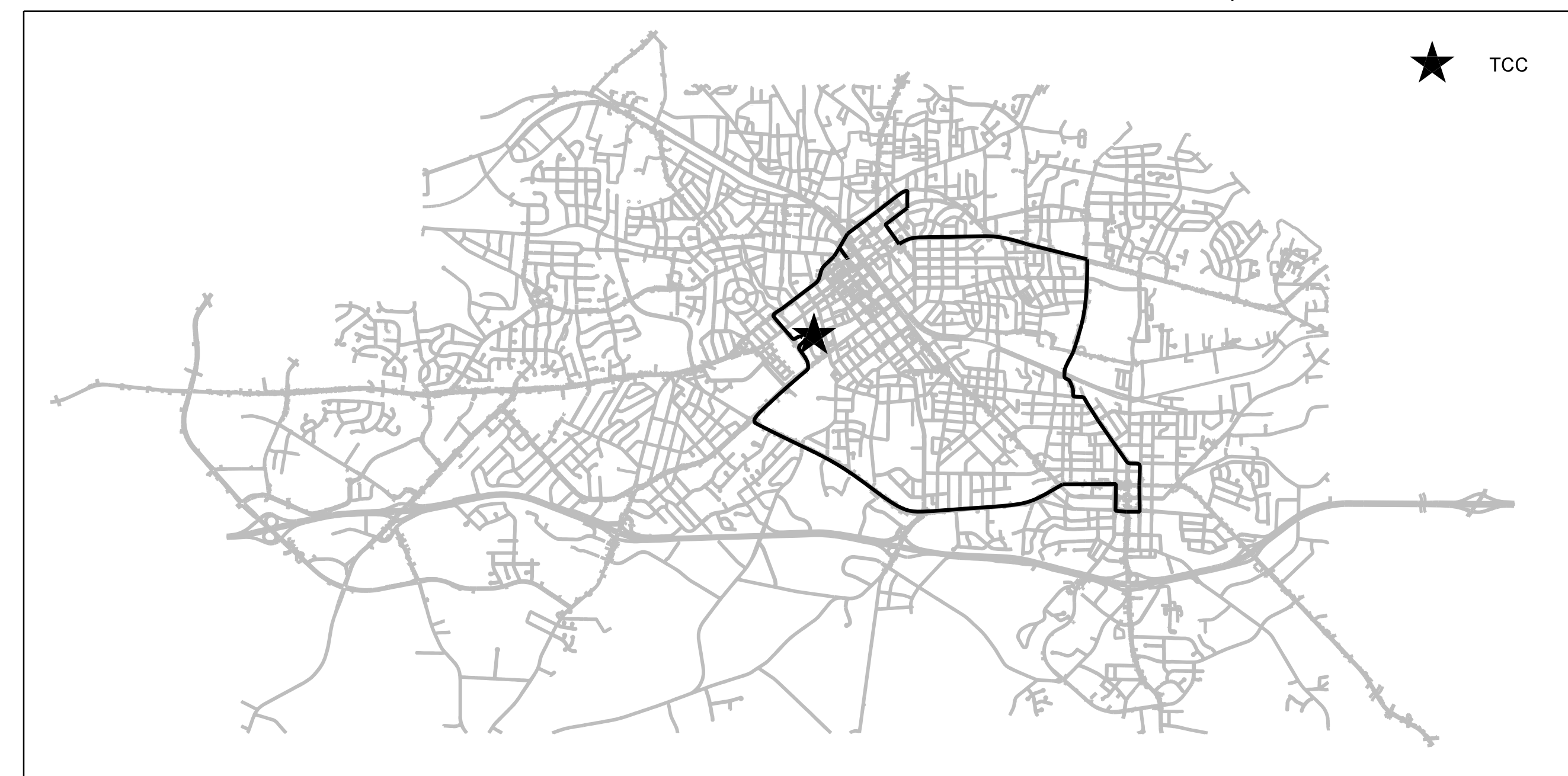
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BRADFORD J. SLOCUM
ENGINEER
15/2018
DATE

VIDEO SHARING RINGS

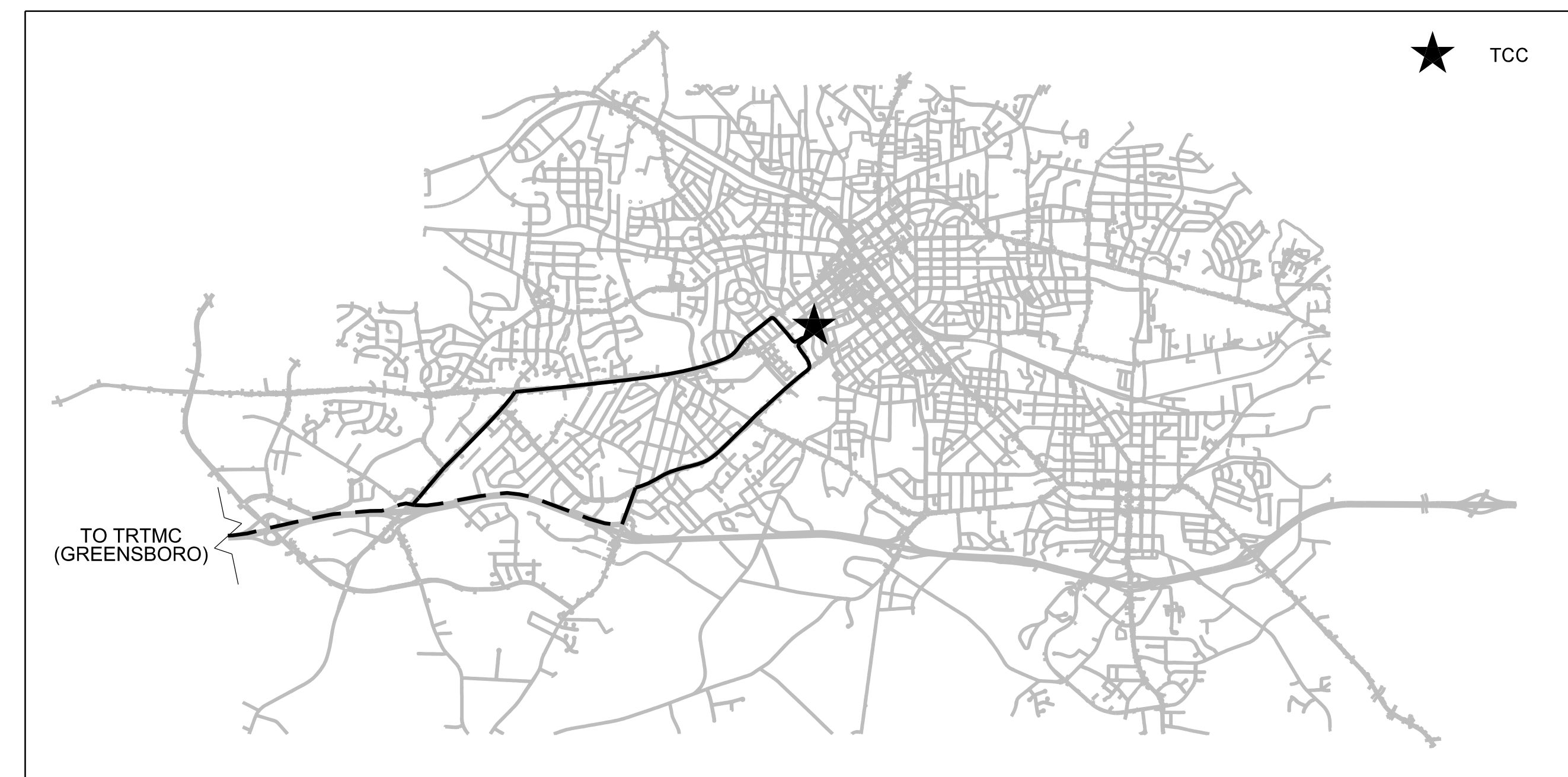
RING 21 OVERALL ROUTE

(SEE SPLICE S10-3 FOR CONNECTION TO POLICE DEPARTMENT.
SEE SPLICE S3-2 FOR CONNECTION TO COUNTY 911 CENTER)



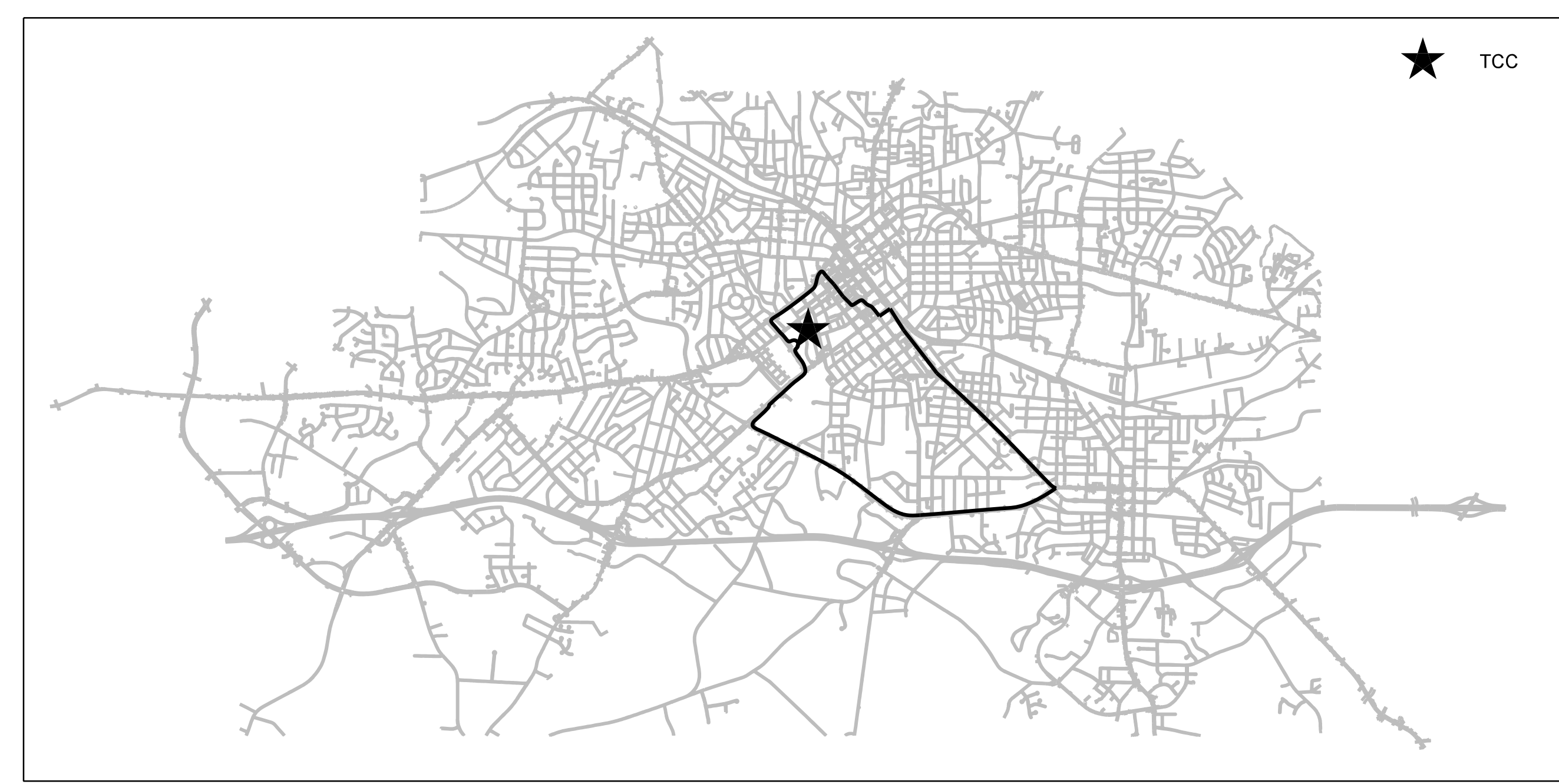
RING 22 OVERALL ROUTE

(SEE SPLICE S17-8 FOR CONNECTION TO HUFFMAN MILL NCDOT HUB CABINET)



RING 23 OVERALL ROUTE

(SEE SPLICE S9-1 FOR CONNECTION TO BURLINGTON CITY HALL)



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| | | | |
|---|---|--|---|
| | Burlington-Graham Signal System Fiber-Optic Ring Schematics (Rings 21, 22, 23) | | |
| | Division 7 Alamance County Burlington & Graham | | |
| Prepared for the Offices of: STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION 750 Greenfield Parkway, Garner, NC 27529 | PLAN DATE: June 2018 PREPARED BY: BJ SLOCUM | REVIEWED BY: HA BADGETT REVIEWED BY: DL JONES | SEAL NORTH CAROLINA PROFESSIONAL ENGINEER BRADFORD J. SLOCUM 040877 15/2018 |
| SCALE N/A | REVISIONS _____ | INIT. _____ | DATE _____ |

Table with columns: CABLE NUMBER, CABLE SIZE, NEW/EXISTING, TUBE, STRAND PAIR. Rows for BLUE, ORANGE, GREEN, BROWN cables with strand pair details.

Table with columns: CABLE NUMBER, CABLE SIZE, NEW/EXISTING, TUBE, STRAND PAIR. Rows for BLUE, ORANGE, GREEN, BROWN cables with strand pair details.

Table with columns: CABLE NUMBER, CABLE SIZE, NEW/EXISTING, TUBE, STRAND PAIR. Rows for BLUE, ORANGE, GREEN, BROWN cables with strand pair details.

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ATKINS 1616 EAST MILLBROOK ROAD, SUITE 160 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

Professional seal area for Bradford J. Slocum, Engineer. Includes project title 'Burlington-Graham Signal System Fiber-Optic Cable Usage Summary', plan date 'June 2018', and reviewer 'HA BADGETT'. Includes a circular seal with 'NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 040877'.

Table with 5 columns: Splice Number, Signal Inventory / CCTV ID, Fiber Splicing Detail Sheet, Cable Schematic, Cable Routing Plan Sheet No. Includes rows for TCC, S1-1 to S1-12, S2-0 to S2-10, S3-1 to S3-4, S4-1 to S4-10, S5-1 to S5-11, S6-1 to S6-9, S7-1 to S7-7.

Table with 5 columns: Splice Number, Signal Inventory / CCTV ID, Fiber Splicing Detail Sheet, Cable Schematic, Cable Routing Plan Sheet No. Includes rows for S8-1 to S8-6, S9-1 to S9-5, S10-1 to S10-6, S11-1 to S11-9, S12-1 to S12-9, S13-1 to S13-9.

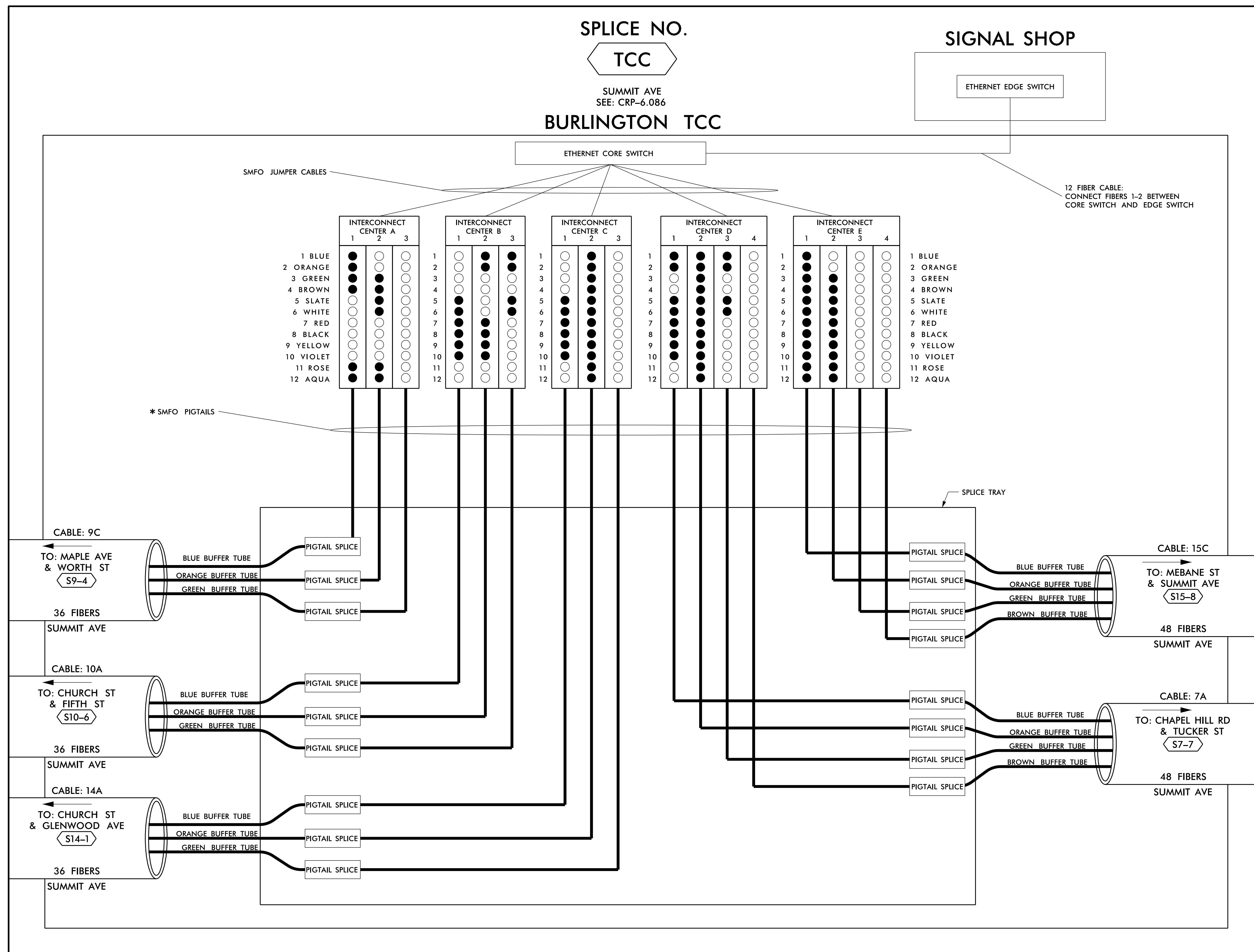
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ATKINS 1616 EAST MILLBROOK ROAD, SUITE 160
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEES #F-0326

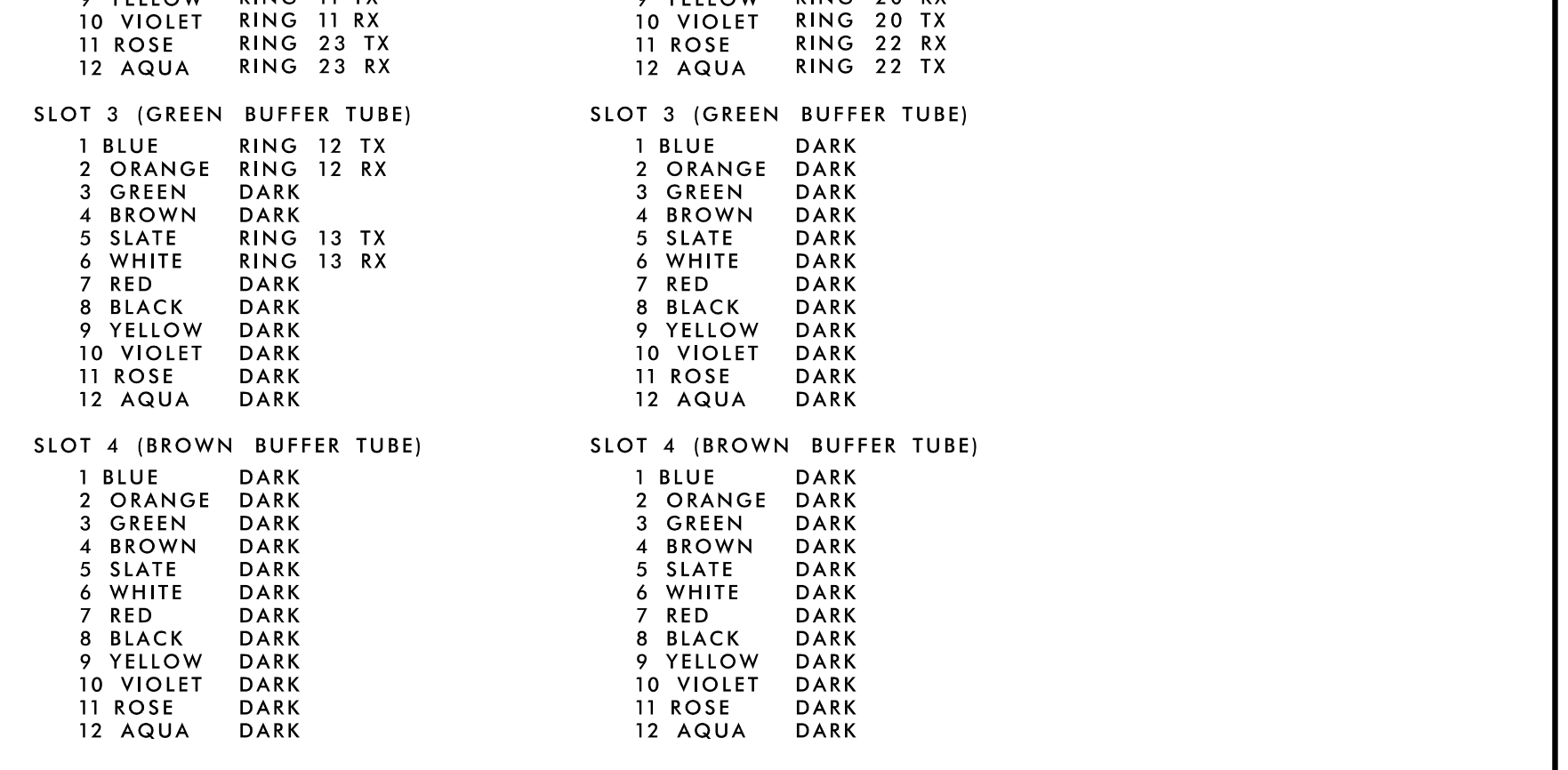
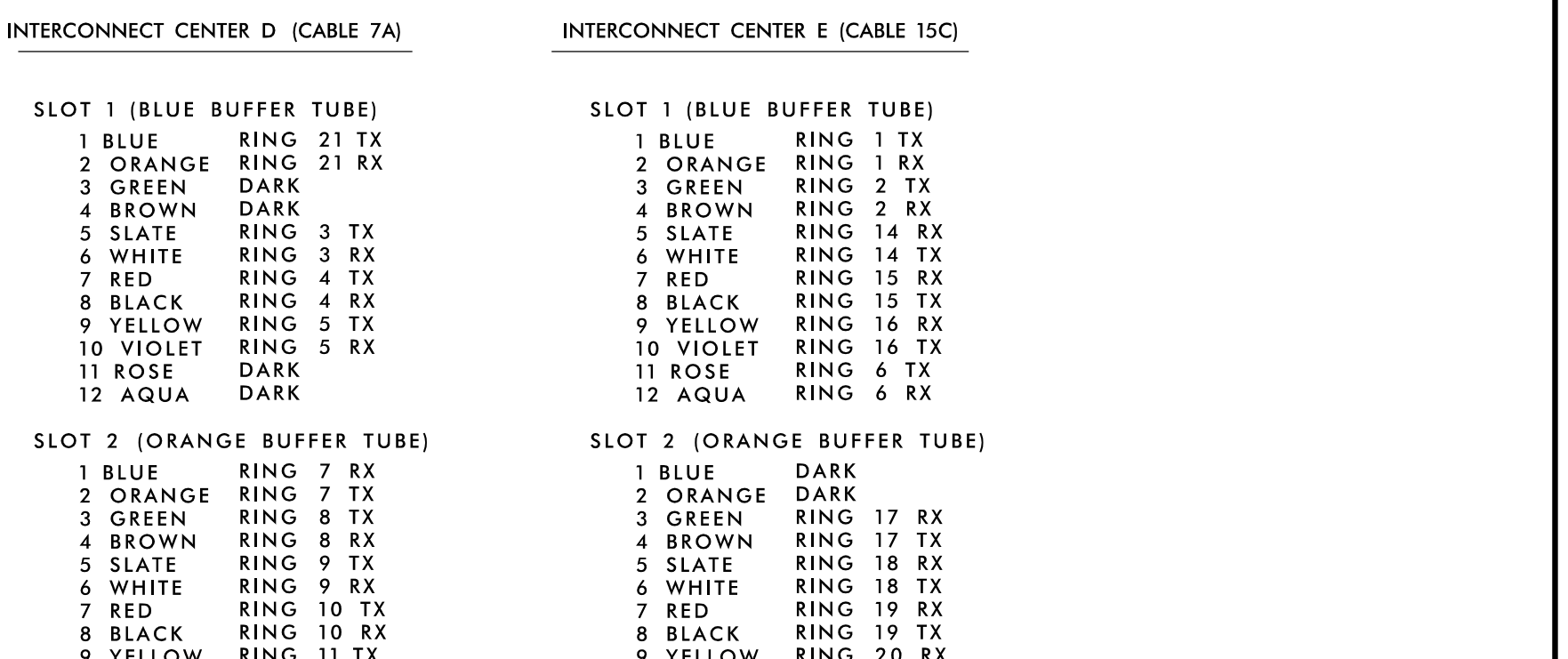
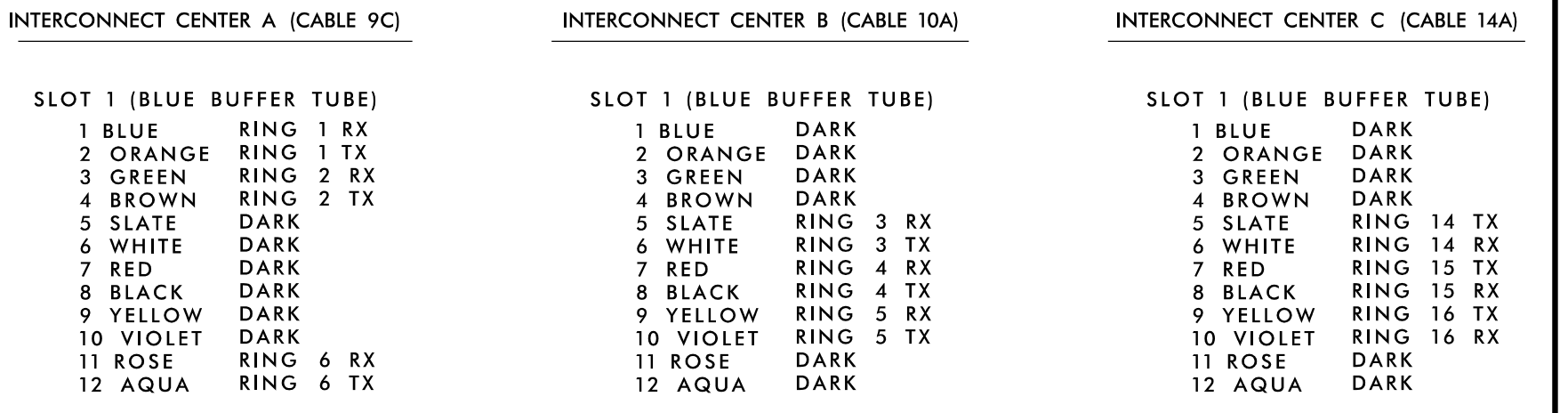
Document title: Burlington-Graham Signal System Fiber-Optic Splicing Details Key Sheet. Includes project details, revision table, and professional seals for Bradford J. Slocum and HA Badgett.

BURLINGTON PUBLIC WORKS BUILDING



* SMFO PIGTAILS

12 FIBER CABLE.
CONNECT FIBERS 1-2 BETWEEN
CORE SWITCH AND EDGE SWITCH



* SMFO PIGTAILS TO BE SPLICED TO BUFFER TUBES COLOR TO COLOR.

LEGEND

| | | | |
|-----------------------------|-------------|------------------------------------|--|
| COLOR CODE TIA/EIA 598-B | | X = FUSION SPlice INDIVIDUAL FIBER | |
| (1) BLUE | (7) RED | EXPRESS | EXPRESS ENTIRE BUFFER TUBE /FIBERS THROUGH WITHOUT CUTTING |
| (2) ORANGE | (8) BLACK | BUFFER SPlice | SPLICE ALL FIBERS IN BUFFER TUBE COLOR TO COLOR |
| (3) GREEN | (9) YELLOW | EXISTING | EXISTING BUFFER TUBE /FIBERS DO NOT MODIFY EXISTING SPLICES OR EXPRESSED FIBERS. |
| (4) BROWN | (10) VIOLET | | |
| (5) SLATE | (11) ROSE | | |
| (6) WHITE | (12) AQUA | | |

NOTES

- UNUSED FIBERS LEFT COILED AND STORED IN SPLICE TRAY
- UNUSED BUFFER TUBES LEFT COILED AND STORED IN SPLICE ENCLOSURE
- EDGE SWITCH CONFIGURATIONS ARE GENERIC. CONTRACTOR IS RESPONSIBLE FOR DETERMINING/ENSURING THE PROPER TERMINATIONS.

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RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEES #F-0326

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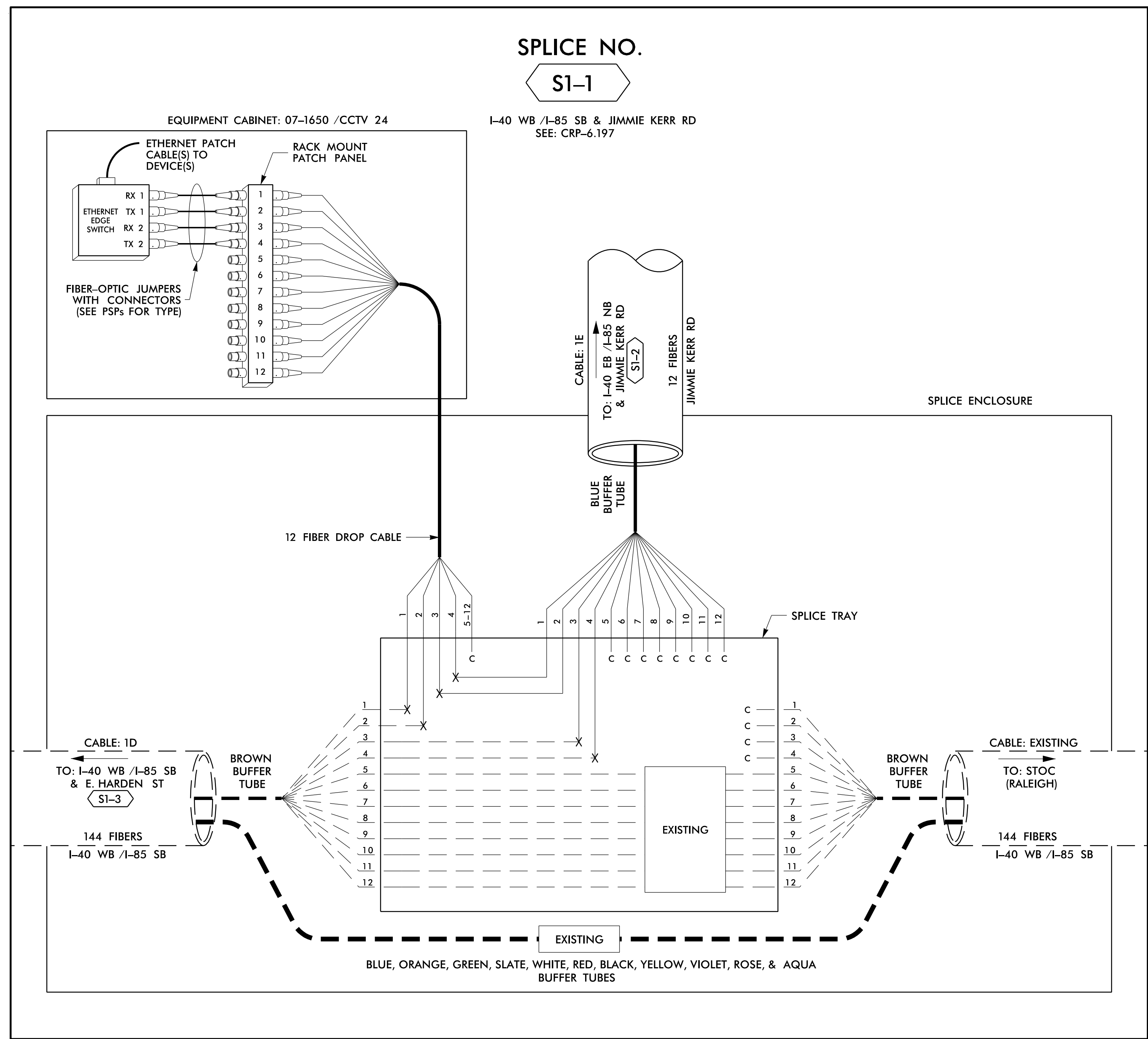
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|--|-------------------------|-----------|-------|------|--|--|--|--|--|--|
| <p>Division 7 Alamance County Burlington & Graham</p> | | | | | | | | | | |
| PLAN DATE: June 2018 | REVIEWED BY: HA BADGETT | | | | | | | | | |
| PREPARED BY: BJ SLOCUM | REVIEWED BY: DL JONES | | | | | | | | | |
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| REVISIONS | INIT. | DATE | | | | | | | | |
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SCALE
N/A

750 Greenfield Parkway, Garner, NC 27529

CAD FILE NAME: FS_4.001.dgn

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LEGEND

| | | | |
|-------------------|-------------|----------------------|--|
| COLOR CODE | | | |
| TIA/EIA 598-B | | | |
| (1) BLUE | (7) RED | EXPRESS | EXPRESS ENTIRE BUFFER TUBE /FIBERS THROUGH WITHOUT CUTTING |
| (2) ORANGE | (8) BLACK | BUFFER SPLICE | SPLICE ALL FIBERS IN BUFFER TUBE COLOR TO COLOR |
| (3) GREEN | (9) YELLOW | EXISTING | EXISTING BUFFER TUBE /FIBERS DO NOT MODIFY EXISTING SPLICES OR EXPRESSED FIBERS. |
| (4) BROWN | (10) VIOLET | | |
| (5) SLATE | (11) ROSE | | |
| (6) WHITE | (12) AQUA | | |

X = FUSION SPLICE INDIVIDUAL FIBER
C = CAP AND SEAL

- NOTES**
- UNUSED FIBERS LEFT COILED AND STORED IN SPLICE TRAY
 - UNUSED BUFFER TUBES LEFT COILED AND STORED IN SPLICE ENCLOSURE
 - EDGE SWITCH CONFIGURATIONS ARE GENERIC. CONTRACTOR IS RESPONSIBLE FOR DETERMINING/ENSURING THE PROPER TERMINATIONS.

ATKINS 1616 EAST MILLBROOK ROAD, SUITE 160
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEEES #F-0326

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared for the Offices of:

 State of North Carolina
 Department of Transportation

Burlington-Graham Signal System
Fiber-Optic Splicing Details

Division 7 Alamance County Burlington & Graham

PLAN DATE: June 2018 REVIEWED BY: HA BADGETT

PREPARED BY: BJ SLOCUM REVIEWED BY: DL JONES

| REVISIONS | INIT. | DATE |
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SCALE: N/A

750 Greenfield Parkway, Garner, NC 27529

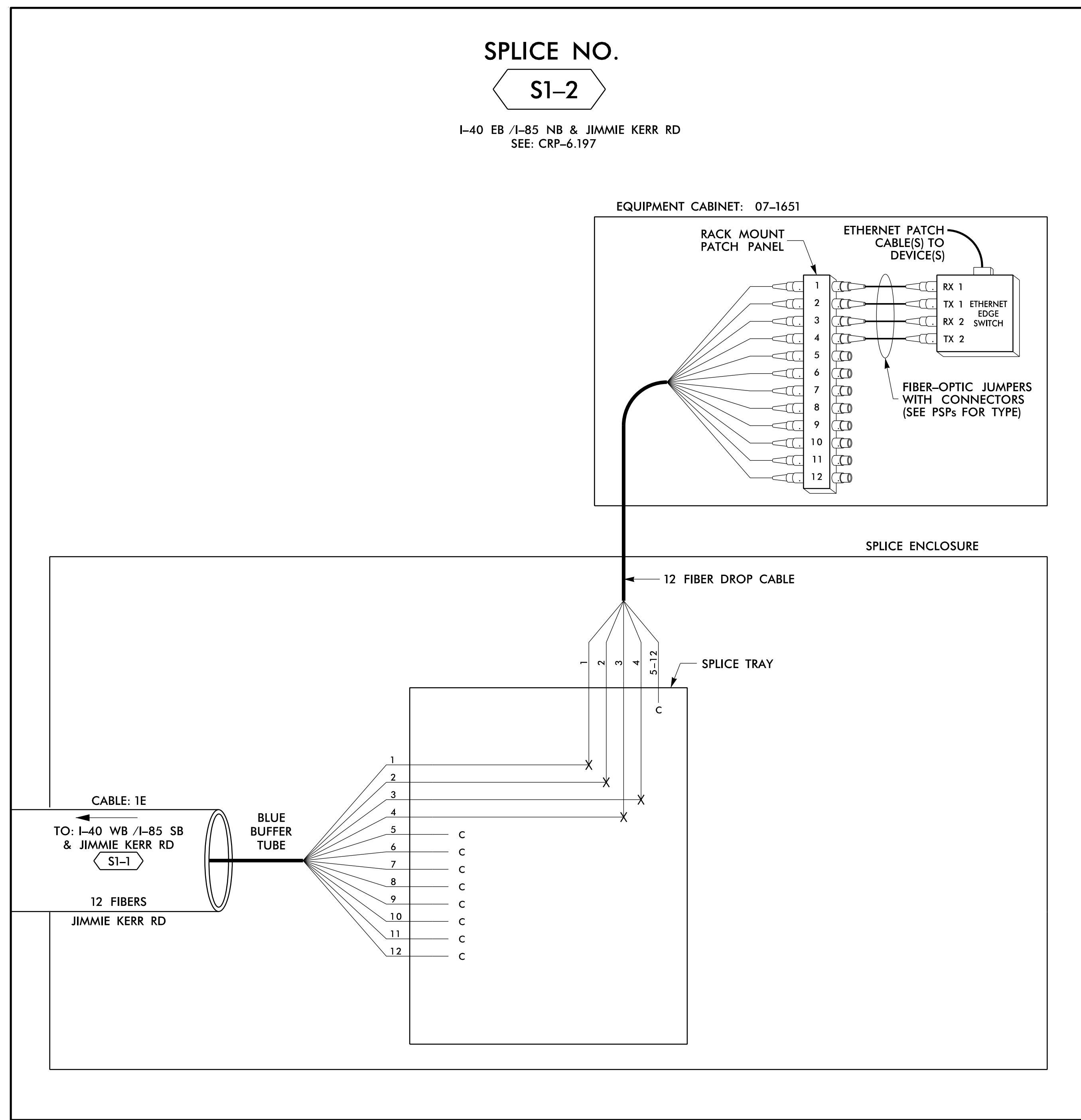
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 NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 040877
 BRADFORD J. SLOCUM
 15/2018
 DATE

CADD File name: FS 4.002.dgn

SPLICE NO.

S1-2

I-40 EB / I-85 NB & JIMMIE KERR RD
SEE: CRP-6.197



LEGEND

| | | | |
|-----------------------------|-------------|------------------------------------|---|
| COLOR CODE TIA/EIA 598-B | | X = FUSION SPlice INDIVIDUAL FIBER | |
| (1) BLUE | (7) RED | EXPRESS | EXPRESS ENTIRE BUFFER TUBE / FIBERS THROUGH WITHOUT CUTTING |
| (2) ORANGE | (8) BLACK | BUFFER SPlice | SPlice ALL FIBERS IN BUFFER TUBE COLOR TO COLOR |
| (3) GREEN | (9) YELLOW | EXISTING | EXISTING BUFFER TUBE / FIBERS DO NOT MODIFY EXISTING SPlices OR EXPRESSED FIBERS. |
| (4) BROWN | (10) VIOLET | | |
| (5) SLATE | (11) ROSE | | |
| (6) WHITE | (12) AQUA | | |

NOTES

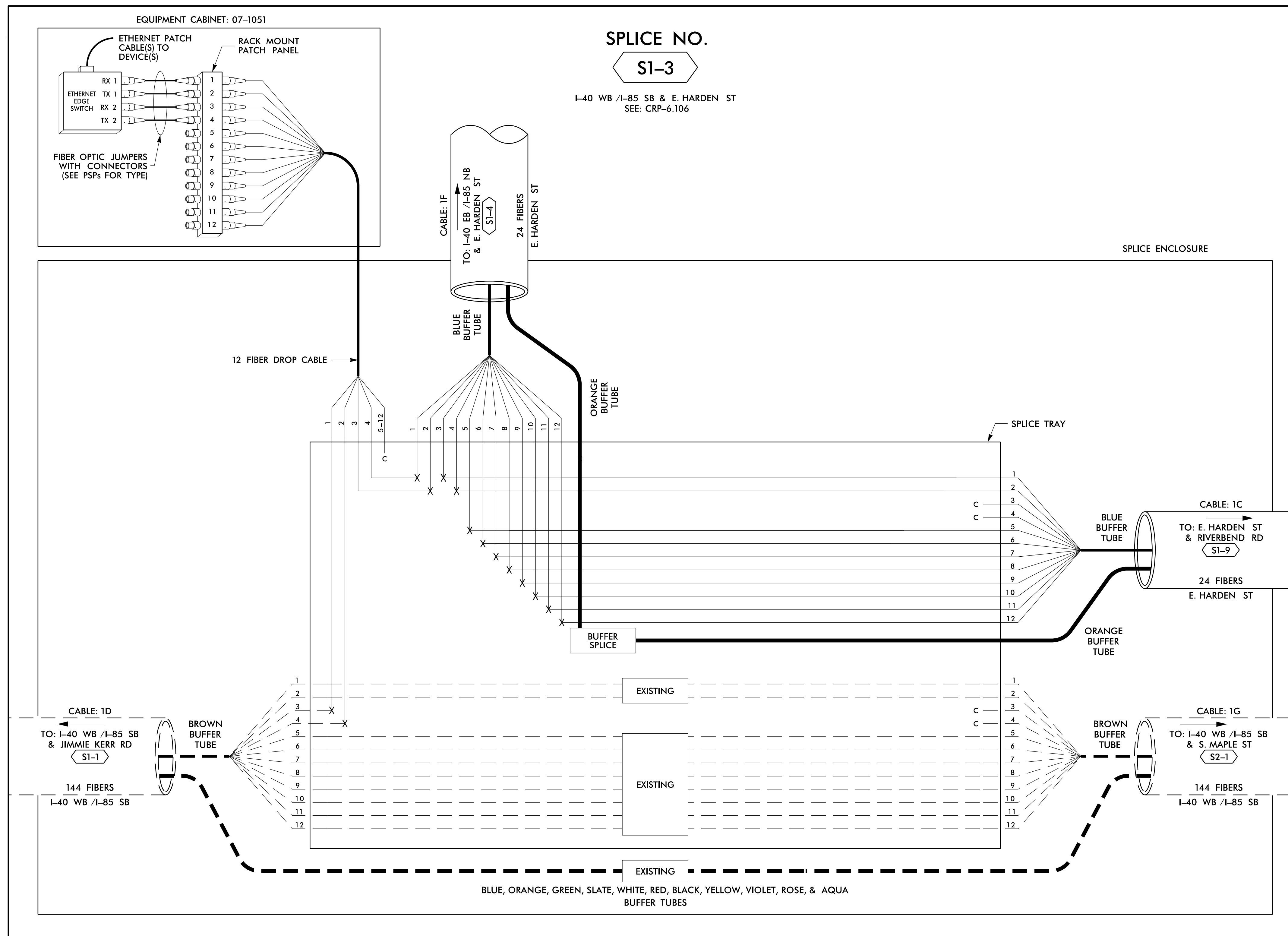
- UNUSED FIBERS LEFT COILED AND STORED IN SPLICE TRAY
- UNUSED BUFFER TUBES LEFT COILED AND STORED IN SPLICE ENCLOSURE
- EDGE SWITCH CONFIGURATIONS ARE GENERIC. CONTRACTOR IS RESPONSIBLE FOR DETERMINING/ENSURING THE PROPER TERMINATIONS.

ATKINS 1616 EAST MILLBROOK ROAD, SUITE 160
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEEES #F-0326

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| | | | |
|--|---|------------|------|
| | Burlington-Graham Signal System Fiber-Optic Splicing Details | | |
| | Division 7 Alamance County Burlington & Graham | | |
| PLAN DATE: June 2018 PREPARED BY: BJ SLOCUM | REVIEWED BY: HA BADGETT REVIEWED BY: DL JONES | | |
| SCALE: N/A | REVISIONS | INIT. DATE | DATE |

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LEGEND

| | | | |
|-----------------------------|-------------|--|--|
| COLOR CODE TIA/EIA 598-B | | X = FUSION SPlice INDIVIDUAL FIBER C = CAP AND SEAL | |
| (1) BLUE | (7) RED | EXPRESS | EXPRESS ENTIRE BUFFER TUBE /FIBERS THROUGH WITHOUT CUTTING |
| (2) ORANGE | (8) BLACK | BUFFER SPlice | SPlice ALL FIBERS IN BUFFER TUBE COLOR TO COLOR |
| (3) GREEN | (9) YELLOW | EXISTING | EXISTING BUFFER TUBE /FIBERS DO NOT MODIFY EXISTING SPlices OR EXPRESSED FIBERS. |
| (4) BROWN | (10) VIOLET | | |
| (5) SLATE | (11) ROSE | | |
| (6) WHITE | (12) AQUA | | |

NOTES

- UNUSED FIBERS LEFT COILED AND STORED IN SPICE TRAY
- UNUSED BUFFER TUBES LEFT COILED AND STORED IN SPICE ENCLOSURE
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|--|--|---|--|
| Prepared for the Offices of: 750 Greenfield Parkway, Garner, NC 27529 SCALE: N/A | Burlington-Graham Signal System Fiber-Optic Splicing Details | | SEAL NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 040877 BRADFORD J. SLOCUM 15/2018 DATE |
| | Division 7 Alamance County PLAN DATE: June 2018 PREPARED BY: BJ SLOCUM | Burlington & Graham REVIEWED BY: HA BADGETT REVIEWED BY: DL JONES | |
| | REVISIONS | INIT. DATE | |
| | CAD File name: FS_4.004.dgn | | |