

SLACK SPAN

PROJECT REFERENCE NO.

CADD FILE NAME: R-5020B SCP

REVISIONS

License C-2197

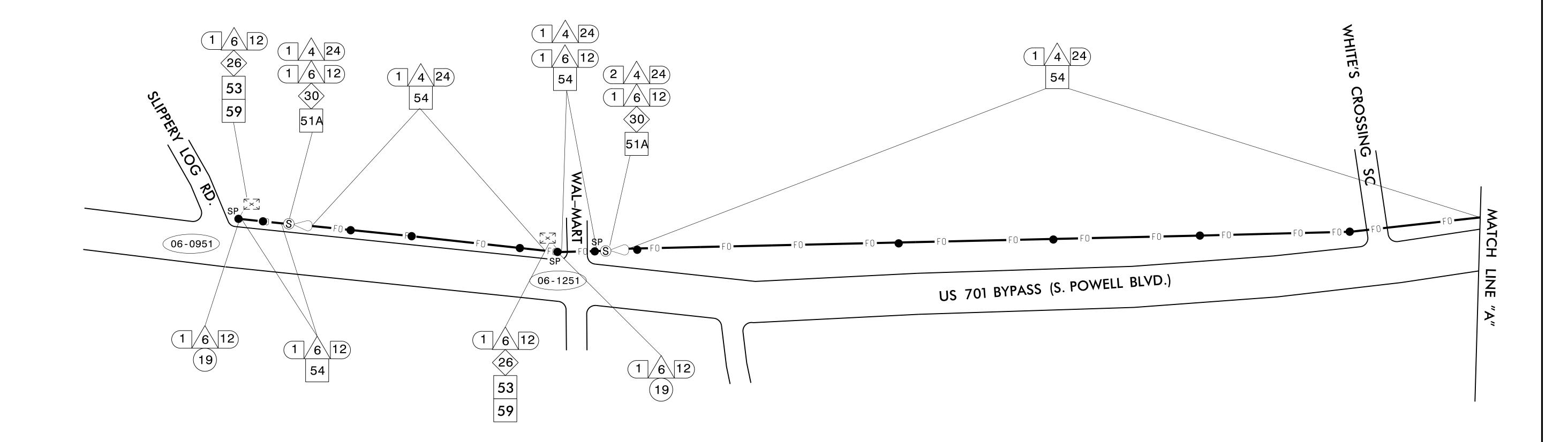
NONE

Engineering & Construction, Inc.

Notes

 Record existing splice arrangements in Existing Splice Enclosures and Signal Cabinets prior to beginning work associated with splicing in the new fiber. If discrepancies exist, contact the Engineer to determine how to proceed prior to re-splicing.

2. Contact the Division 6 Traffic Signal Supervisor at 910-364-0606, and provide a minimum of 5 working days notice prior to disturbing the existing fiber splices.





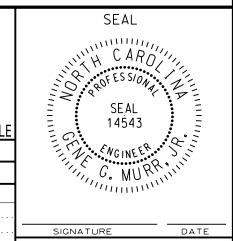
NC Dept of Transportation Division of Highways

Final Drawing Date:

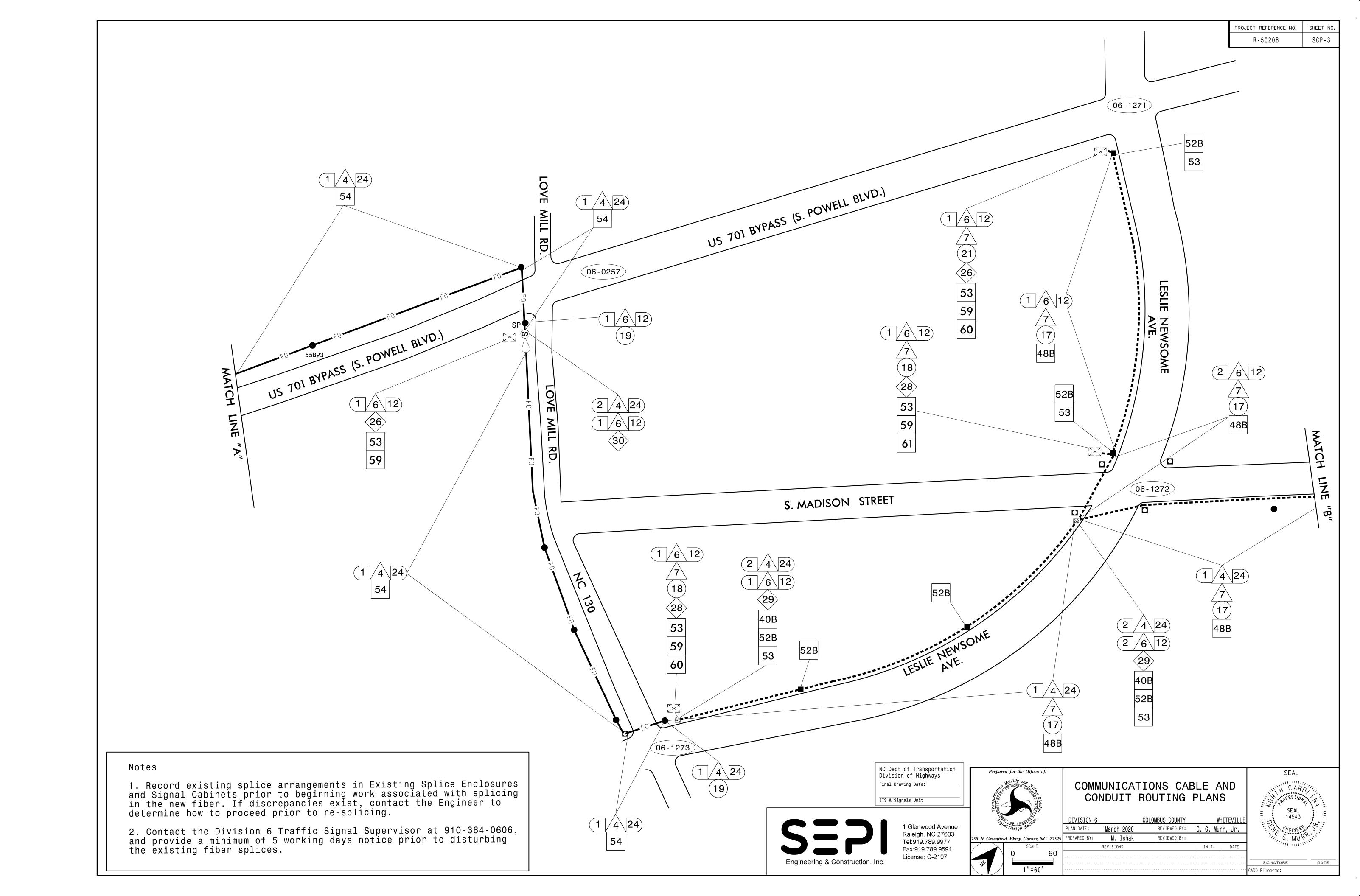


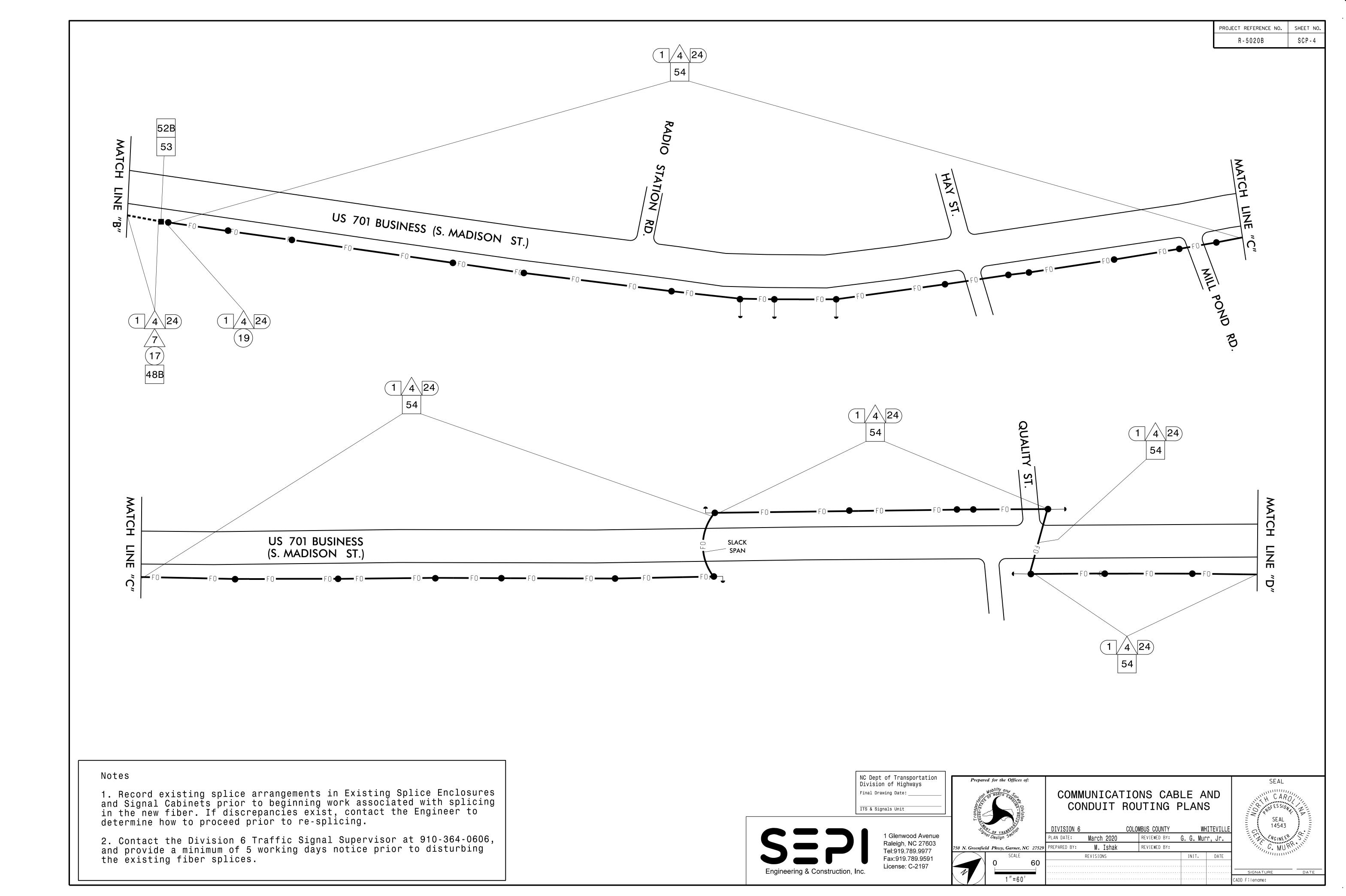
COMMUNICATIONS CABLE AND CONDUIT ROUTING PLANS

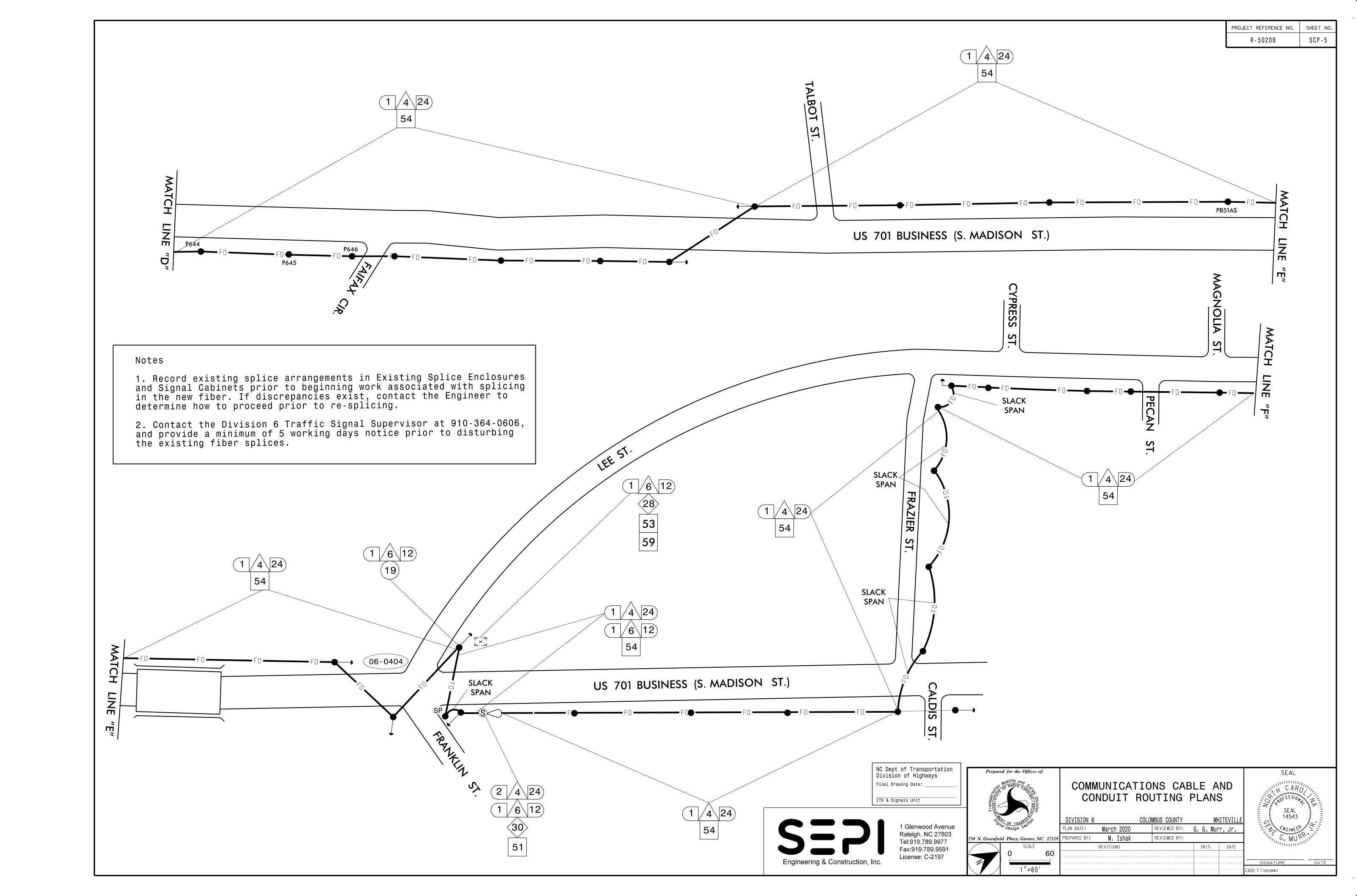
Section		DIVISION 6		COLOMBUS COUNTY	WH	ITEVILL
Sec.		PLAN DATE:	March 2020	REVIEWED BY:	G. G. Mur	r, Jr.
Garner, NC	27529	PREPARED BY:	M. Ishak	REVIEWED BY:		
SCALE			REVISIONS		INIT.	DATE
	60					

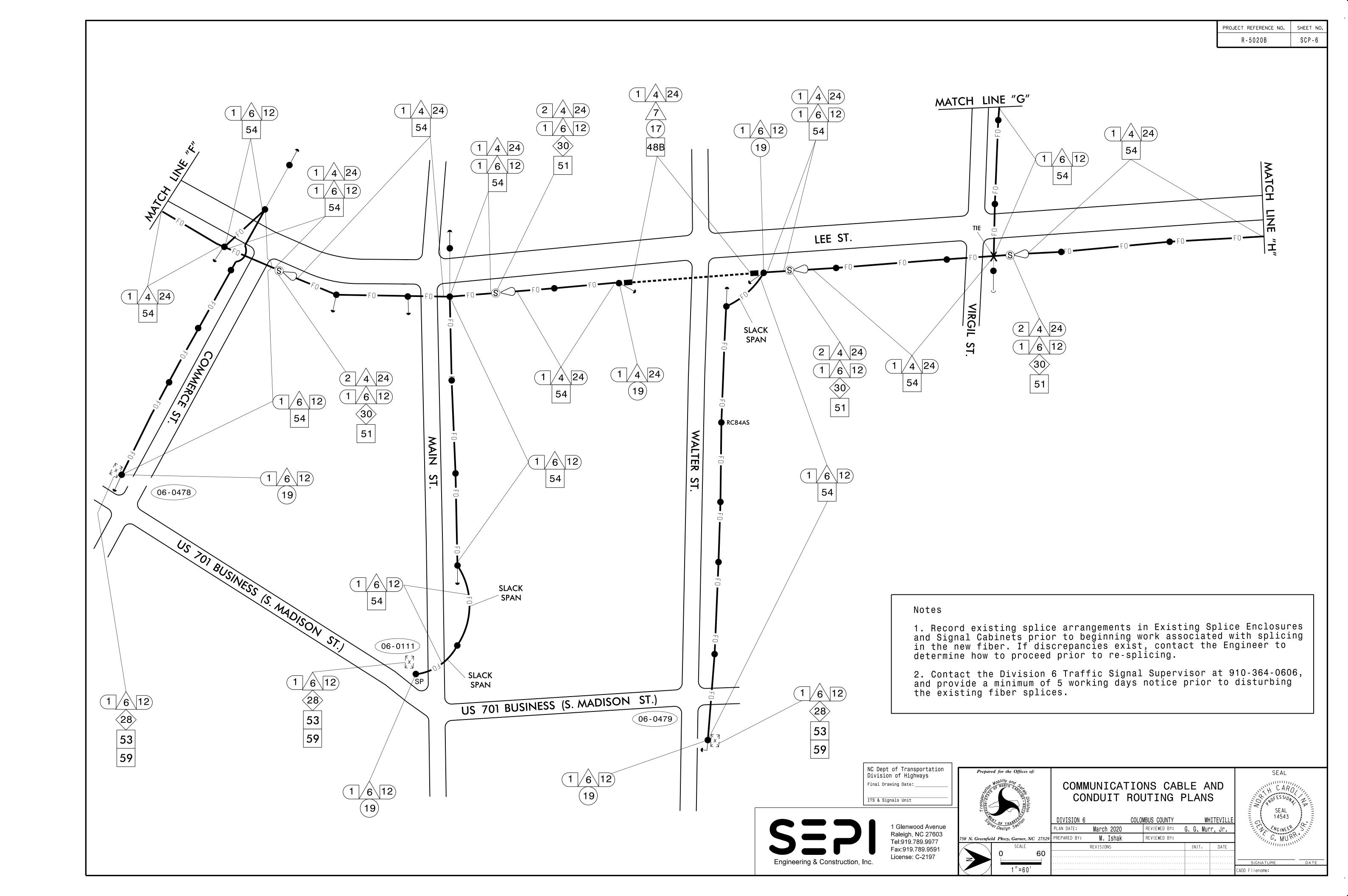


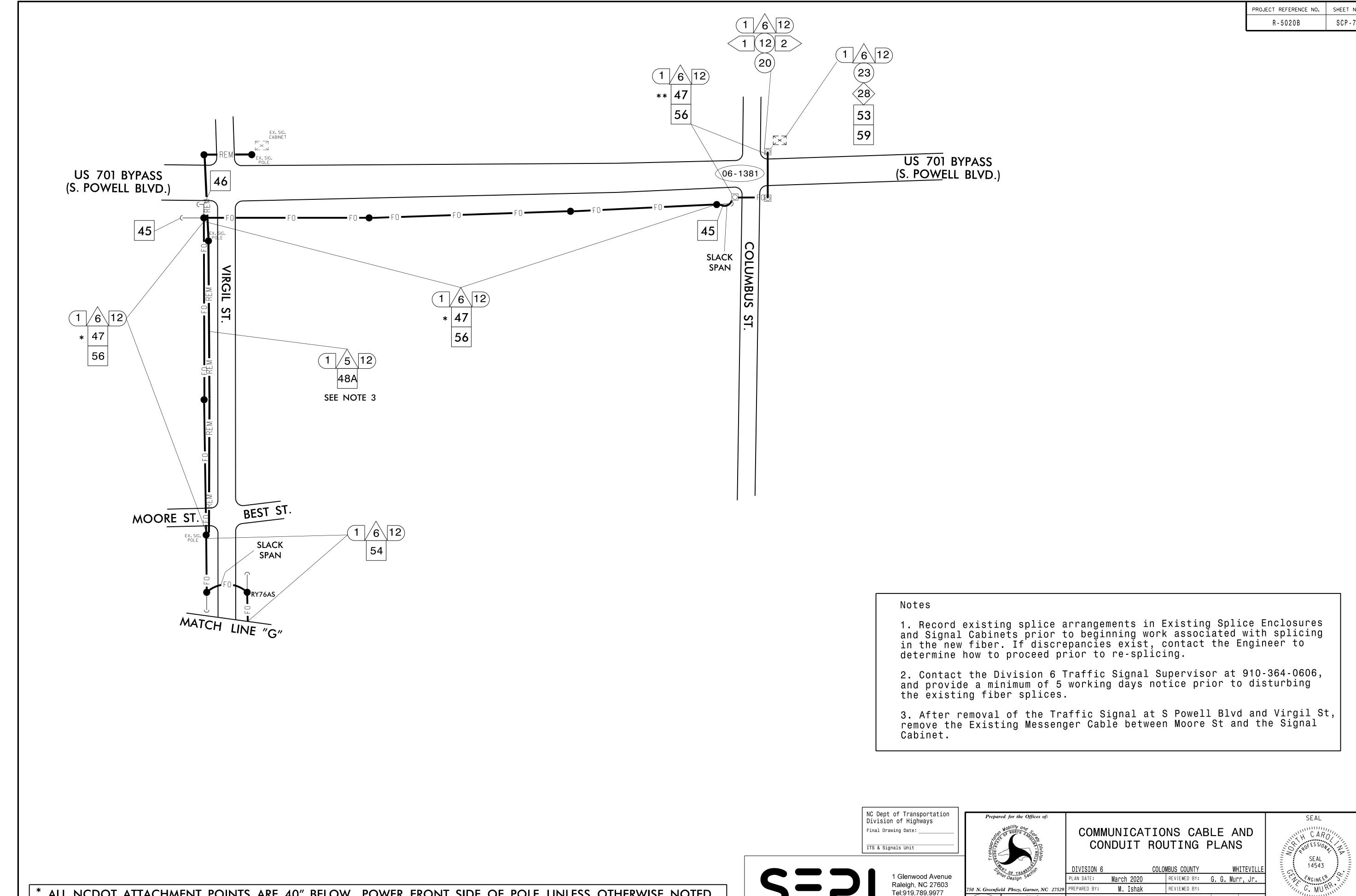
PROJECT REFERENCE NO.









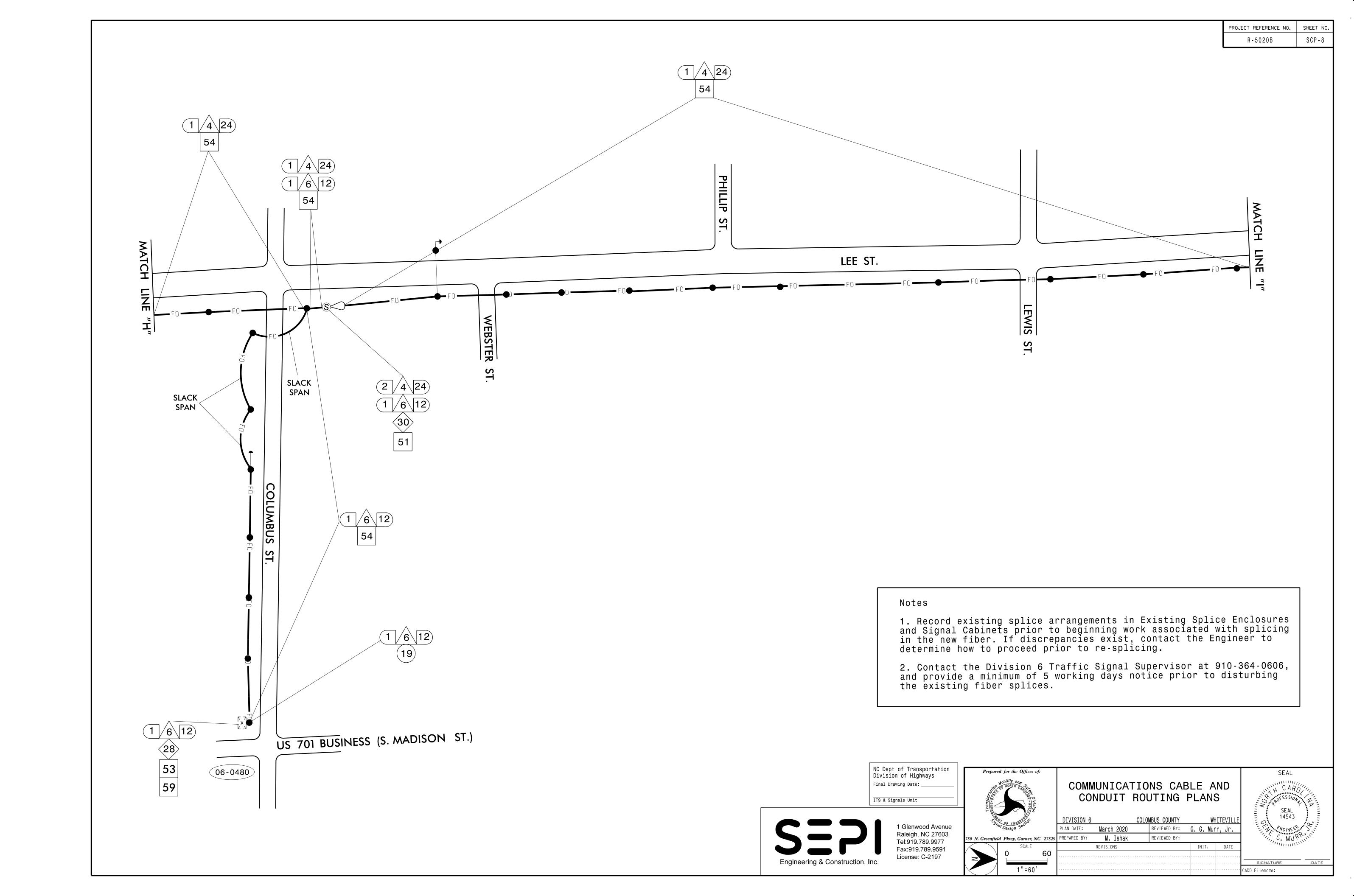


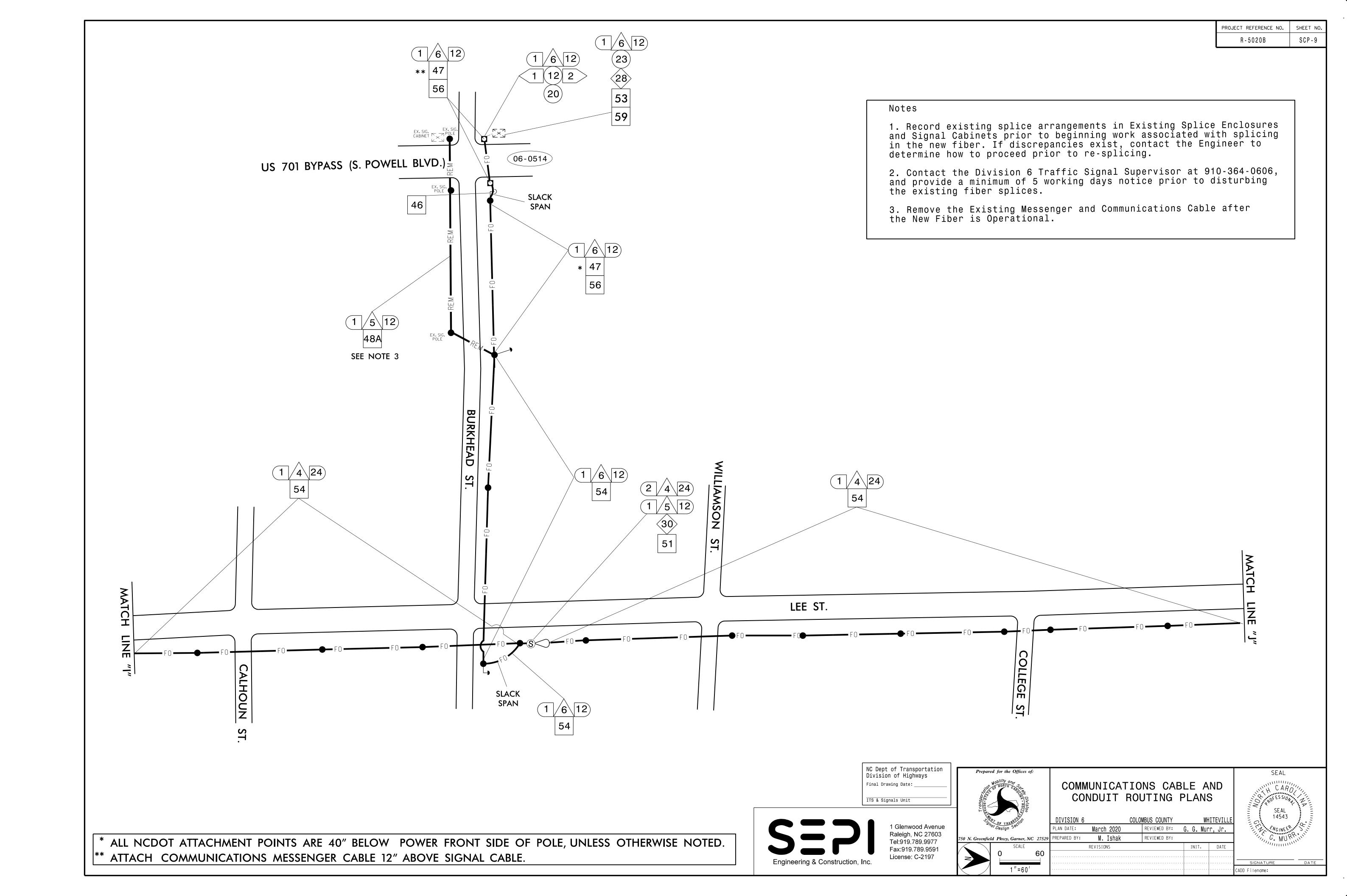
* ALL NCDOT ATTACHMENT POINTS ARE 40" BELOW POWER FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED. ** ATTACH COMMUNICATIONS MESSENGER CABLE 12" ABOVE SIGNAL CABLE.

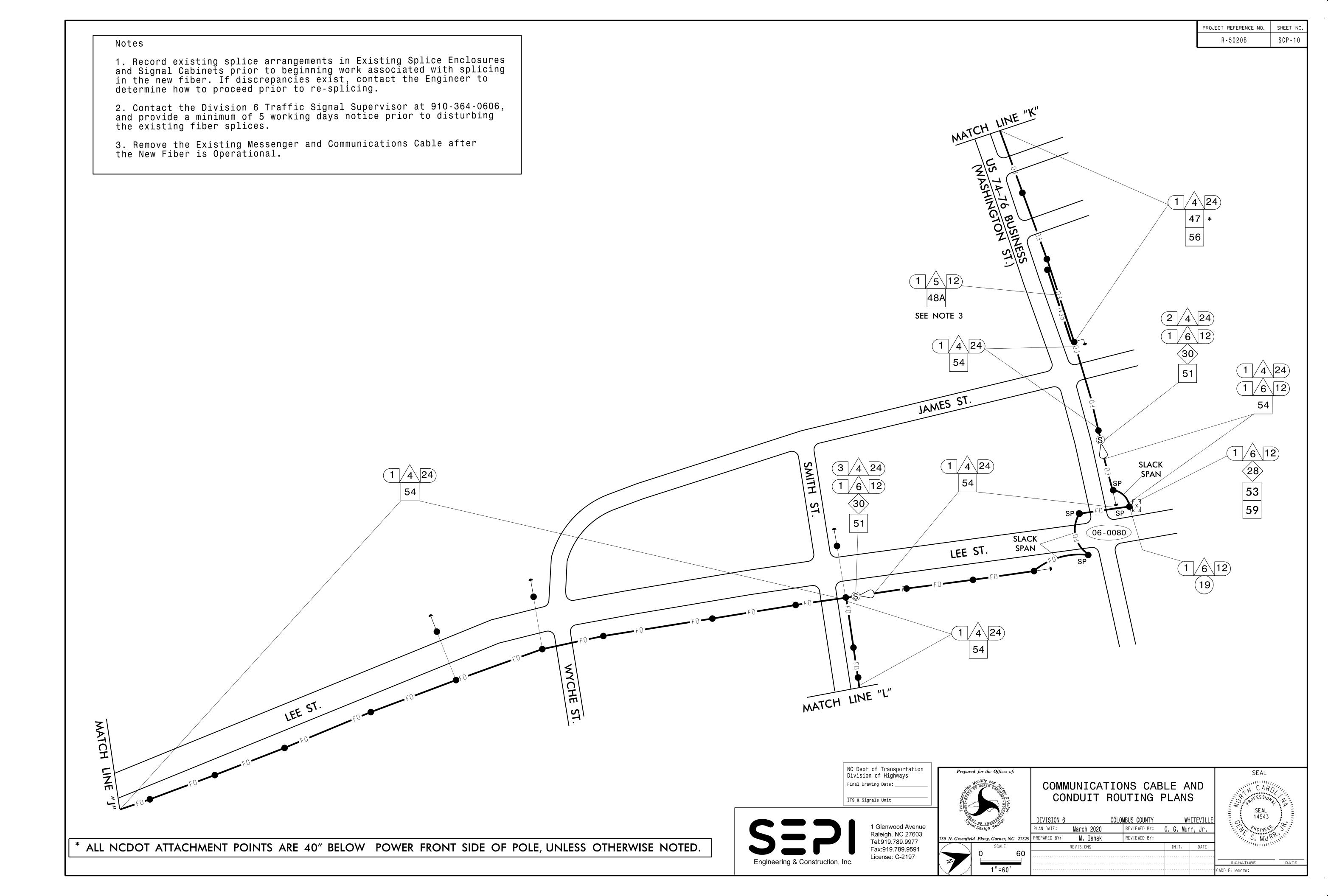


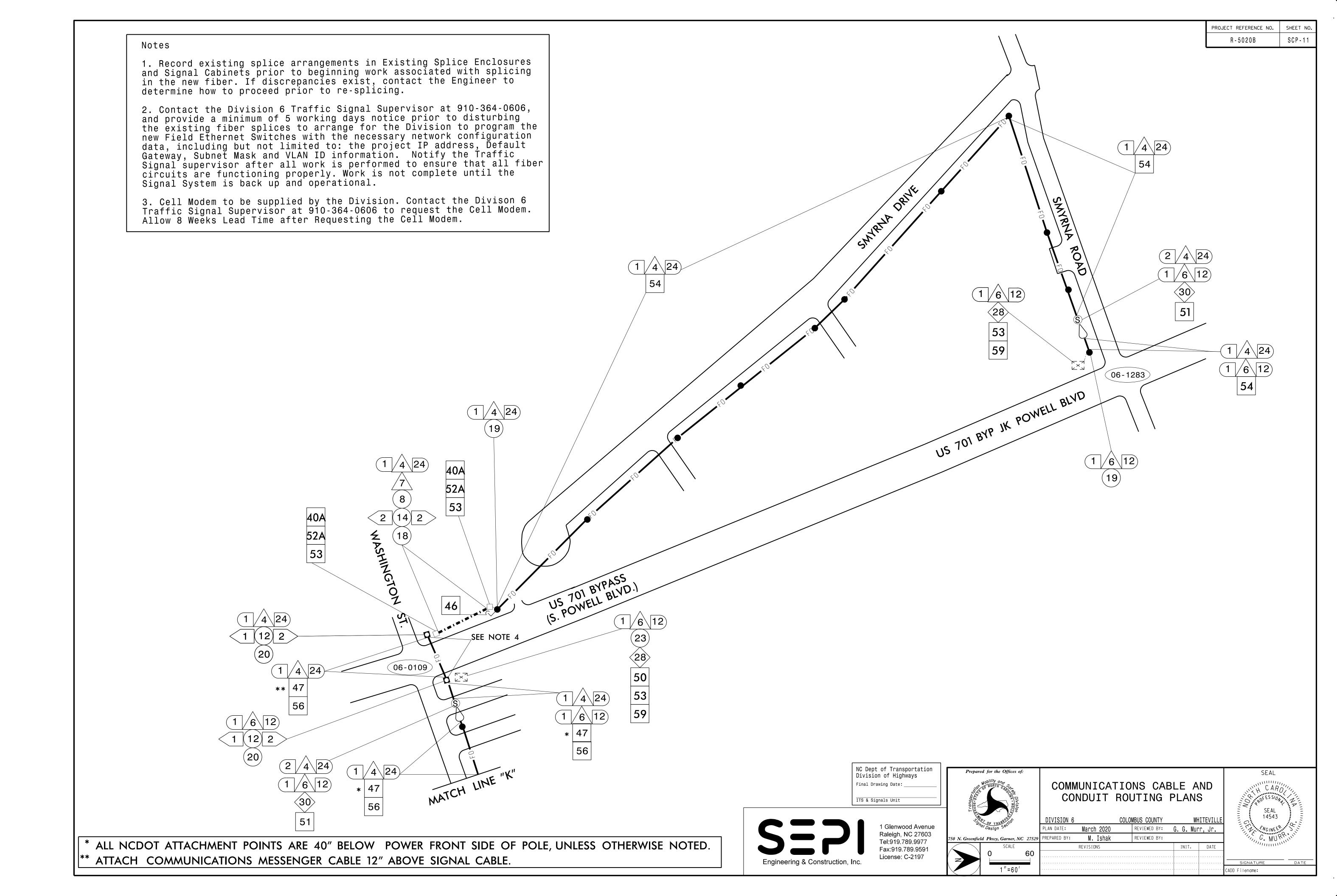
REVISIONS INIT. DATE

CADD Filename:









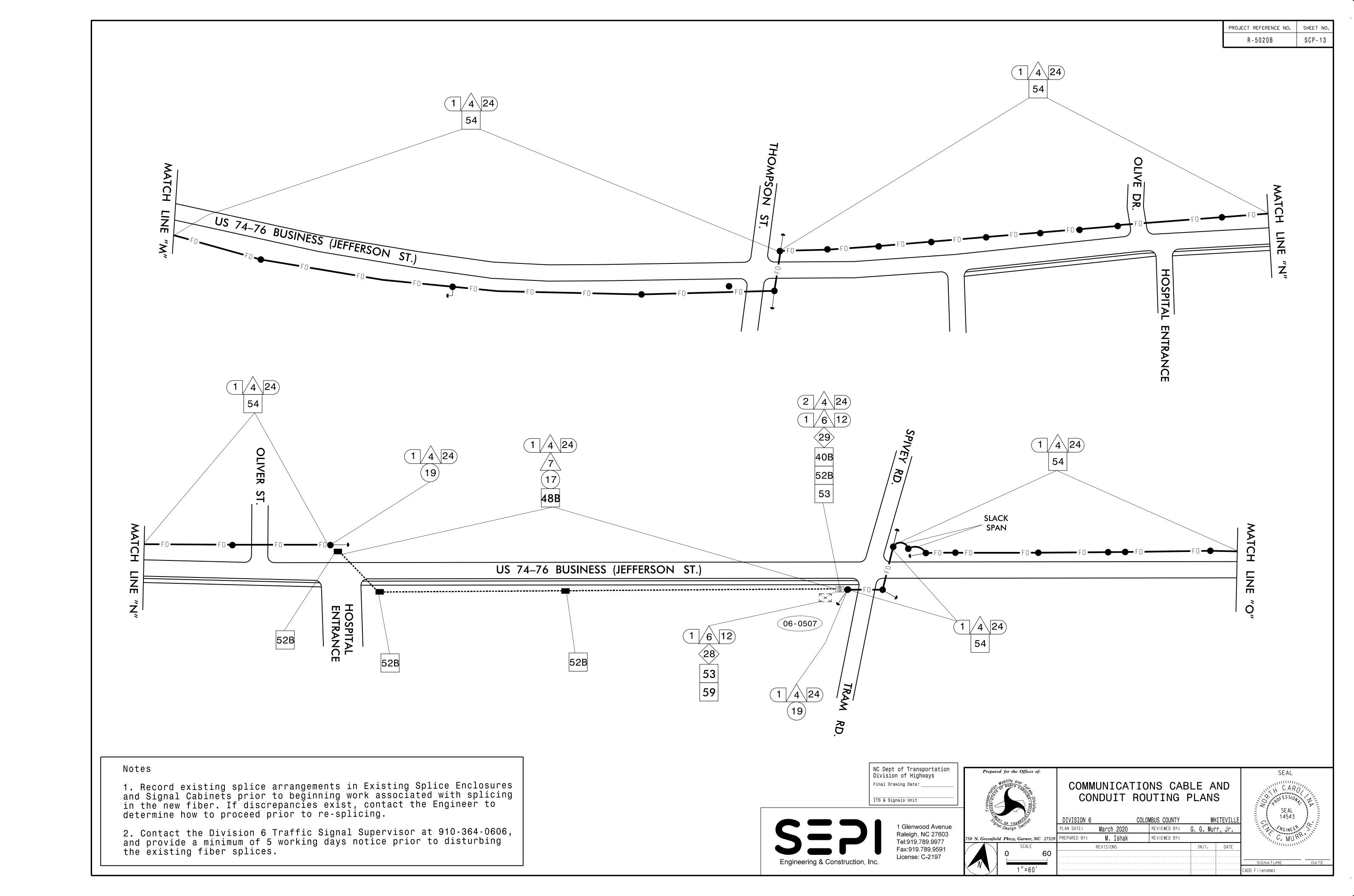
PROJECT REFERENCE NO. R-5020B SCP-12 1. Record existing splice arrangements in Existing Splice Enclosures and Signal Cabinets prior to beginning work associated with splicing in the new fiber. If discrepancies exist, contact the Engineer to determine how to proceed prior to re-splicing. 2. Contact the Division 6 Traffic Signal Supervisor at 910-364-0606, and provide a minimum of 5 working days notice prior to disturbing the existing fiber splices. 1 6 12 MATCH 06-0114 US 74-76 BUSINESS (JEFFERSON ST.) SPAN 28 53 59 2 4 24 FRANKLIN 1 4 24 SMITH ST. NC Dept of Transportation Division of Highways COMMUNICATIONS CABLE AND Final Drawing Date: CONDUIT ROUTING PLANS ITS & Signals Unit COLOMBUS COUNTY 1 Glenwood Avenue March 2020 REVIEWED BY: G. G. Murr, Jr. Raleigh, NC 27603 750 N. Greenfield Pkwy, Garner, NC 27529 PREPARED BY: M. Ishak Tel:919.789.9977 INIT. DATE Fax:919.789.9591

License: C-2197

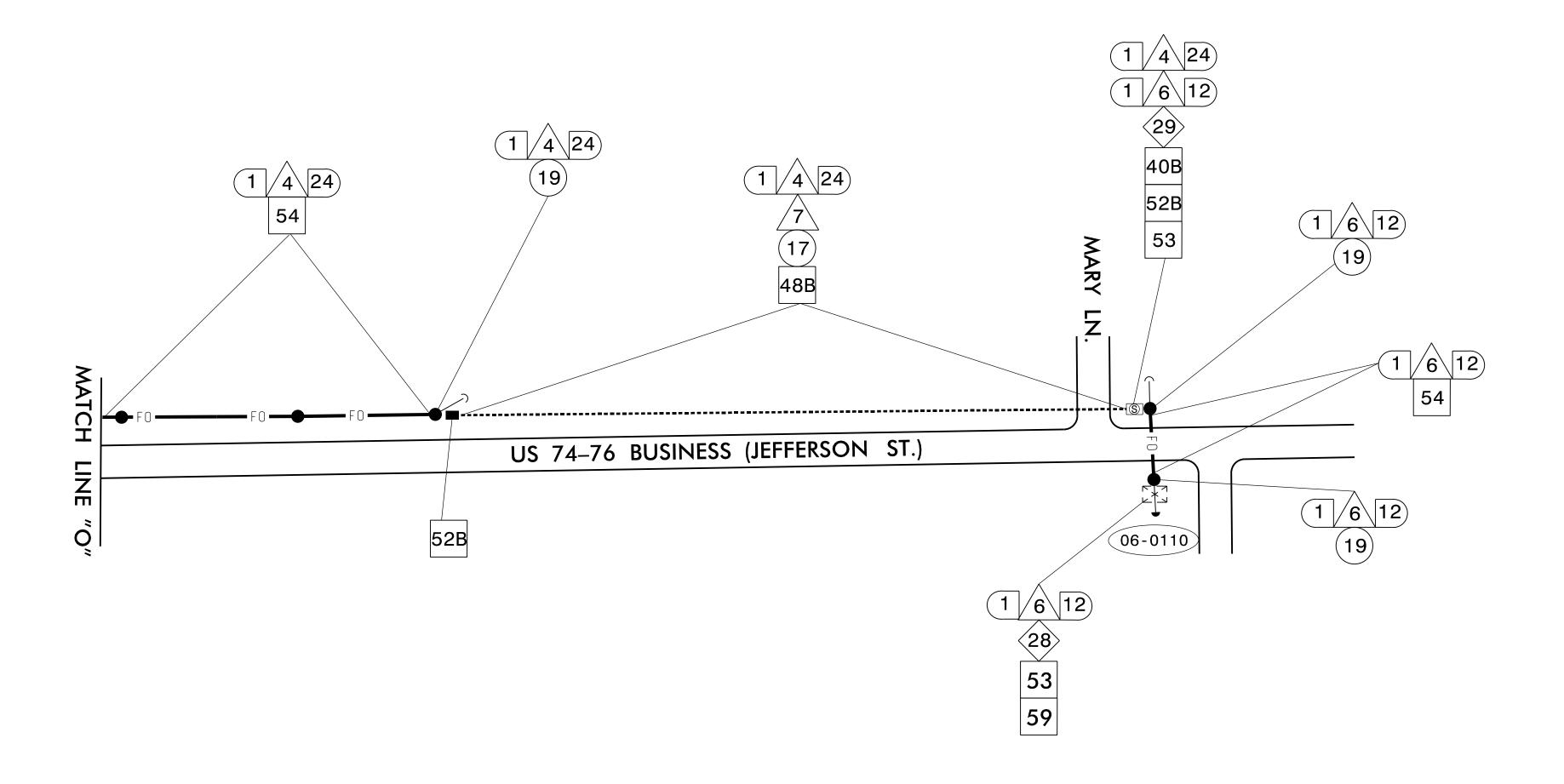
Engineering & Construction, Inc.

Notes

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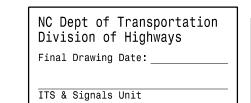
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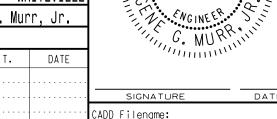






COMMUNICATIONS CABLE AND CONDUIT ROUTING PLANS

COLOMBUS COUNTY DIVISION 6



SEAL

	O Design	Sec.		PLAN DATE:	Marcl	1 2020	REVIEWE	D BY:	G.	G.	Murr	, Jr.
I. G reenfiel	ld Pkwy	, Garner, NC	27529	PREPARED BY:	М.	Ishak	REVIEWE	D BY:				
		SCALE			REVISIO	INS				INIT	•	DATE
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1) FIVE (5) DAYS PRIOR TO BEGINNING WORK ON THE SIGNAL SYSTEM, CONTACT THE DIVISION 6 TRAFFIC SIGNAL SUPERVISOR AT (910) 364–0606 TO PROGRAM THE NEW FIELD ETHERNET SWITCHES WITH THE NECCESSARY NETWORK CONFIGURATION DATA, INCLUDING BUT NOT LIMITED TO: THE PROJECT IP ADDRESS, DEFAULT GATEWAY, SUBNET MASK AND VLAN ID INFORMATION. NOTIFY DIVISION 6 TRAFFIC SIGNAL SUPERVISOR AFTER ALL WORK IS PERFORMED TO ENSURE THAT ALL FIBER CIRCUITS ARE FUNCTIONING ROPERLY. WORK IS NOT COMPLETE UNTIL THE SIGNAL SYSTEM IS BACK UP AND OPERATIONAL.

2) CONTRACTOR TO RECORD EXISTING SPLICE ARRANGEMENT FOR COMPARISON TO THE SUPPLIED SPLICE DETAILS. IF DISCREPANCIES EXIST, CONTACT THE ENGINEER TO DETERMINE HOW TO PROCEED WITH RESPLICING. PROVIDE AS-BUILT PLANS TO THE ENGINEER IF FINAL SPLICE ARRANGEMENT DIFFERS FROM THE SUPPLIED SPLICE DETAILS.

3) ETHERNET SWITCH TERMINATION CONFIGURATIONS ARE GENERIC. CONTRACTOR IS RESPONSIBLE FOR DETERMINING AND ENSURING PROPER TERMINATIONS.

4) INCLUDE ON THE COVER OF EACH SPLICE TRAY THE FOLLOWING: REFERENCE SECTION 1731 "FIBER OPTIC SPLICE ENCLOSURE"

a) SPLICE LOCATION

b) DATE

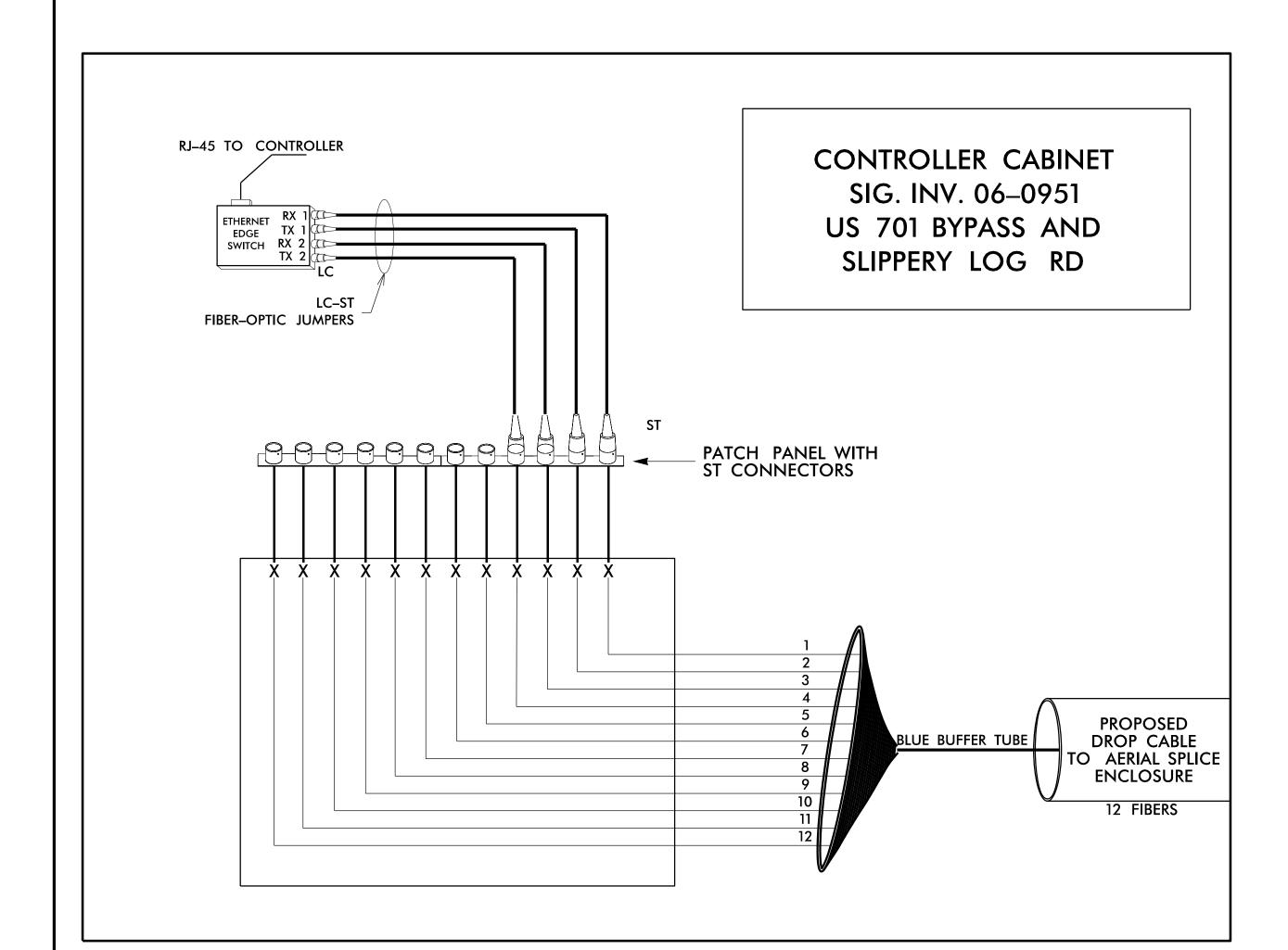
c) COMPANY NAME

d) NAME OF INDIVIDUAL PERFORMING THE SPLICING

5) PRIOR TO INSTALLING THE COVER ON THE SPLICE TRAY TAKE A DIGITAL PHOTOGRAPH SHOWING THE SPLICE TRAY AND INFORMATION SHOWN ABOVE (1–4) AND SUBMIT PHOTOGRAPH ALONG WITH OTDR TEST RESULTS.

6) UNUSED FIBERS LEFT COILED AND STORED IN SPLICE TRAY

7) UNUSED BUFFER TUBES LEFT COILED AND STORED IN SPLICE ENCLOSURE



PROJECT REFERENCE NO. R-5020B SCP-15

LEGEND

COLOR CODE

TIA/EIA 598-A (7) RED (1) BLUE

(2) ORANGE (8) BLACK (3) GREEN (9) YELLOW

(4) BROWN (10) VIOLET (11) ROSE (5) SLATE

(12) AQUA (6) WHITE

X = FUSION SPLICE INDIVIDUAL FIBER

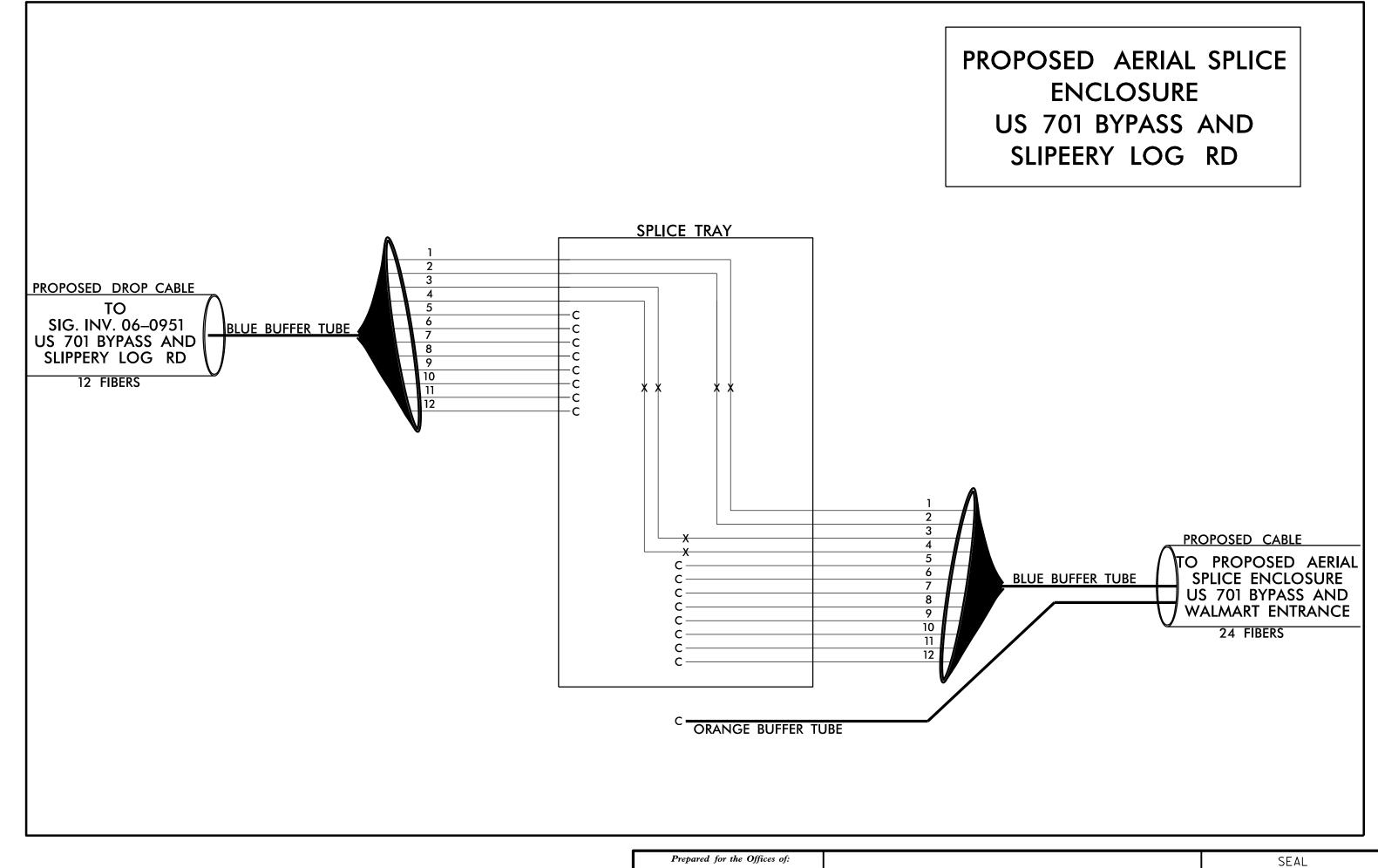
C = CAP AND SEAL

EXPRESS

= EXPRESS ENTIRE BUFFER TUBE /FIBERS THROUGH WITHOUT CUTTING

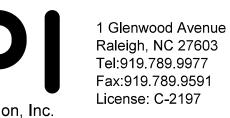
BUFFER SPLICE = SPLICE ALL FIBERS IN BUFFER

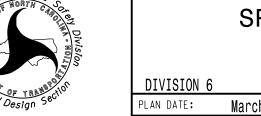
TUBE COLOR TO COLOR



NC Dept of Transportation Division of Highways Final Drawing Date:

ITS & Signals Unit Engineering & Construction, Inc.





SPLICE DETAILS

COLOMBUS COUNTY REVIEWED BY: G. G. Murr, Jr. March 2020 750 N. Greenfield Pkwy, Garner, NC 27529 PREPARED BY: M. Ishak REVIEWED BY: REVISIONS INIT. DATE

CADD Filename:

1) FIVE (5) DAYS PRIOR TO BEGINNING WORK ON THE SIGNAL SYSTEM, CONTACT THE DIVISION 6 TRAFFIC SIGNAL SUPERVISOR AT (910) 364–0606 TO PROGRAM THE NEW FIELD ETHERNET SWITCHES WITH THE NECCESSARY NETWORK CONFIGURATION DATA, INCLUDING BUT NOT LIMITED TO: THE PROJECT IP ADDRESS, DEFAULT GATEWAY, SUBNET MASK AND VLAN ID INFORMATION. NOTIFY DIVISION 6 TRAFFIC SIGNAL SUPERVISOR AFTER ALL WORK IS PERFORMED TO ENSURE THAT ALL FIBER CIRCUITS ARE FUNCTIONING ROPERLY. WORK IS NOT COMPLETE UNTIL THE SIGNAL SYSTEM IS BACK UP AND OPERATIONAL.

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a) SPLICE LOCATION

b) DATE

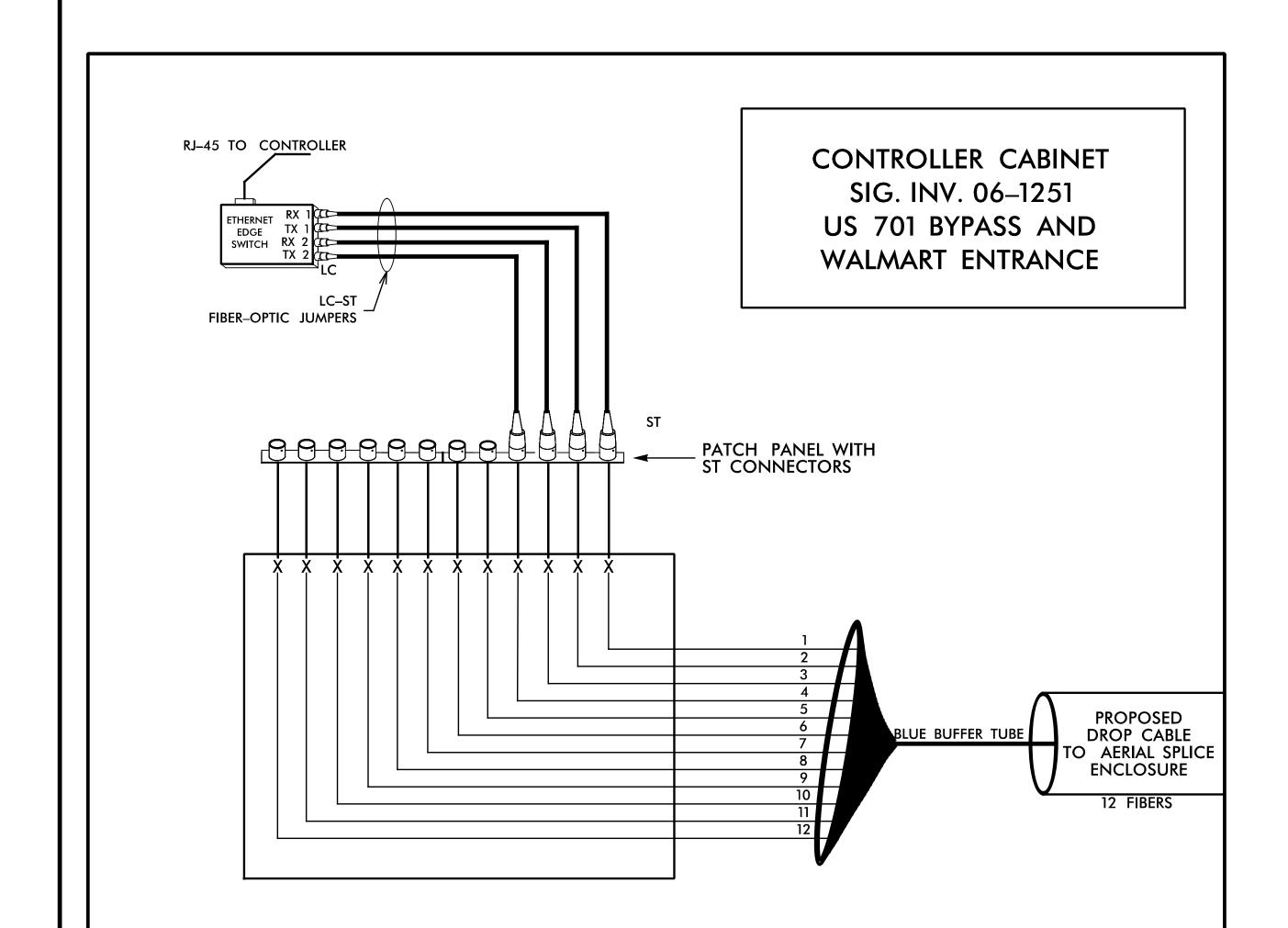
c) COMPANY NAME

d) NAME OF INDIVIDUAL PERFORMING THE SPLICING

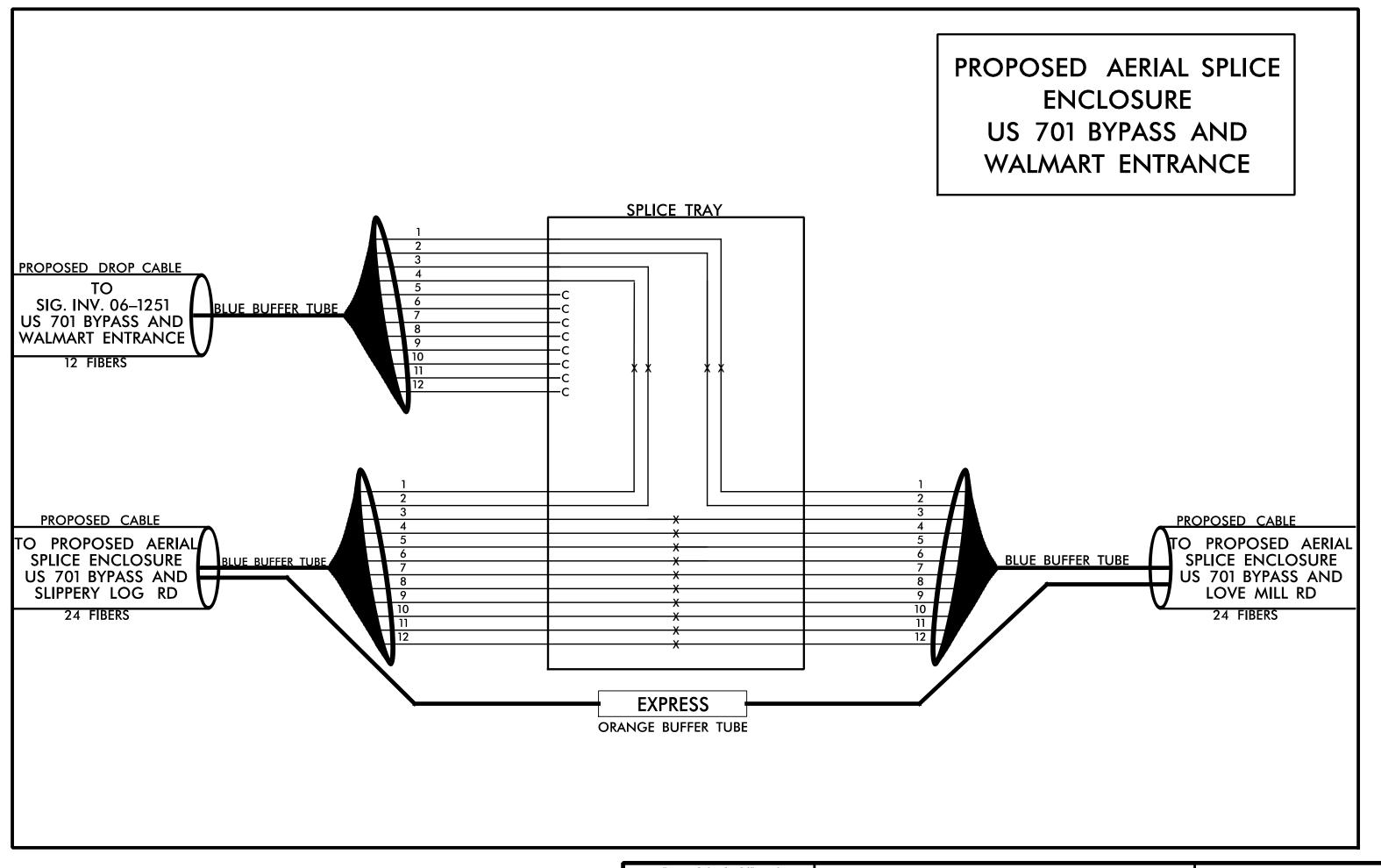
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7) UNUSED BUFFER TUBES LEFT COILED AND STORED IN SPLICE ENCLOSURE



LEGEND COLOR CODE X = FUSION SPLICE INDIVIDUAL FIBER TIA/EIA 598-A (7) RED (1) BLUE C = CAP AND SEAL(2) ORANGE (8) BLACK EXPRESS ENTIRE BUFFER TUBE /FIBERS **EXPRESS** (3) GREEN (9) YELLOW THROUGH WITHOUT CUTTING (4) BROWN (10) VIOLET (11) ROSE SPLICE ALL FIBERS IN BUFFER (5) SLATE BUFFER SPLICE = TUBE COLOR TO COLOR (6) WHITE (12) AQUA

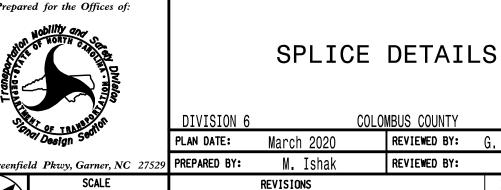


NC Dept of Transportation
Division of Highways
Final Drawing Date:

ITS & Signals Unit

Engineering & Construction, Inc.







CADD Filename:

G. G. Murr, Jr.

INIT. DATE

PROJECT REFERENCE NO.

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b) DATE

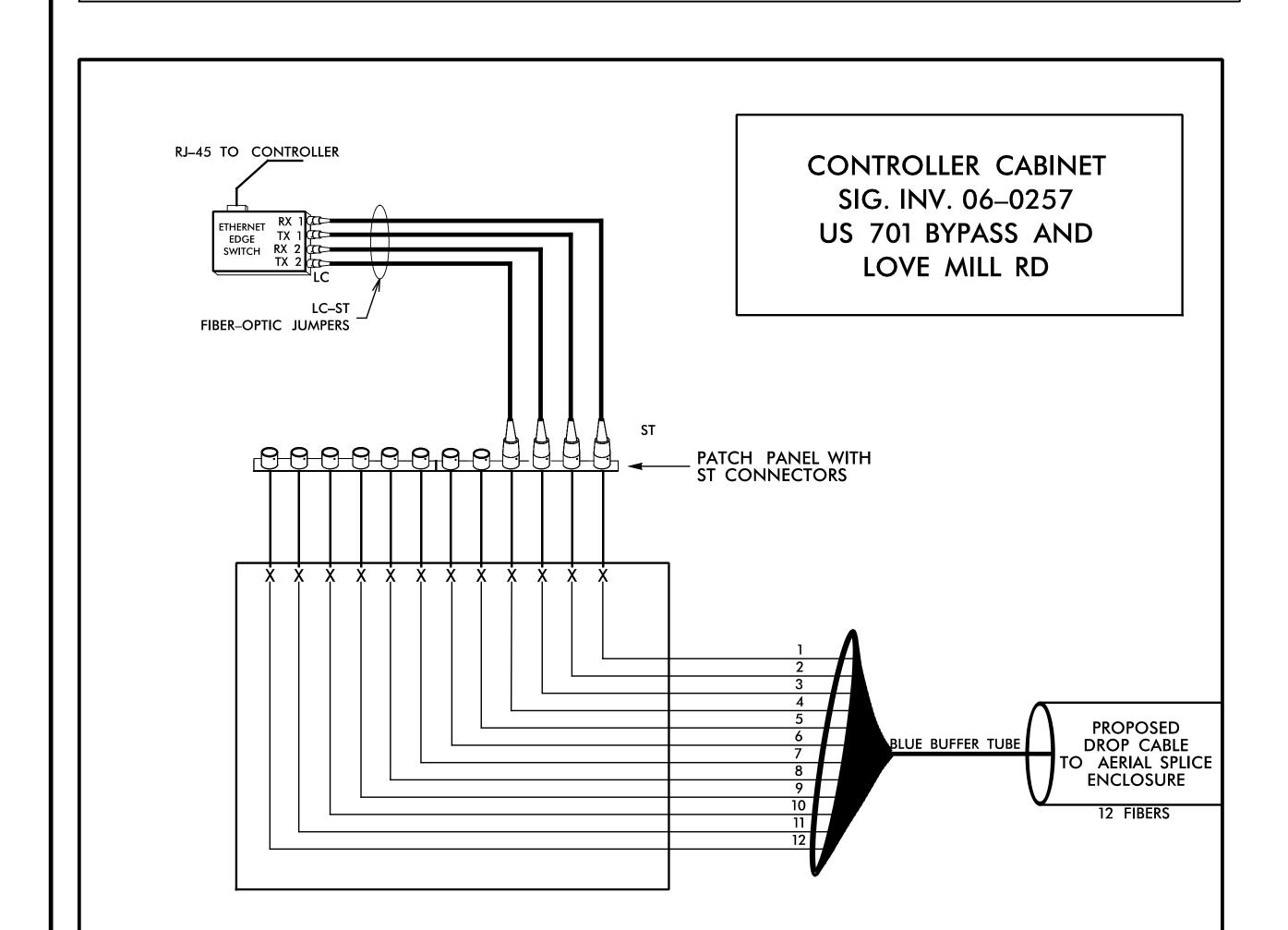
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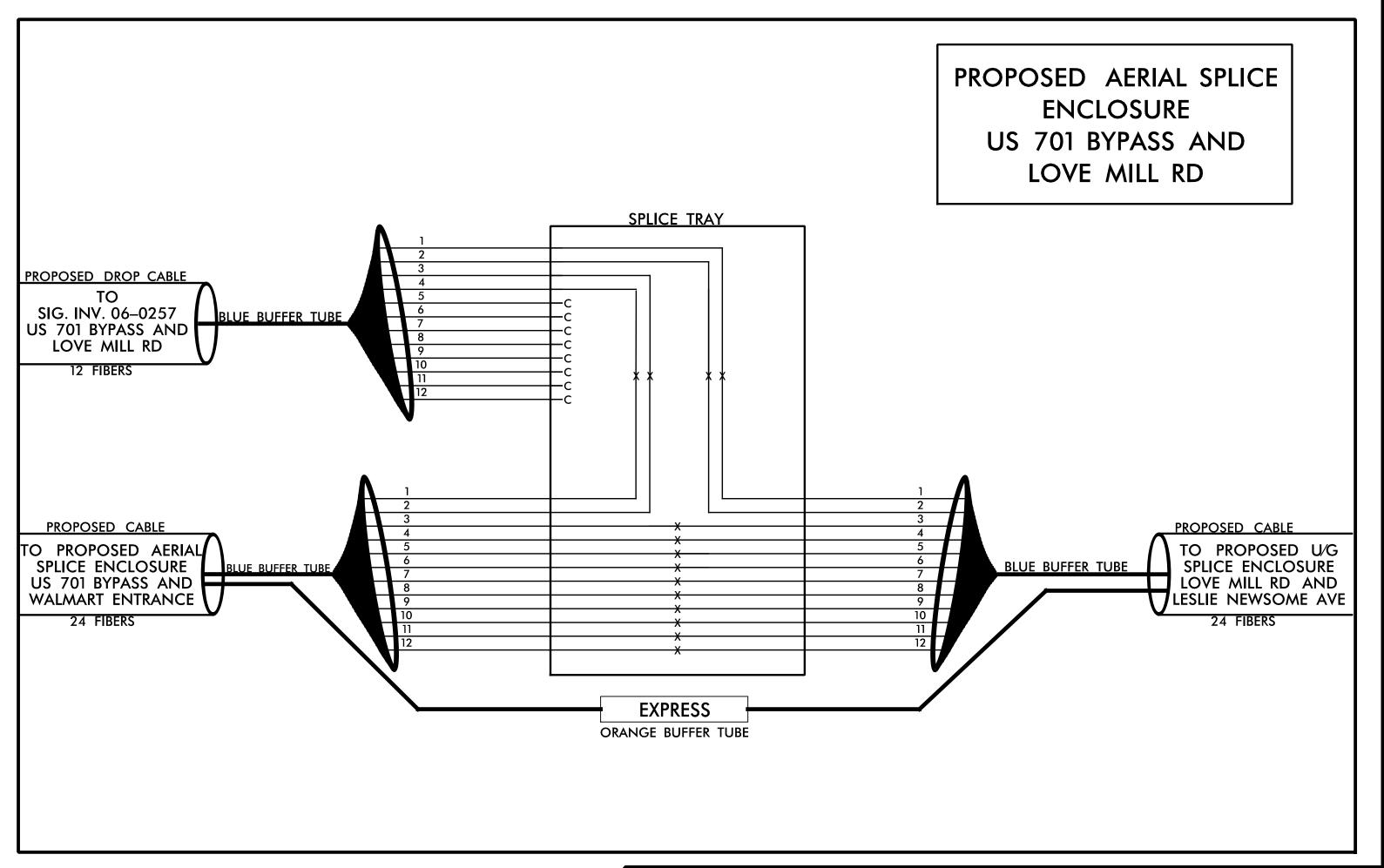
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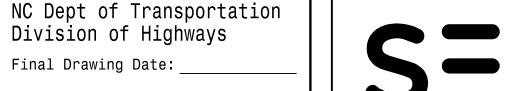
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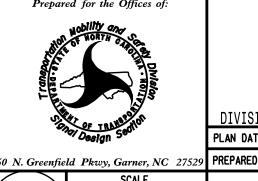
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Engineering & Construction, Inc.

1 Glenwood Avenue Raleigh, NC 27603 Tel:919.789.9977 Fax:919.789.9591 License: C-2197



SPLICE DETAILS

DIVISION 6 COLOMBUS COUNTY WHITEVILLE
PLAN DATE: March 2020 REVIEWED BY: G. G. Murr, Jr.
PREPARED BY: M. Ishak REVIEWED BY:

PREPARED BY: March 2020 REVIEWED BY: G. G. Murr, Jr.

PREPARED BY: M. Ishak REVIEWED BY:

REVISIONS INIT. DATE

SIGNATURE
CADD Filename:

SEAL

PROJECT REFERENCE NO.

R-5020B

ITS & Signals Unit

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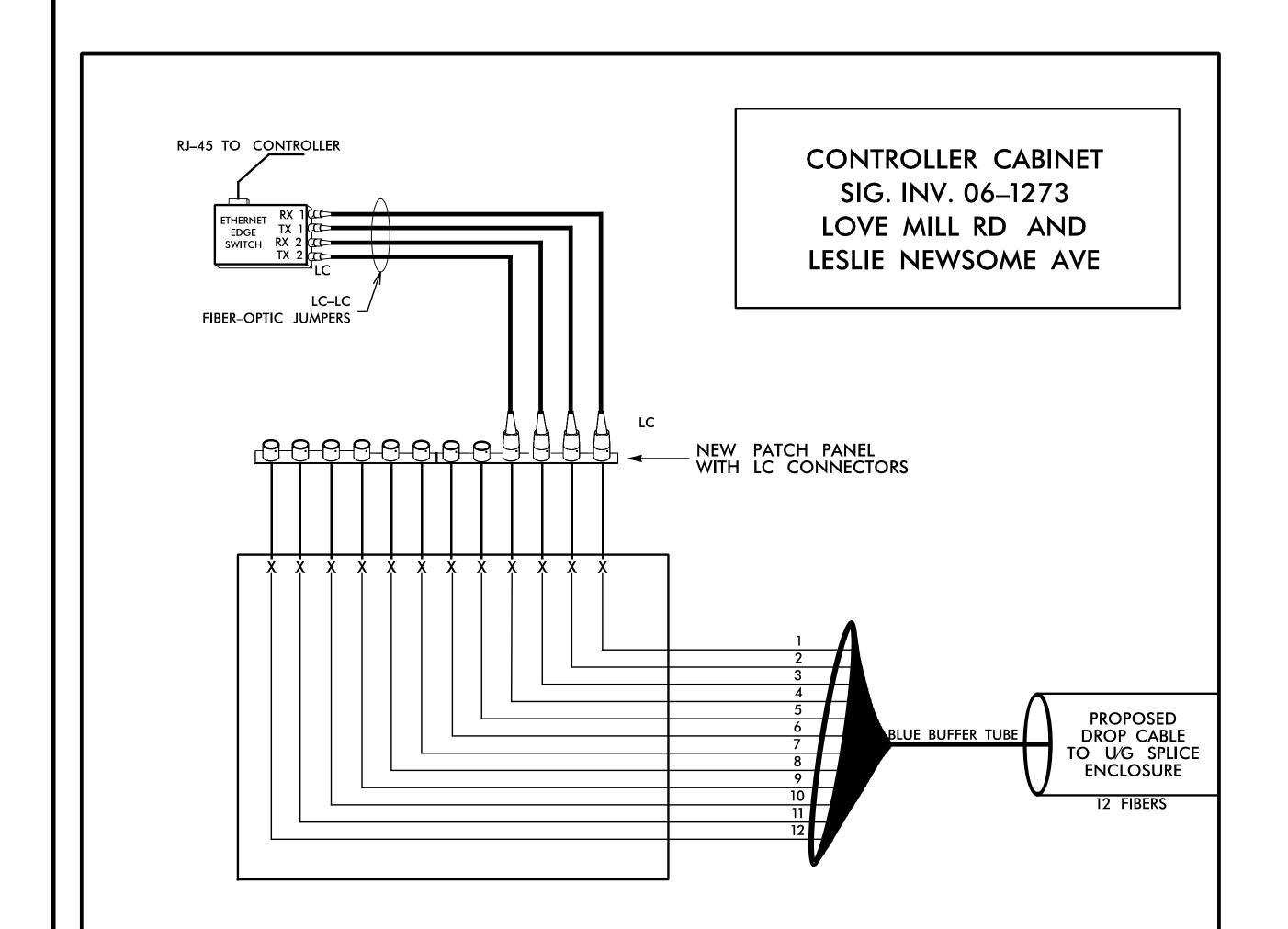
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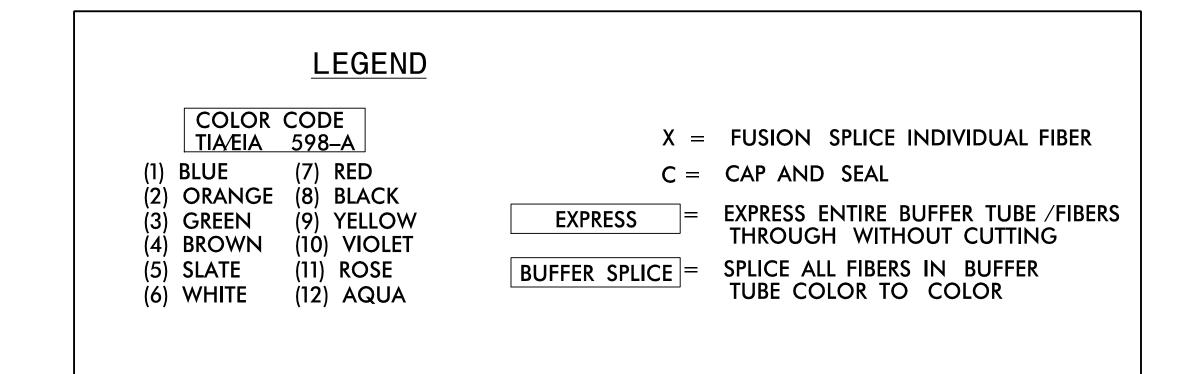
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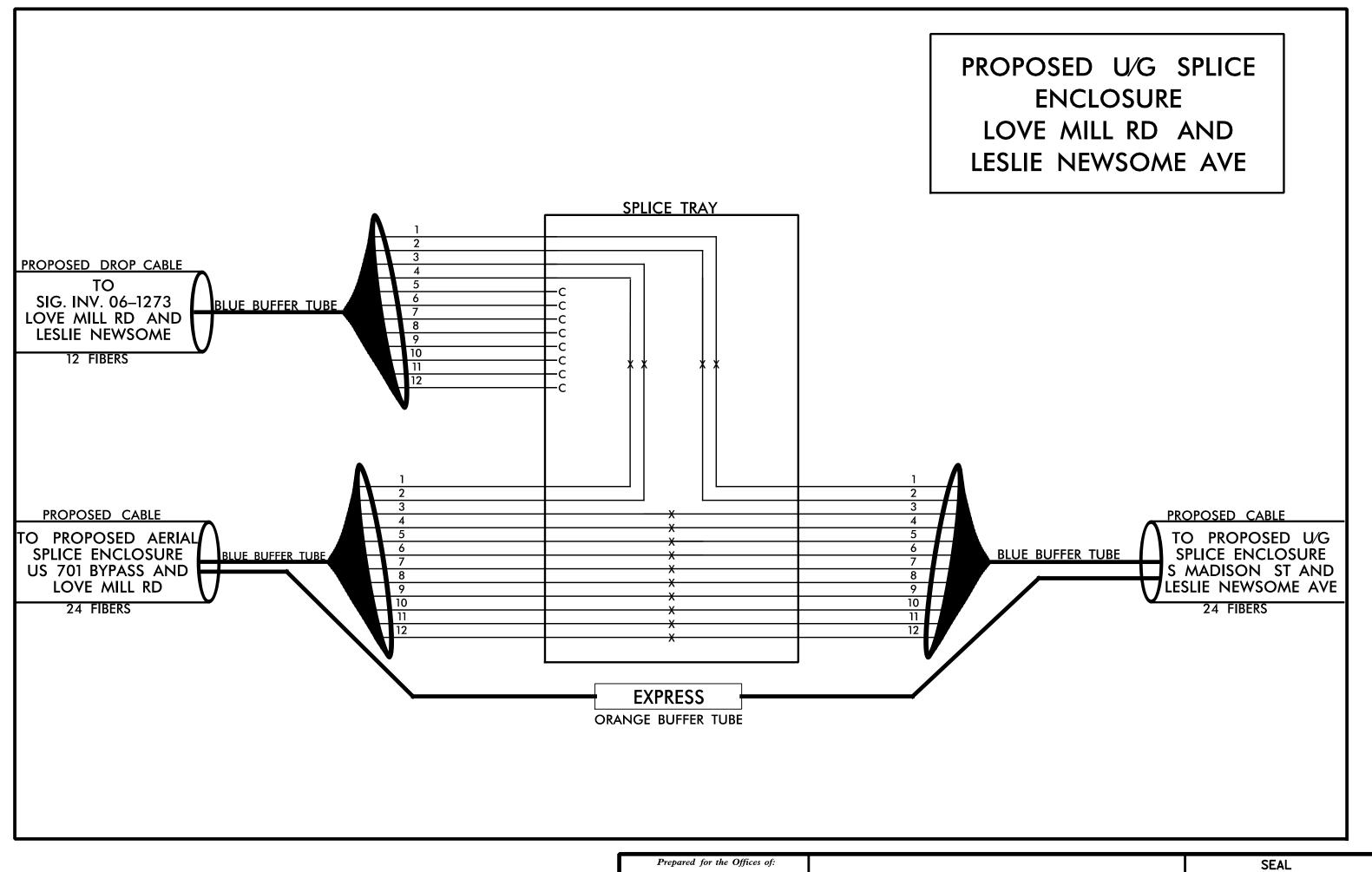
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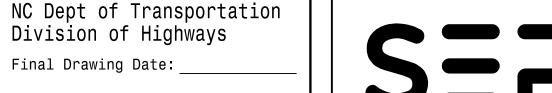
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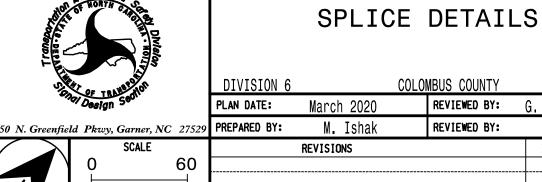






ITS & Signals Unit

1 Glenwood Avenue Raleigh, NC 27603 Tel:919.789.9977 Fax:919.789.9591 License: C-2197



COLOMBUS COUNTY REVIEWED BY: March 2020 G. G. Murr, Jr. M. Ishak REVIEWED BY:

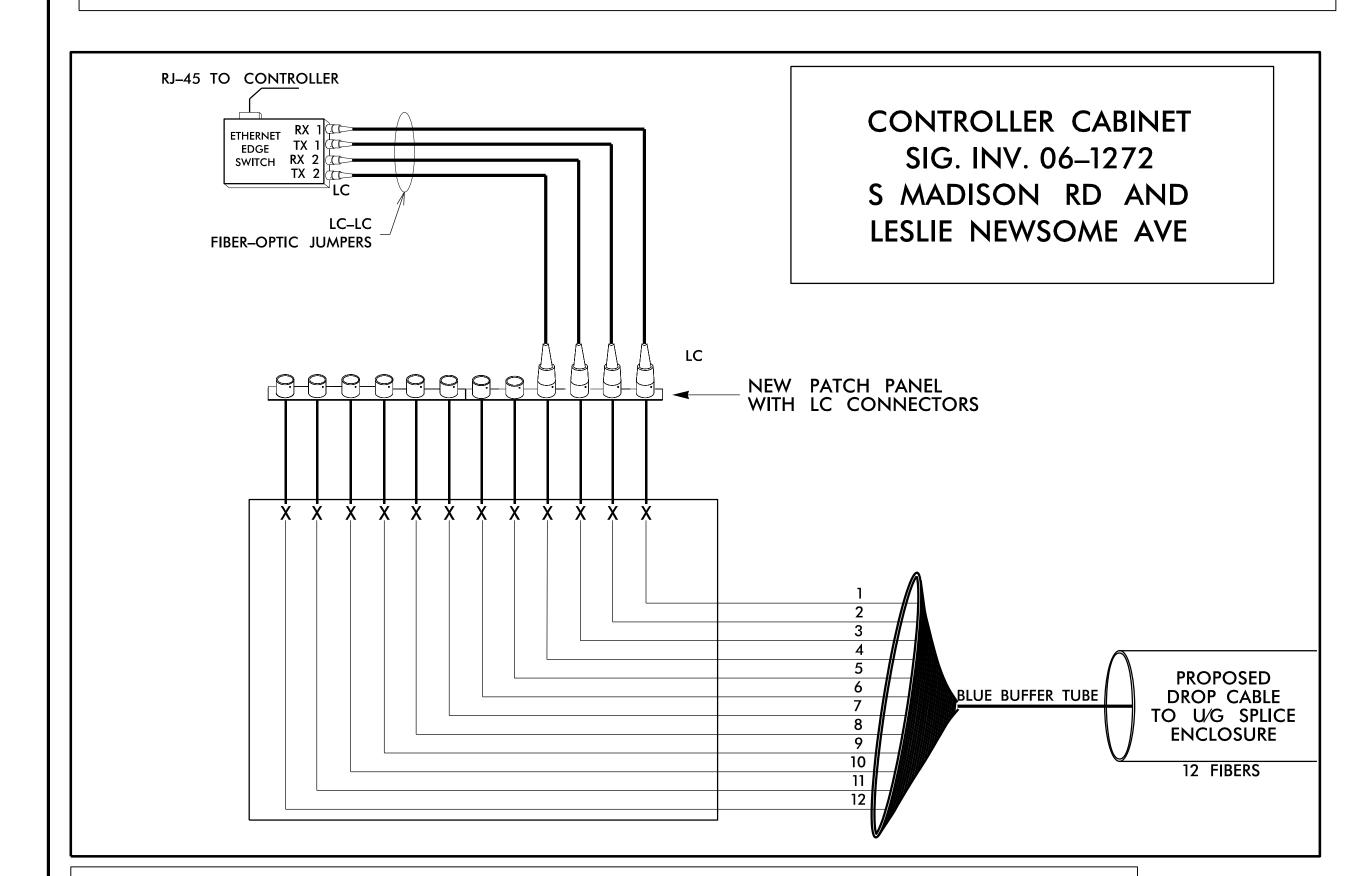
INIT. DATE SIGNATURE

PROJECT REFERENCE NO.

R-5020B

Engineering & Construction, Inc. CADD Filename:

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LEGEND

COLOR CODE TIA/EIA 598-A

(1) BLUE (7) RED (2) ORANGE (8) BLACK

(3) GREEN (9) YELLOW (4) BROWN (10) VIOLET

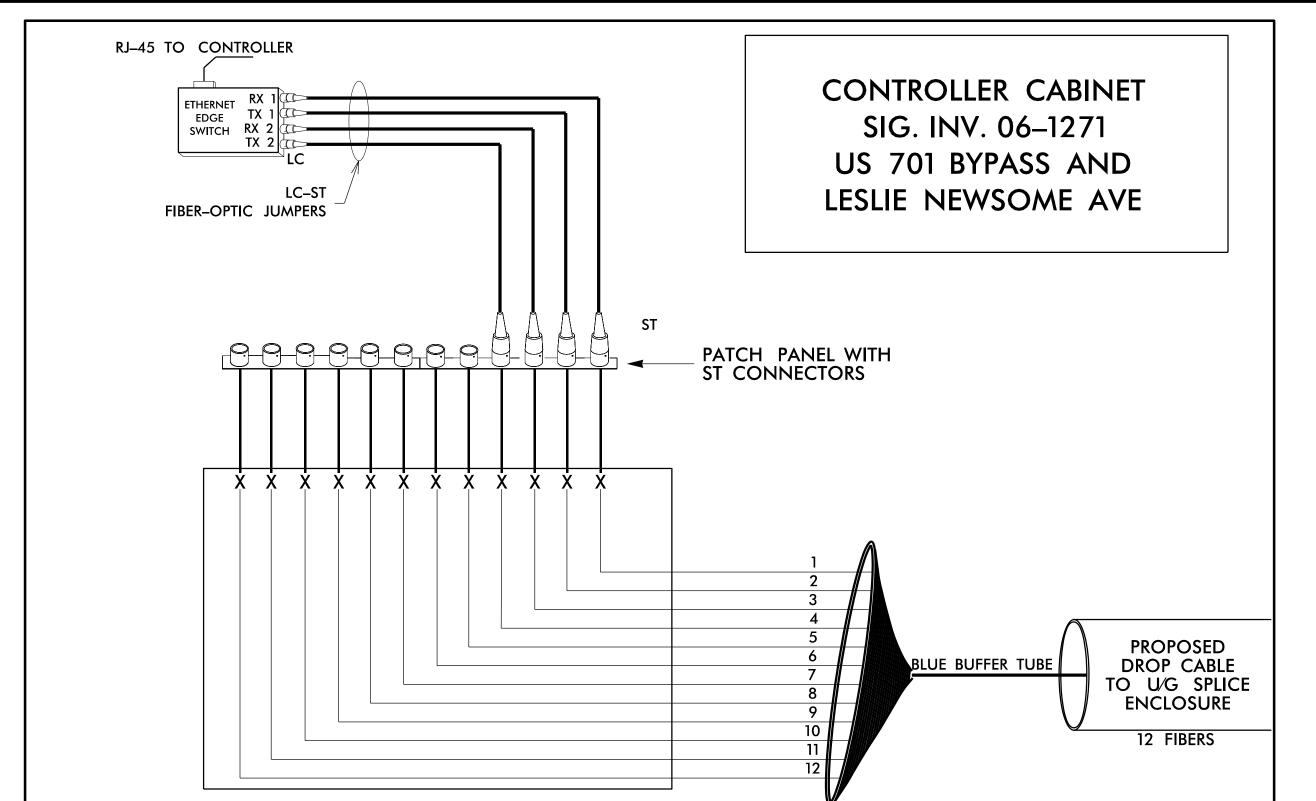
(4) BROWN (10) VIOLE (5) SLATE (11) ROSE (6) WHITE (12) AQUA X = FUSION SPLICE INDIVIDUAL FIBER

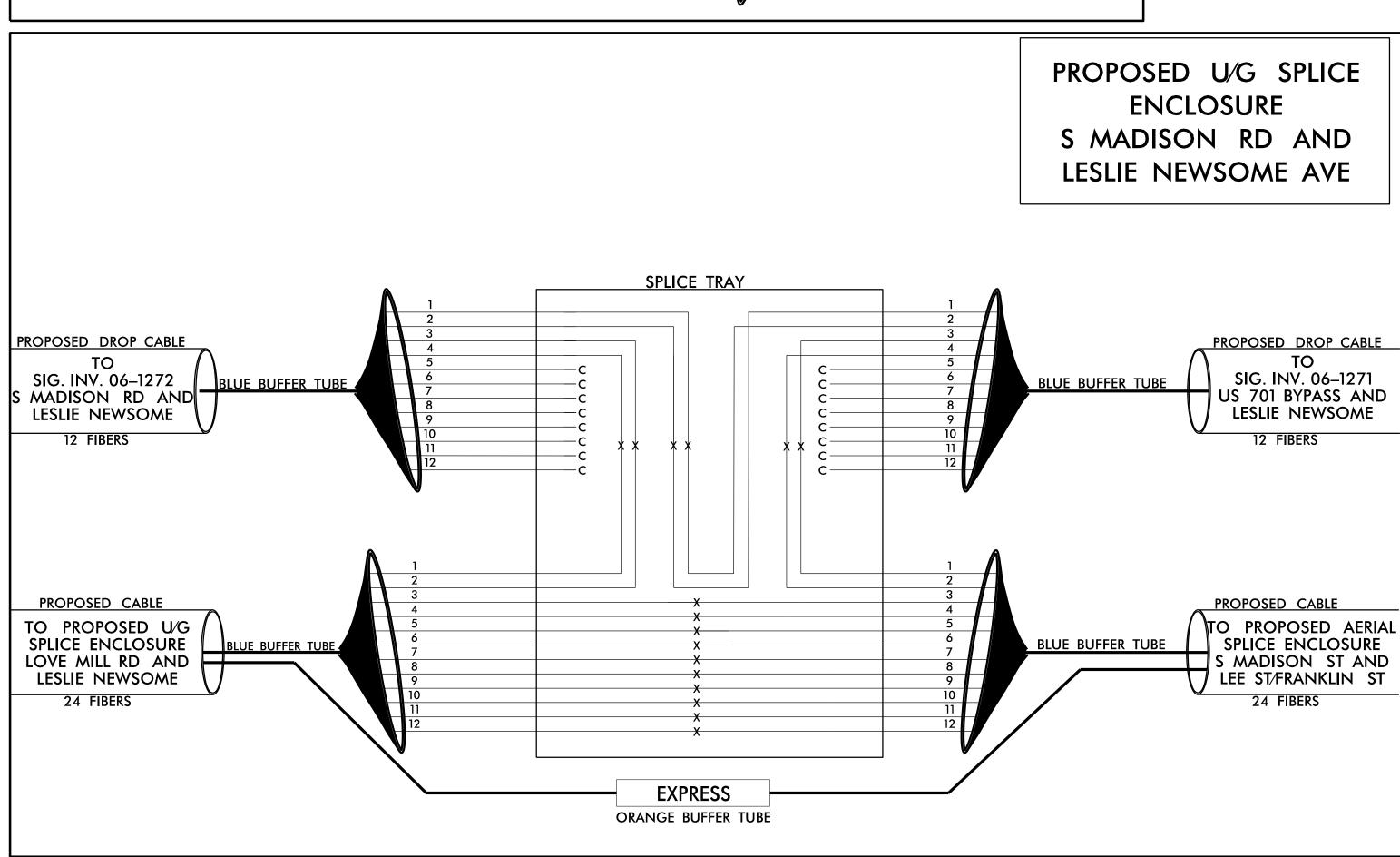
C = CAP AND SEAL

EXPRESS

EXPRESS ENTIRE BUFFER TUBE /FIBERS THROUGH WITHOUT CUTTING

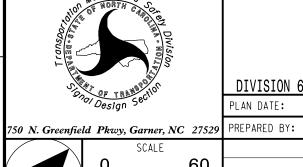
BUFFER SPLICE = SPLICE ALL FIBERS IN BUFFER TUBE COLOR TO COLOR











1 Glenwood Avenue

Raleigh, NC 27603

Tel:919.789.9977

Fax:919.789.9591 License: C-2197

SPLICE DETAILS

DIVISION 6

COLOMBUS COUNTY
WHITEVILLE
PLAN DATE: March 2020
REVIEWED BY: G. G. Murr, Jr.
PREPARED BY: M. Ishak
REVIEWED BY:
REVISIONS
INIT. DATE

SIGNATURE DATE

CADD Filename:

SEAL

PROJECT REFERENCE NO.

R-5020B

SCP-19

ITS & Signals Unit Engineering & Cons

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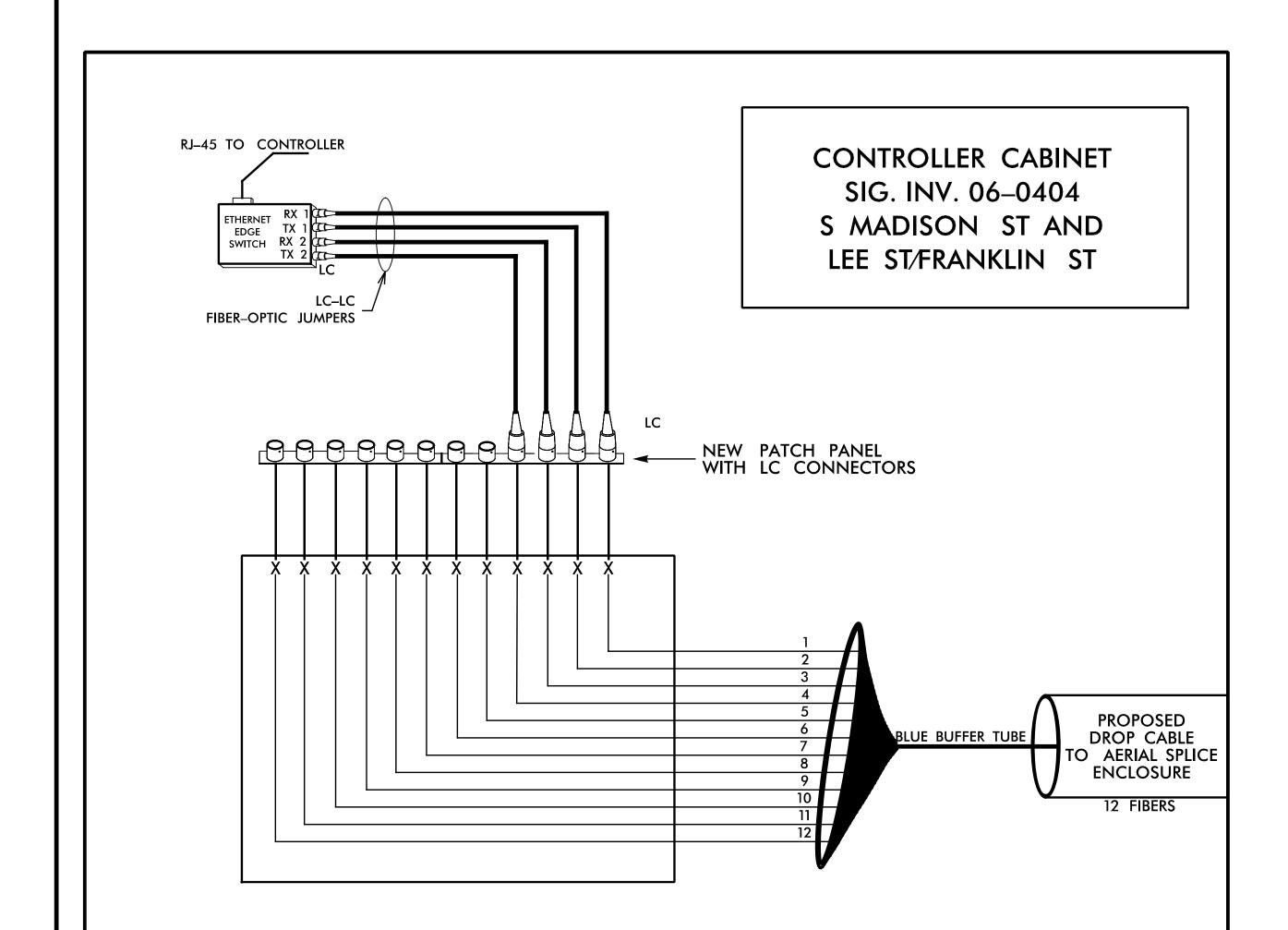
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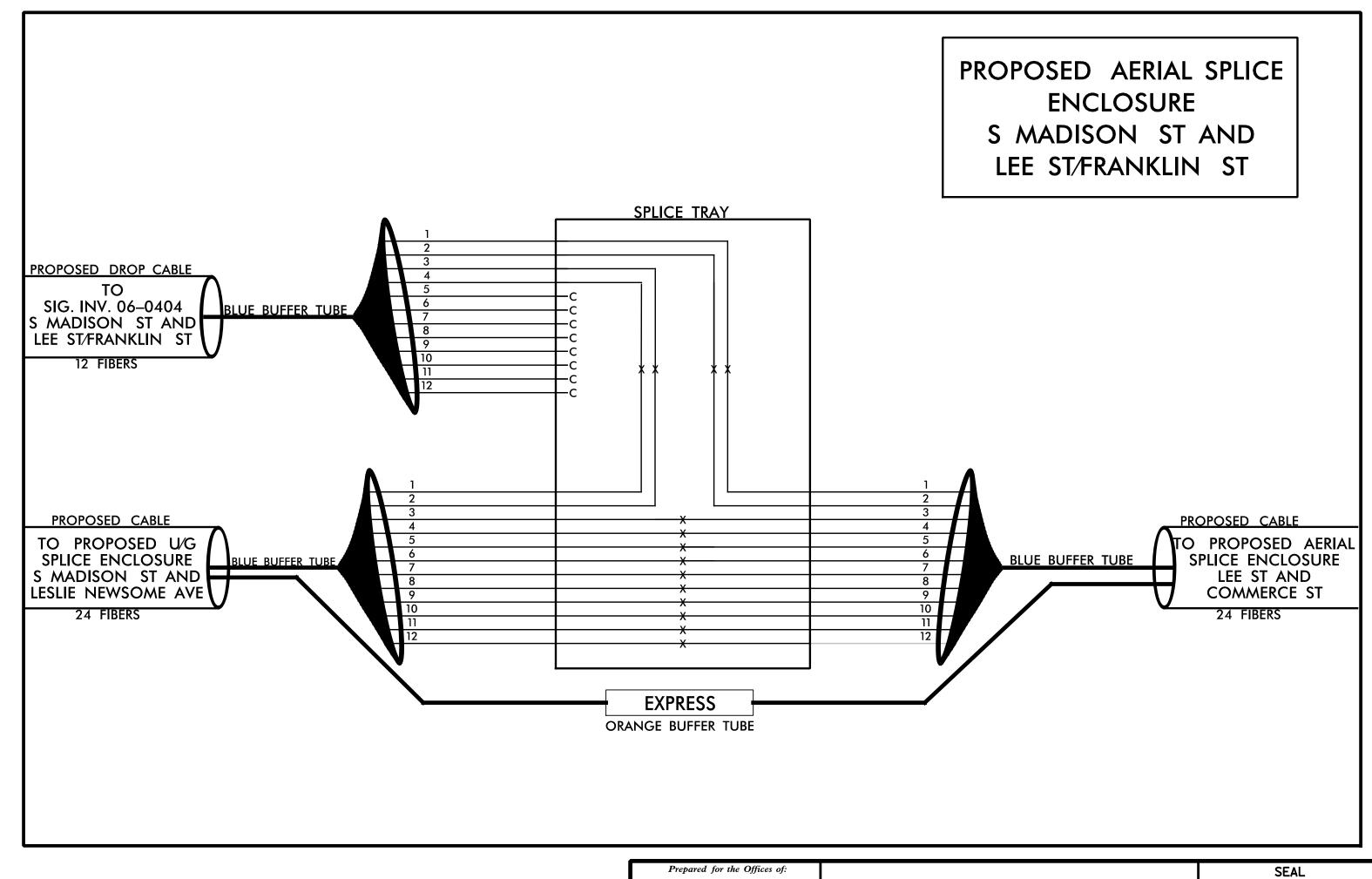
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7) UNUSED BUFFER TUBES LEFT COILED AND STORED IN SPLICE ENCLOSURE



LEGEND COLOR CODE X = FUSION SPLICE INDIVIDUAL FIBER TIA/EIA 598-A (7) RED (1) BLUE C = CAP AND SEAL(2) ORANGE (8) BLACK EXPRESS ENTIRE BUFFER TUBE /FIBERS (3) GREEN (9) YELLOW **EXPRESS** THROUGH WITHOUT CUTTING (4) BROWN (10) VIOLET (11) ROSE SPLICE ALL FIBERS IN BUFFER (5) SLATE BUFFER SPLICE = TUBE COLOR TO COLOR (6) WHITE (12) AQUA

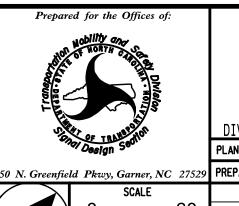


NC Dept of Transportation Division of Highways Final Drawing Date:

ITS & Signals Unit



1 Glenwood Avenue Raleigh, NC 27603 Tel:919.789.9977 Fax:919.789.9591 License: C-2197



SPLICE DETAILS

DIVISION 6 COLOMBUS COUNTY WHITEVILLE
PLAN DATE: March 2020 REVIEWED BY: G. G. Murr, Jr.
PREPARED BY: M. Ishak REVIEWED BY:

EPARED BY: M. Ishak REVIEWED BY:

REVISIONS INIT. DATE

SIGNATURE
CADD Filename:

PROJECT REFERENCE NO.

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4) INCLUDE ON THE COVER OF EACH SPLICE TRAY THE FOLLOWING: REFERENCE SECTION 1731 "FIBER OPTIC SPLICE ENCLOSURE"

a) SPLICE LOCATION

b) DATE

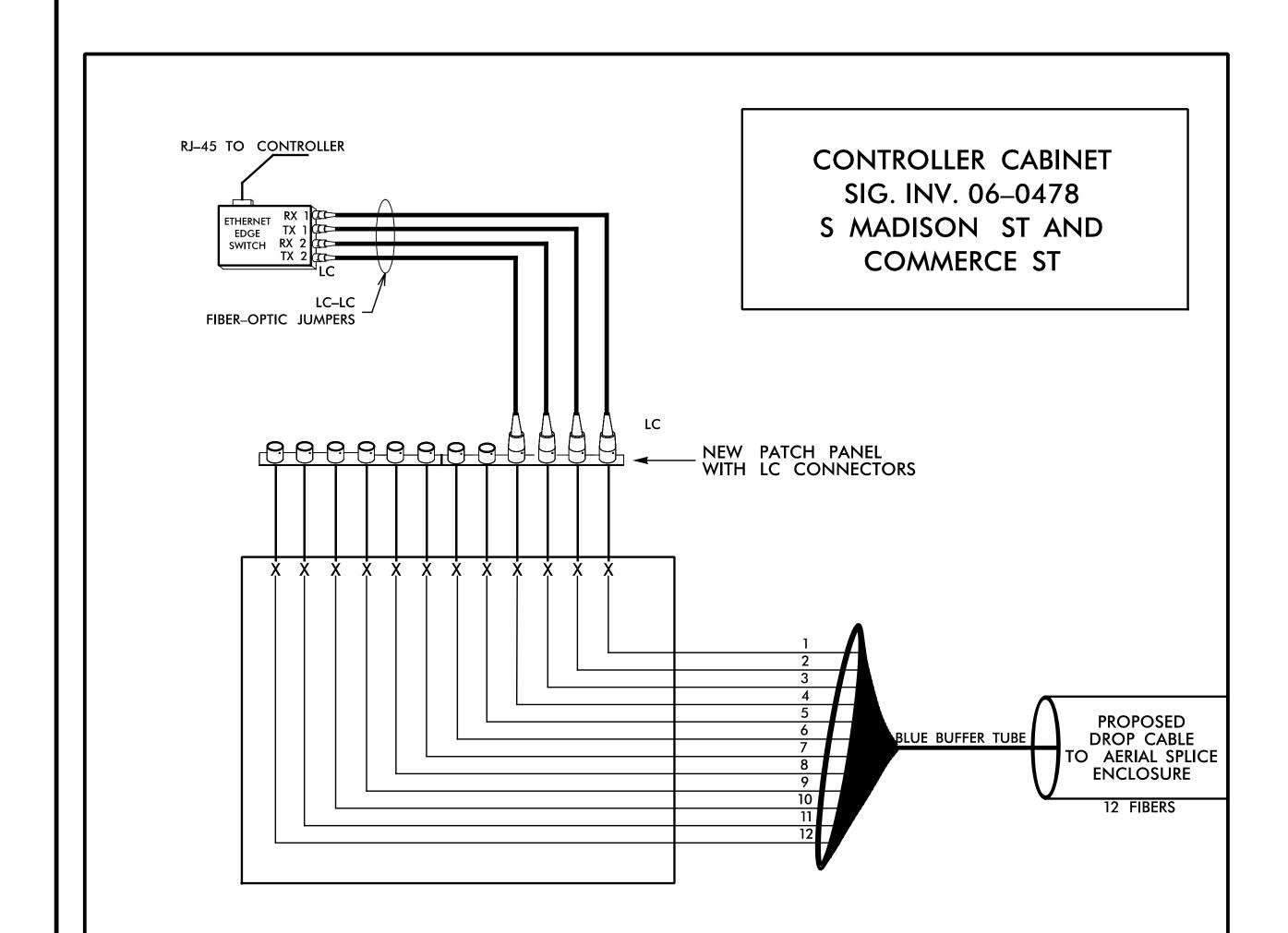
c) COMPANY NAME

d) NAME OF INDIVIDUAL PERFORMING THE SPLICING

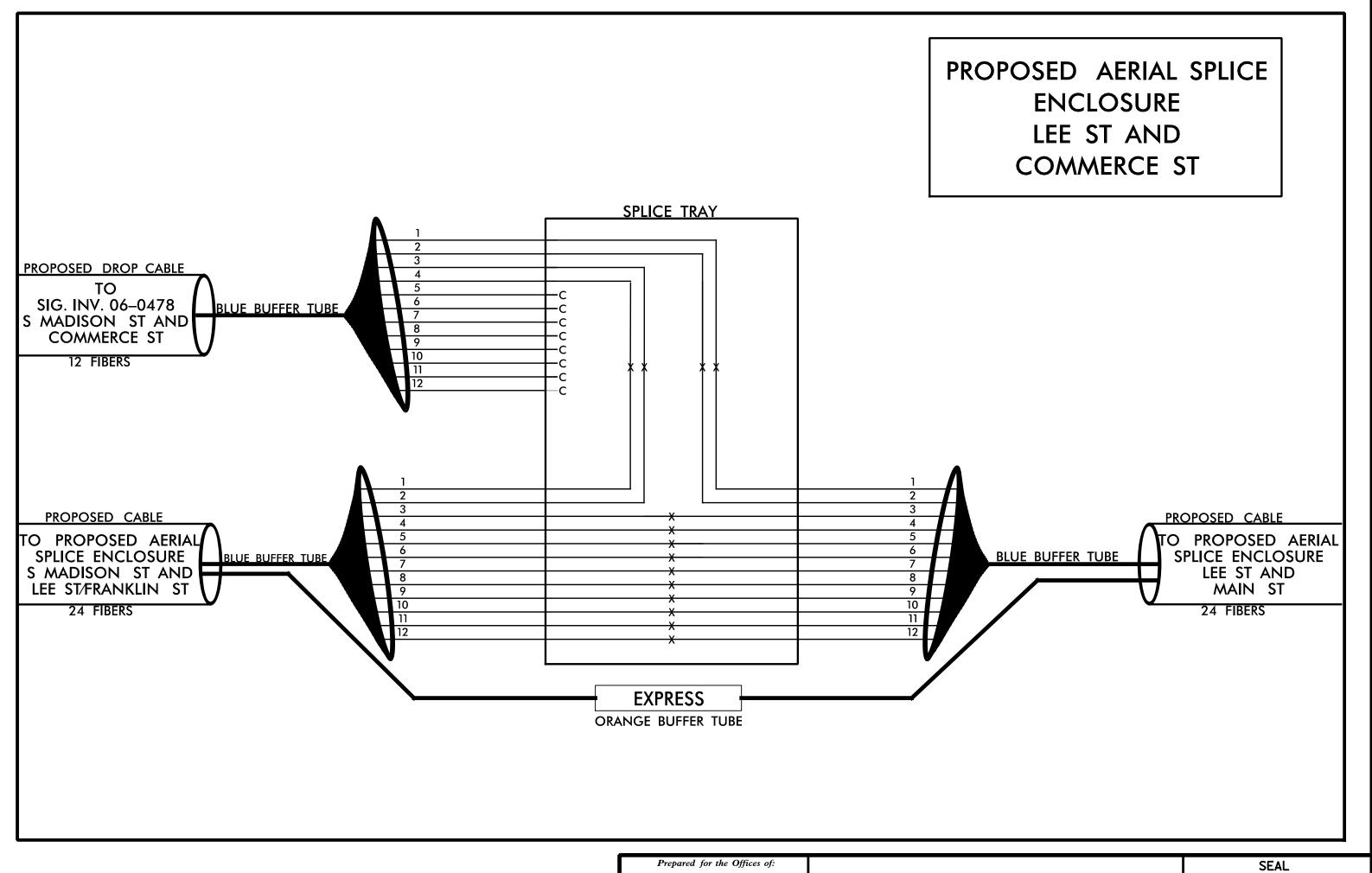
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6) UNUSED FIBERS LEFT COILED AND STORED IN SPLICE TRAY

7) UNUSED BUFFER TUBES LEFT COILED AND STORED IN SPLICE ENCLOSURE



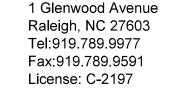
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NC Dept of Transportation Division of Highways Final Drawing Date:

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SPLICE DETAILS

DIVISION 6 COLOMBUS COUNTY WHITEVILLE
PLAN DATE: March 2020 REVIEWED BY: G. G. Murr, Jr.
PREPARED BY: M. Ishak REVIEWED BY:
REVISIONS INIT. DATE

PREPARED BY: M. Ishak REVIEWED BY:

REVISIONS INIT. DATE

SIGNATURE
CADD Filename:

SCP-21

PROJECT REFERENCE NO.

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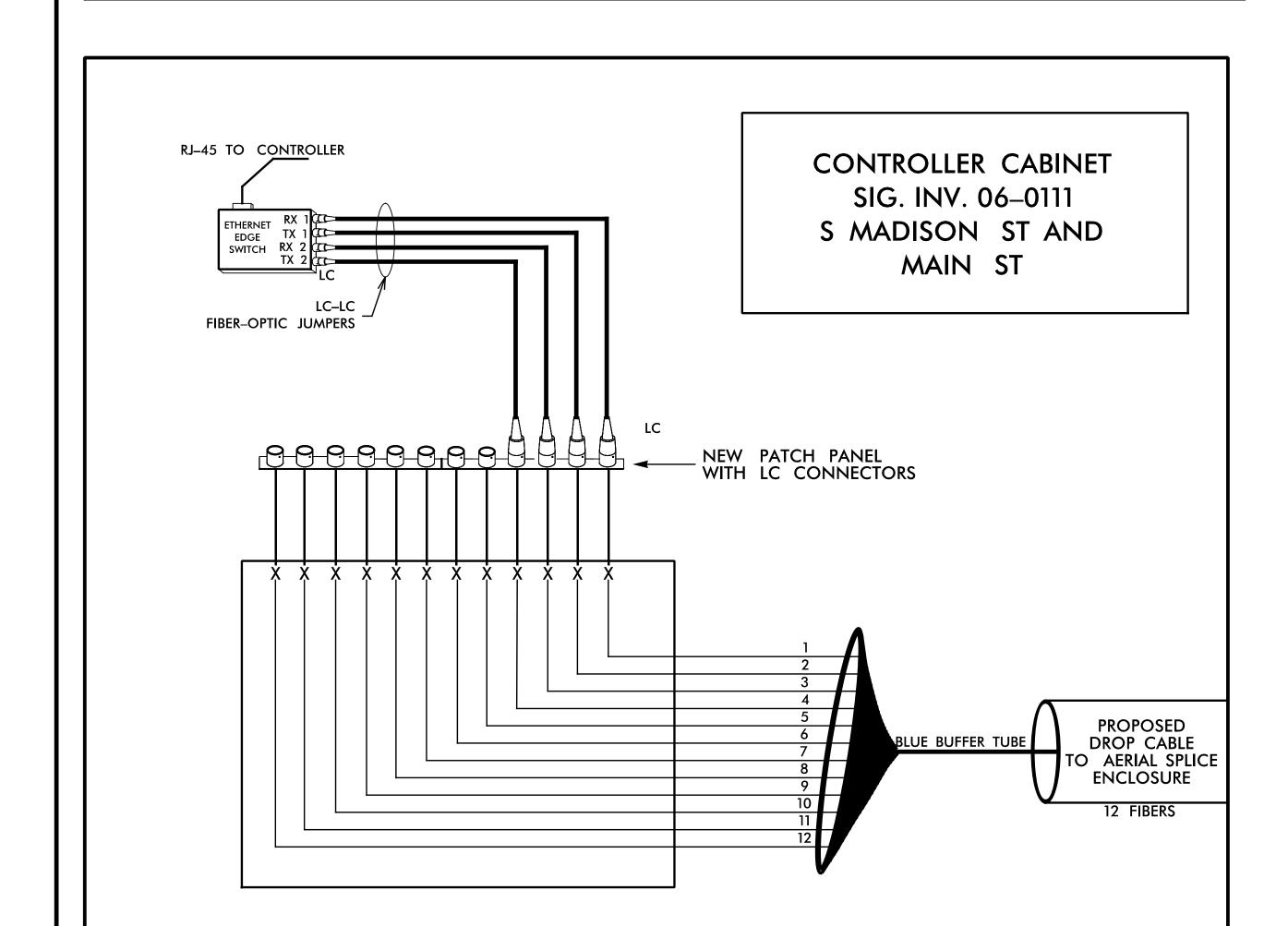
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PROJECT REFERENCE NO. R-5020B

LEGEND

COLOR CODE TIA/EIA 598-A (7) RED (1) BLUE

(2) ORANGE (8) BLACK (3) GREEN (9) YELLOW

(4) BROWN (10) VIOLET (5) SLATE

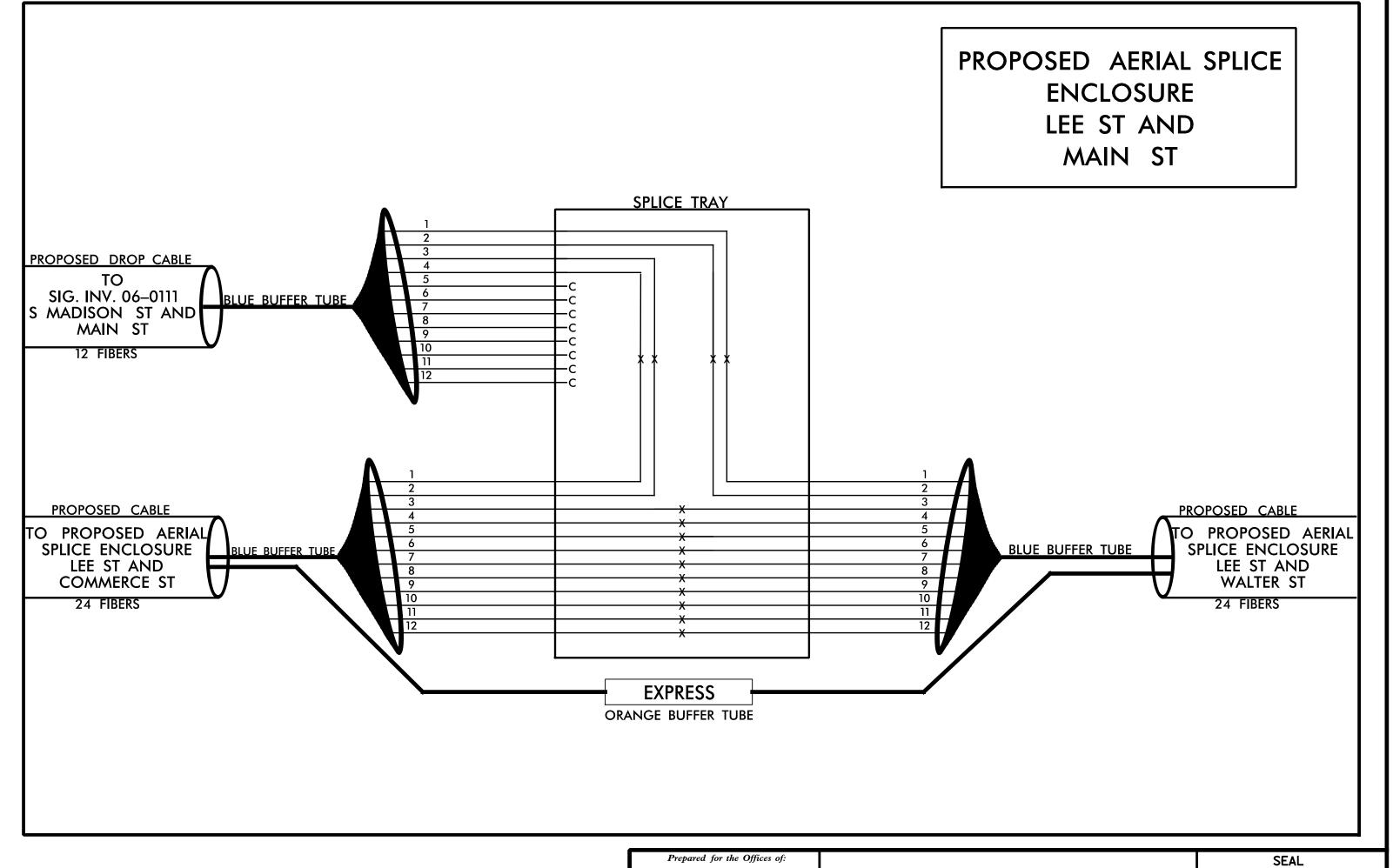
(11) ROSE (6) WHITE (12) AQUA X = FUSION SPLICE INDIVIDUAL FIBER

C = CAP AND SEAL

EXPRESS ENTIRE BUFFER TUBE /FIBERS **EXPRESS** THROUGH WITHOUT CUTTING

SPLICE ALL FIBERS IN BUFFER BUFFER SPLICE =

TUBE COLOR TO COLOR



NC Dept of Transportation Division of Highways Final Drawing Date:

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SPLICE DETAILS

COLOMBUS COUNTY PLAN DATE: REVIEWED BY: March 2020 G. G. Murr, Jr. PREPARED BY: M. Ishak REVIEWED BY: REVISIONS INIT. DATE

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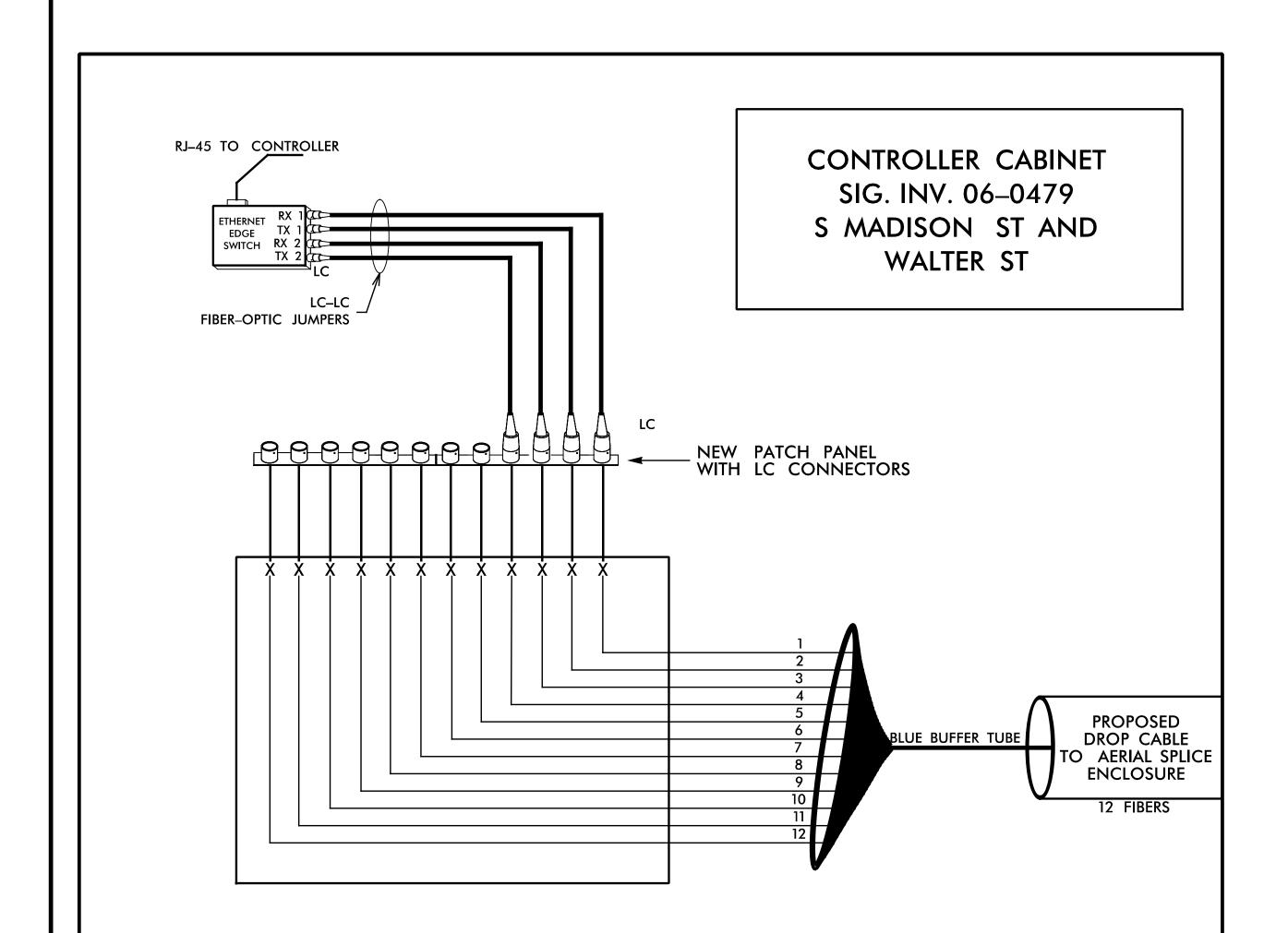
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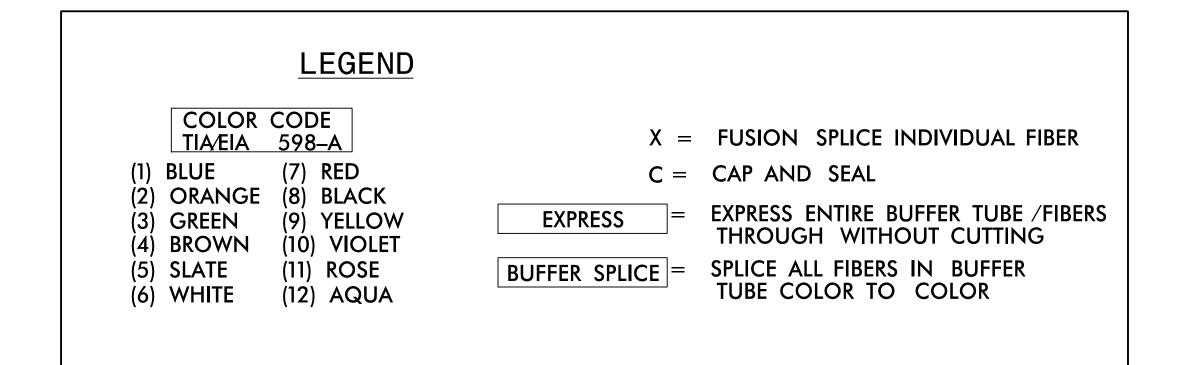
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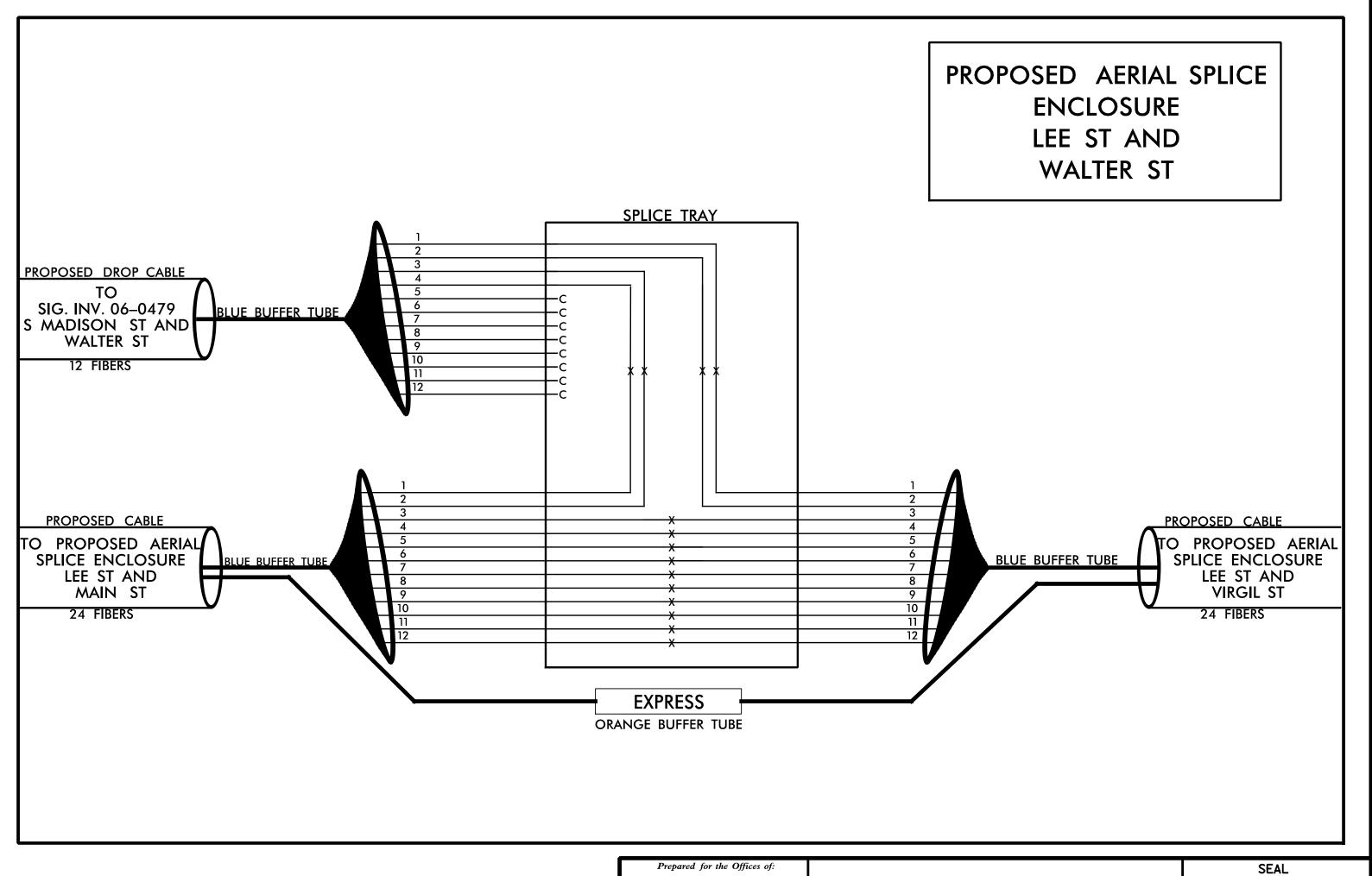
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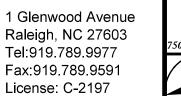




NC Dept of Transportation Division of Highways Final Drawing Date:

ITS & Signals Unit





PLAN DATE:

SPLICE DETAILS

COLOMBUS COUNTY REVIEWED BY: March 2020 G. G. Murr, Jr. PREPARED BY: M. Ishak REVIEWED BY: REVISIONS INIT. DATE

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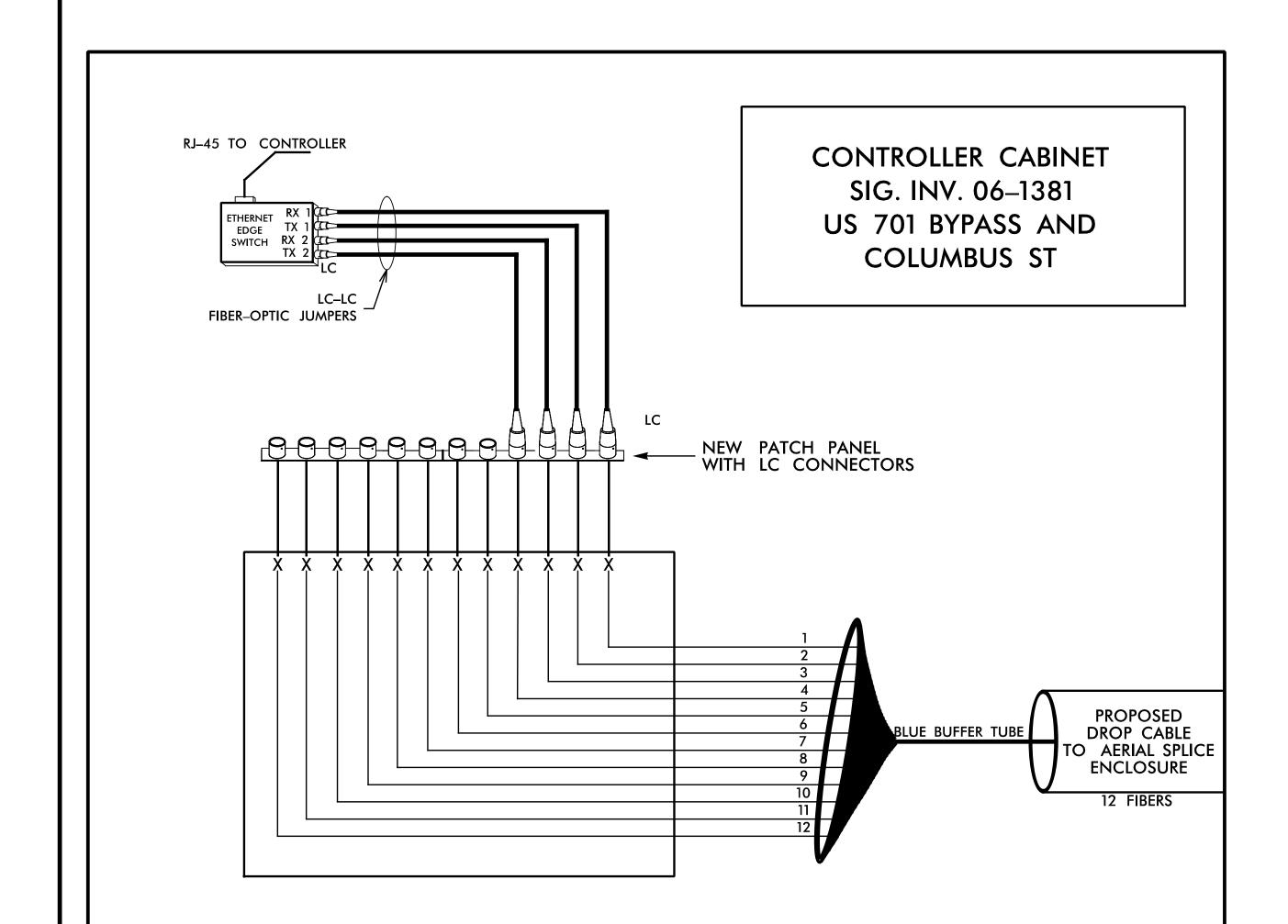
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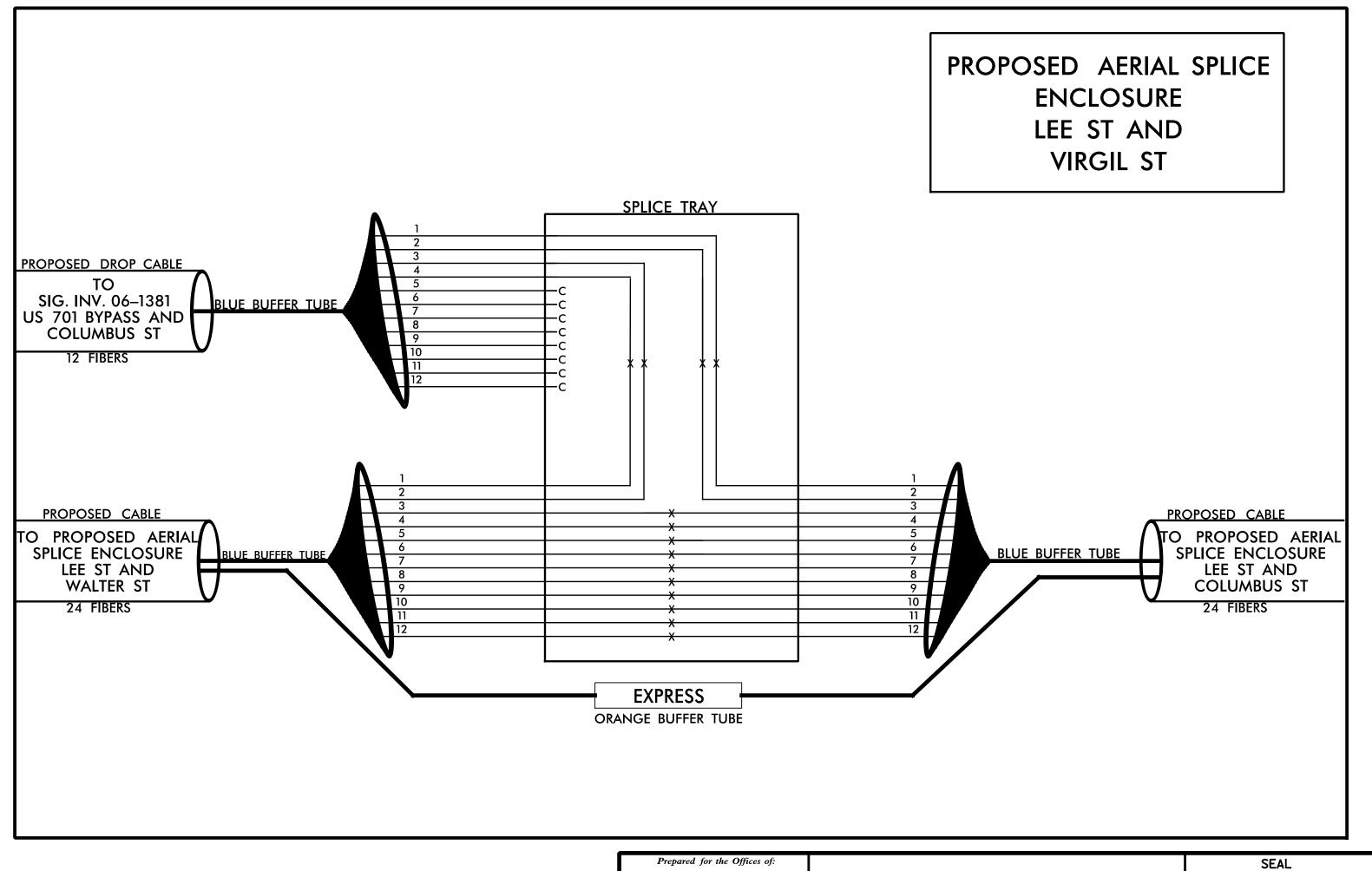
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NC Dept of Transportation
Division of Highways
Final Drawing Date:

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ITS & Signals Unit

Engineering & Construction, Inc.

1 Glenwood Avenue Raleigh, NC 27603 Tel:919.789.9977 Fax:919.789.9591

License: C-2197

DIVISIO
PLAN DATE:

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SPLICE DETAILS

DIVISION 6 COLOMBUS COUNTY WHITEVILLE
PLAN DATE: March 2020 REVIEWED BY: G. G. Murr, Jr.

PREPARED BY: M. Ishak REVIEWED BY:

REVISIONS INIT. DATE

D BY: M. Ishak REVIEWED BY:

REVISIONS INIT. DATE

SIGNATURE
CADD Filename:

SWGINEER.

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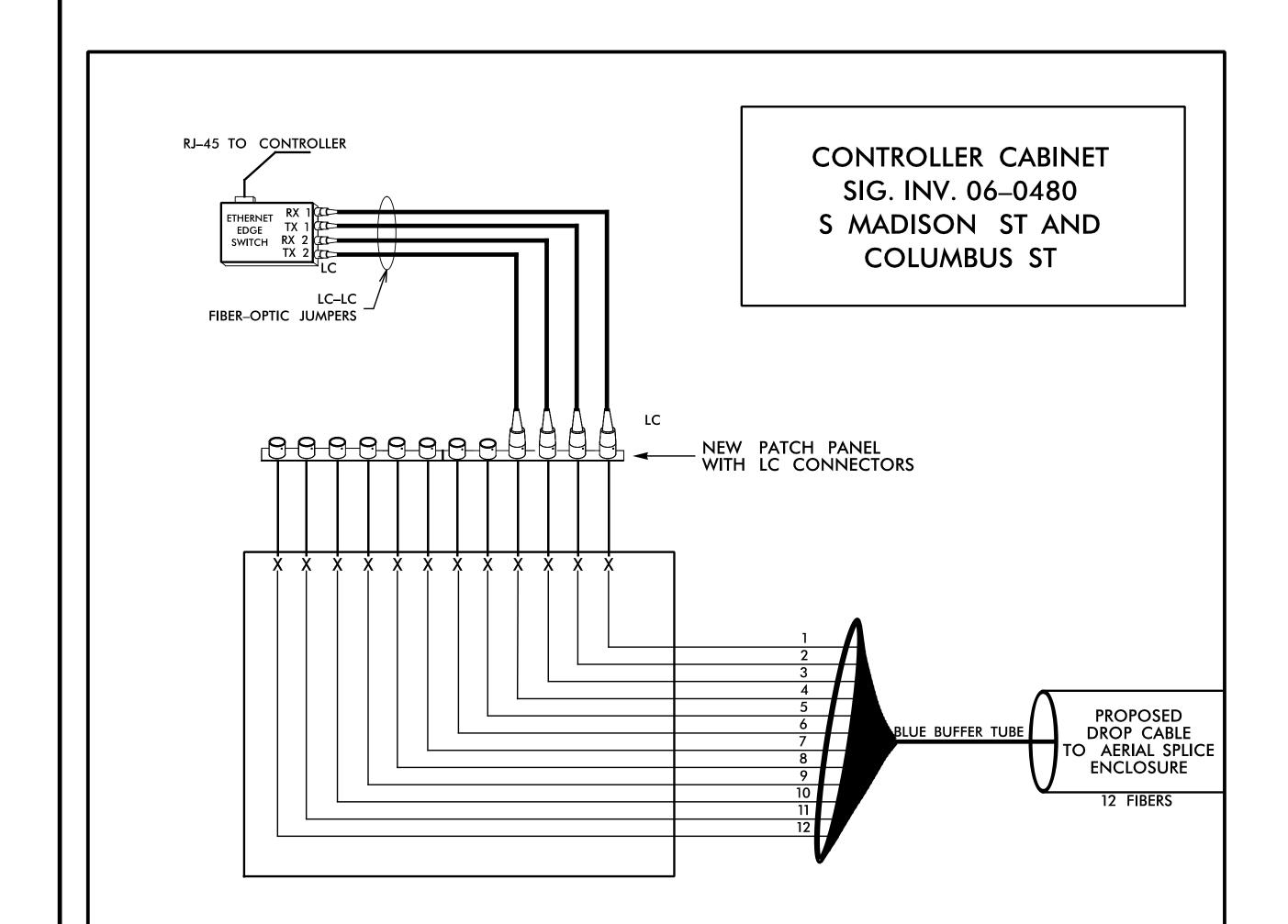
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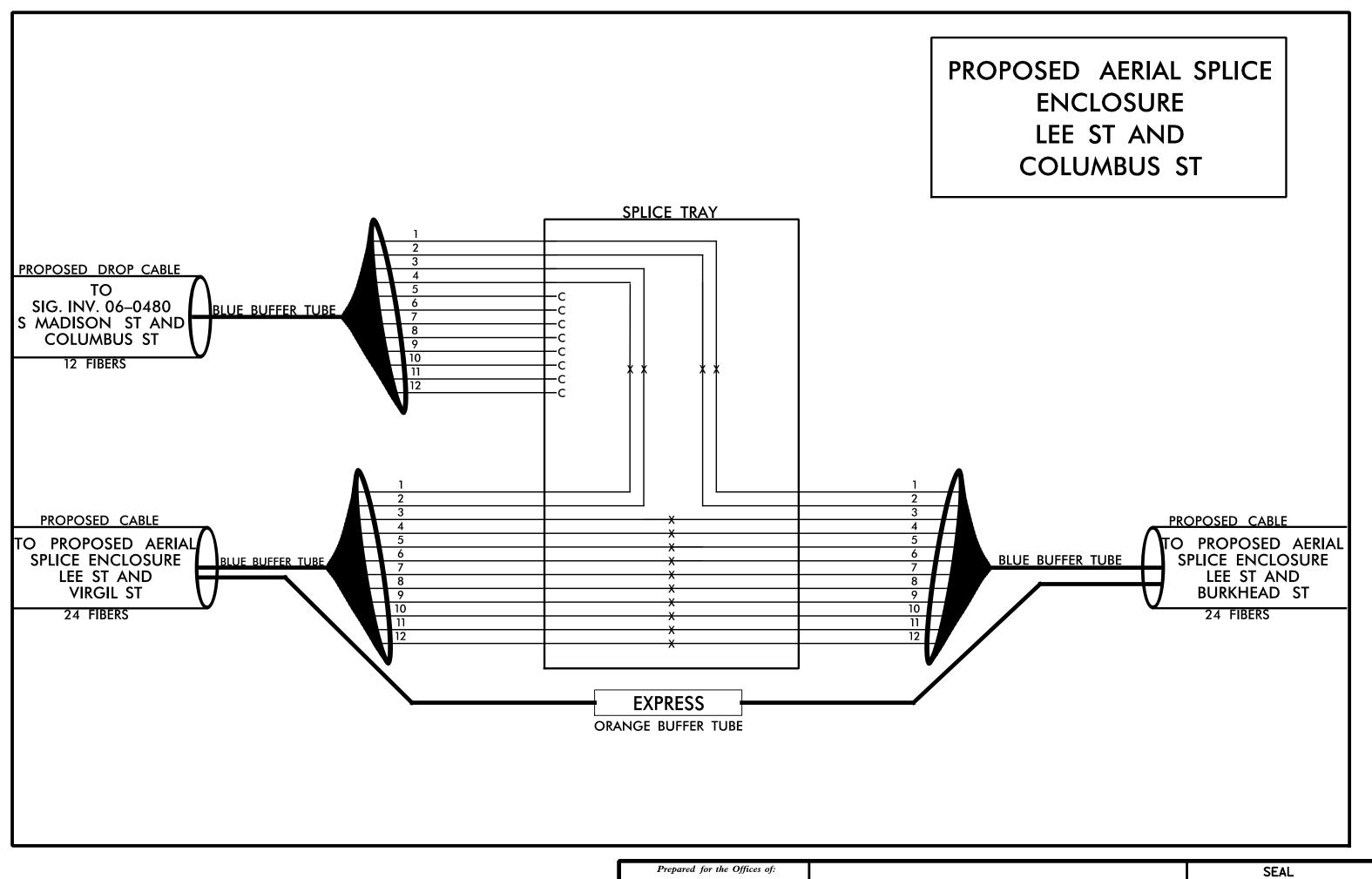
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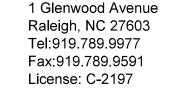
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NC Dept of Transportation Division of Highways Final Drawing Date:

ITS & Signals Unit







SPLICE DETAILS

COLOMBUS COUNTY REVIEWED BY: PLAN DATE: March 2020 G. G. Murr, Jr. PREPARED BY: M. Ishak REVIEWED BY:

REVISIONS INIT. DATE CADD Filename:

SWGINEER.

SIGNATURE

PROJECT REFERENCE NO.

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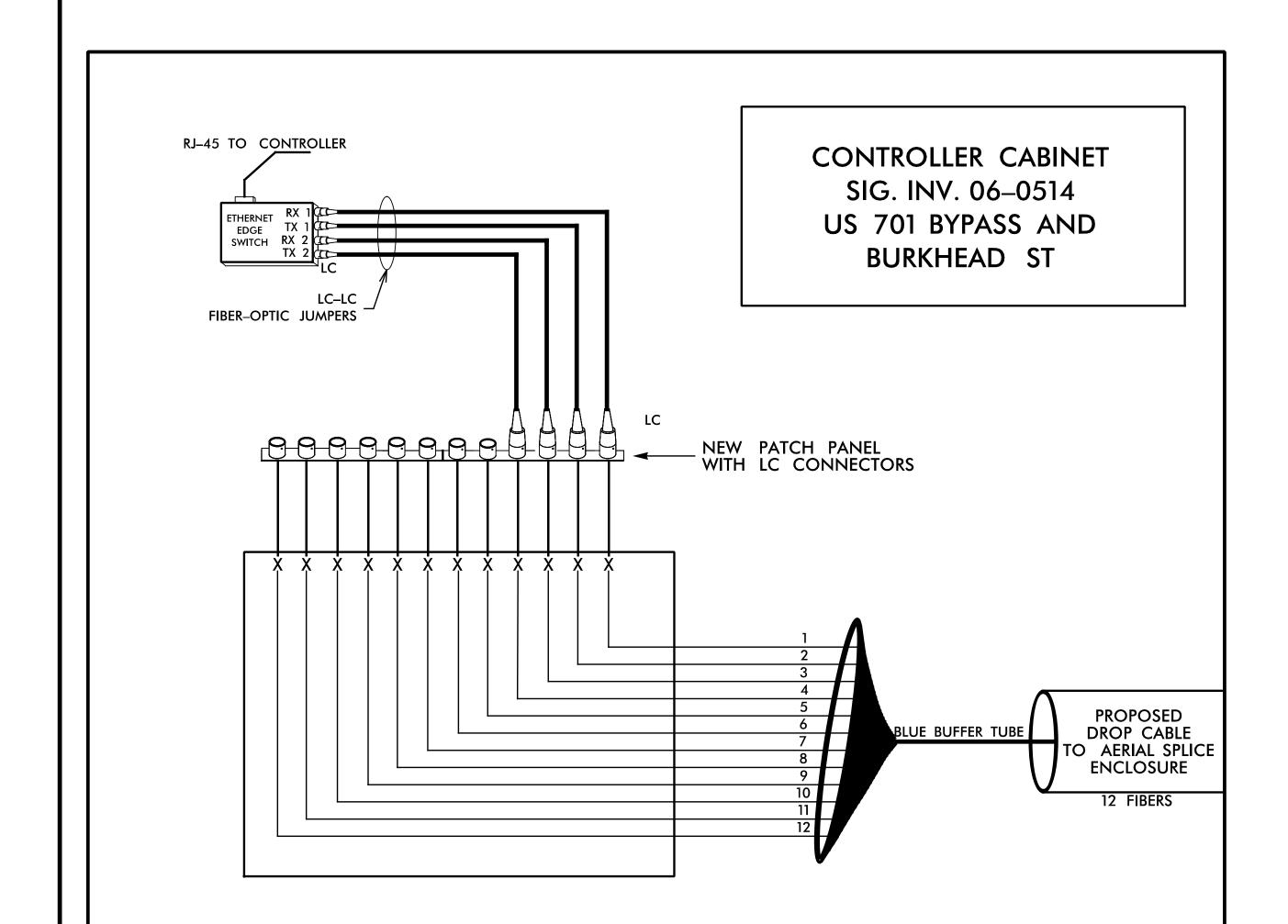
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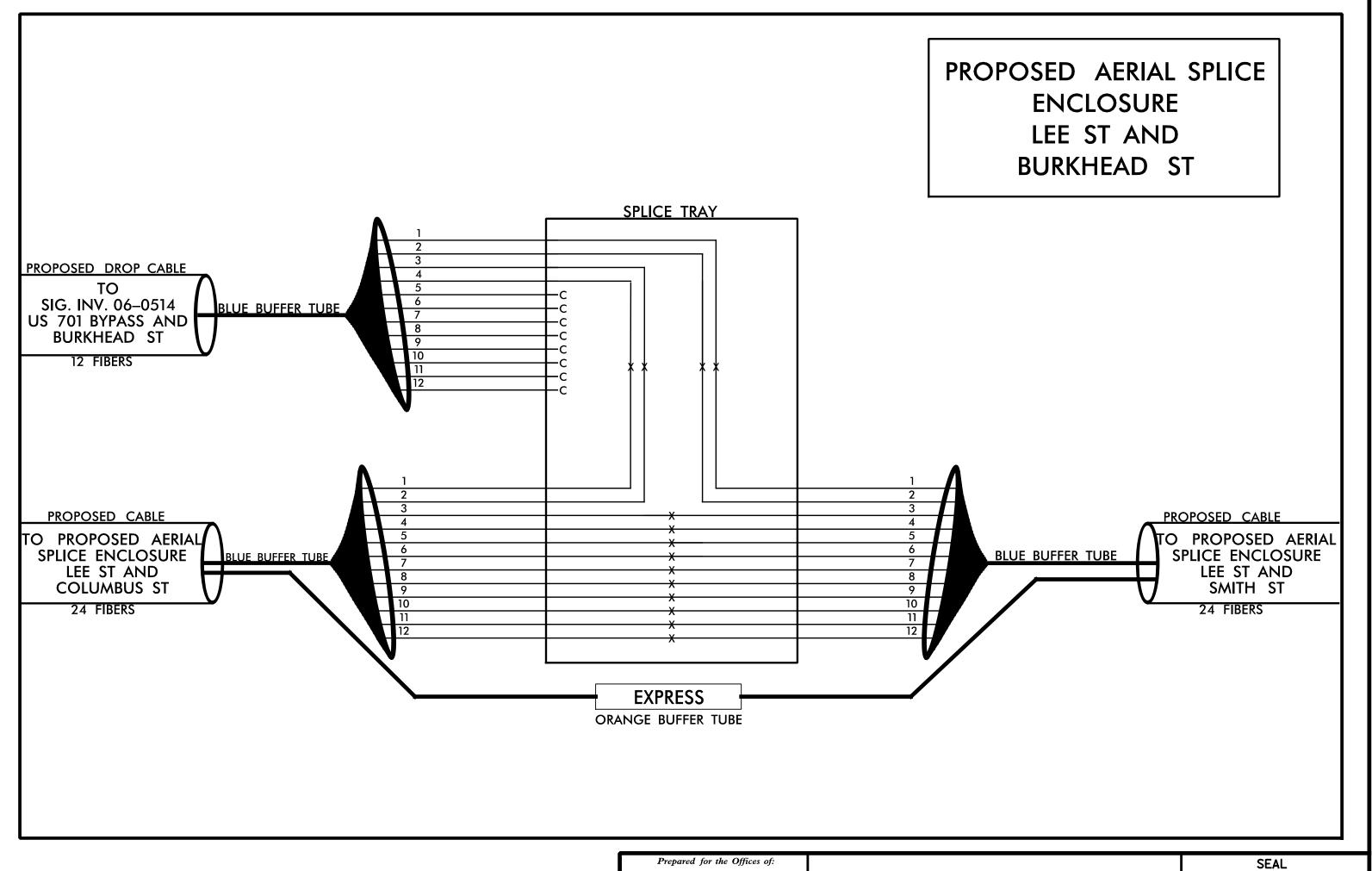
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NC Dept of Transportation
Division of Highways
Final Drawing Date:

ITS & Signals Unit





SPLICE DETAILS

DIVISION 6

COLOMBUS COUNTY

PLAN DATE: March 2020

REVIEWED BY: G. G. Murr, Jr.

PREPARED BY: M. Ishak

REVIEWED BY:

REVISIONS

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R - 5020B SCP - 27

LEGEND

COLOR CODE TIA/EIA 598-A

- (1) BLUE (7) RED
- (2) ORANGE (8) BLACK (3) GREEN (9) YELLOW
- (4) BROWN (10) VIOLET (5) SLATE (11) ROSE
- (6) WHITE (12) AQUA

X = FUSION SPLICE INDIVIDUAL FIBER

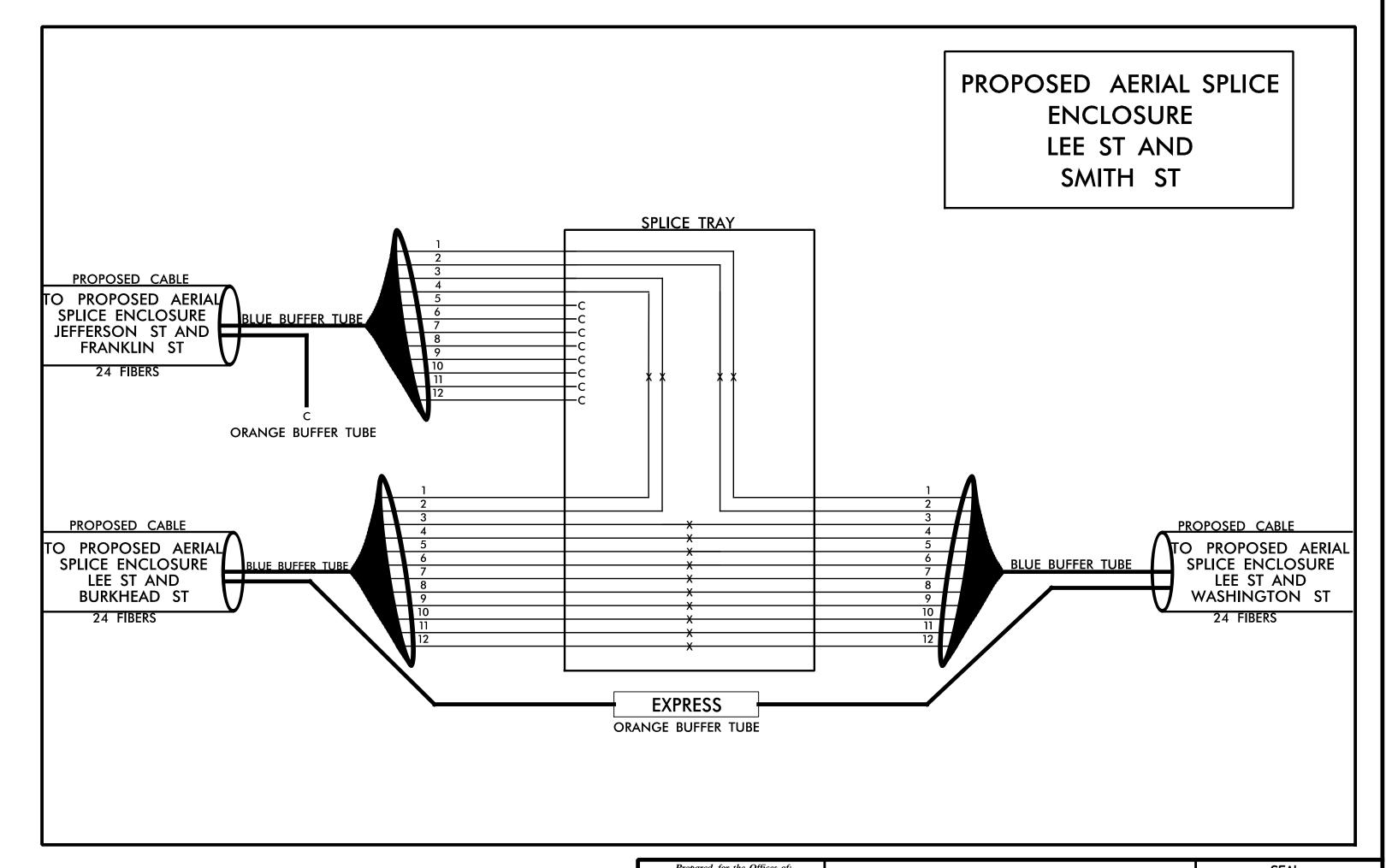
C = CAP AND SEAL

EXPRESS

EXPRESS ENTIRE BUFFER TUBE /FIBERS THROUGH WITHOUT CUTTING

BUFFER SPLICE = SPLICE ALL FIBERS IN BUFFER

TUBE COLOR TO COLOR

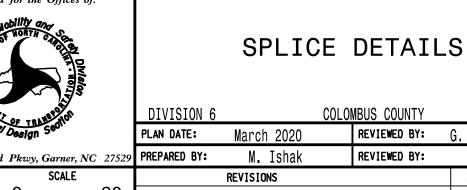


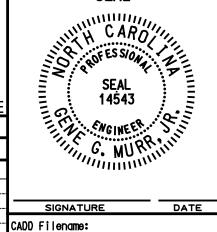
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G. G. Murr, Jr.

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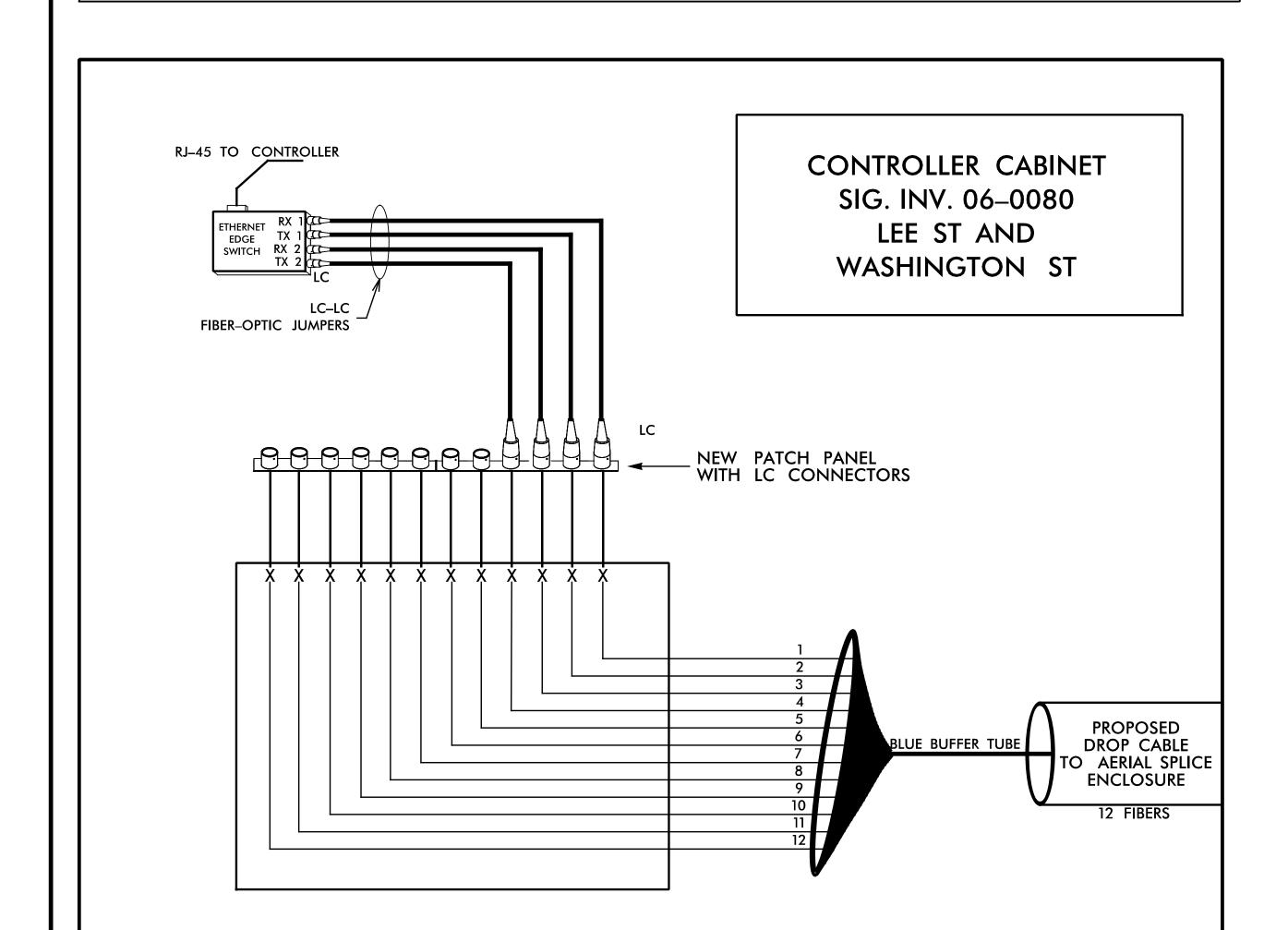
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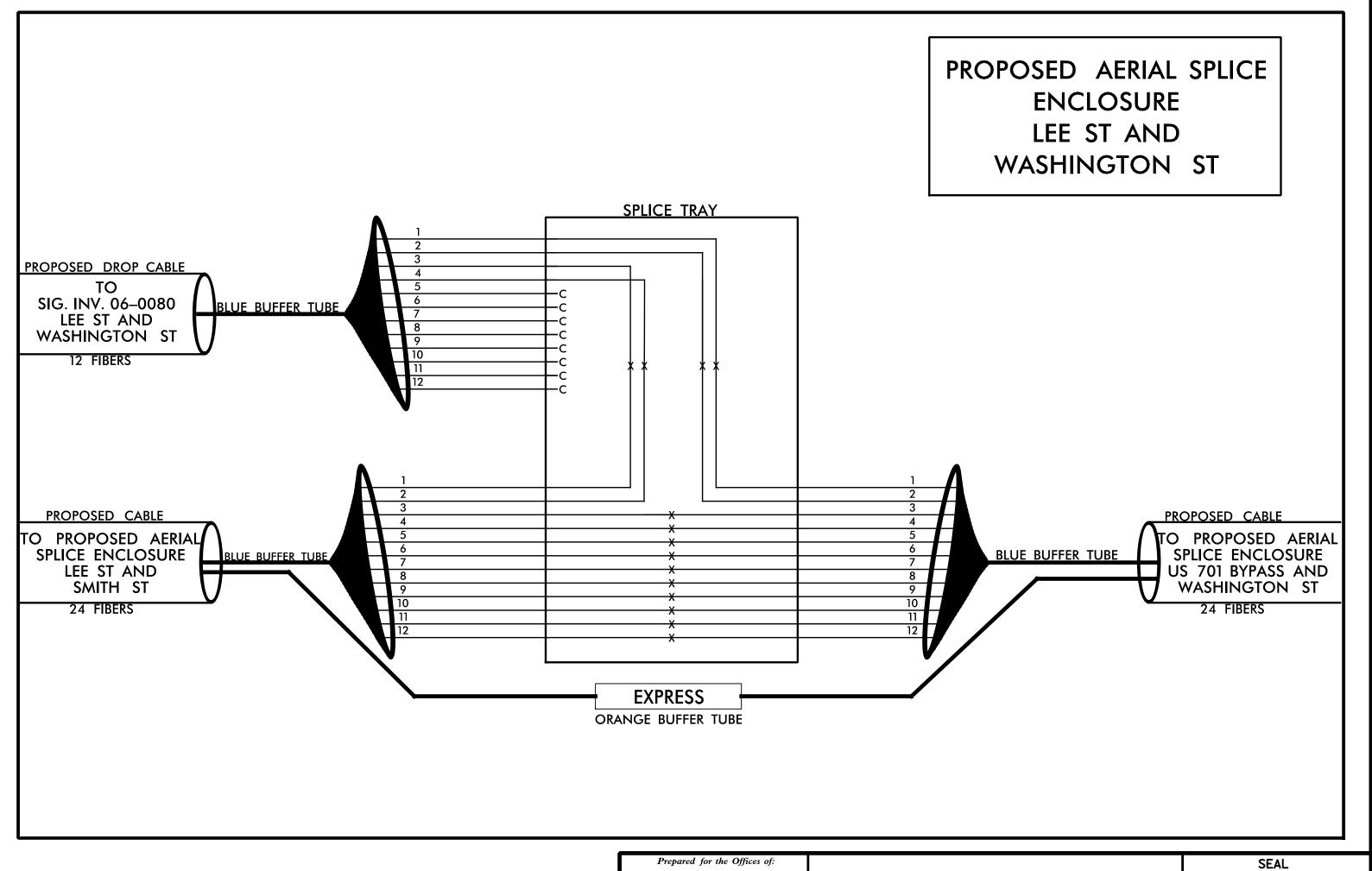
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SPLICE DETAILS PLAN DATE: PREPARED BY:

COLOMBUS COUNTY REVIEWED BY: March 2020 G. G. Murr, Jr. M. Ishak REVIEWED BY:

REVISIONS INIT. DATE

SIGNATURE CADD Filename:

PROJECT REFERENCE NO.

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a) SPLICE LOCATION

b) DATE

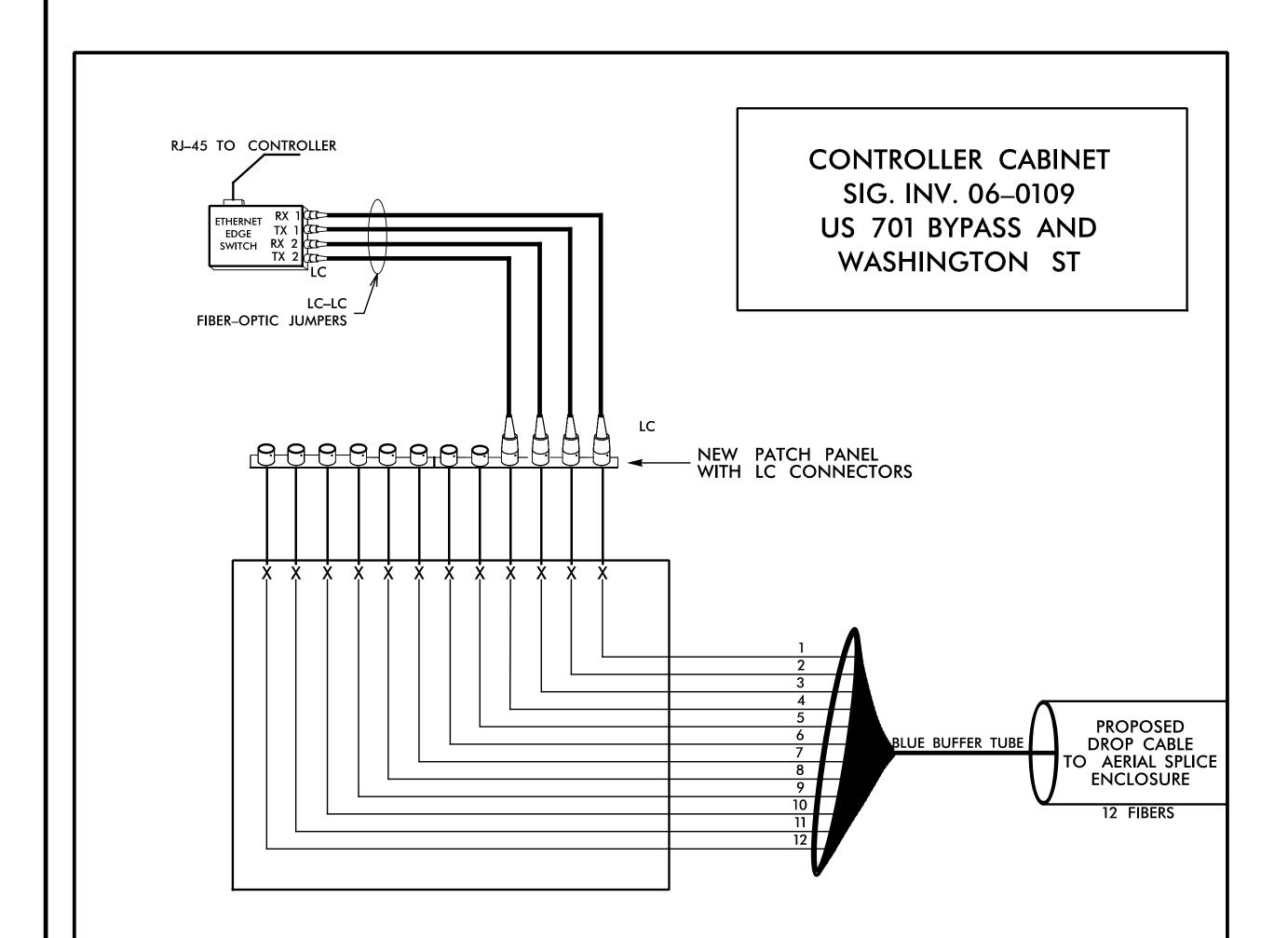
c) COMPANY NAME

d) NAME OF INDIVIDUAL PERFORMING THE SPLICING

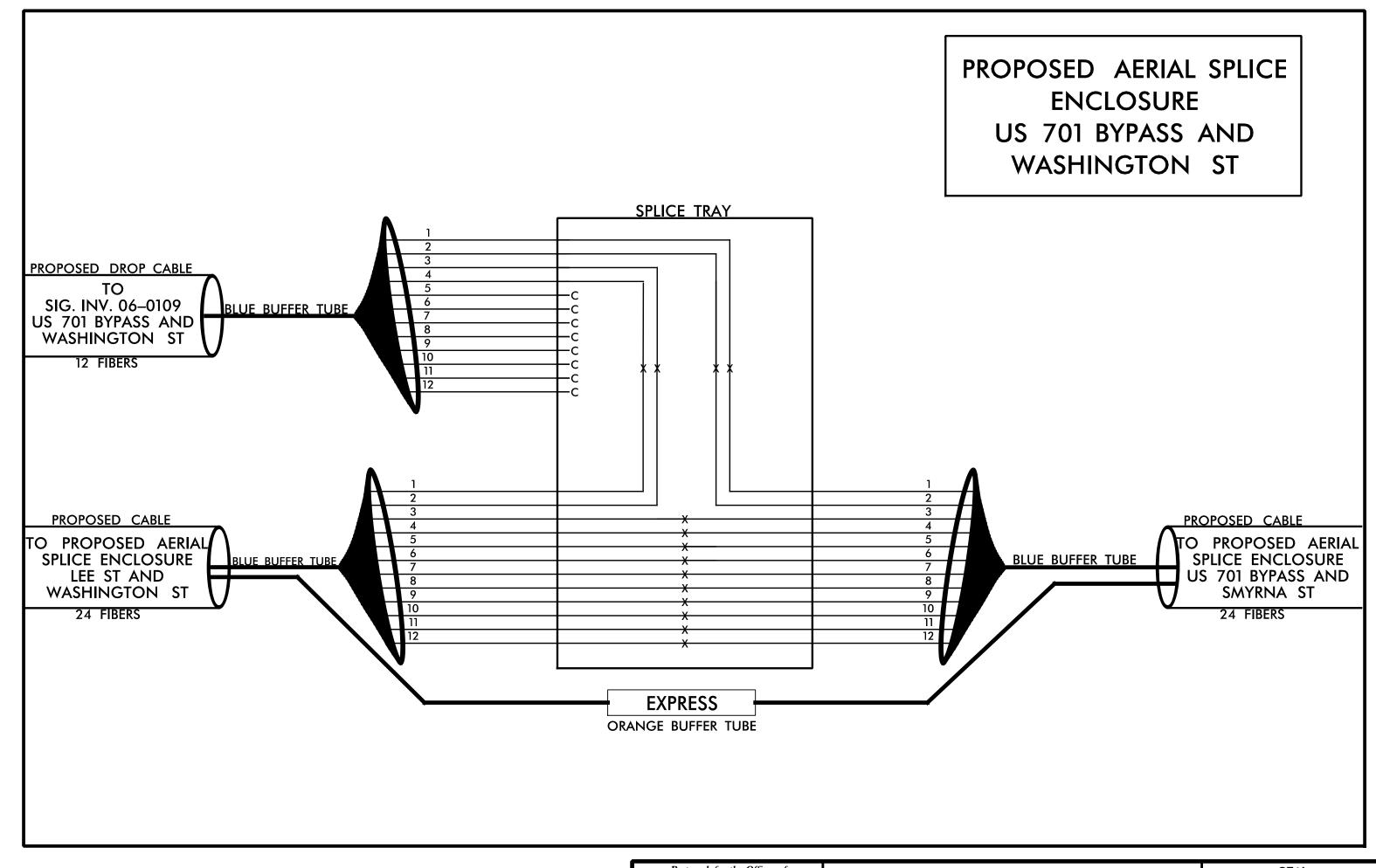
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LEGEND COLOR CODE X = FUSION SPLICE INDIVIDUAL FIBER TIA/EIA 598-A (7) RED (1) BLUE C = CAP AND SEAL(2) ORANGE (8) BLACK EXPRESS ENTIRE BUFFER TUBE /FIBERS **EXPRESS** (3) GREEN (9) YELLOW THROUGH WITHOUT CUTTING (4) BROWN (10) VIOLET (11) ROSE SPLICE ALL FIBERS IN BUFFER (5) SLATE BUFFER SPLICE = TUBE COLOR TO COLOR (6) WHITE (12) AQUA



NC Dept of Transportation
Division of Highways
Final Drawing Date:

ITS & Signals Unit



1 Glenwood Avenue Raleigh, NC 27603 Tel:919.789.9977 Fax:919.789.9591 License: C-2197 DIVIS

PLAN DA

N. Greenfield Pkwy, Garner, NC 27529

PREPARE

SCALE

SPLICE DETAILS

DIVISION 6 COLOMBUS COUNTY WHITEVILLE
PLAN DATE: March 2020 REVIEWED BY: G. G. Murr, Jr.

PREPARED BY: M. Ishak REVIEWED BY:

REVISIONS INIT. DATE

INIT. DATE

SIGNATU

CADD Filename:

SIGNATURE
CADD Filename:

PROJECT REFERENCE NO.

R-5020B

Prepared for the Offices of:

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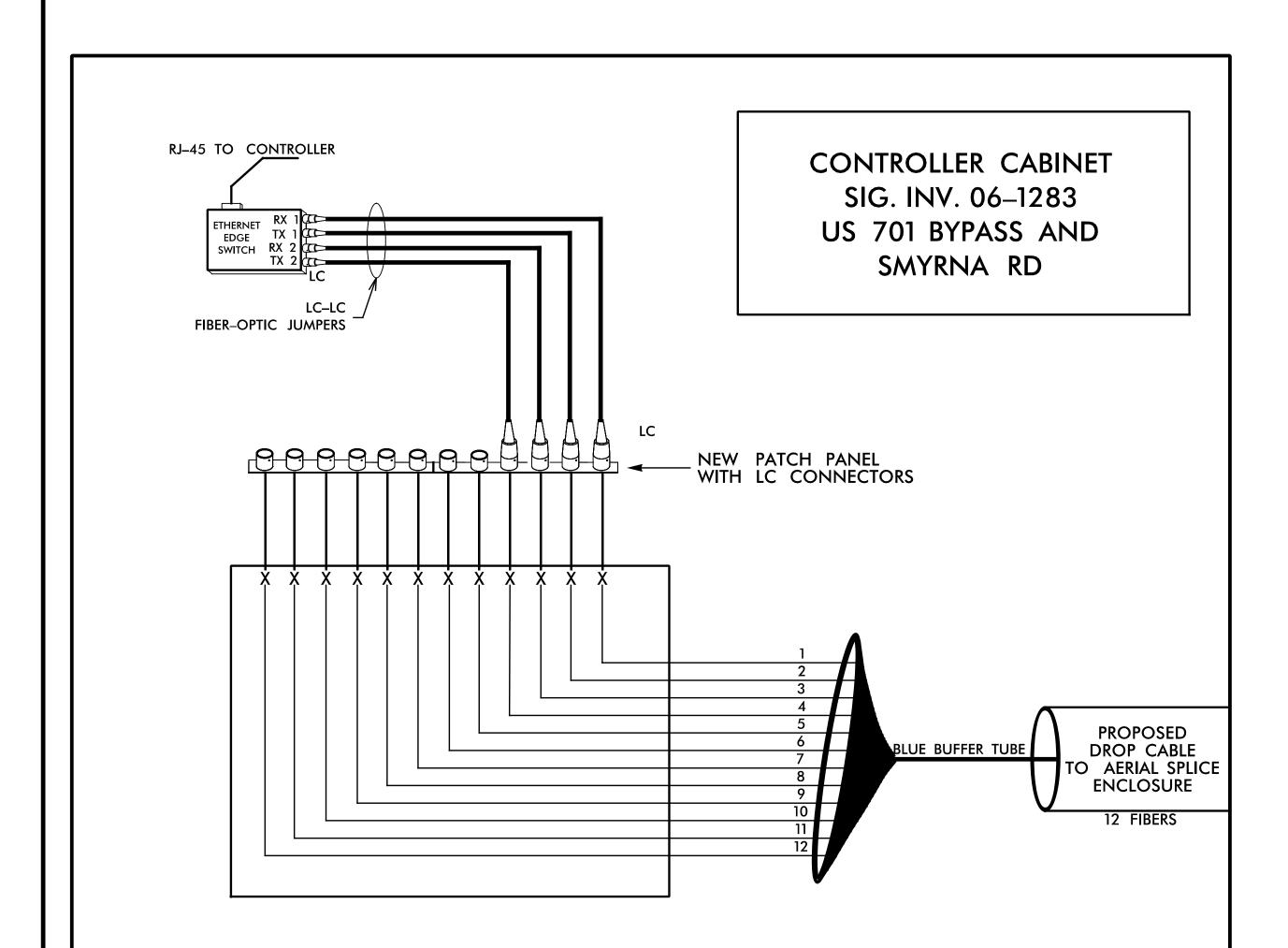
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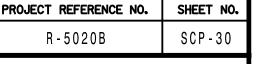
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LEGEND

COLOR CODE TIA/EIA 598-A

(7) RED (1) BLUE (2) ORANGE (8) BLACK

(3) GREEN (9) YELLOW (4) BROWN (10) VIOLET

(11) ROSE (5) SLATE (12) AQUA (6) WHITE

X = FUSION SPLICE INDIVIDUAL FIBER

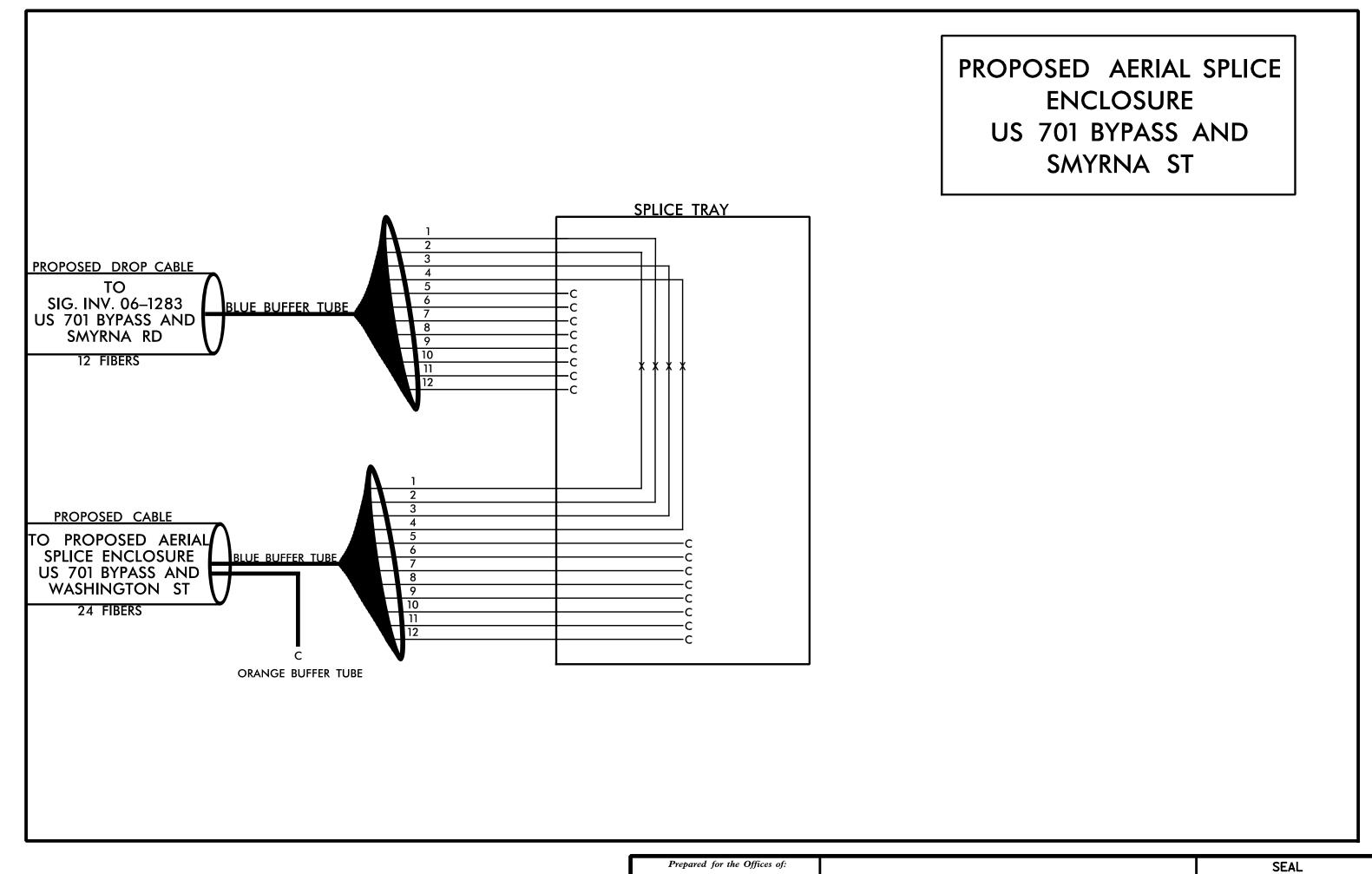
C = CAP AND SEAL

EXPRESS

EXPRESS ENTIRE BUFFER TUBE /FIBERS THROUGH WITHOUT CUTTING

SPLICE ALL FIBERS IN BUFFER BUFFER SPLICE =

TUBE COLOR TO COLOR



NC Dept of Transportation Division of Highways Final Drawing Date:

ITS & Signals Unit





1 Glenwood Avenue

Raleigh, NC 27603

Tel:919.789.9977

SPLICE DETAILS

COLOMBUS COUNTY PLAN DATE: REVIEWED BY: March 2020 G. G. Murr, Jr. PREPARED BY: M. Ishak REVIEWED BY: REVISIONS

INIT. DATE

SIGNATURE CADD Filename:

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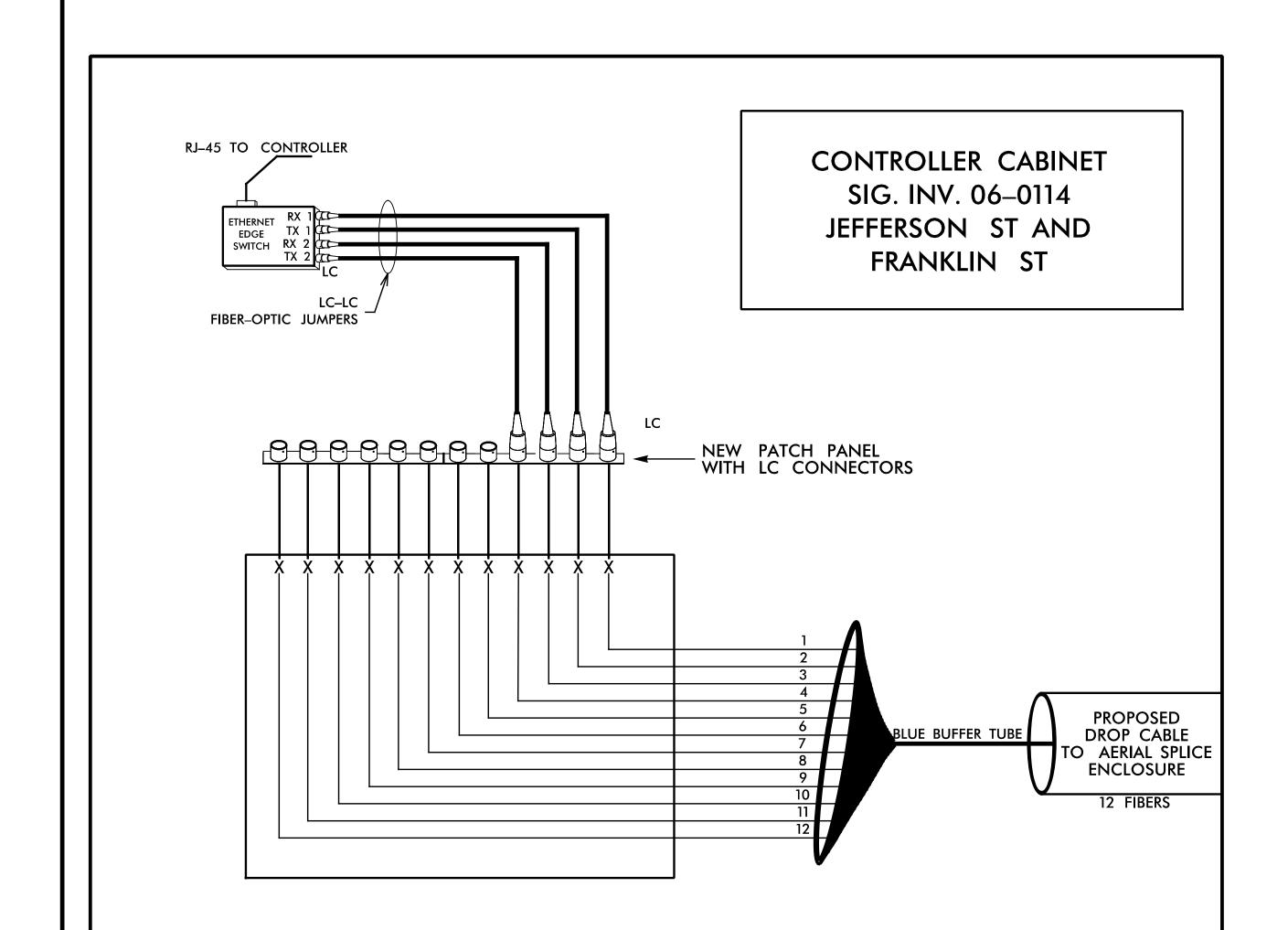
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PROJECT REFERENCE NO. R-5020B

LEGEND

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(11) ROSE (5) SLATE (12) AQUA (6) WHITE

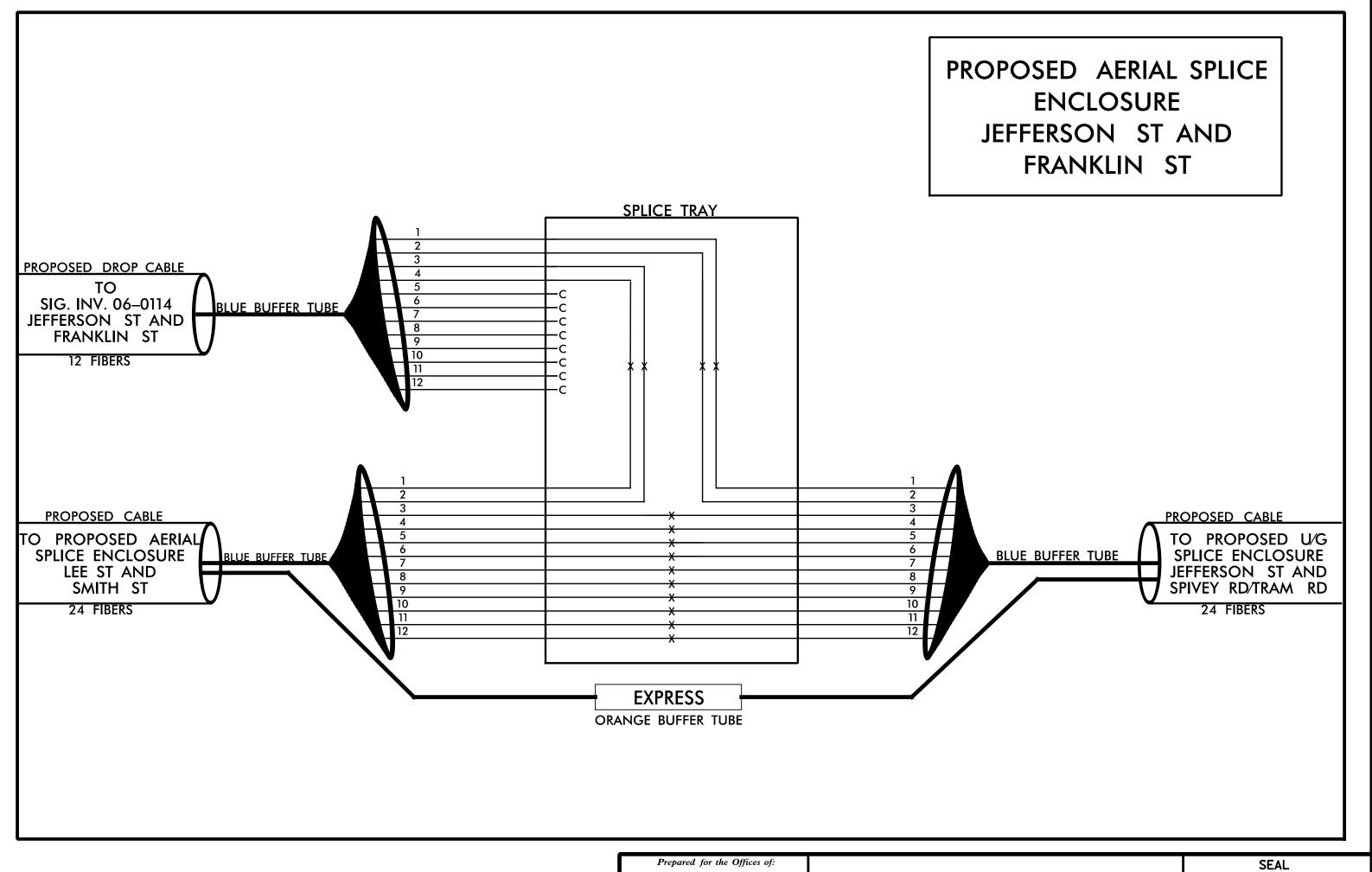
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C = CAP AND SEAL

EXPRESS ENTIRE BUFFER TUBE /FIBERS **EXPRESS** THROUGH WITHOUT CUTTING

BUFFER SPLICE = SPLICE ALL FIBERS IN BUFFER

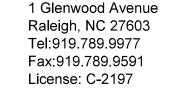
TUBE COLOR TO COLOR



NC Dept of Transportation Division of Highways Final Drawing Date:

ITS & Signals Unit







SPLICE DETAILS

COLOMBUS COUNTY REVIEWED BY: PLAN DATE: March 2020 G. G. Murr, Jr. PREPARED BY: M. Ishak REVIEWED BY: REVISIONS INIT. DATE

SWGINEER.

SIGNATURE CADD Filename:

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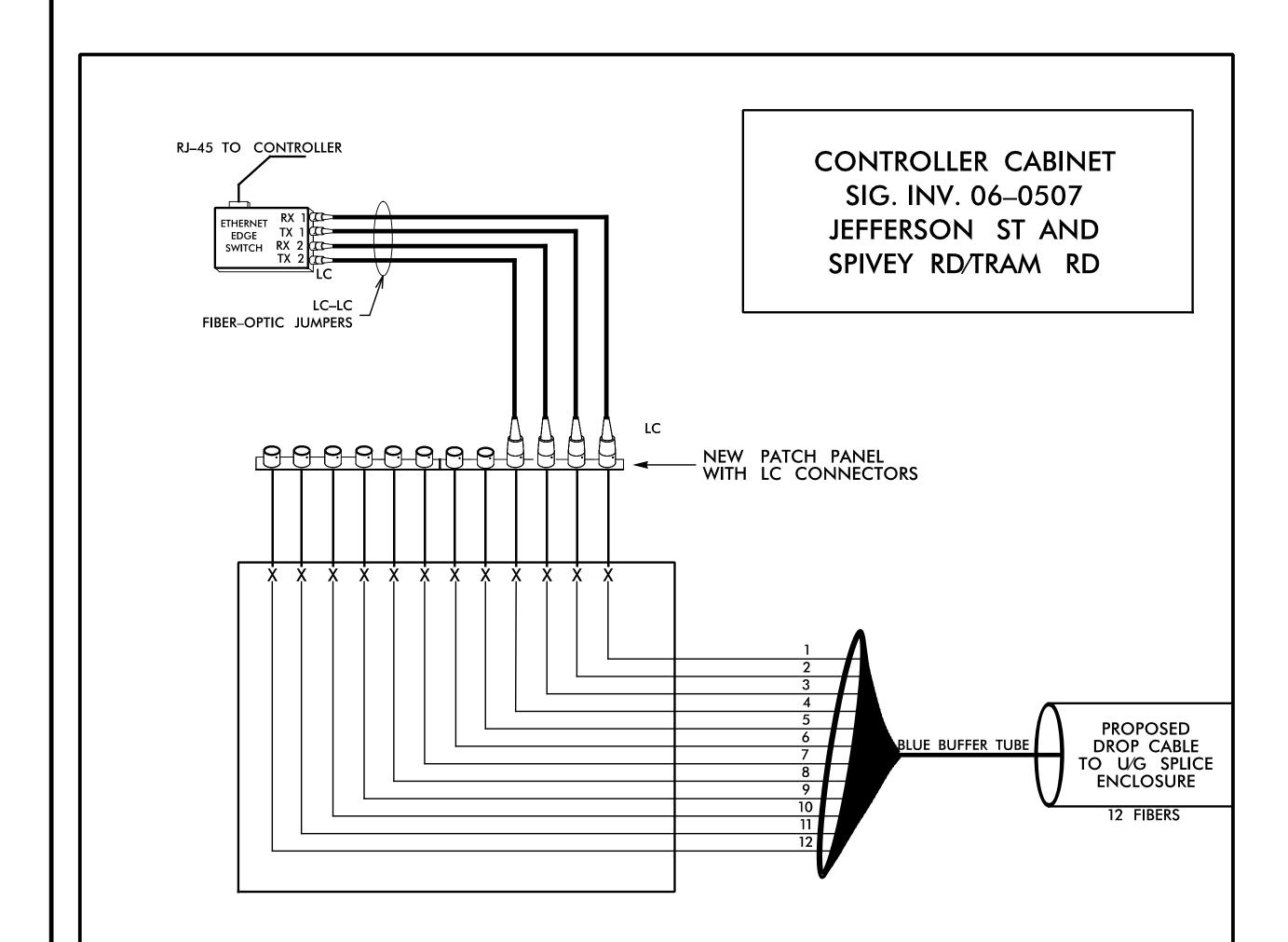
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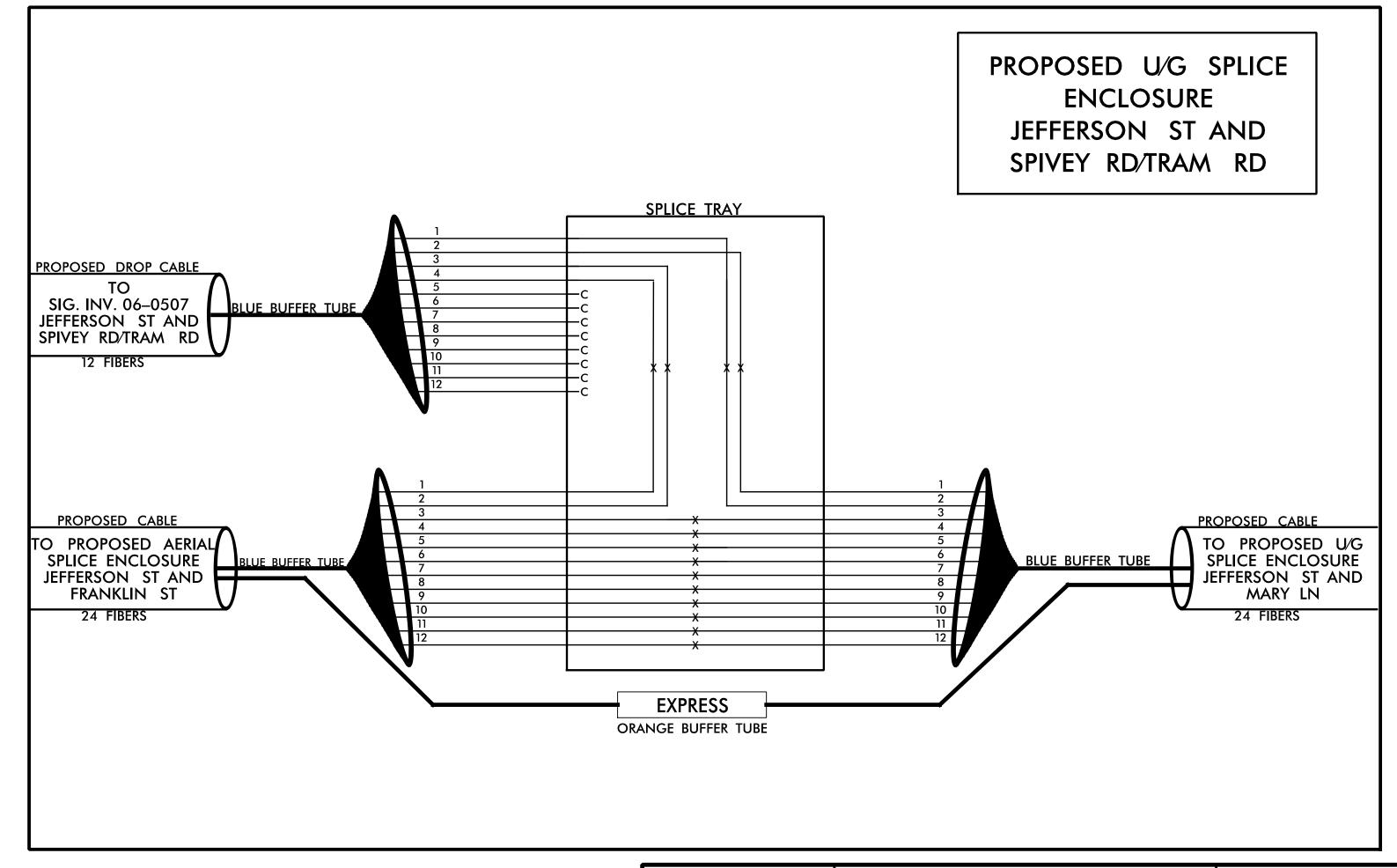
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NC Dept of Transportation Division of Highways Final Drawing Date:

Engineering & Construction, Inc.

1 Glenwood Avenue Raleigh, NC 27603 Tel:919.789.9977 Fax:919.789.9591 License: C-2197

SPLICE DETAILS

COLOMBUS COUNTY PLAN DATE: REVIEWED BY: March 2020 G. G. Murr, Jr. PREPARED BY: M. Ishak REVIEWED BY: REVISIONS

INIT. DATE

SIGNATURE CADD Filename:

SWGINEER.

SEAL

PROJECT REFERENCE NO.

R-5020B

ITS & Signals Unit

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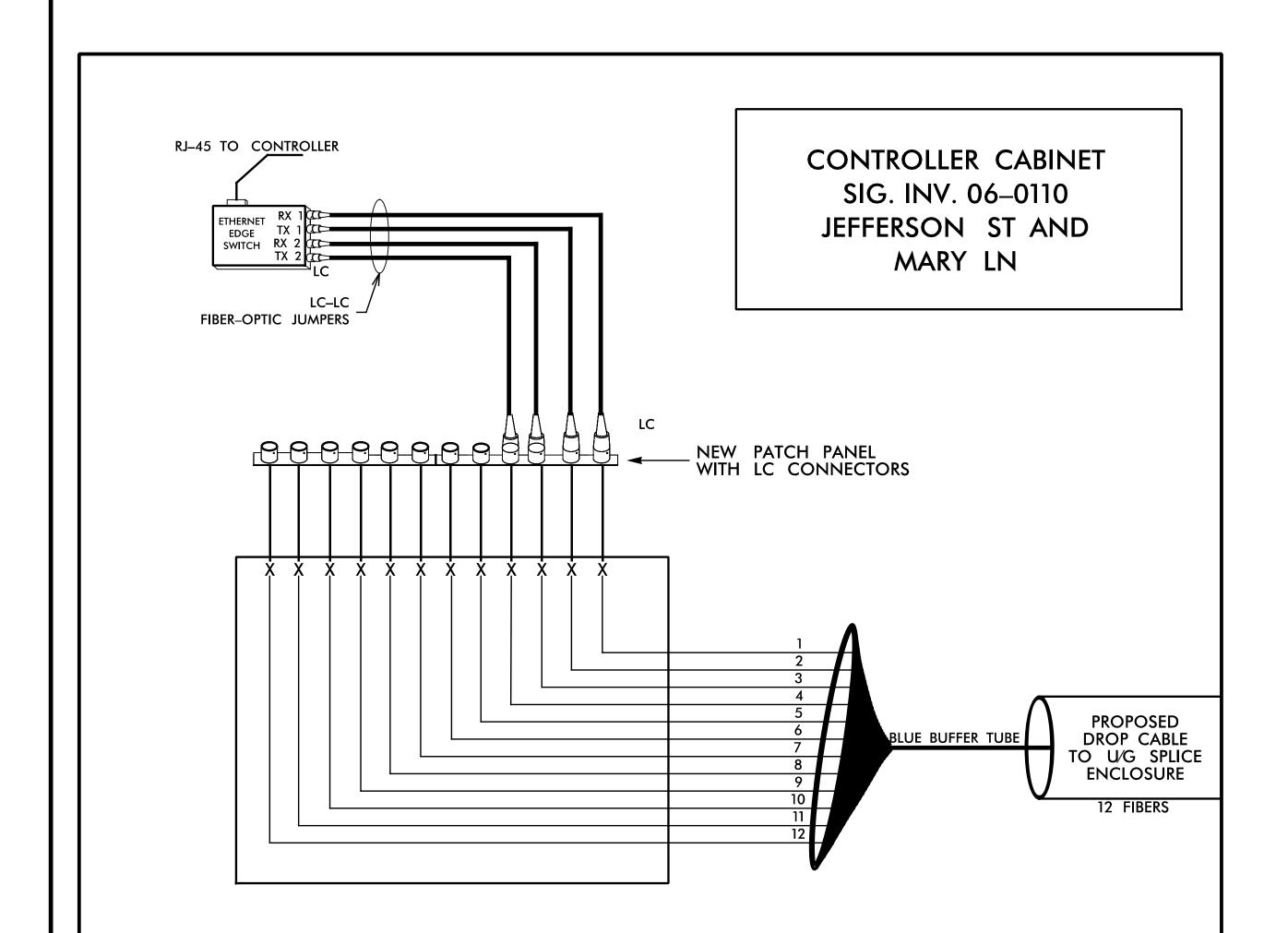
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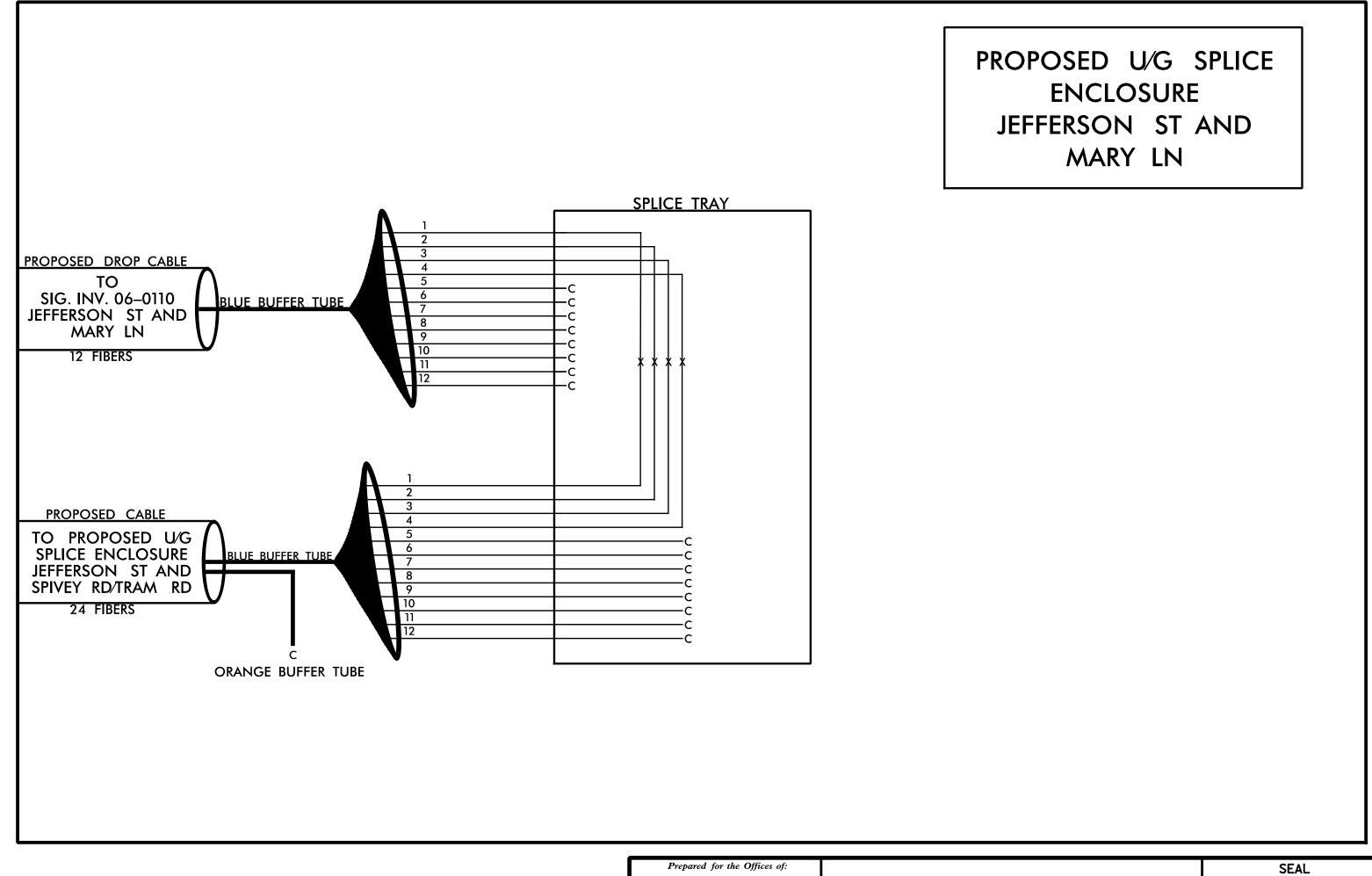
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NC Dept of Transportation
Division of Highways
Final Drawing Date: _____

ITS & Signals Unit



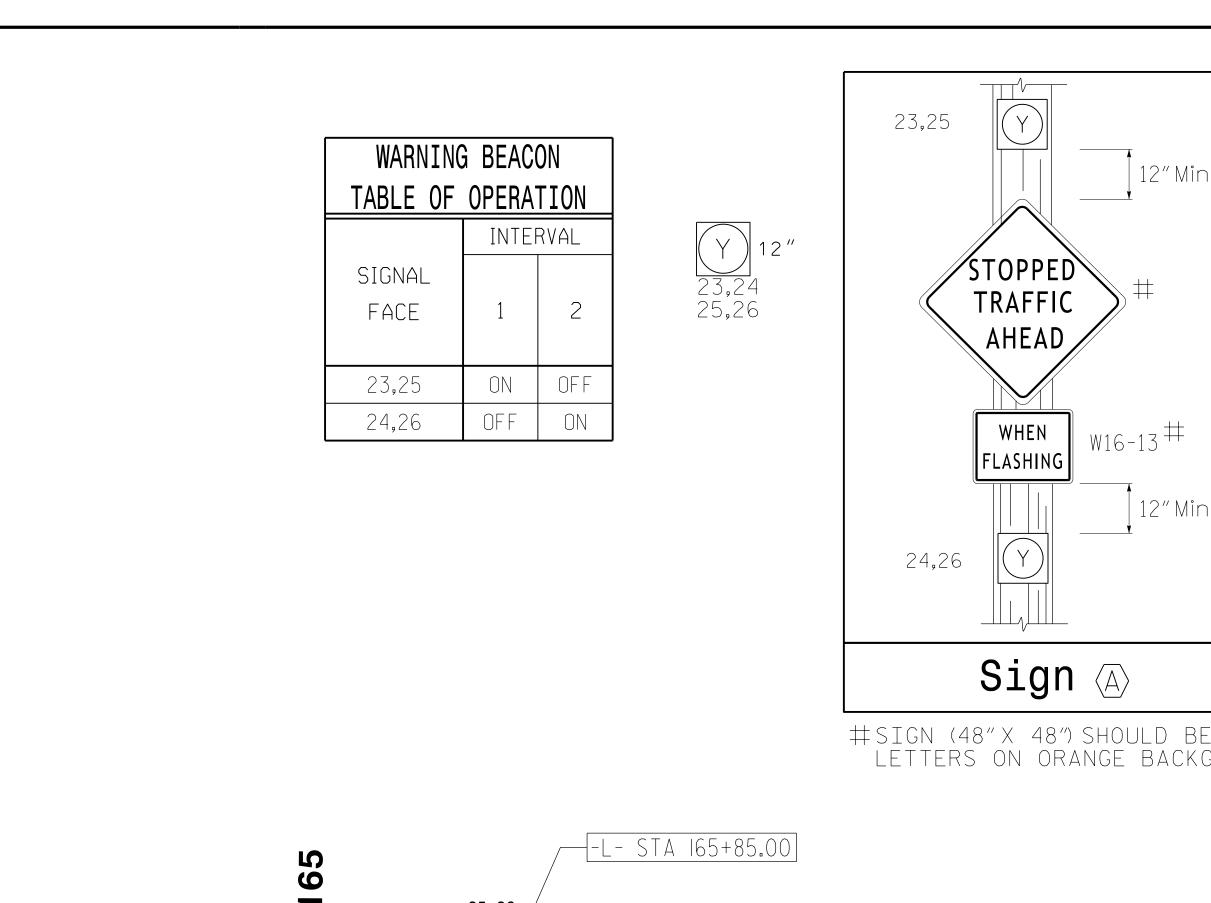


COMMUNICATIONS CABLE AND CONDUIT ROUTING PLANS

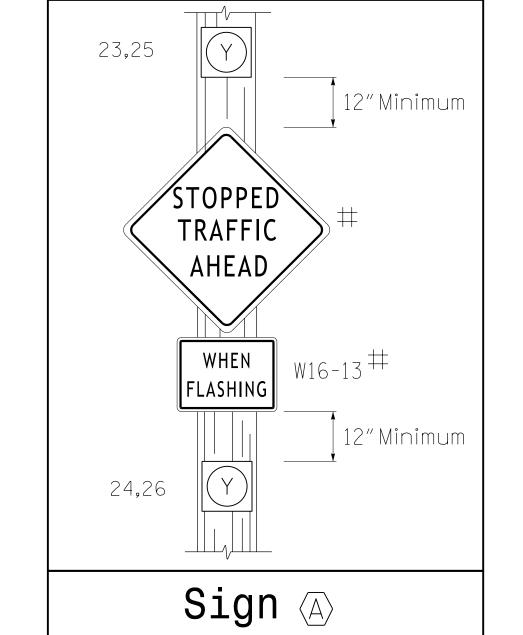
DIVISION 6 COLOMBUS COUNTY WHITEVILL
PLAN DATE: March 2020 REVIEWED BY: G. G. Murr, Jr.
PREPARED BY: M. Ishak REVIEWED BY:
REVISIONS INIT. DATE

SIGNATURE DATE

CADD Filename:



CENTERLINE



#SIGN (48" X 48") SHOULD BE BLACK LETTERS ON ORANGE BACKGROUD

1) Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.

NOTES

2) Install new wood pole. Install a 2-inch rigid galvanized steel riser with weatherhead on the wood pole to route coaxial cable to the antenna.

PROJECT REFERENCE NO.

ITS-1

R-5020B

3) Reference RDWY STANDARD DRAWINGS "1736 - SPREAD SPECTRUM RADIO" FOR INSTALLATION DETAILS.

4) Maintain proper clearance from all utilities per the National Electric Safety Code (NESC).

5) Install a beacon controller assembly and cabinet (type f3) with the following modifications:

a) equipment shelf;

b) convenience outlet,

c) NEMA TS-2 power supply, shelf mount;

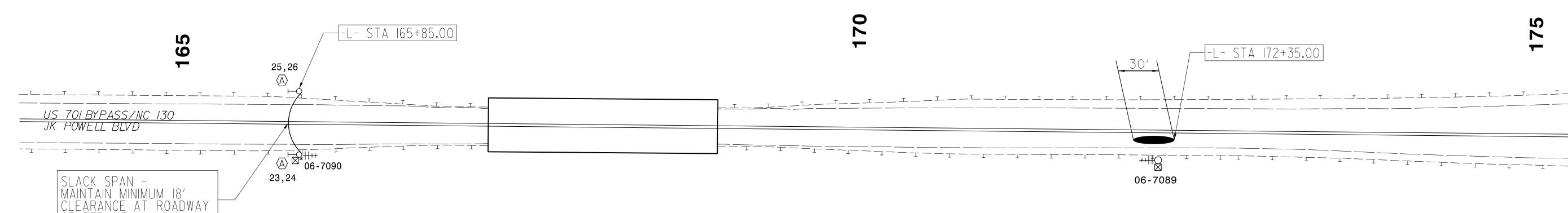
d) exterior disconnect switch on cabinet. 6) Set power meter and disconnect on pole.

7) Connect and make operational the wireless magnetic vehicle detection system and integrate with the contact closure radio.

8) Install lightning arrestor, coaxial cable shield grounding and weatherproofing kit.

9) The queue detection zone is being provided by embedded wireless magnetic vehicle sensors. Follow manufacturer's instructions to achieve the optimum detection zone as shown on this plan

10)When the Temporary Queue Backup Warning System is removed, return all equipment to the Division 6 Traffic Services Office, 450 Transportation Drive, Fayetteville, NC.



MAGNETIC VEHICLE DETECTION ZONE PLACEMENT & TIMING PARAMETERS DELAY (S) | EXTEND (S) STATION SIZE (FT) -L- STA 172+35.00 6′X30′



WIRELESS ANTENNA

NEW CABINET (TYPE F3) WITH WIRELESS MAGNETIC VEHICLE DETECTION SYSTEM AND CONTACT CLOSURE RADIO

NEW CABINET (TYPE F3) WITH BEACON CONTROLLER ASSEMBLY AND RADIO RECEIVER EQUIPMENT

NEW CLASS 3, 40' WOOD POLE

WIRELESS MAGNETIC SENSOR VEHICLE DETECTION ZONE

TEMPORARY QUEUE BACKUP WARNING SYSTEM

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



Advanced Queue Detection System

US 701/NC 130 (S.J.K. Powell Blvd)

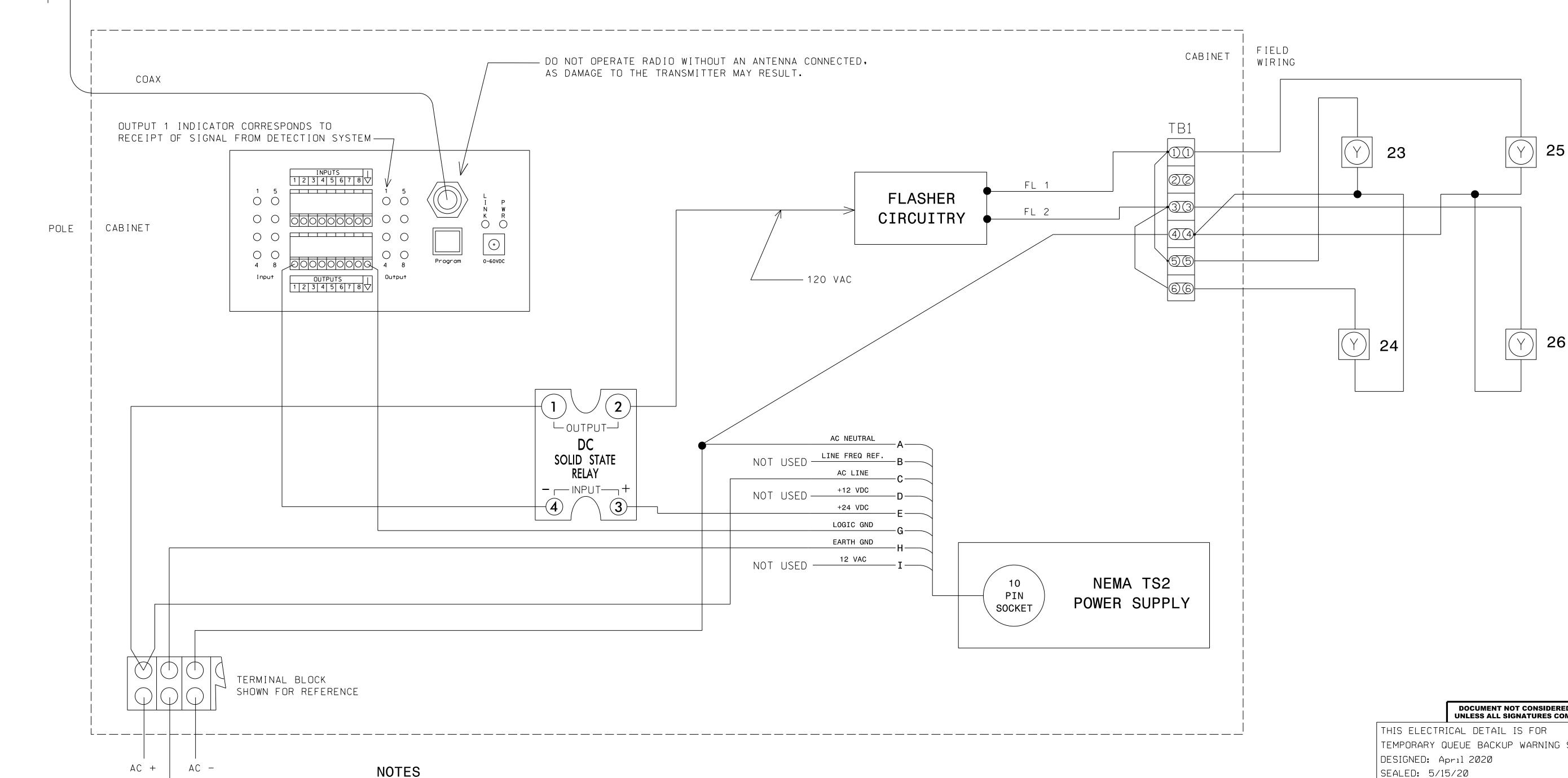
Division 6 Columbus County Whiteville| REVIEWED BY:G.G. Murr, Jr. PLAN DATE: April 2020 PREPARED BY: M. Ishak REVIEWED BY: REVISIONS INIT. DATE 1"=40'

14543 N/ASIG. INVENTORY NO.

Engineering & Construction, Inc.

1 Glenwood Avenue Raleigh, NC 27603 Tel:919.789.9977 Fax:919.789.9591 License: C-2197





1. Install a wireless contact closure radio modem in a Type F3 Beacon Controller Cabinet.

2. Install DC solid state relay (25 Amp AC output) in Type F3 cabinet that will take a DC contact closure from the radio and switch the utility 120 VAC to the flasher circuitry. This new relay will require rewiring the normal input power to the flasher circuit, as shown above. Recommended way to re-wire input power: 1) remove the 120 VAC wire going to the flasher from the input power terminal block and reattach it to pin 2 of the solid state relay. 2) Connect a new wire between the AC+ terminal on the input power block and pin 1 on the solid state relay.

3. Integrate the flasher circuitry and the wireless contact closure radio modem such that when a radio signal is received, the flasher circuitry will flash the signs as shown on Sheet ITS-1.

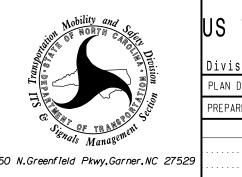
- 4. Install a 15A non-GFCI duplex receptacle in the F3 cabinet.
- 5. Plug 120 VAC wall cube supplied with radio into radio and then into the duplex receptacle.
- 6. Install a TS-2 Power Supply as shown above.
- 7. Program the wireless contact closure radio modem in this location as a slave.
- 8. Install flasher circuitry such that heads 23 and 25 flash together and heads 24 and 26 flash together, in a wig/wag manner.
- 9. Perform installation according to manufacturer's directions and NCDOT engineer approved mounting locations to accomplish the flashing schemes shown on Sheet ITS-1.



ELECTRICAL DETAIL SHEET 2 OF 2

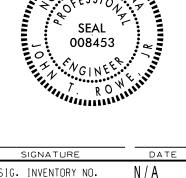


Advanced Queue Detection System US 701/NC 130 (S.J.K. Powell Blvd)



ELECTRICAL AND PROGRAMMING

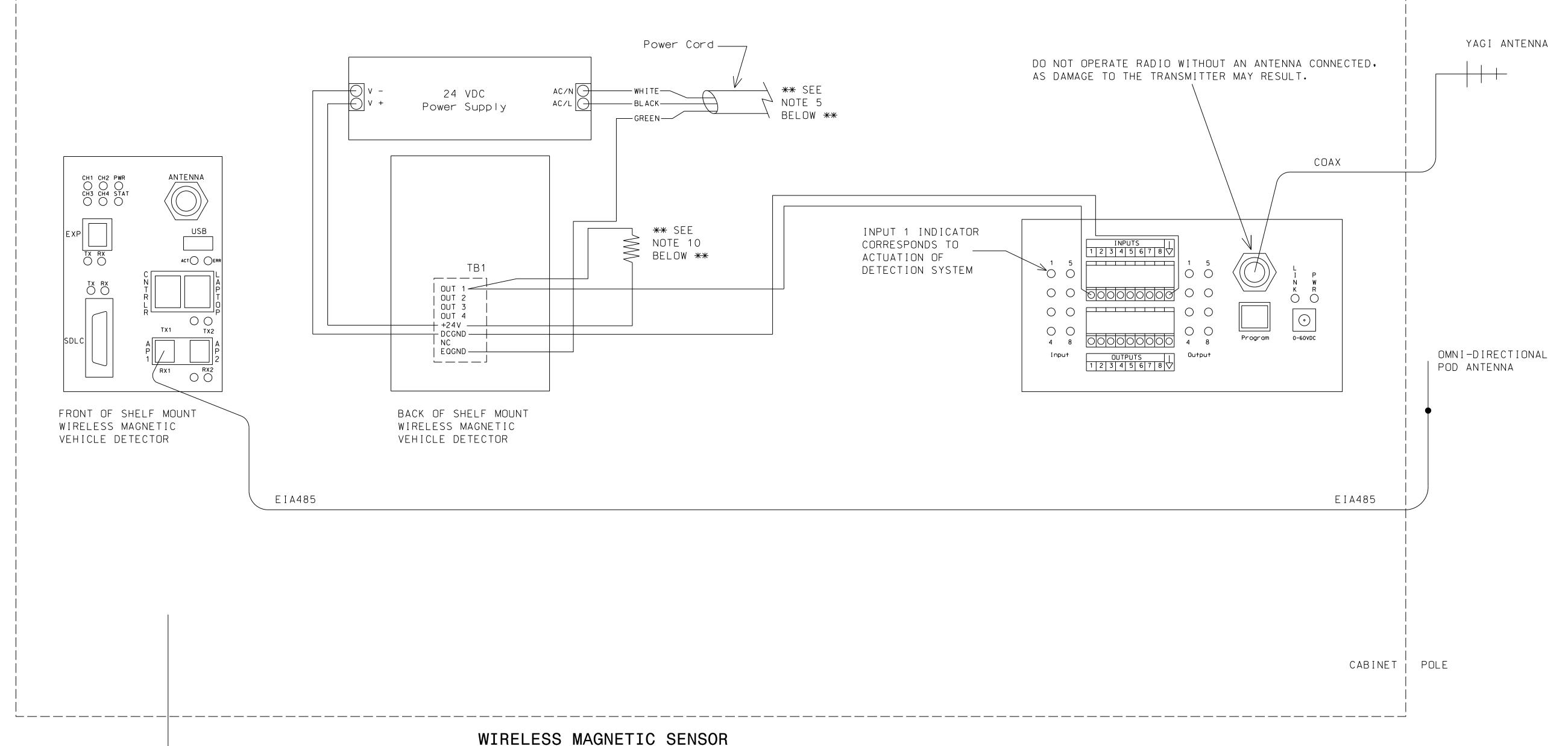
0 1011	100 100 (0.	0.11.10	ACTT	DIVU)
ivision 6	Columbu	s County	Wh	iteville
LAN DATE:	April 2020	REVIEWED BY:		
REPARED BY:	J T Rowe	REVIEWED BY:		
	REVISIONS		INIT.	DATE



UTILITY

120 VAC

WIRELESS MAGNETIC SENSOR VEHICLE DETECTION CABINET DETAIL



VEHICLE DETECTION CABINET

NOTES

UTILITY

120 VAC

- 1. Install a wireless magnetic sensor vehicle detection system for vehicle detection as shown on Sheet ITS-1 according to the manufacturer's instructions. Install a wireless contact closure radio to communicate to the flasher location as shown on Sheet ITS-1 according to the manufacturer's instructions. Integrate the detection system and the wireless contact closure radio modem such that an output radio signal is transmitted to the remote flasher cabinet as required by Sheet ITS-1.
- 2. Detection system and radio are located in a Type F3 Beacon Controller, with the flasher unit being unused. The unused flasher unit may be removed.
- 3. Install a 15 A non-GFCI duplex receptacle in the F3 cabinet.
- 4. Terminal block designations shown are for an RGA, INC. dual circuit NEMA flasher cabinet, RGA DWG. NO. GC-NCF3-TYPICAL. (DOT NO. 609024300).
- 5. Plug 120 VAC wall cube supplied with radio into radio and then into the duplex receptacle.
- 6. Attach detector's power cable on the power supply as shown above, and insert the plug end into the duplex receptacle.
- 7. Program the wireless contact closure radio modem in this location as a master.
- 8. Program call delay time and extend time in the detection system as specified on Sheet ITS-1.
- 9. Perform installation according to manufacturers' directions and NCDOT engineer approved mounting locations to accomplish the detection schemes shown on Sheet ITS-1.
- 10. Install 4.7 Kohm resistor (0.25 W min) as shown above. This resistor is required to pull up the open collector output of the vehicle detector.

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

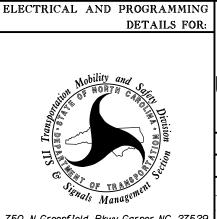
THIS ELECTRICAL DETAIL IS FOR TEMPORARY QUEUE BACKUP WARNING SYSTEM DESIGNED: Aprıl 2020 SEALED: 5/15/20

REVISED: N/A



Raleigh, NC 27603 Tel:919.789.9977 Fax:919.789.9591 License: C-2197

ELECTRICAL DETAIL SHEET 1 OF 2



Advanced Queue Detection System

US 701/NC 130 (S.J.K. Powell Blvd PLAN DATE: April 2020 REVIEWED BY:

PREPARED BY: J T Rowe REVIEWED BY: REVISIONS INIT. DATE

SIG. INVENTORY NO.

SEAL

Glenwood Avenue