

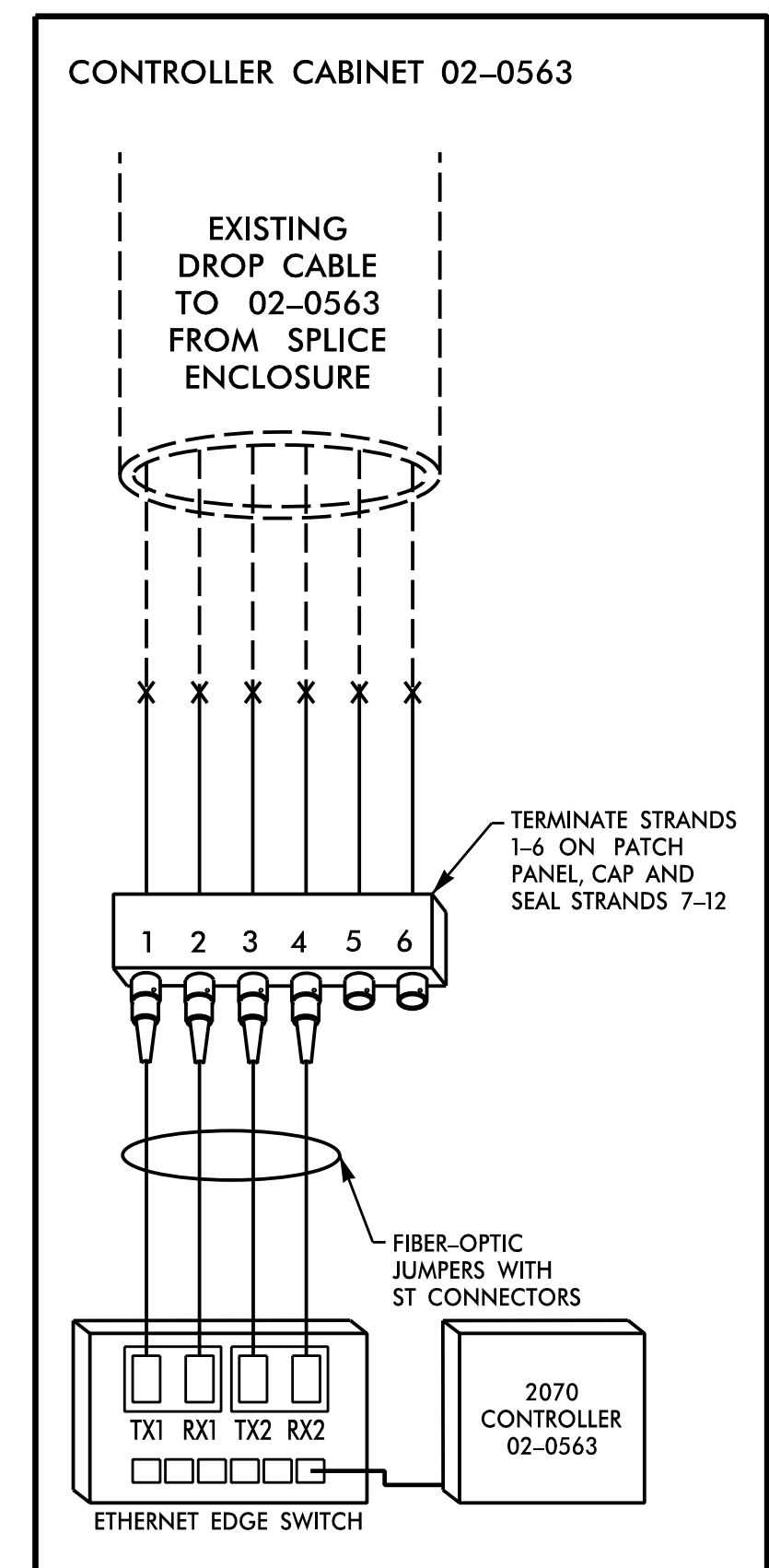
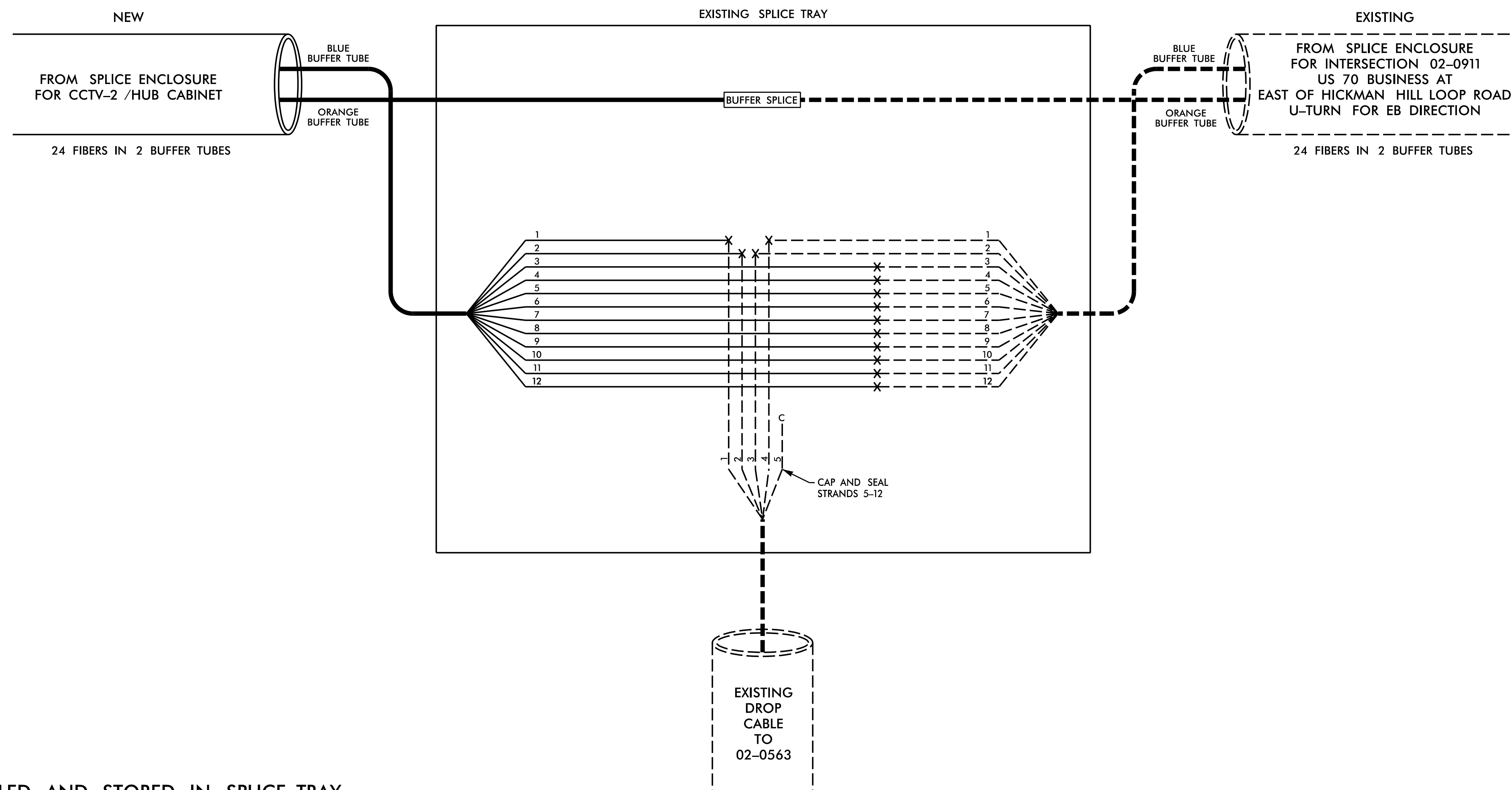
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02-0563
 US 70 BUSINESS AT
 HICKMAN HILL LOOP ROAD/
 PINE GROVE ROAD

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



NOTES:

1. UNUSED FIBERS LEFT COILED AND STORED IN SPLICE TRAY.
2. UNUSED BUFFER TUBES LEFT COILED AND STORED IN SPLICE TRAY.
3. ETHERNET SWITCH TERMINATION CONFIGURATIONS ARE GENERIC. CONTRACTOR IS RESPONSIBLE FOR DETERMINING / ENSURING PROPER TERMINATION.
4. INCLUDE ON THE COVER OF EACH SPLICE TRAY THE FOLLOWING: REFERENCE SECTION 1731 "FIBER OPTIC SPLICE ENCLOSURE"

- (1) SPLICE
- (2) DATE
- (3) COMPANY NAME
- (4) NAME OF INDIVIDUAL PERFORMING THE SPLICING

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.

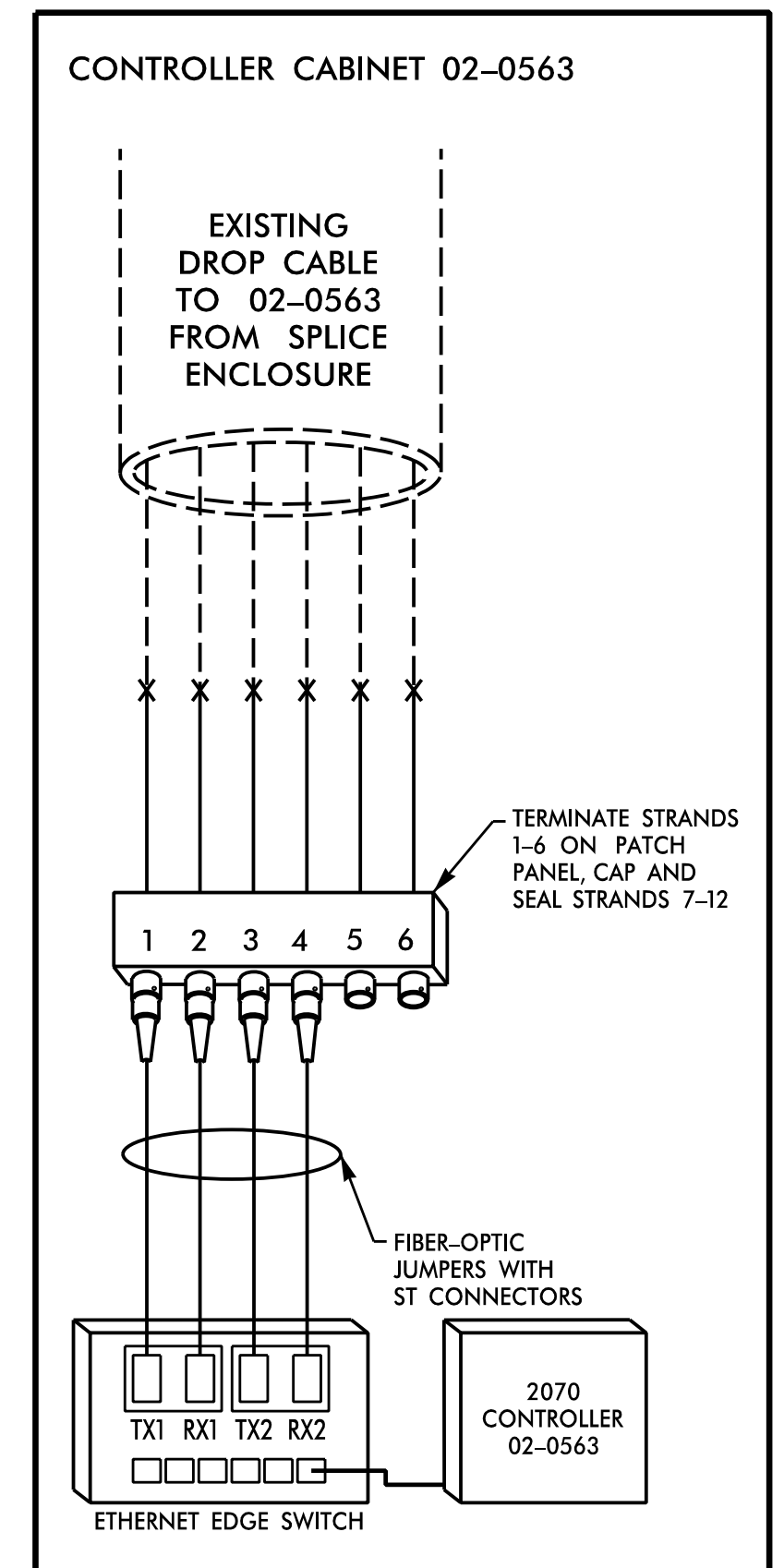
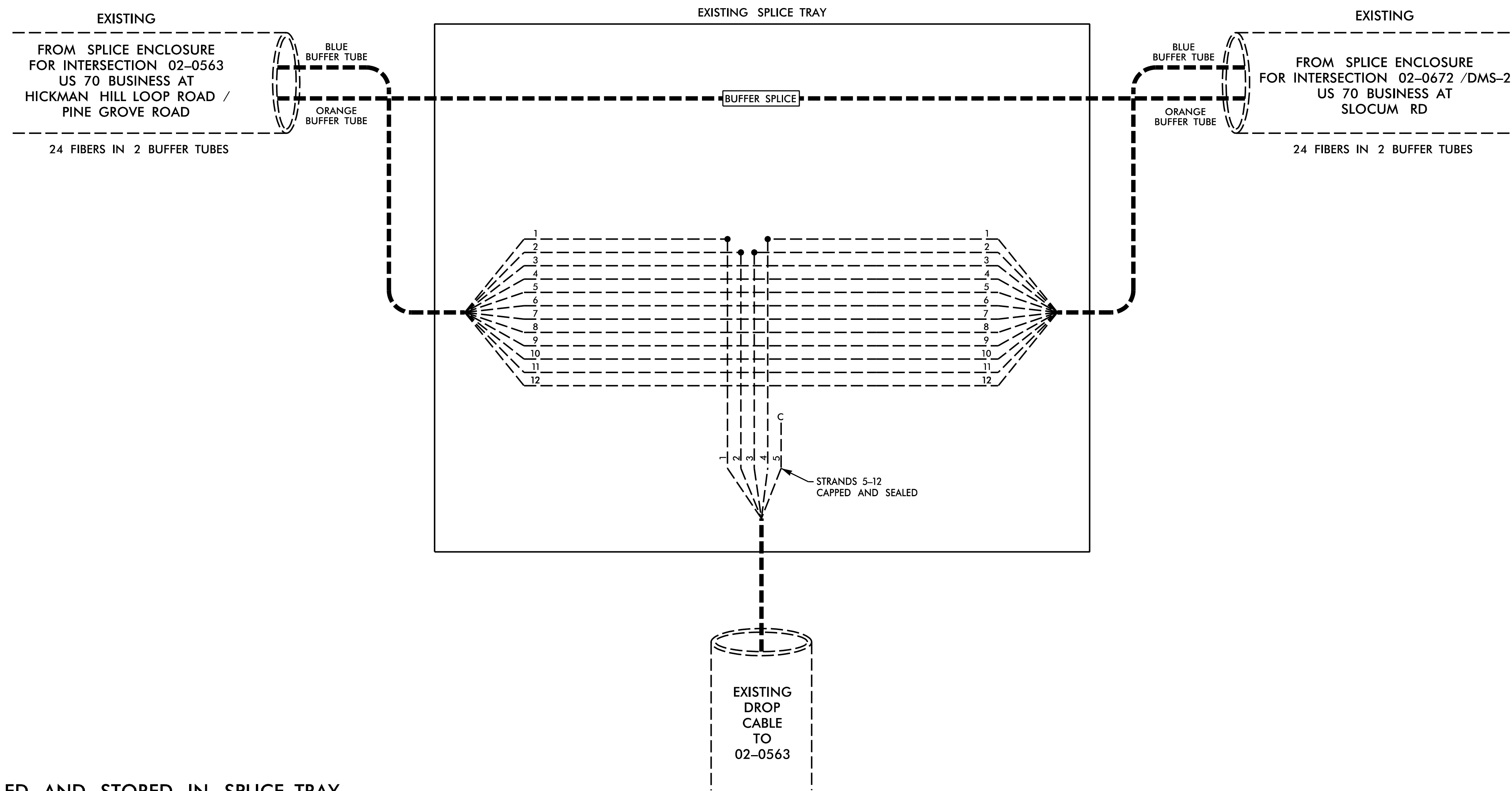
HNTB HNTB NORTH CAROLINA, P.C.
 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554
 (919) 548-8997

Plans Prepared for:		US 70 HAVELOCK BYPASS SPLICE DETAILS		
Division 02 Craven Co. Havelock		PLANNED BY: J.A. Wagner		
250 N. Greenfield Place, Garner, NC 27529		SCALE: NONE	REVISIONS:	DATE:
DocuSigned by: Natasha R. Simmons 12/7/2018		REVISIONS:		DATE:
CADD File name: R1015 SCP-58.dgn		REVISIONS:		DATE:

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02-0911
 US 70 BUSINESS AT
 EAST OF HICKMAN HILL LOOP ROAD
 U-TURN FOR EB DIRECTION

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



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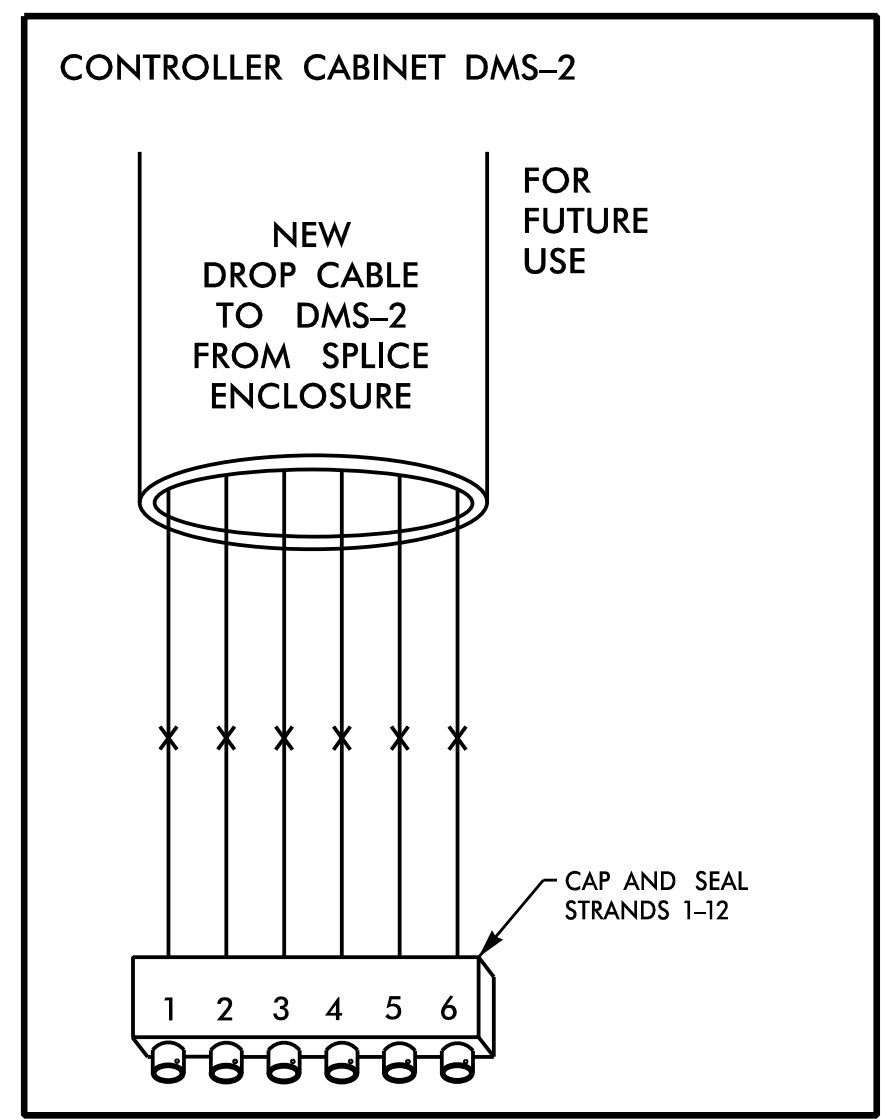
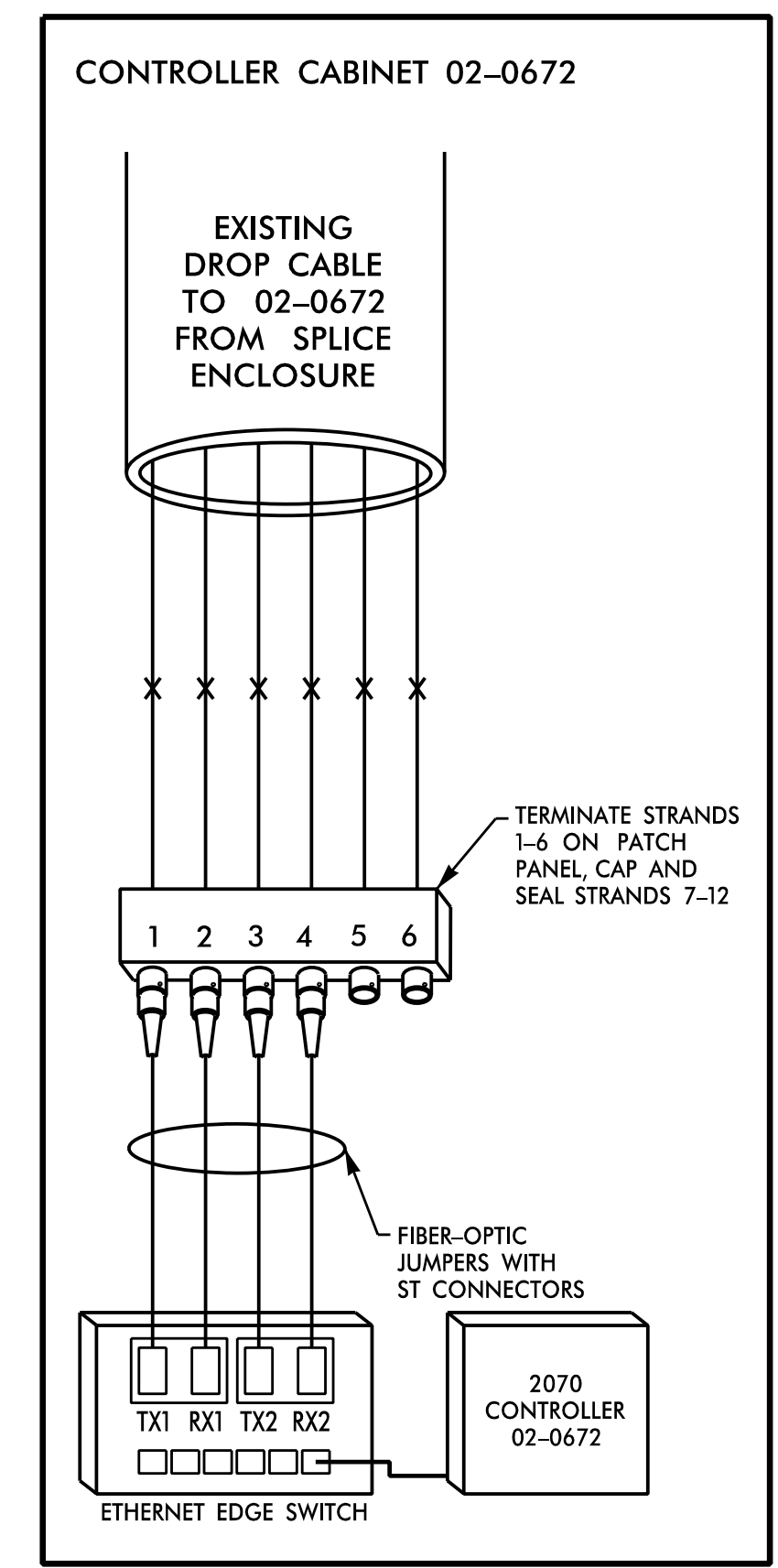
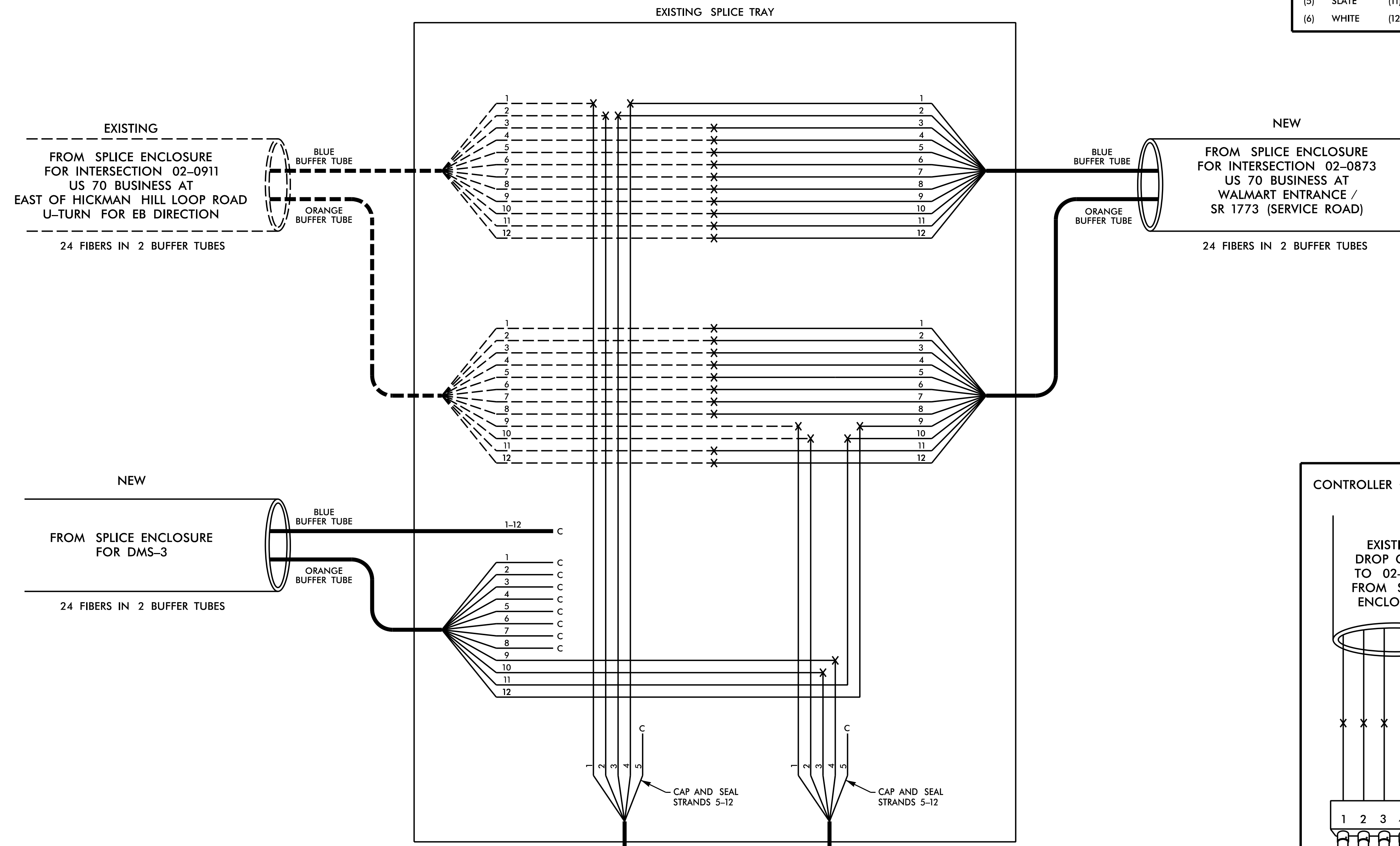
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 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554
 (919) 548-8997

Plans Prepared for:  250 N. Greenfield Place, Garner, NC 27529	US 70 HAVELOCK BYPASS SPLICE DETAILS		SEAL  SEAL 031464 NATASHA R. SIMMONS
	Division 02 Craven Co. Havelock PLAN DATE: June 2018 REVIEWED BY: T.R. Terrell PREPARED BY: J.A. Wagner REVIEWED BY: N.R. Simmons	2070 CONTROLLER 02-0563 ETHERNET EDGE SWITCH	
SCALE NONE	REVISIONS _____ _____ _____	INIT. DATE _____ _____ _____	DocuSigned by: Natasha R Simmons 12/7/2018 FID480F3AD464 SIGNATURE DATE CADD File name: R1015_SCP-59.dgn

**02-0672/DMS-2
US 70 BUSINESS AT
SLOCUM ROAD**

COLOR CODE TIA/EIA 598-C		LEGEND	
(1) BLUE	(7) RED	X = NEW FUSION SPLICE INDIVIDUAL FIBER	
(2) ORANGE	(8) BLACK	● = EXISTING FUSION SPLICE	
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(6) WHITE	(12) AQUA		



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- (4) NAME OF INDIVIDUAL PERFORMING THE SPLICING

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343 E. Six Forks Road, Suite 200
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NC License No: C-1554
(919) 546-8997

**US 70
HAVELOCK BYPASS
SPLICE DETAILS**

Division 02 Craven Co. Havelock

PLAN DATE: June 2018 REVIEWED BY: T.R. Terrell
PREPARED BY: J.A. Wagner REVIEWED BY: N.R. Simmons

SCALE: NONE

REVISIONS: _____

INIT. DATE

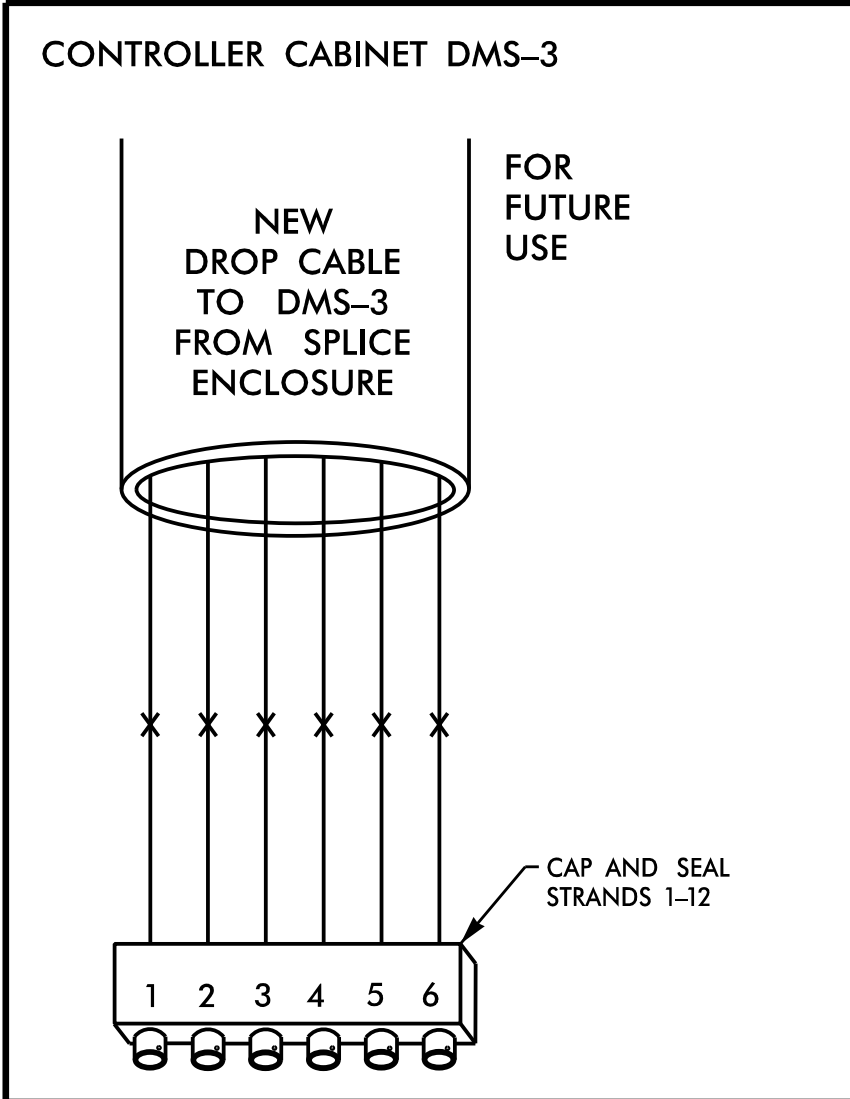
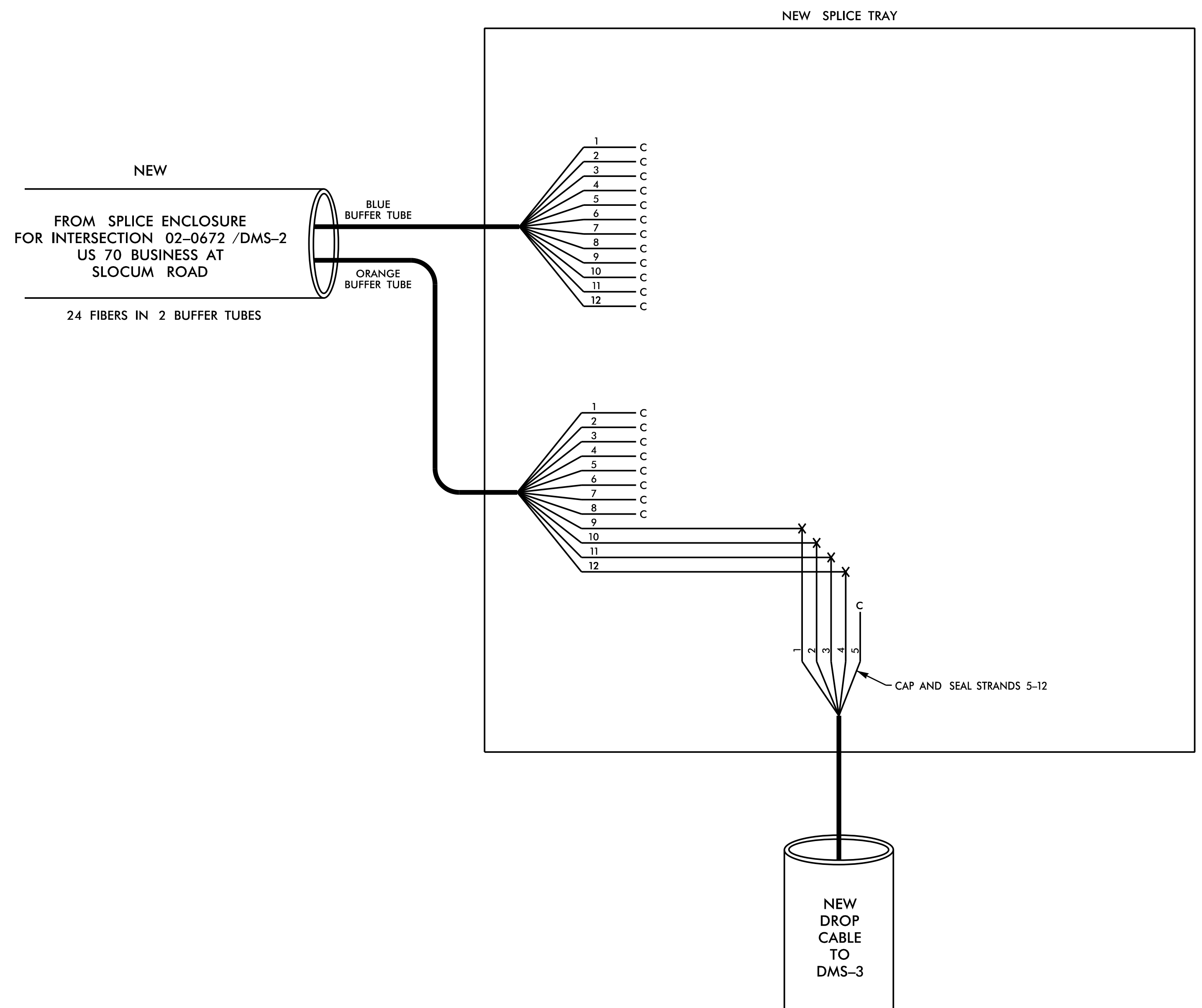
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SIGNATURE DATE
CADD File name: R1015_SCP-60.dgn

SEAL
NORTH CAROLINA
PROFESSIONAL
ENGINEER
SEAL
031464
NATASHA R. SIMMONS

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

DMS-3
SLOCUM ROAD
0.3 MILE NORTHEAST OF
INTERSECTION 02-0672

COLOR CODE TIA/EIA 598-C		LEGEND	
(1) BLUE	(7) RED	X = NEW FUSION SPLICE INDIVIDUAL FIBER	
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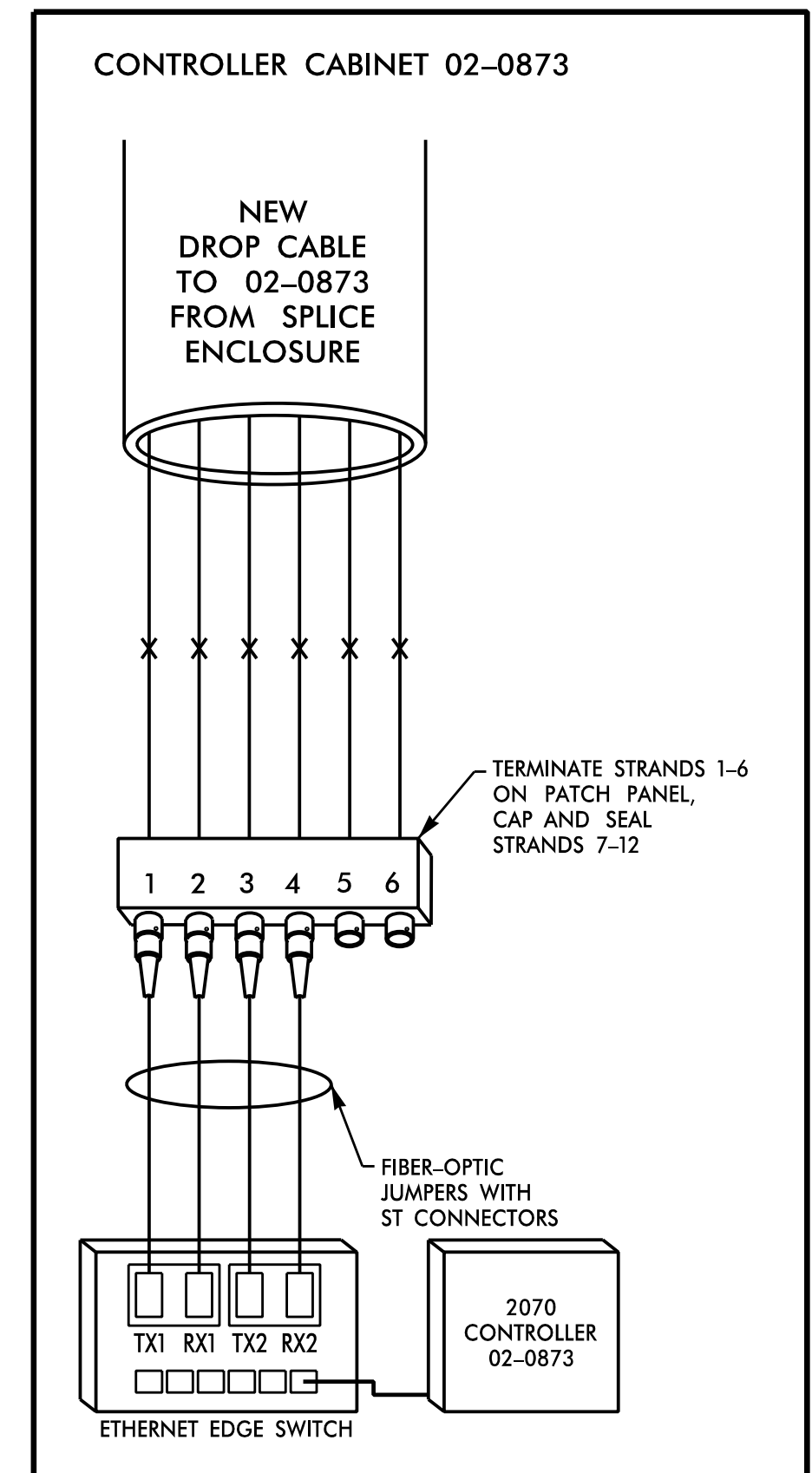
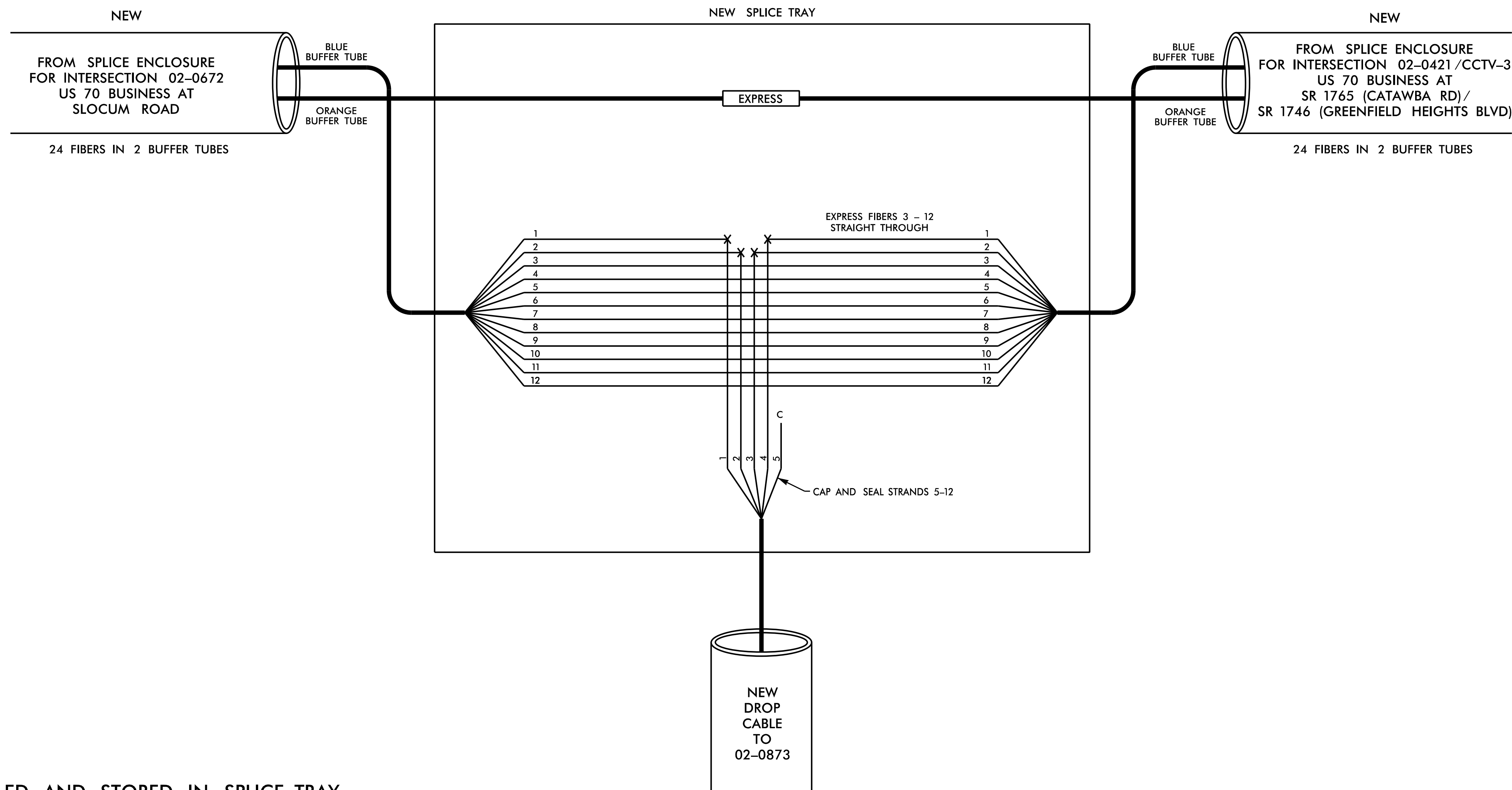
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343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554
(919) 548-8997

Plans Prepared for: 250 N. Greenfield Pkwy., Garner, NC 27529	US 70 HAVELOCK BYPASS SPLICE DETAILS		SEAL SEAL NATASHA R. SIMMONS
	Division 02 Craven Co. Havelock PLAN DATE: June 2018 REVIEWED BY: T.R. Terrell PREPARED BY: J.A. Wagner REVIEWED BY: N.R. Simmons	REVISIONS INIT. DATE	
SCALE: NONE	Documented by: Natasha R. Simmons 12/7/2018 Signature: _____ Date: _____ CADD Filename: R-1015 SCP-61.dgn		

02-0873
 US 70 BUSINESS AT
 WAL-MART ENTRANCE/
 SR 1773 (SERVICE ROAD)

COLOR CODE TIA/EIA 598-C			LEGEND	
(1) BLUE	(7) RED	X = NEW FUSION SPLICE INDIVIDUAL FIBER		
(2) ORANGE	(8) BLACK	● = EXISTING FUSION SPLICE		
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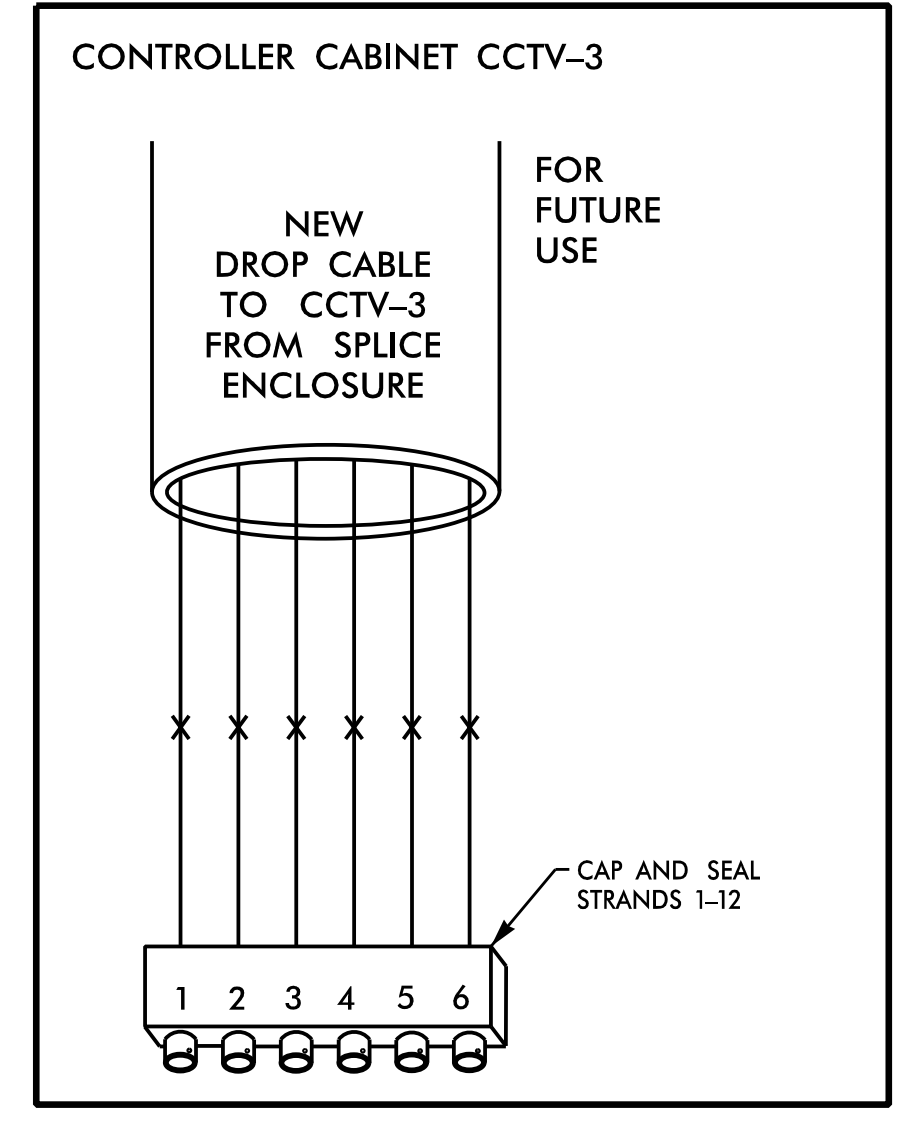
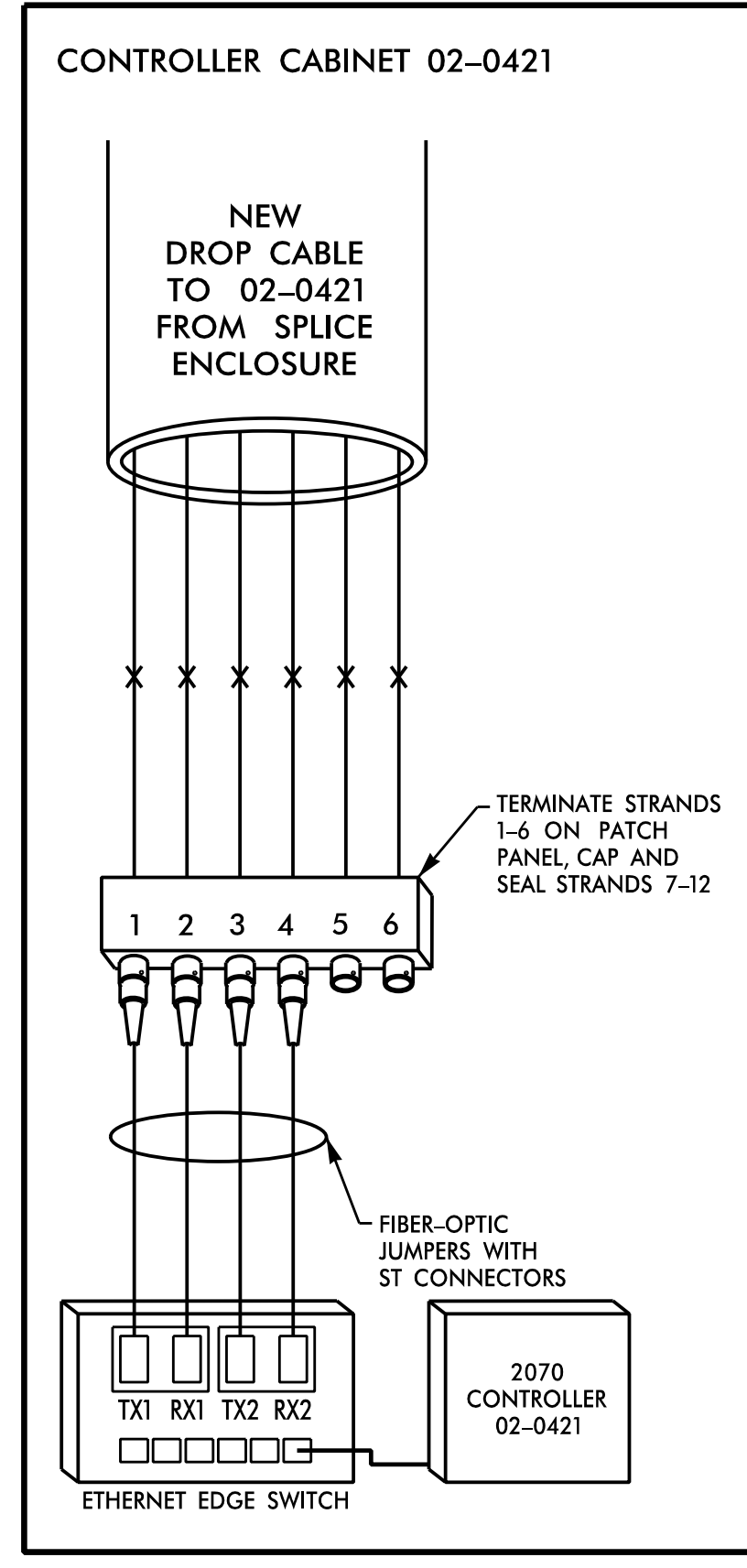
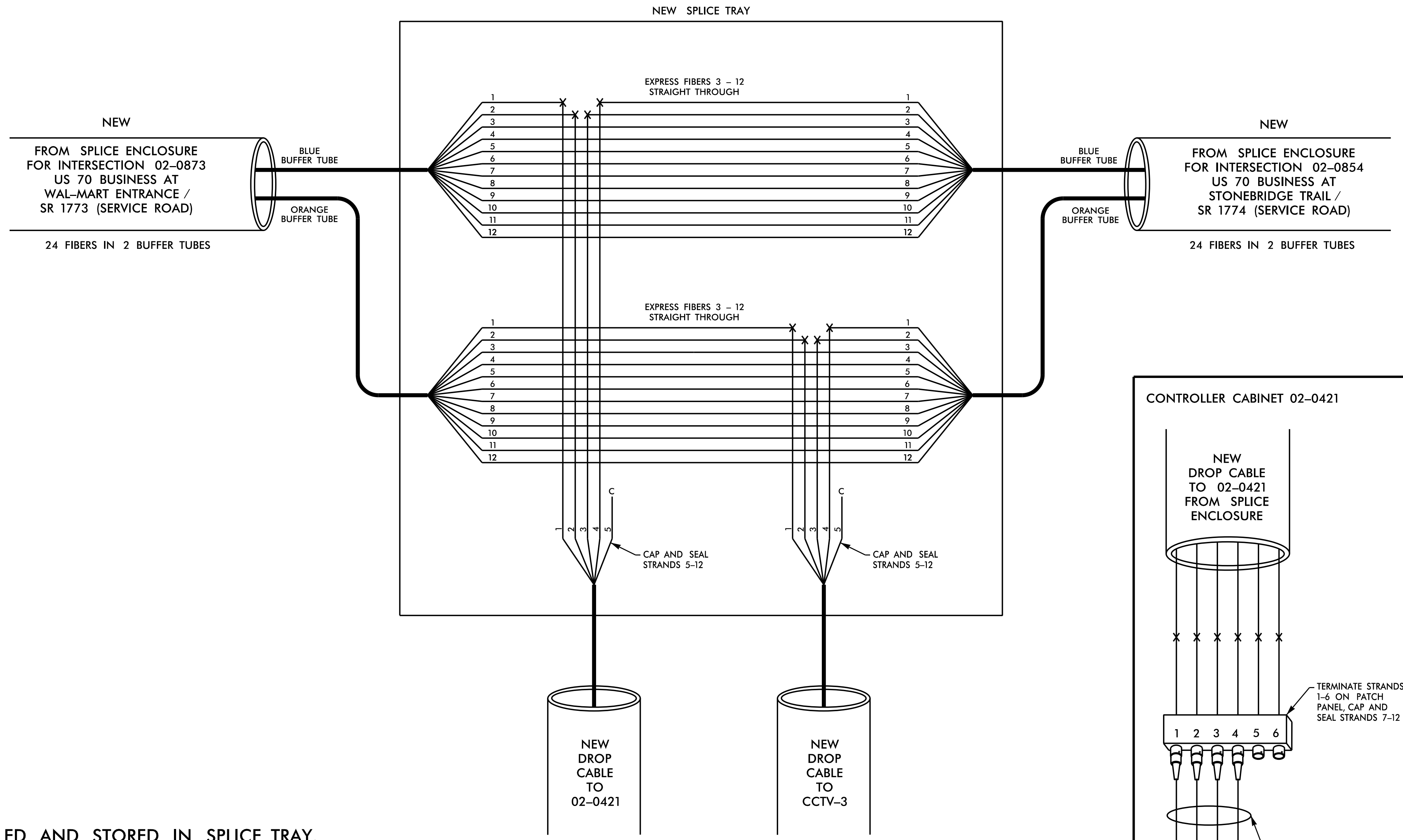
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 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554
 (919) 548-8997

Plans Prepared for: 250 N. Greenfield Place, Garner, NC 27529	US 70 HAVELOCK BYPASS SPLICE DETAILS		SEAL SEAL 031464 NATASHA R. SIMMONS
	Division 02 Craven Co. Havelock	PLAN DATE: June 2018 REVIEWED BY: T.R. Terrell	
SCALE NONE	REVISIONS	INIT. DATE	DocuSigned by: Natasha R. Simmons 12/7/2018 FID480F3AD4454 SIGNATURE DATE CADD File name: R1015_SCP-62.dgn

02-0421 /CCTV-3
 US 70 BUSINESS AT
 SR 1765 (CATAWBA RD)/
 SR 1746 (GREENFIELD
 HEIGHTS BLVD)

COLOR CODE TIA/EIA 598-C		LEGEND	
(1) BLUE	(7) RED	X = NEW FUSION SPLICE INDIVIDUAL FIBER	
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(6) WHITE	(12) AQUA		



NOTES:


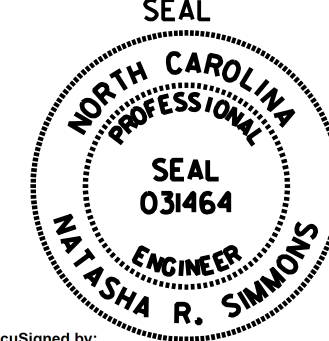
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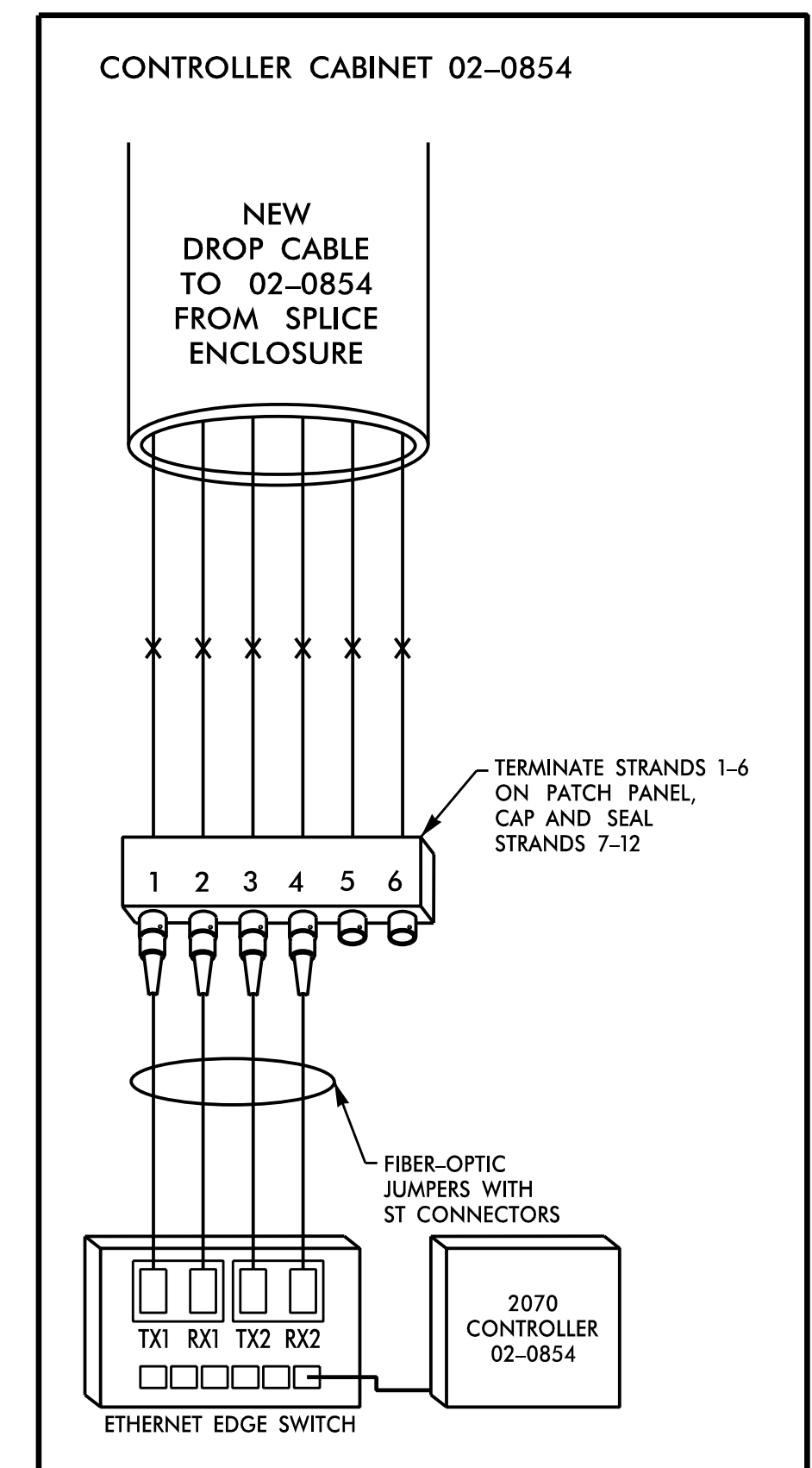
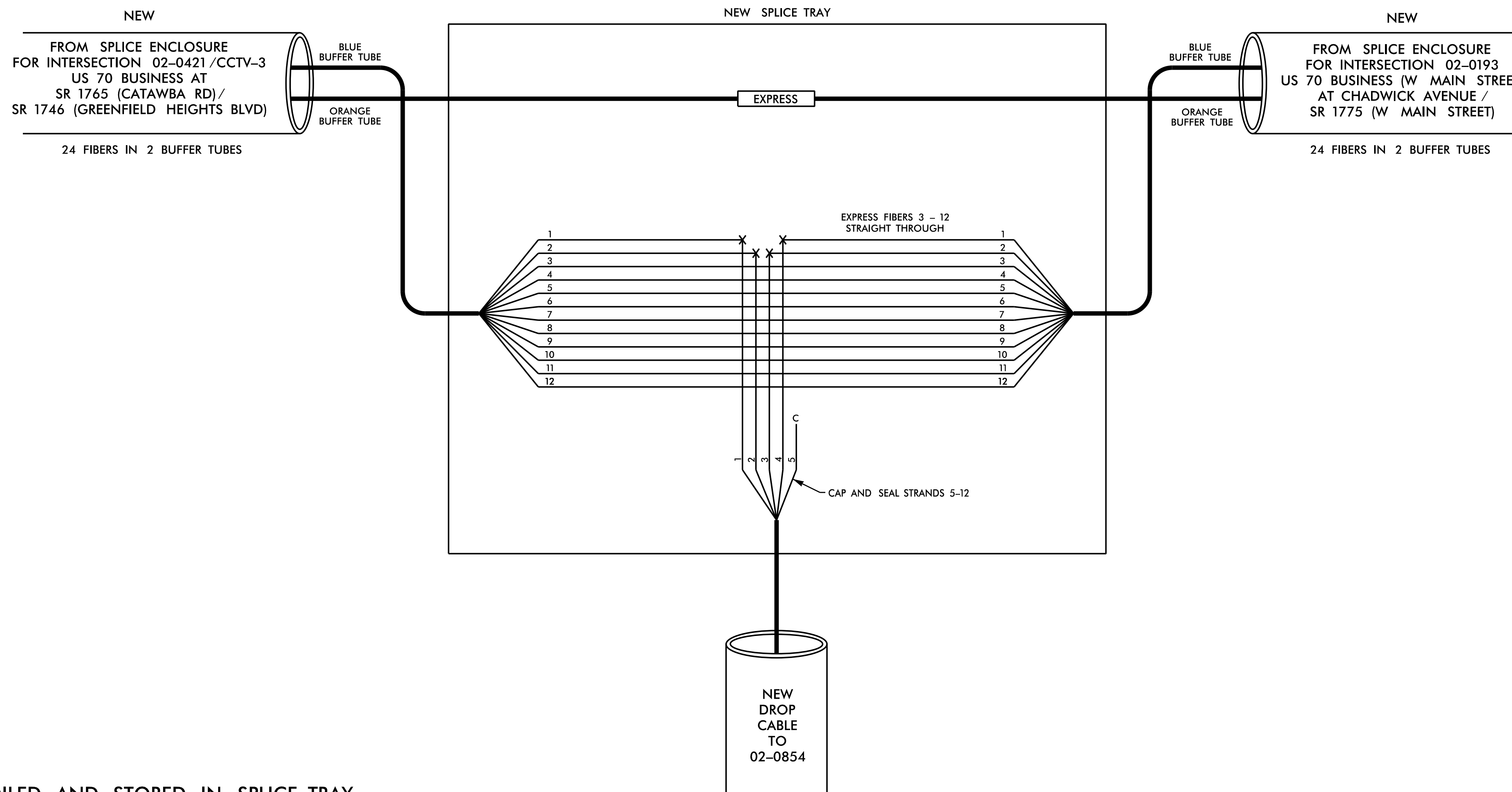
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 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554
 (919) 548-8997

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Plans Prepared for:  250 N. Greenfield Place, Garner, NC 27529		US 70 HAVELOCK BYPASS SPLICE DETAILS		
Division 02 Craven Co. Havelock		PLAN DATE: June 2018 REVIEWED BY: T.R. Terrell		
SCALE: NONE		PREPARED BY: J.A. Wagner REVIEWED BY: N.R. Simmons		DocuSigned by: Natasha R. Simmons 12/7/2018 FID480F3AD445A SIGNATURE DATE
		REVISIONS:		CADD File name: R1015_SCP-63.dgn

02-0854
US 70 BUSINESS AT
STONEBRIDGE TRAIL /
SR 1774 (SERVICE ROAD)

COLOR CODE TIA/EIA 598-C			LEGEND	
(1) BLUE	(7) RED	X = NEW FUSION SPLICE INDIVIDUAL FIBER		
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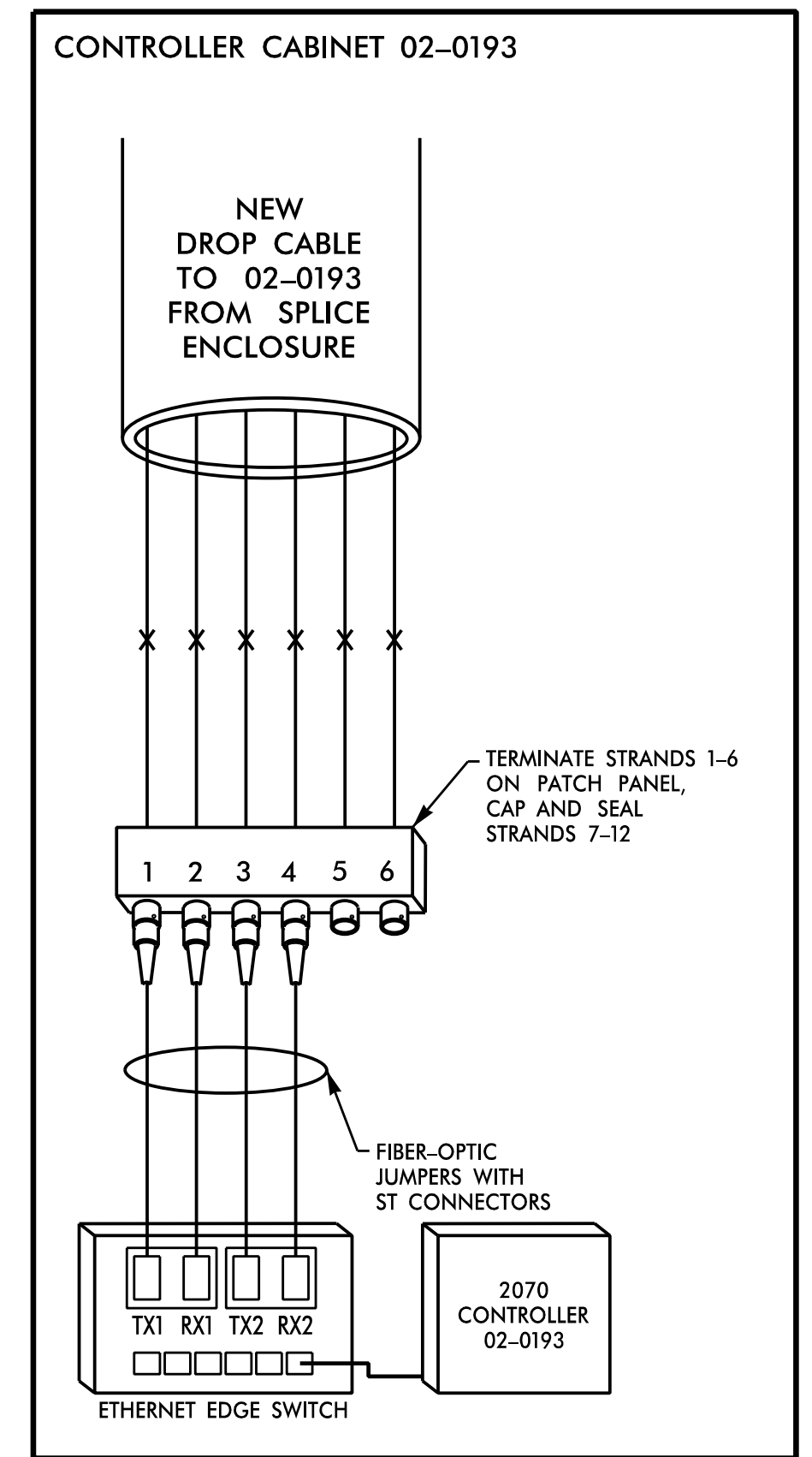
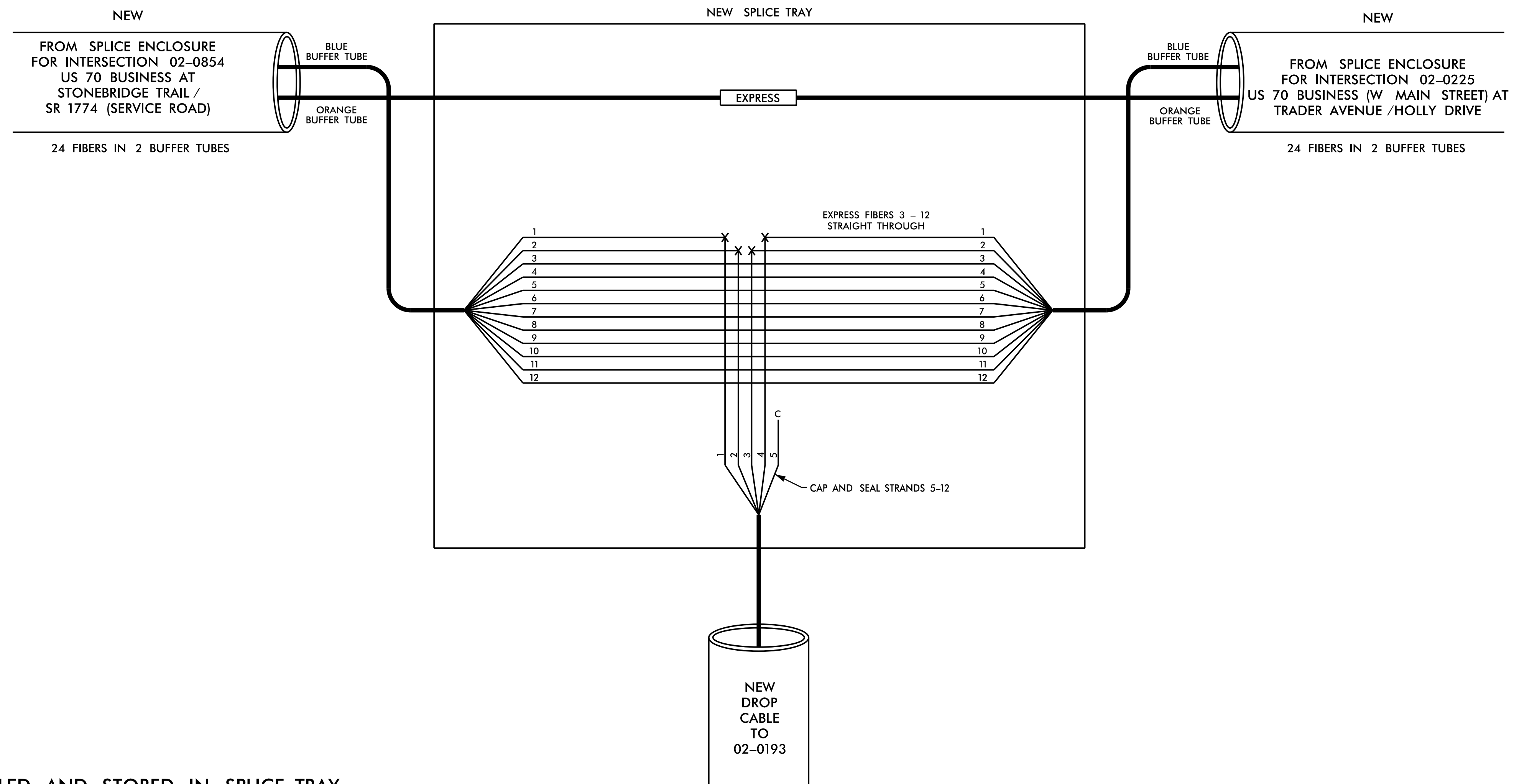
HNTB HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
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(919) 548-8997

Plans Prepared for:		US 70 HAVELOCK BYPASS SPLICE DETAILS		
		Division 02 Craven Co. Havelock PLAN DATE: June 2018 REVIEWED BY: T.R. Terrell PREPARED BY: J.A. Wagner REVIEWED BY: N.R. Simmons		
SCALE	NONE	REVISIONS	INIT.	DATE
		Documented by: <i>Natasha R. Simmons</i> 12/7/2018 SIGNATURE DATE CADD File name: R1015_SCP-64.dgn		

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02-0193
 US 70 BUSINESS (W MAIN STREET)
 AT CHADWICK AVENUE /
 SR 1775 (W MAIN STREET)

COLOR CODE TIA/EIA 598-C		LEGEND	
(1) BLUE	(7) RED	X = NEW FUSION SPLICE INDIVIDUAL FIBER	
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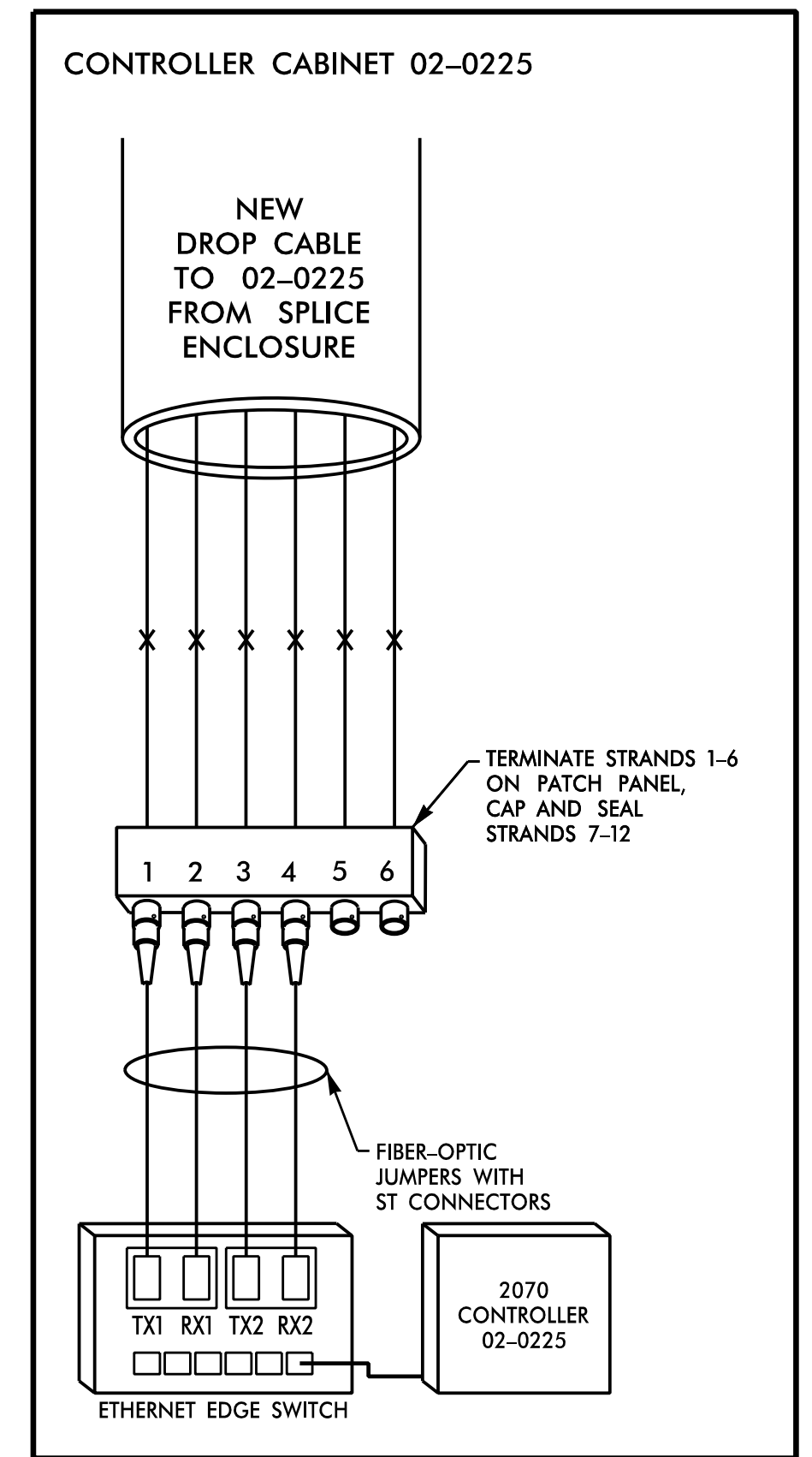
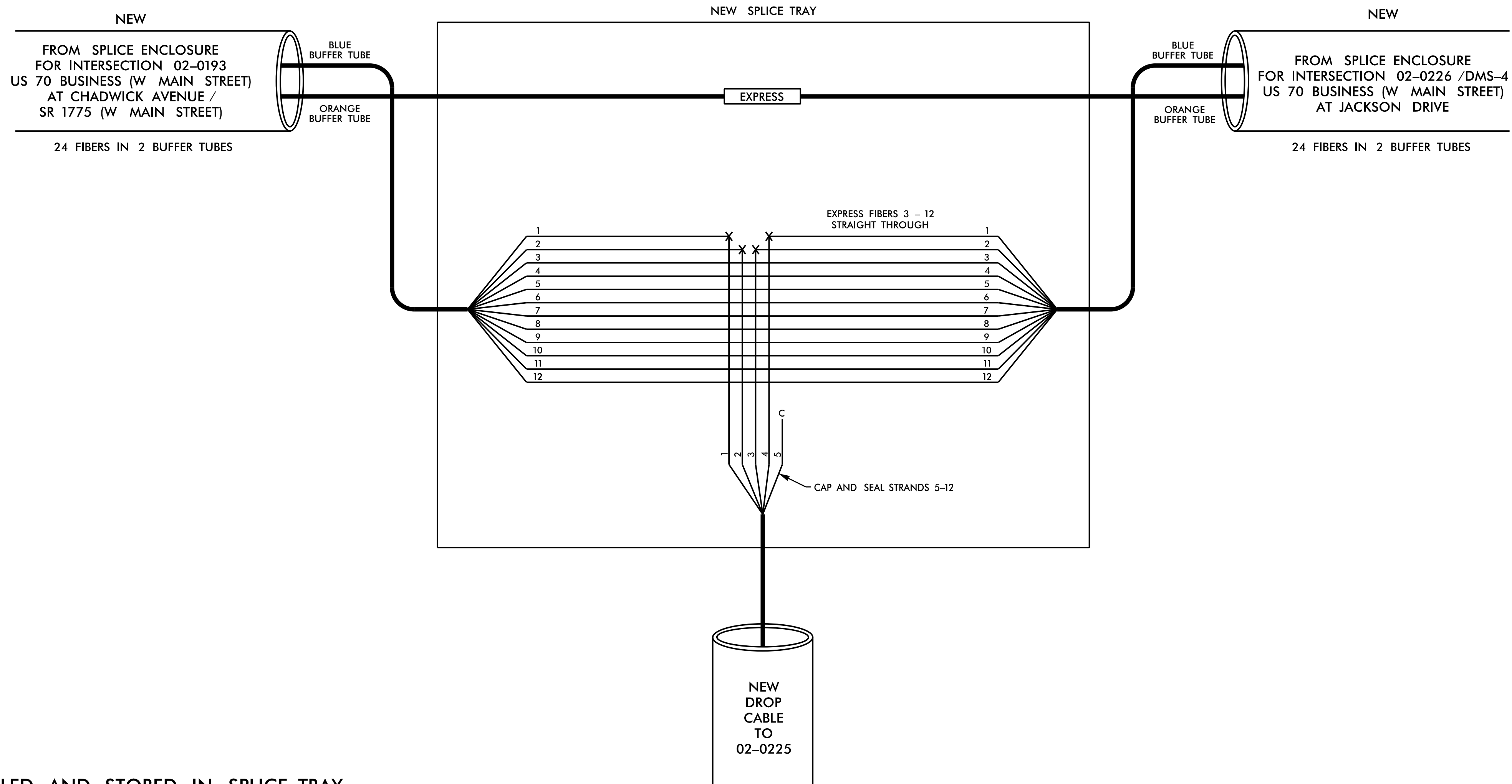
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Plans Prepared for: 250 N. Greenfield Place, Garner, NC 27529	US 70 HAVELOCK BYPASS SPLICE DETAILS		SEAL SEAL 031464 NATASHA R. SIMMONS
	Division 02 Craven Co. Havelock PLAN DATE: June 2018 REVIEWED BY: T.R. Terrell PREPARED BY: J.A. Wagner REVIEWED BY: N.R. Simmons	DocuSigned by: Natasha R. Simmons 12/7/2018 FEDERAL 34454 SIGNATURE DATE CADD File name: R1015_SCP-65.dgn	

02-0225
 US 70 BUSINESS (W MAIN STREET)
 AT
 TRADER AVENUE /HOLLY DRIVE

COLOR CODE TIA/EIA 598-C			LEGEND	
(1) BLUE	(7) RED	X =	NEW FUSION SPLICE INDIVIDUAL FIBER	
(2) ORANGE	(8) BLACK	● =	EXISTING FUSION SPLICE	
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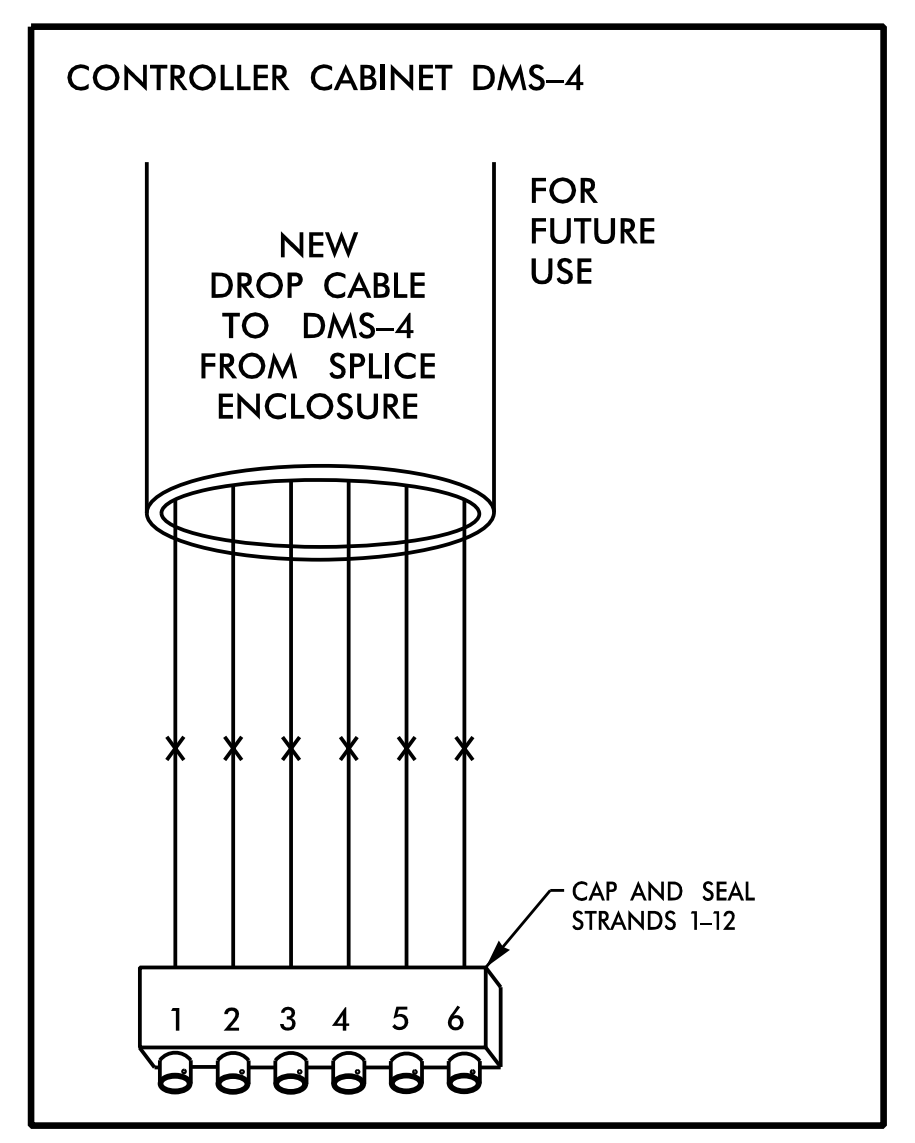
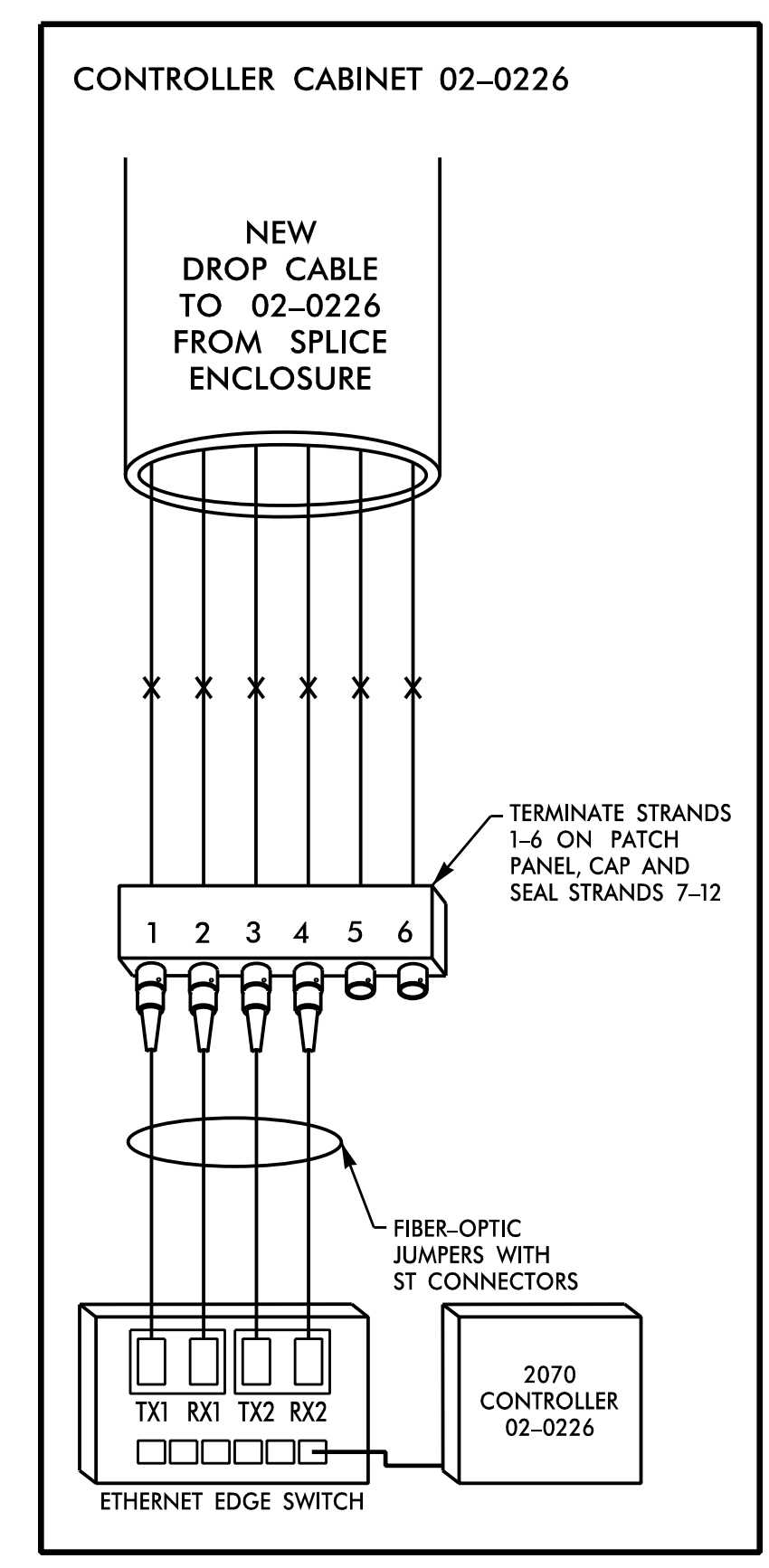
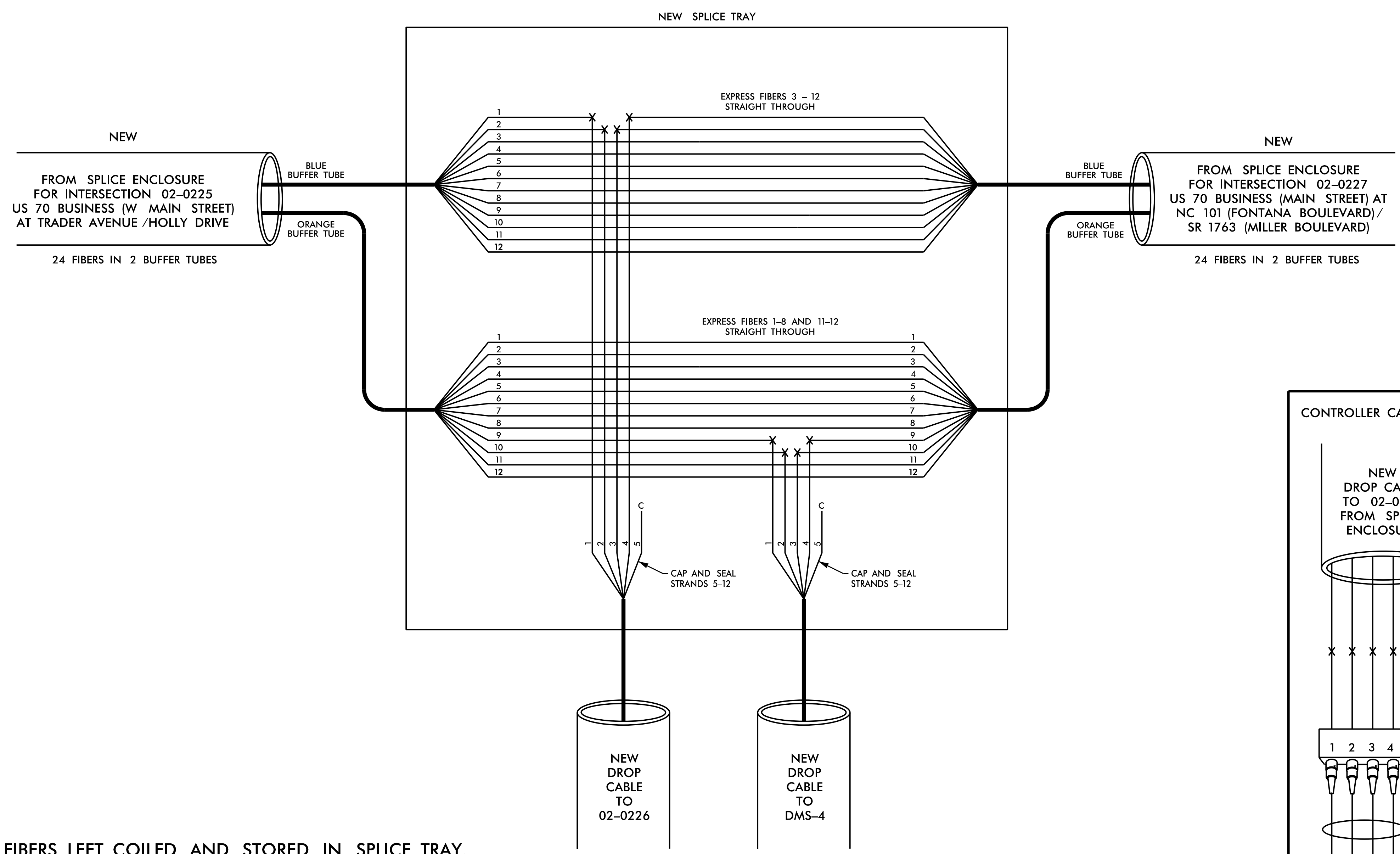
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HNTB HNTB NORTH CAROLINA, P.C.
 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554
 (919) 548-8997

Plans Prepared for: 250 N. Greenfield Place, Garner, NC 27529	US 70 HAVELOCK BYPASS SPLICE DETAILS		 SEAL NORTH CAROLINA PROFESSIONAL ENGINEER NATASHA R. SIMMONS
	Division 02 Craven Co. Havelock PLAN DATE: June 2018 REVIEWED BY: T.R. Terrell PREPARED BY: J.A. Wagner REVIEWED BY: N.R. Simmons	2070 CONTROLLER 02-0225	
SCALE NONE	REVISIONS	INIT. DATE	DocuSigned by: Natasha R. Simmons 12/7/2018 FID480F3AD454 SIGNATURE DATE CADD File name: R1015_SCP-66.dgn

02-0226/DMS-4
US 70 BUSINESS
(W MAIN STREET) AT
JACKSON DRIVE

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



NOTES:

1. UNUSED FIBERS LEFT COILED AND STORED IN SPlice TRAY.
2. UNUSED BUFFER TUBES LEFT COILED AND STORED IN SPlice TRAY.
3. ETHERNET SWITCH TERMINATION CONFIGURATIONS ARE GENERIC. CONTRACTOR IS RESPONSIBLE FOR DETERMINING /ENSURING PROPER TERMINATION.
4. INCLUDE ON THE COVER OF EACH SPlice TRAY THE FOLLOWING: REFERENCE SECTION 1731 "FIBER OPTIC SPlice ENCLOSURE"

- (1) SPlice
- (2) DATE
- (3) COMPANY NAME
- (4) NAME OF INDIVIDUAL PERFORMING THE SPlicing

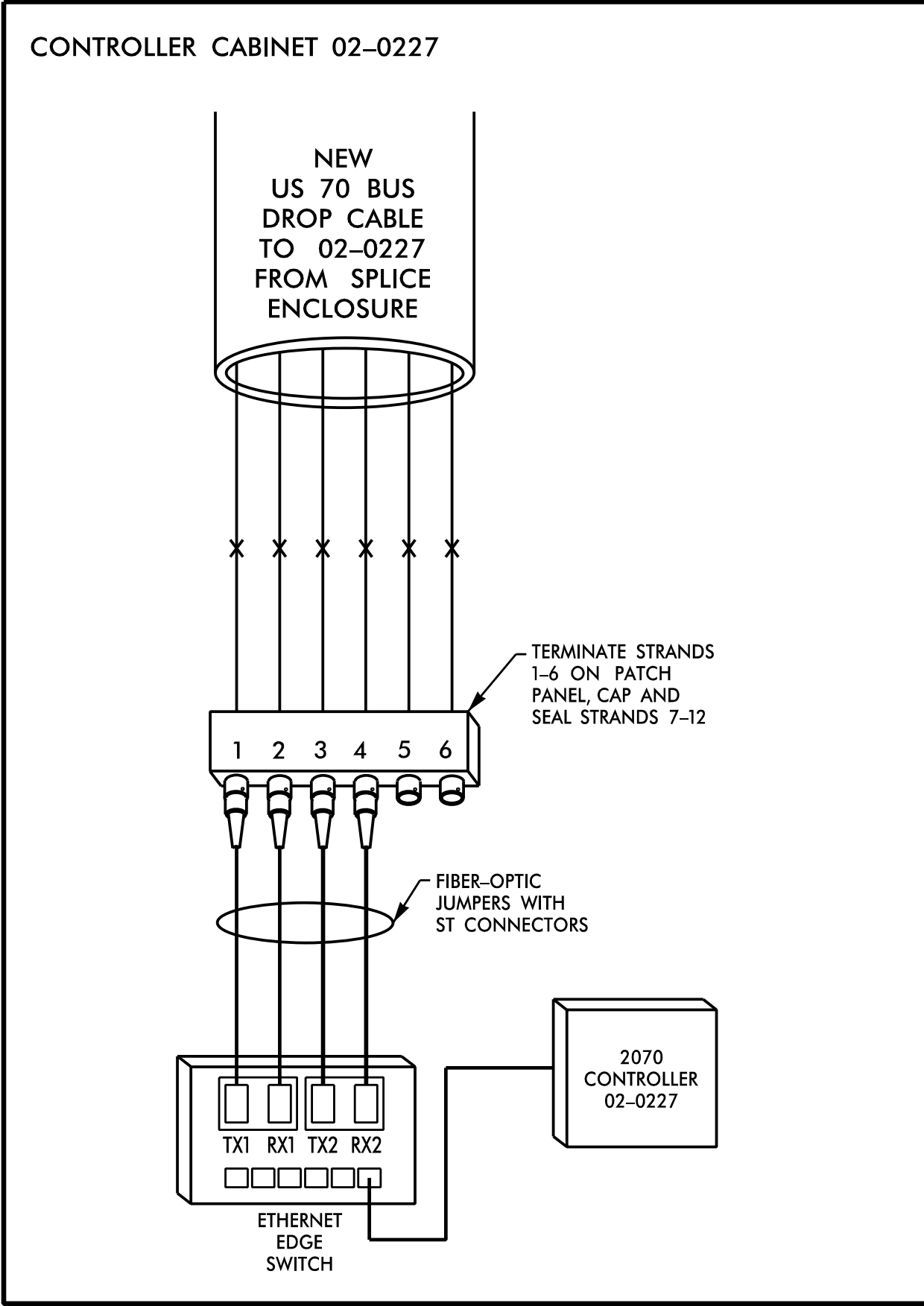
PRIOR TO INSTALLING THE COVER ON THE SPlice TRAY, TAKE A DIGITAL PHOTOGRAPH SHOWING THE SPlice TRAY AND INFORMATION SHOWN ABOVE (1-4) AND SUBMIT PHOTOGRAPH ALONG WITH OTDR TEST RESULTS.

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343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554
(919) 548-8997

Plans Prepared for:		US 70 HAVELOCK BYPASS SPlice DETAILS		
		Division 02 Craven Co. Havelock PLAN DATE: June 2018 REVIEWED BY: T.R. Terrell PREPARED BY: J.A. Wagner REVIEWED BY: N.R. Simmons		
SCALE	NONE	REVISIONS	INIT.	DATE
250 N. Greenfield Place, Garner, NC 27529		Documented by: <i>Natasha R. Simmons</i> 12/7/2018 Signature: _____ DATE: _____ CADD File name: R1015 SCP-67.dgn		

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

02-0227 US 70 BUSINESS (MAIN STREET) AT NC 101 (FONTANA BOULEVARD) / SR 1763 (MILLER BOULEVARD)



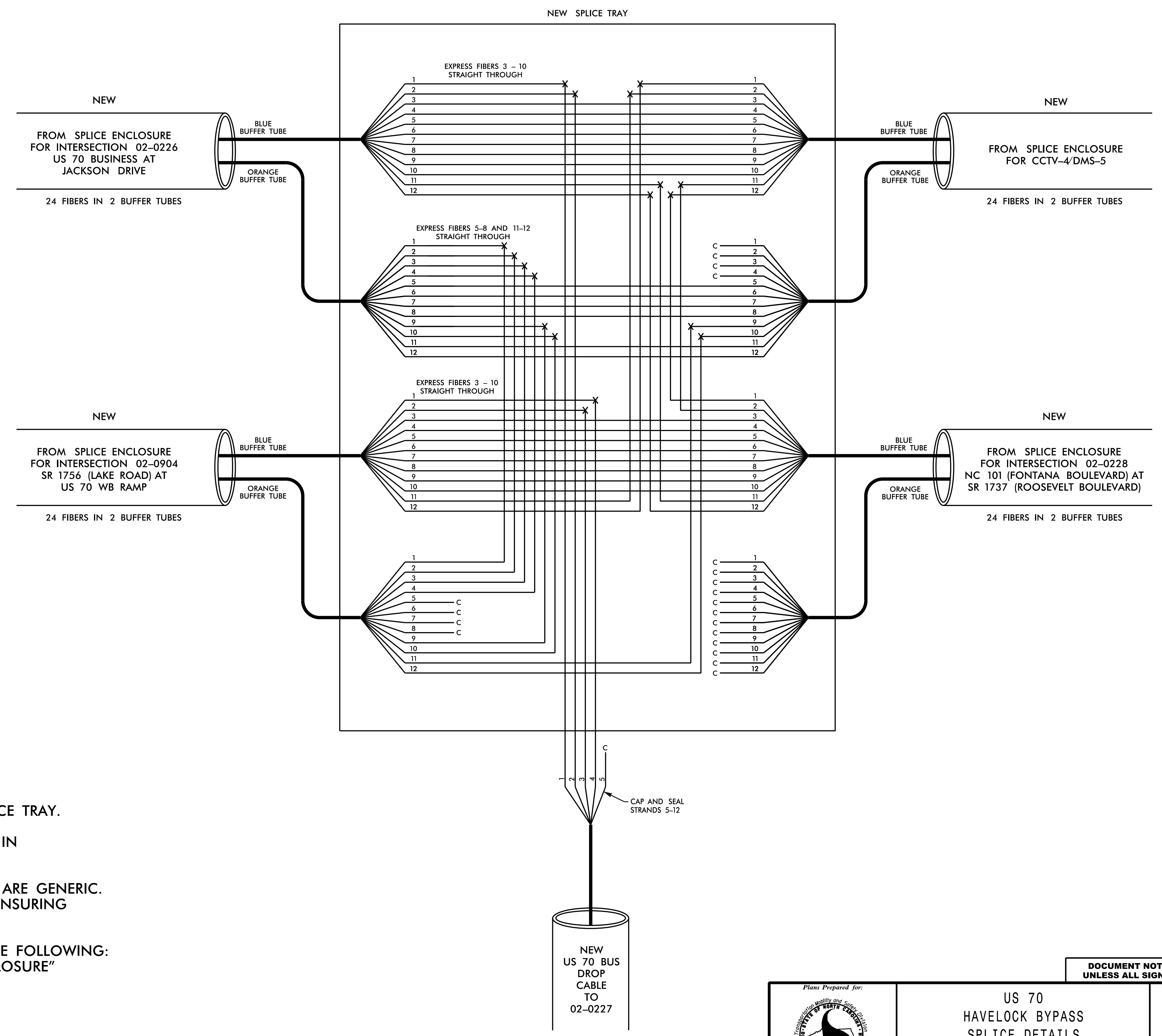
COLOR CODE TIA/EIA 598-C		LEGEND	
(1) BLUE	(7) RED	X = NEW FUSION SPLICE INDIVIDUAL FIBER	
(2) ORANGE	(8) BLACK	● = EXISTING FUSION SPLICE	
(3) GREEN	(9) YELLOW	C = CAP AND SEAL	
(4) BROWN	(10) VIOLET	EXPRESS = EXPRESS ENTIRE BUFFER TUBE THROUGH WITHOUT CUTTING	
(5) SLATE	(11) ROSE	BUFFER SPLICE = SPLICE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

NOTES:

1. UNUSED FIBERS LEFT COILED AND STORED IN SPLICE TRAY.
2. UNUSED BUFFER TUBES LEFT COILED AND STORED IN SPLICE ENCLOSURE.
3. ETHERNET SWITCH TERMINATION CONFIGURATIONS ARE GENERIC. CONTRACTOR IS RESPONSIBLE FOR DETERMINING / ENSURING PROPER TERMINATION.
4. INCLUDE ON THE COVER OF EACH SPLICE TRAY THE FOLLOWING: REFERENCE SECTION 1731 "FIBER OPTIC SPLICE ENCLOSURE"


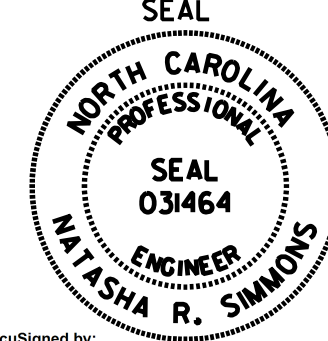
- (1) SPLICE
- (2) DATE
- (3) COMPANY NAME
- (4) NAME OF INDIVIDUAL PERFORMING THE SPLICING

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.



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Raleigh, North Carolina 27609
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(919) 548-8997

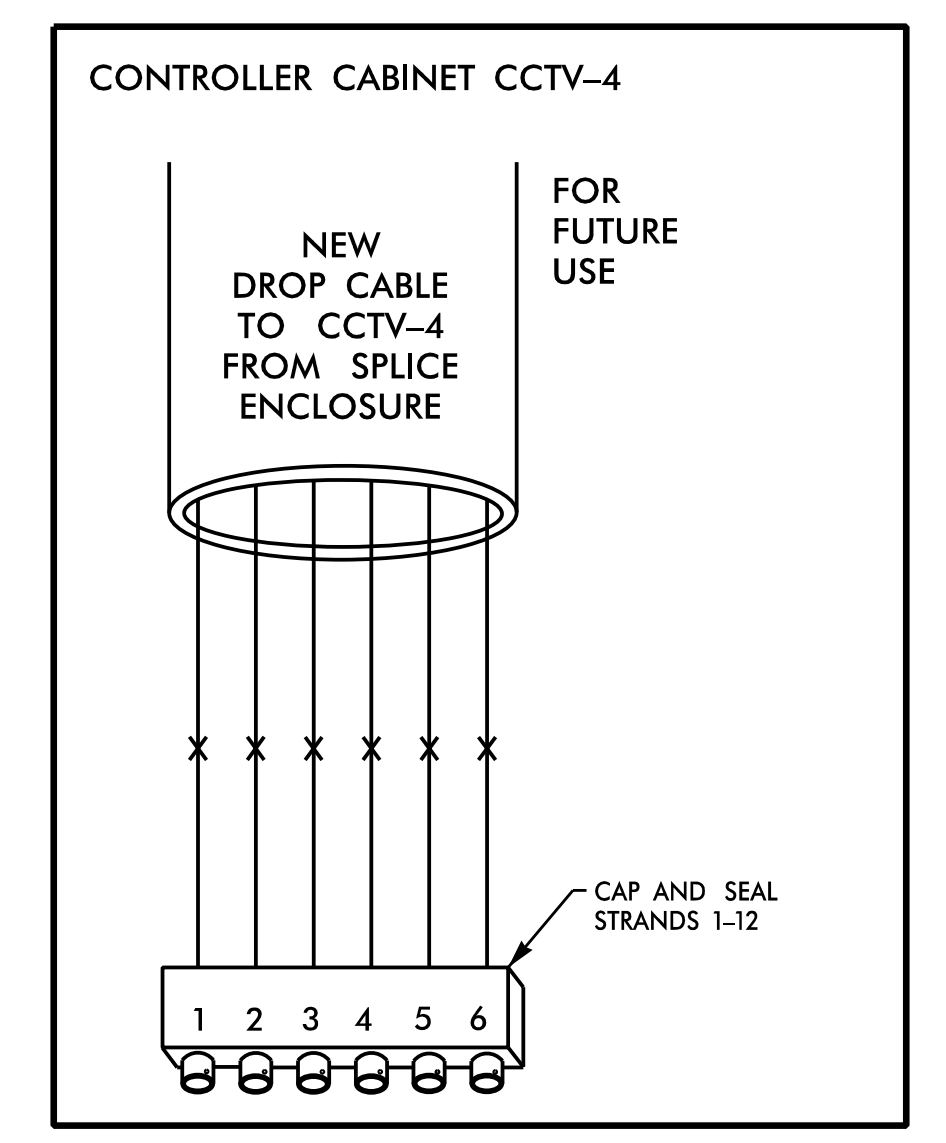
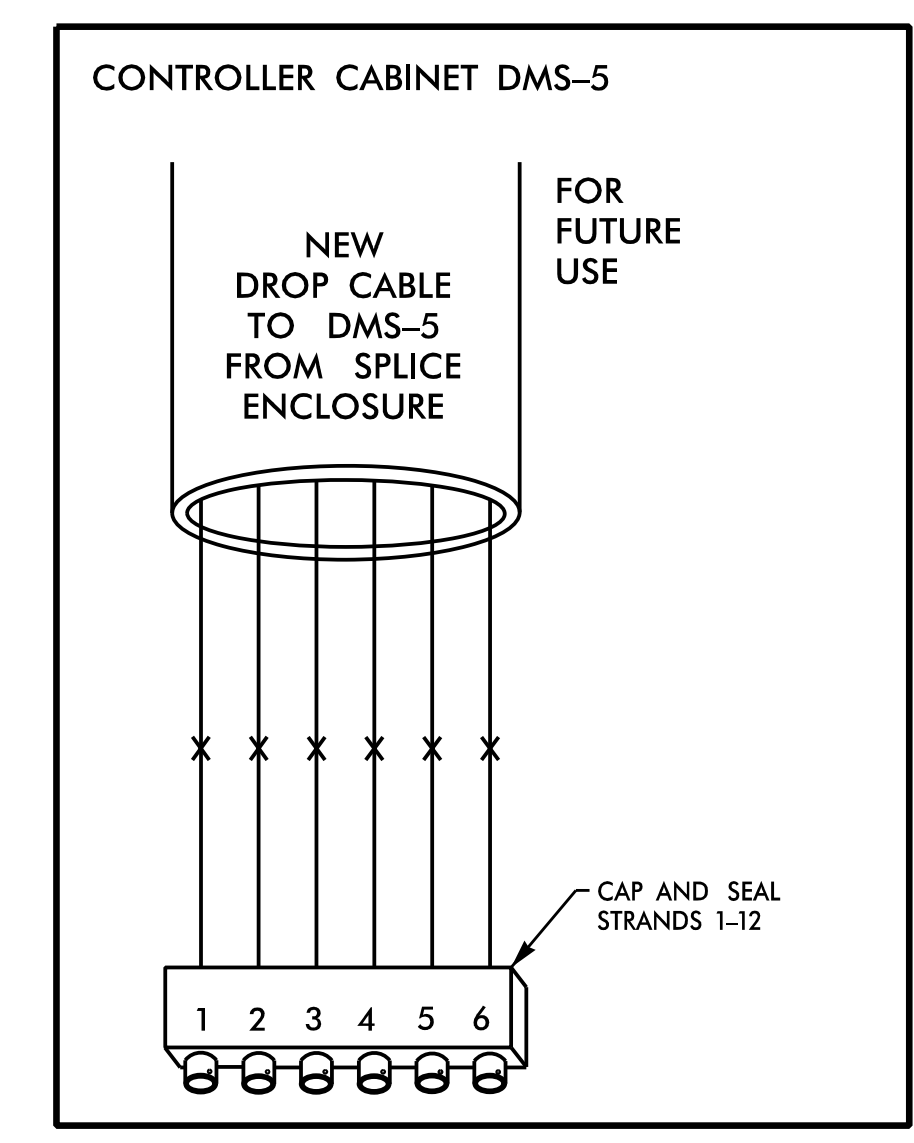
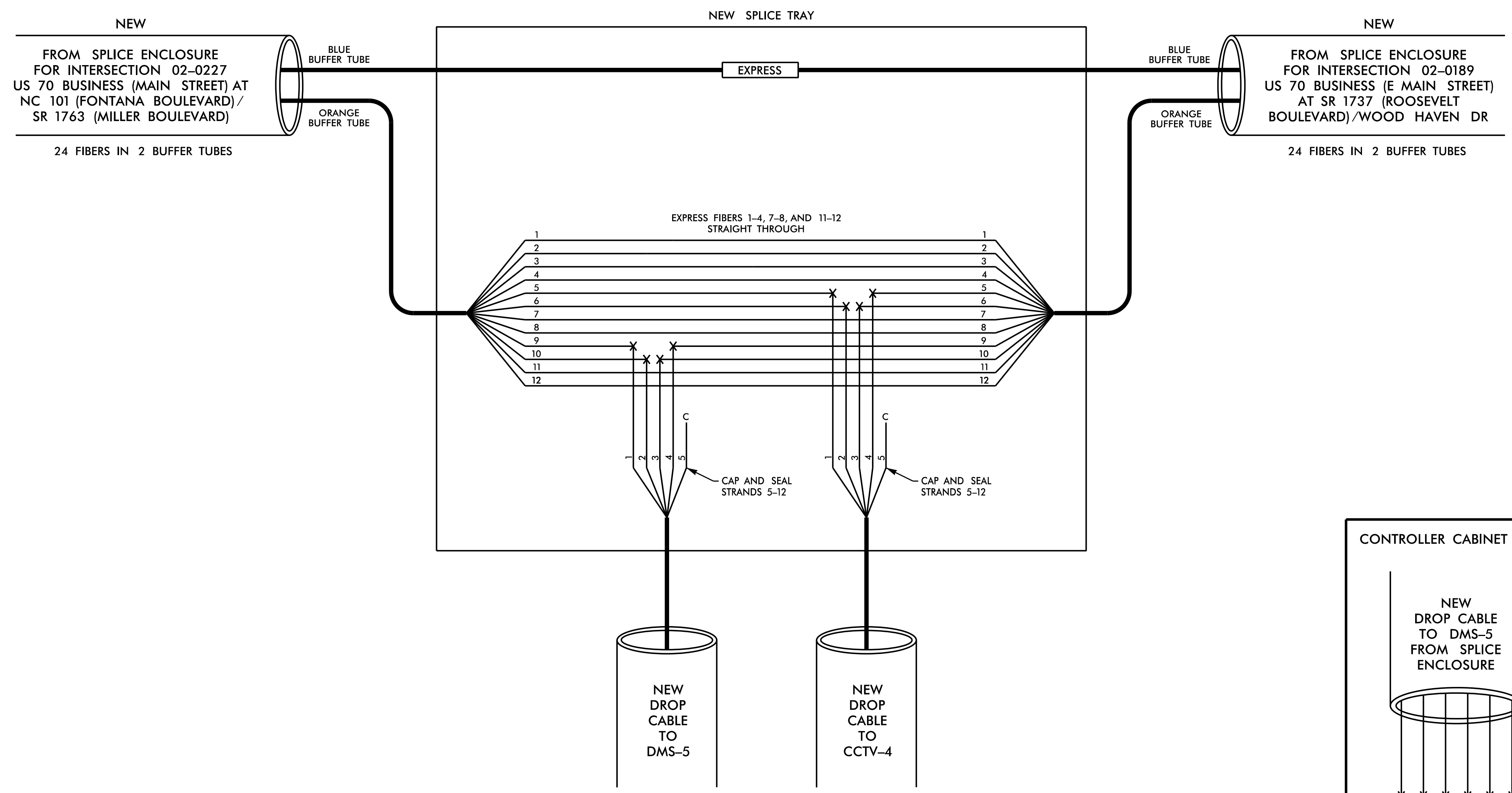
**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

Plans Prepared for: 		US 70 HAVELOCK BYPASS SPLICE DETAILS		
Division 02 Craven Co. Havelock		PLANNED BY: J.A. Wagner		
SCALE: NONE	PREPARED BY: J.A. Wagner	REVIEWED BY: T.R. Terrell	REVIEWED BY: N.R. Simmons	DocuSigned by: Natasha R. Simmons 12/7/2018
				SEAL 031464 ENGINEER NATASHA R. SIMMONS

CADD File name: R1015_SCP-68.dgn

CCTV-4/DMS-5
US 70 BUSINESS (MAIN STREET)
450' EAST OF
NC 101 (FONTANA BOULEVARD)/
SR 1763 (MILLER BOULEVARD)

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



NOTES:


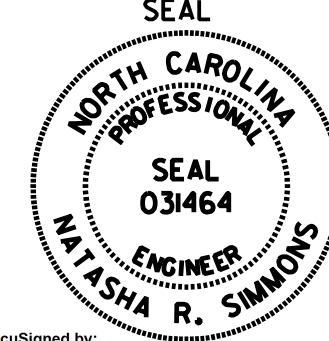
1. UNUSED FIBERS LEFT COILED AND STORED IN SPLICE TRAY.
2. UNUSED BUFFER TUBES LEFT COILED AND STORED IN SPLICE TRAY.
3. INCLUDE ON THE COVER OF EACH SPLICE TRAY THE FOLLOWING: REFERENCE SECTION 1731 "FIBER OPTIC SPLICE ENCLOSURE"

- (1) SPLICE
- (2) DATE
- (3) COMPANY NAME
- (4) NAME OF INDIVIDUAL PERFORMING THE SPLICING

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.

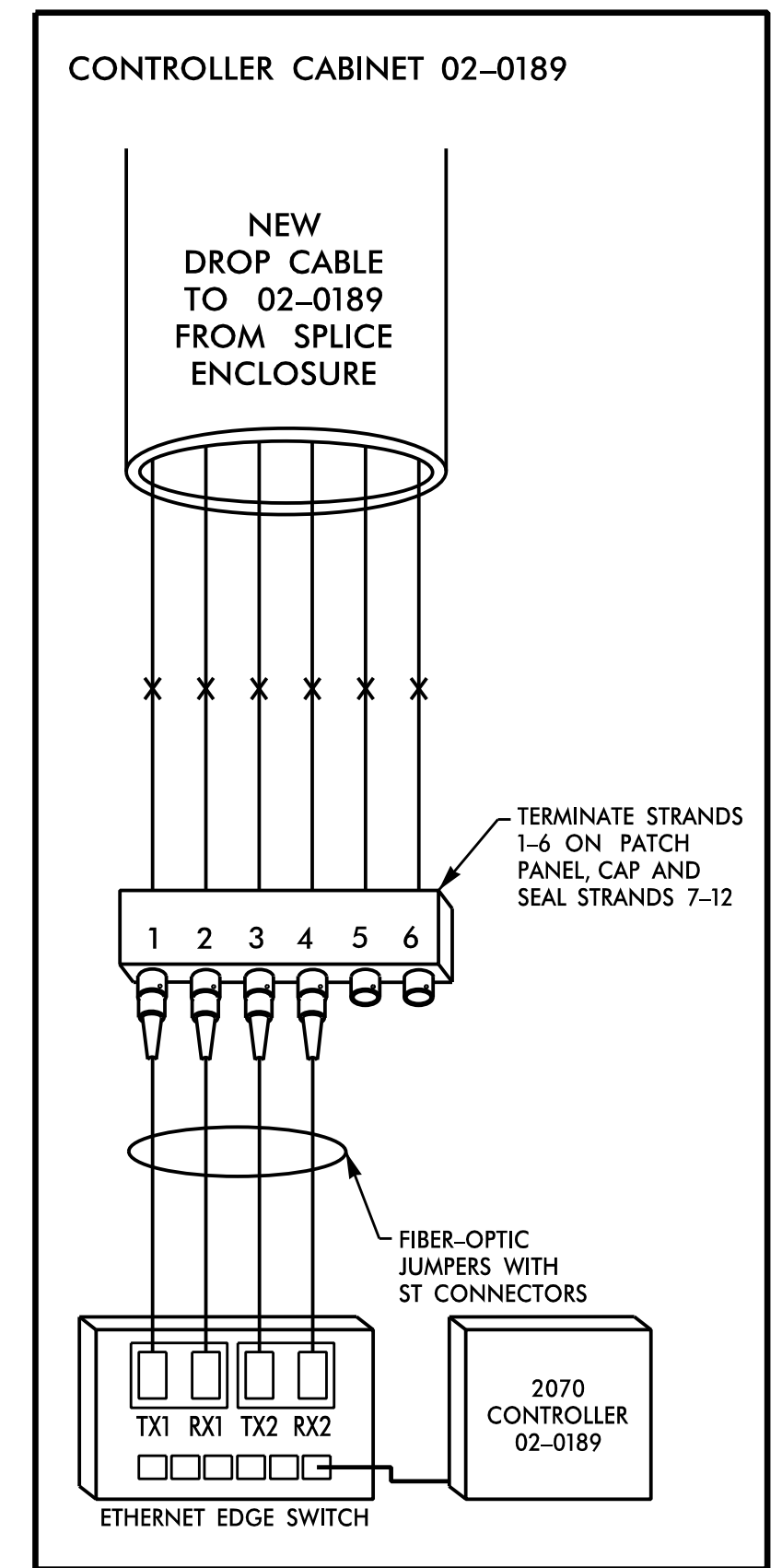
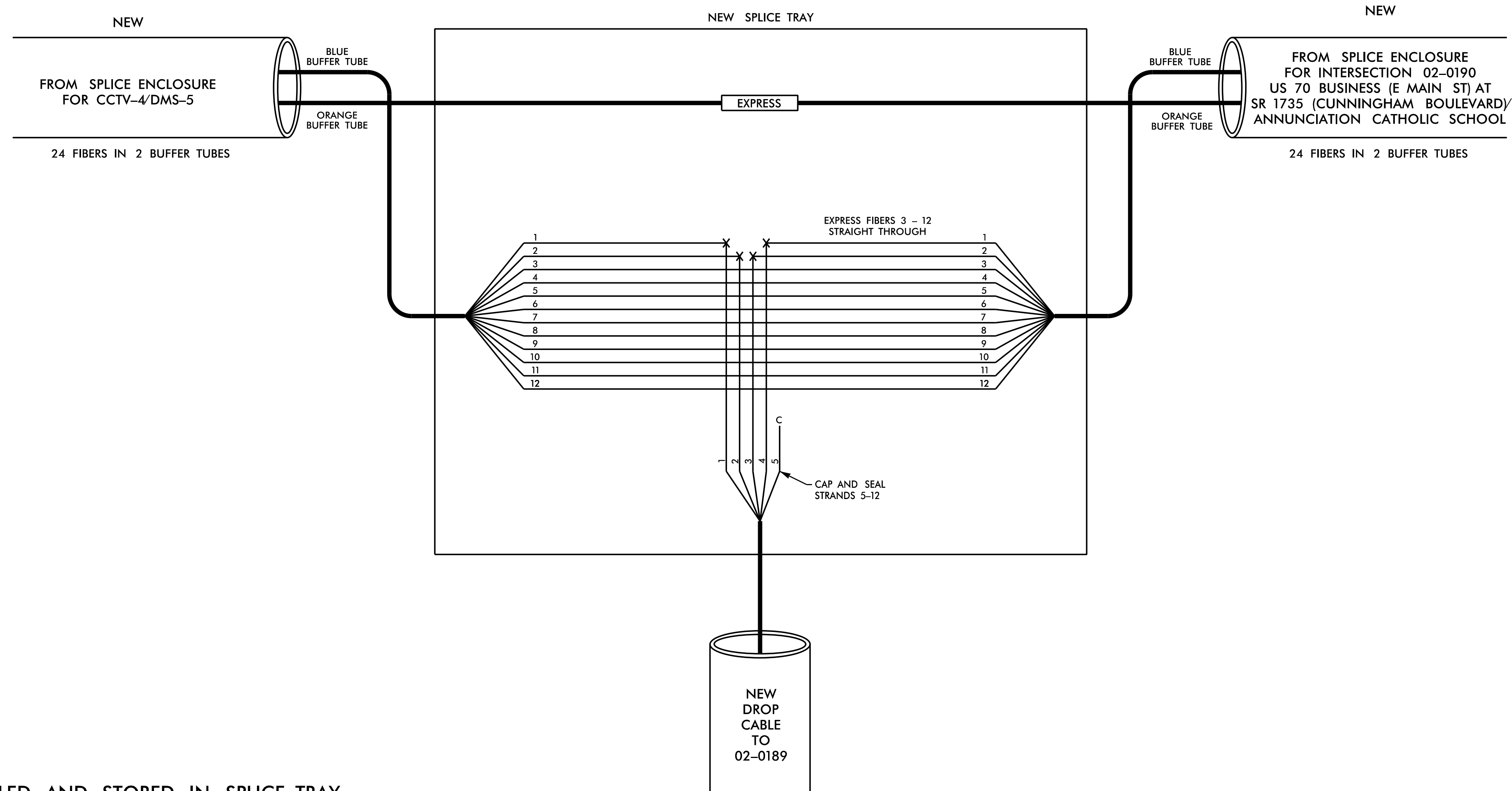
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 NC License No: C-1554
 (919) 548-8997

Plans Prepared for:  250 N. Greenfield Place, Garner, NC 27529	US 70 HAVELOCK BYPASS SPLICE DETAILS		
	Division 02 Craven Co. Havelock PLAN DATE: June 2018 REVIEWED BY: T.R. Terrell PREPARED BY: J.A. Wagner REVIEWED BY: N.R. Simmons	SCALE: NONE REVISIONS: _____ INITI. DATE: _____ SIGNATURE: _____ DATE: _____ CADD File name: R1015_SCP-69.dgn	

02-0189
 US 70 BUSINESS (E MAIN STREET)
 AT SR 1737 (ROOSEVELT
 BOULEVARD) WOOD HAVEN DRIVE

COLOR CODE TIA/EIA 598-C			LEGEND	
(1) BLUE	(7) RED	X = NEW FUSION SPLICE INDIVIDUAL FIBER		
(2) ORANGE	(8) BLACK	● = EXISTING FUSION SPLICE		
(3) GREEN	(9) YELLOW	C = CAP AND SEAL		
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(6) WHITE	(12) AQUA			



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DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

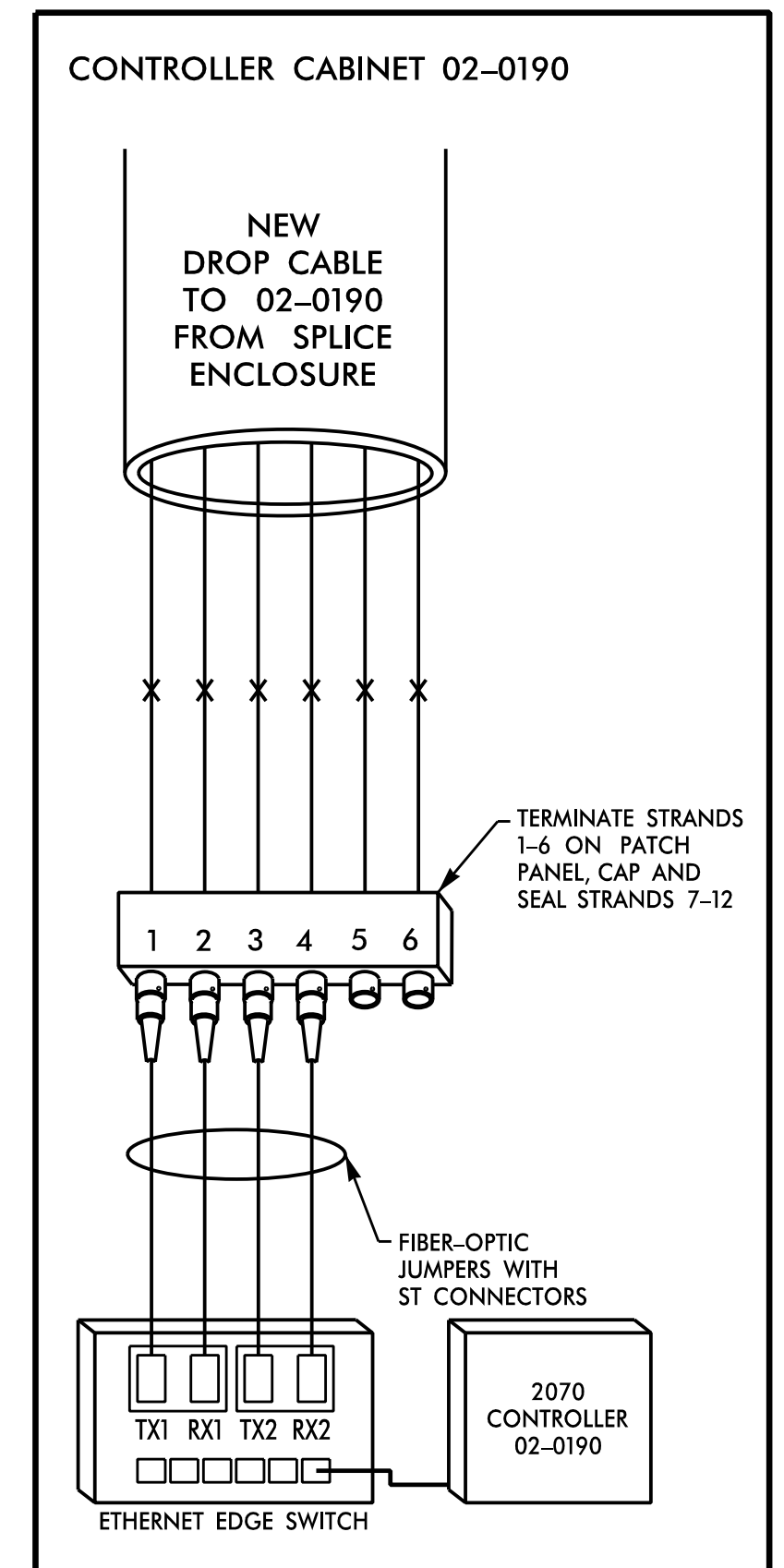
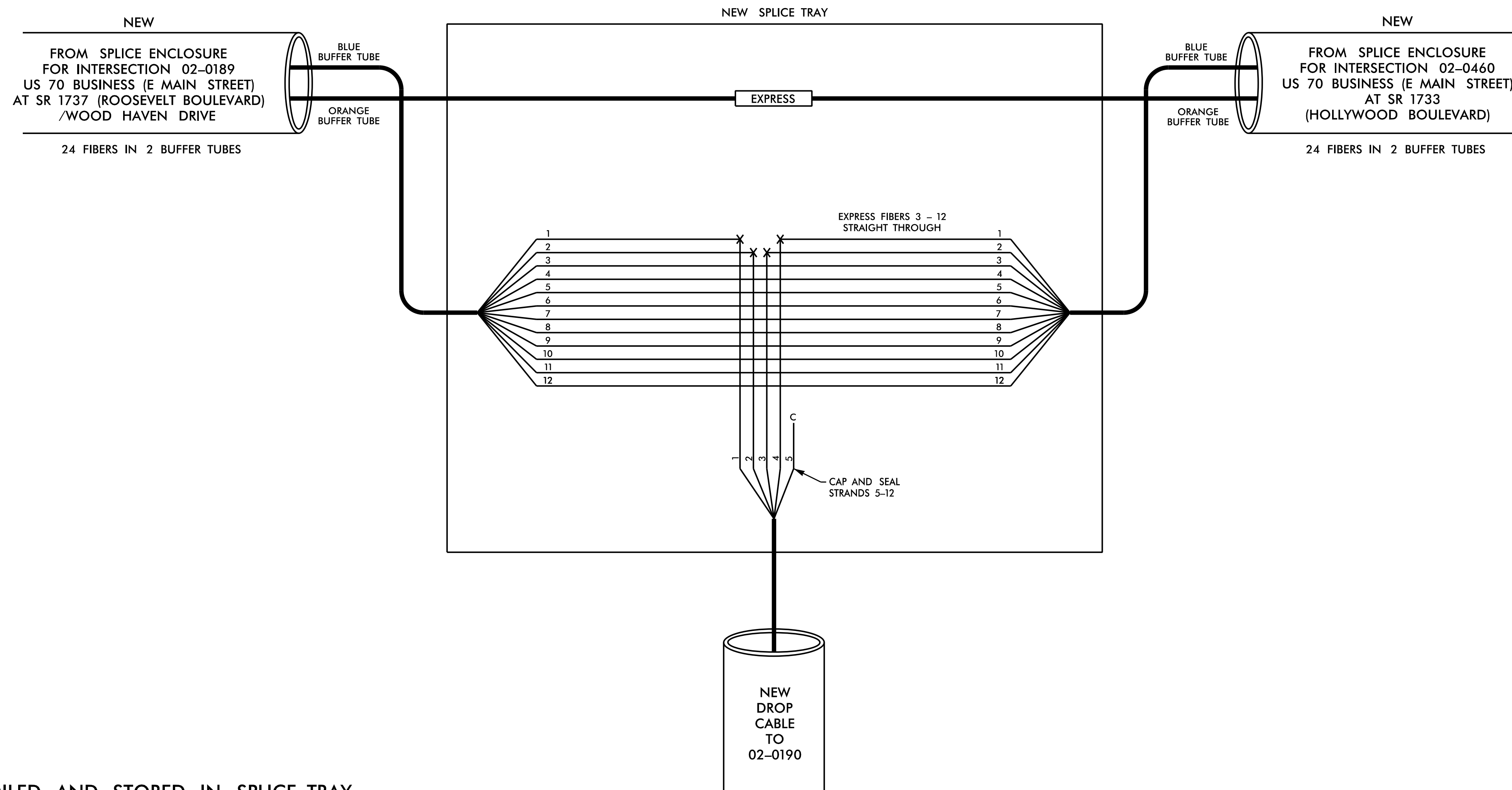
HNTB HNTB NORTH CAROLINA, P.C.
 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554
 (919) 548-8997

Plans Prepared for: 250 N. Greenfield Place, Garner, NC 27529	US 70 HAVELOCK BYPASS SPLICE DETAILS		
	Division 02 Craven Co. Havelock PLAN DATE: June 2018 REVIEWED BY: T.R. Terrell PREPARED BY: J.A. Wagner REVIEWED BY: N.R. Simmons	2070 CONTROLLER 02-0189	
SCALE: NONE	REVISIONS:	INITI.:	DATE:

DocuSigned by: *Natasha R. Simmons* 12/7/2018
 CADD File name: R1015 SCP-70.dgn

02-0190
 US 70 BUSINESS (E MAIN ST) AT
 SR 1735 (CUNNINGHAM BOULEVARD) /
 ANNUNCIATION CATHOLIC SCHOOL

COLOR CODE TIA/EIA 598-C			LEGEND	
(1) BLUE	(7) RED	X = NEW FUSION SPLICE INDIVIDUAL FIBER		
(2) ORANGE	(8) BLACK	● = EXISTING FUSION SPLICE		
(3) GREEN	(9) YELLOW	C = CAP AND SEAL		
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(6) WHITE	(12) AQUA			



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- (4) NAME OF INDIVIDUAL PERFORMING THE SPLICING

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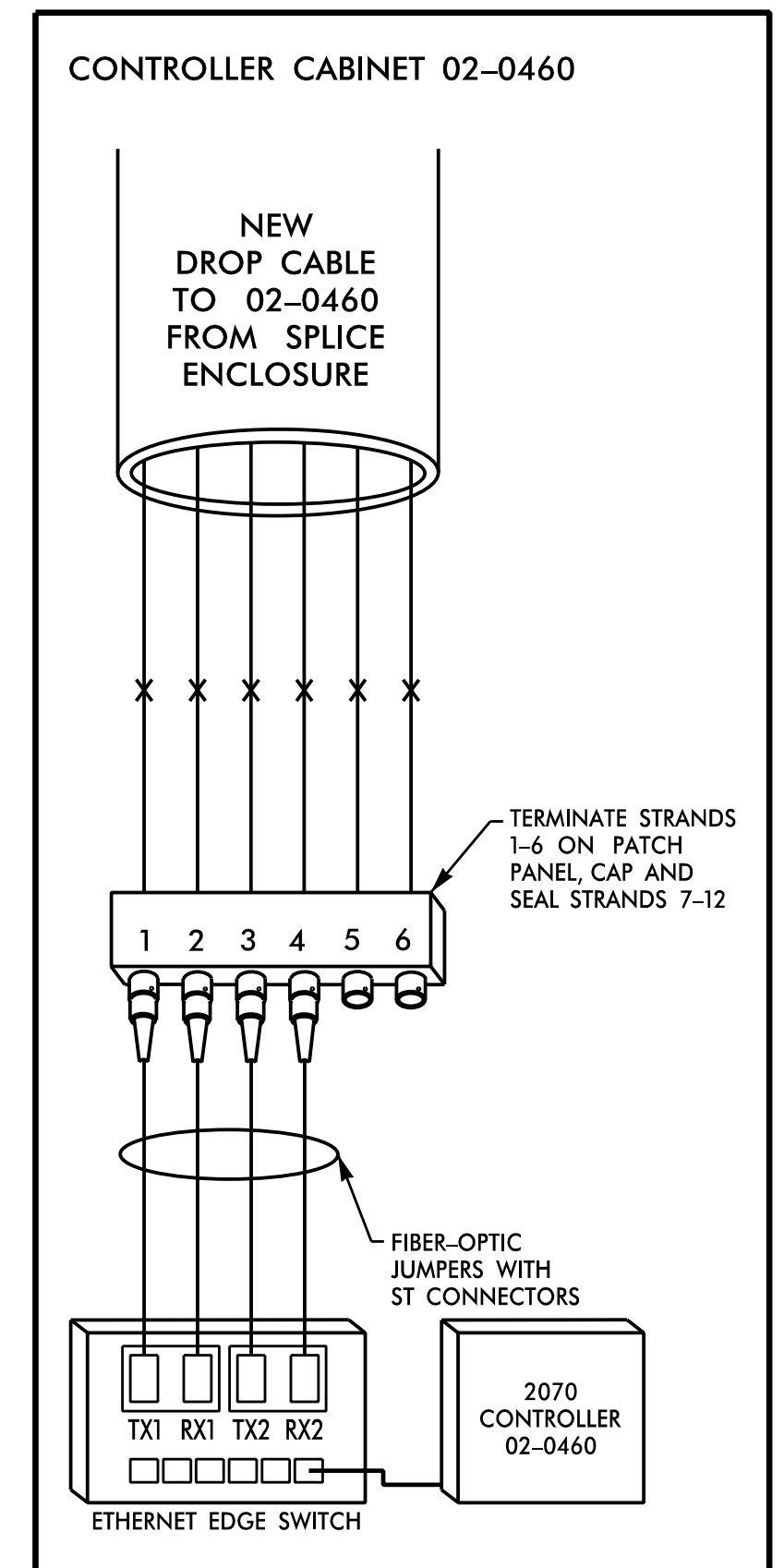
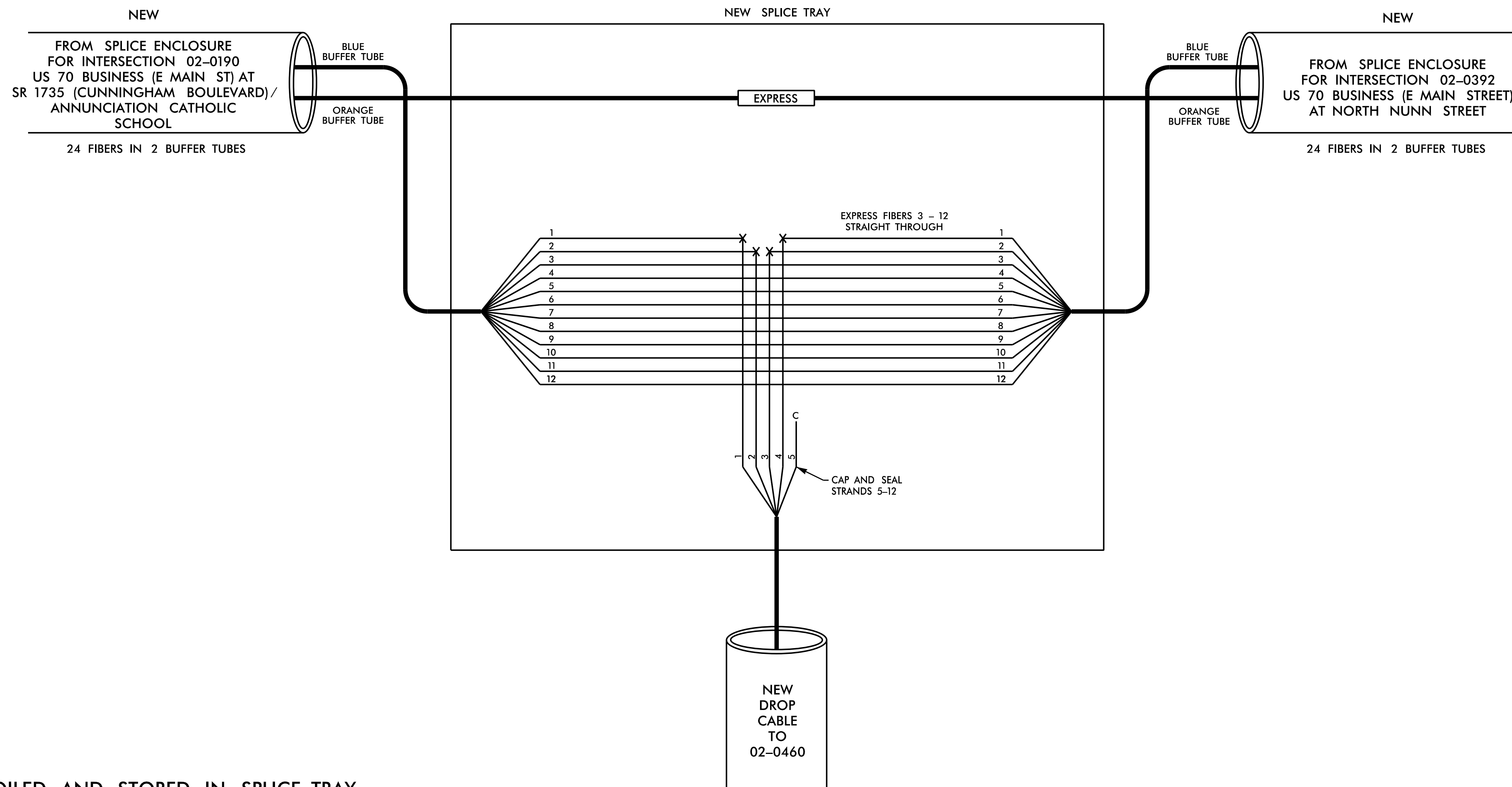
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 Raleigh, North Carolina 27609
 NC License No: C-1554
 (919) 548-8997

Plans Prepared for: 250 N. Greenfield Place, Garner, NC 27529	US 70 HAVELOCK BYPASS SPLICE DETAILS		
	Division 02 Craven Co. Havelock	PLAN DATE: June 2018 REVIEWED BY: T.R. Terrell	
SCALE NONE	REVISIONS	INIT. DATE	DocuSigned by: Natasha R. Simmons 12/7/2018 FID480F3AD454 SIGNATURE DATE CADD File name: R1015_SCP-71.dgn

02-0460
 US 70 BUSINESS (E MAIN STREET)
 AT
 SR 1733 (HOLLYWOOD BOULEVARD)

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



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

- (1) SPLICE
- (2) DATE
- (3) COMPANY NAME
- (4) NAME OF INDIVIDUAL PERFORMING THE SPLICING

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.

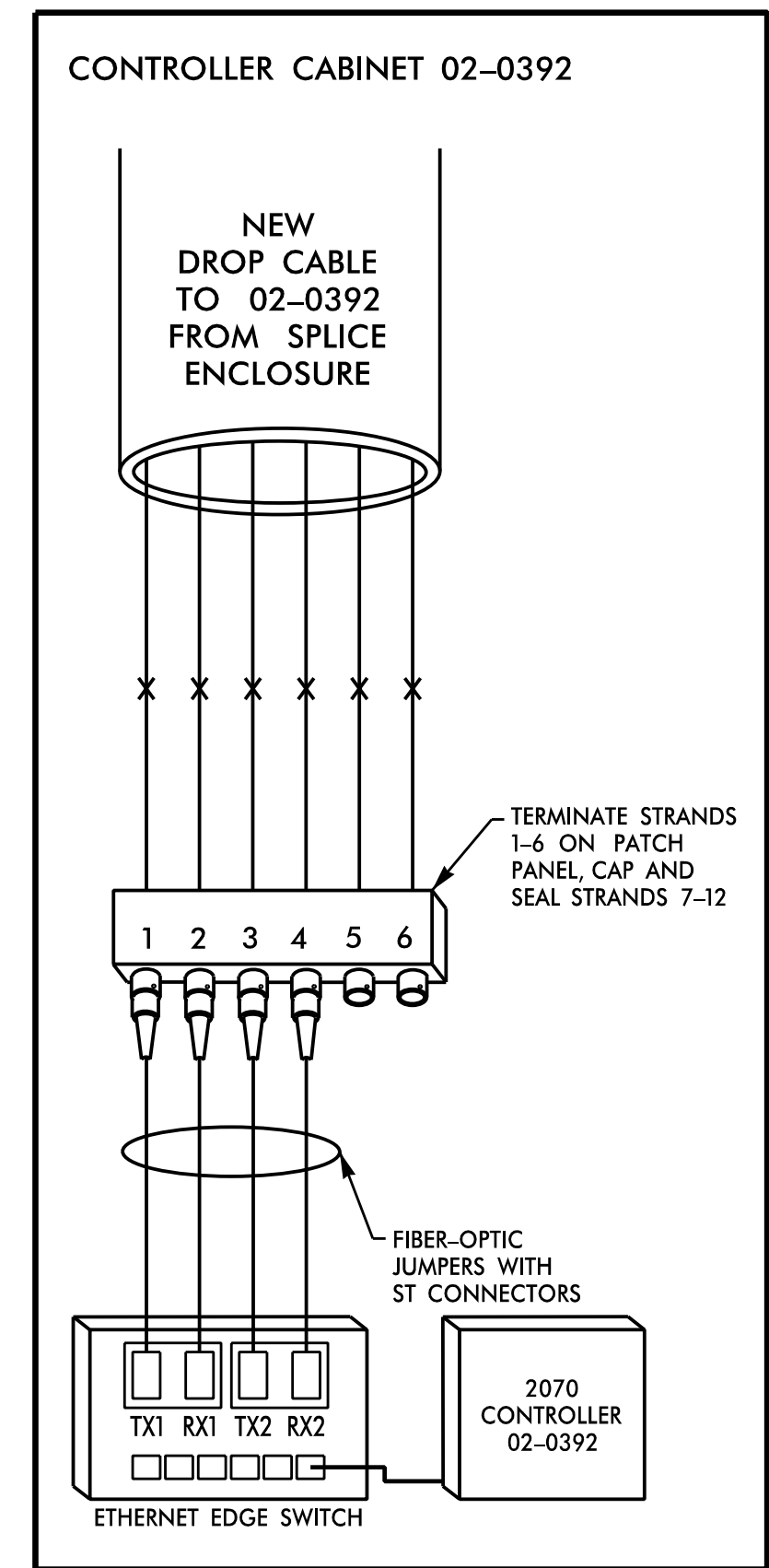
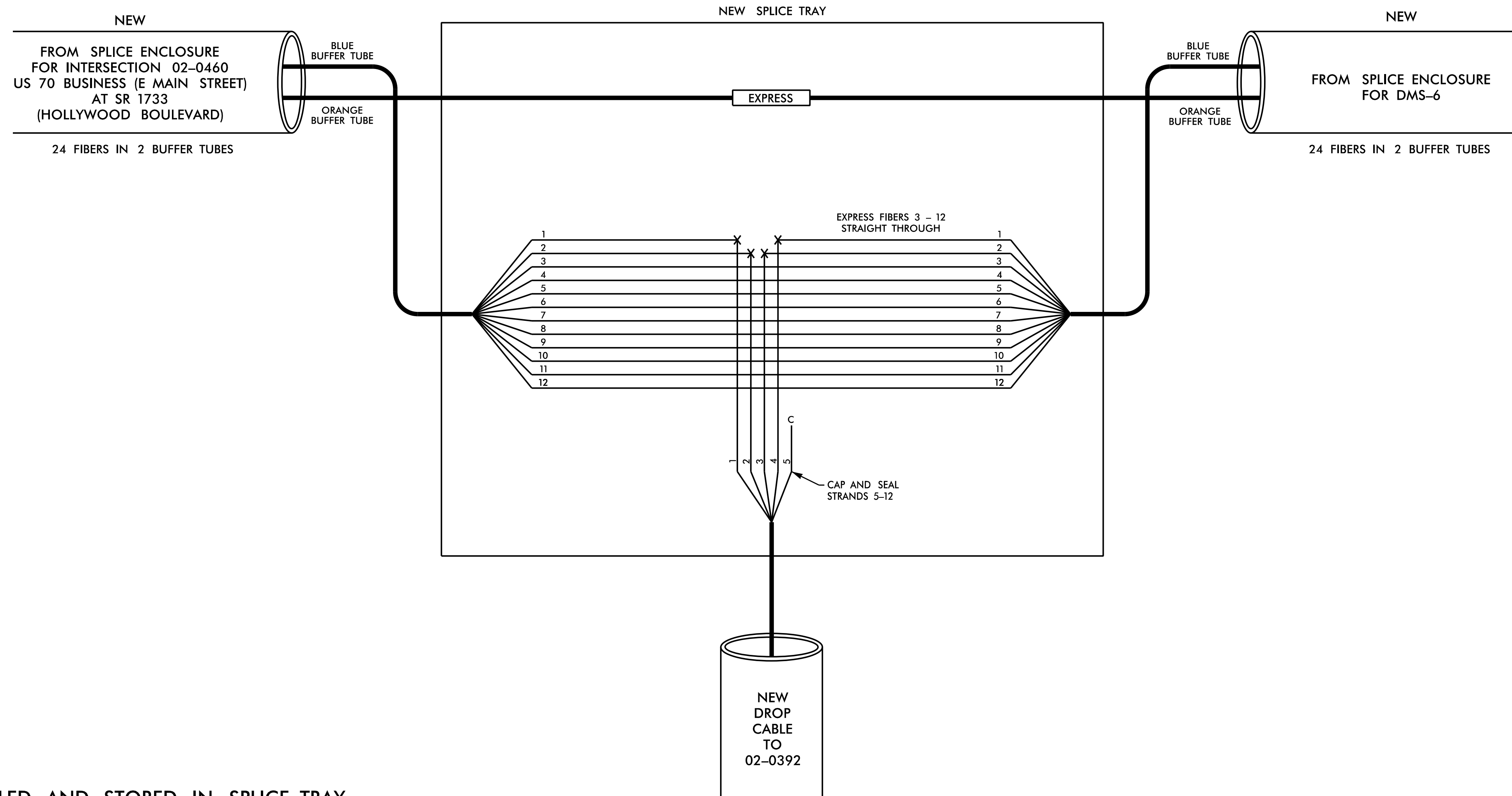
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554
 (919) 548-8997

Plans Prepared for: 250 N. Greenfield Place, Garner, NC 27529	US 70 HAVELOCK BYPASS SPLICE DETAILS		
	Division 02 Craven Co. Havelock	PLAN DATE: June 2018 REVIEWED BY: T.R. Terrell	
SCALE: NONE	REVISIONS:	INITI:	DATE:
DocuSigned by: Natasha R. Simmons 12/7/2018			SEAL 031464 NATASHA R. SIMMONS

02-0392
 US 70 BUSINESS (E MAIN STREET)
 AT
 NORTH NUNN STREET

COLOR CODE TIA/EIA 598-C			LEGEND	
(1) BLUE	(7) RED	X = NEW FUSION SPLICE INDIVIDUAL FIBER		
(2) ORANGE	(8) BLACK	● = EXISTING FUSION SPLICE		
(3) GREEN	(9) YELLOW	C = CAP AND SEAL		
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NOTES:

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- (1) SPLICE
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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.

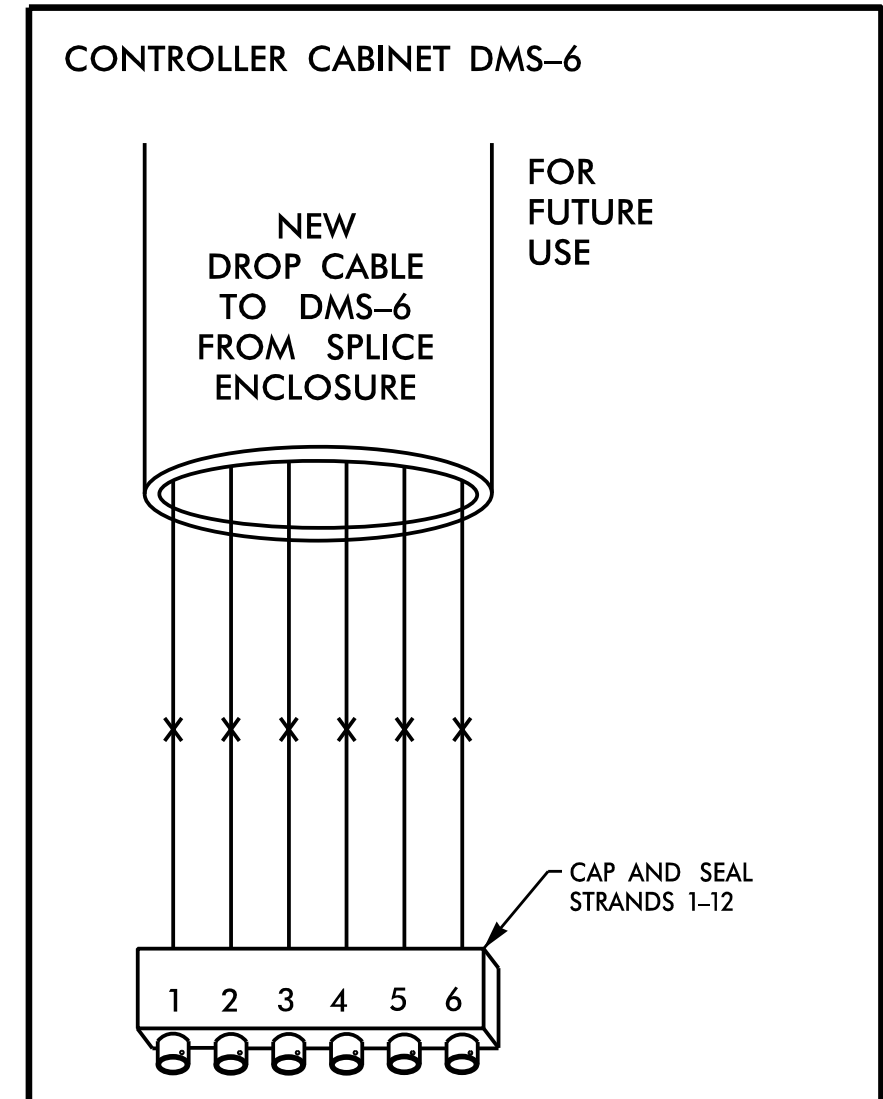
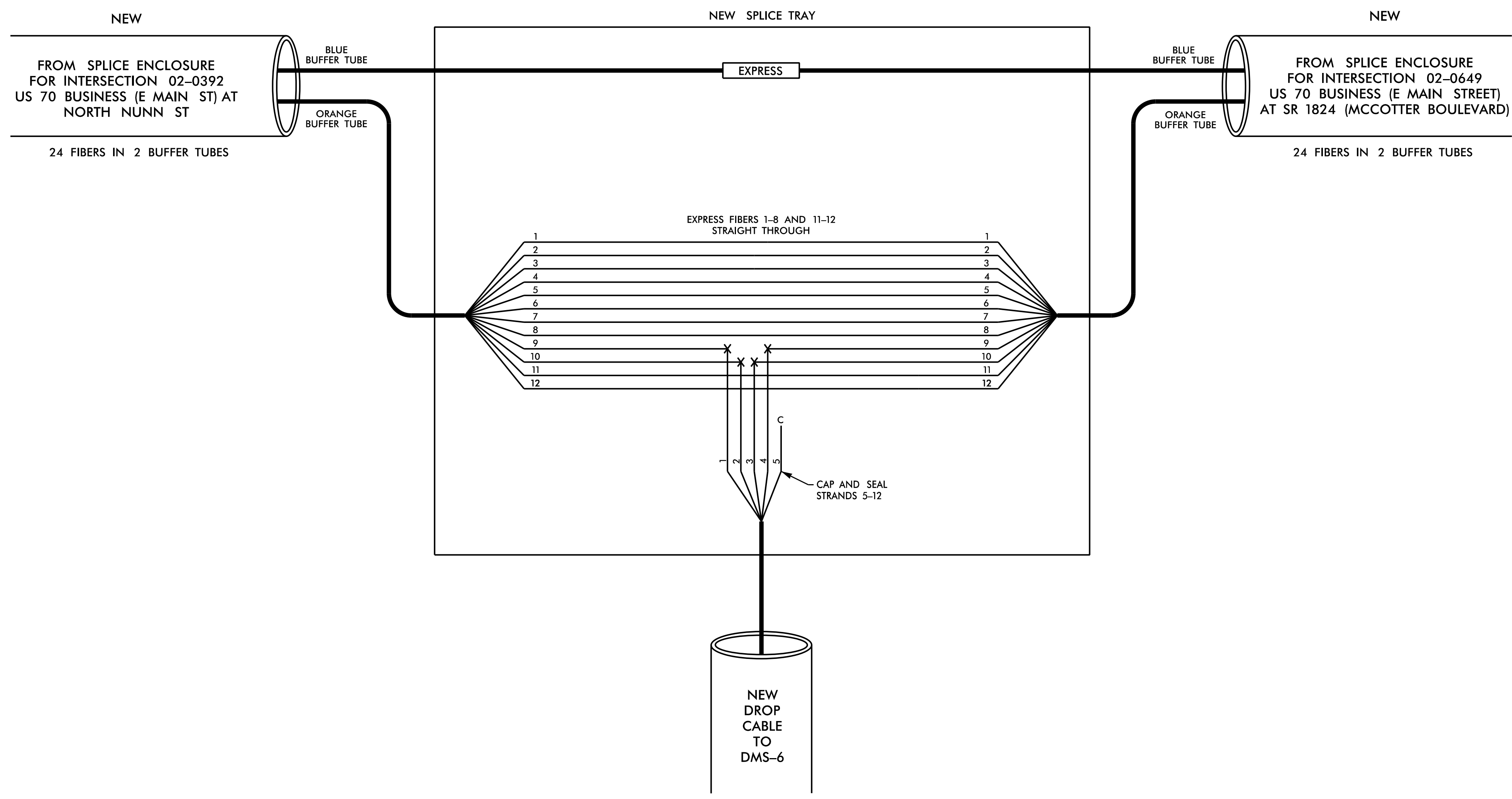
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 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554
 (919) 548-8997

Plans Prepared for: 250 N. Greenfield Place, Garner, NC 27529	US 70 HAVELOCK BYPASS SPLICE DETAILS		SEAL SEAL 031464 NATASHA R. SIMMONS
	Division 02 Craven Co. Havelock PLAN DATE: June 2018 REVIEWED BY: T.R. Terrell PREPARED BY: J.A. Wagner REVIEWED BY: N.R. Simmons	Documented by: Natasha R. Simmons 12/7/2018 FID480F3AD454 SIGNATURE DATE CADD File name: R1015_SCP-73.dgn	

DMS-6
US 70 BUSINESS (E MAIN STREET)
0.3 MILE EAST OF
NORTH NUNN ST

COLOR CODE TIA/EIA 598-C			LEGEND	
(1) BLUE	(7) RED	X = NEW FUSION SPLICE INDIVIDUAL FIBER		
(2) ORANGE	(8) BLACK	● = EXISTING FUSION SPLICE		
(3) GREEN	(9) YELLOW	C = CAP AND SEAL		
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NOTES:

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- (1) SPLICE
- (2) DATE
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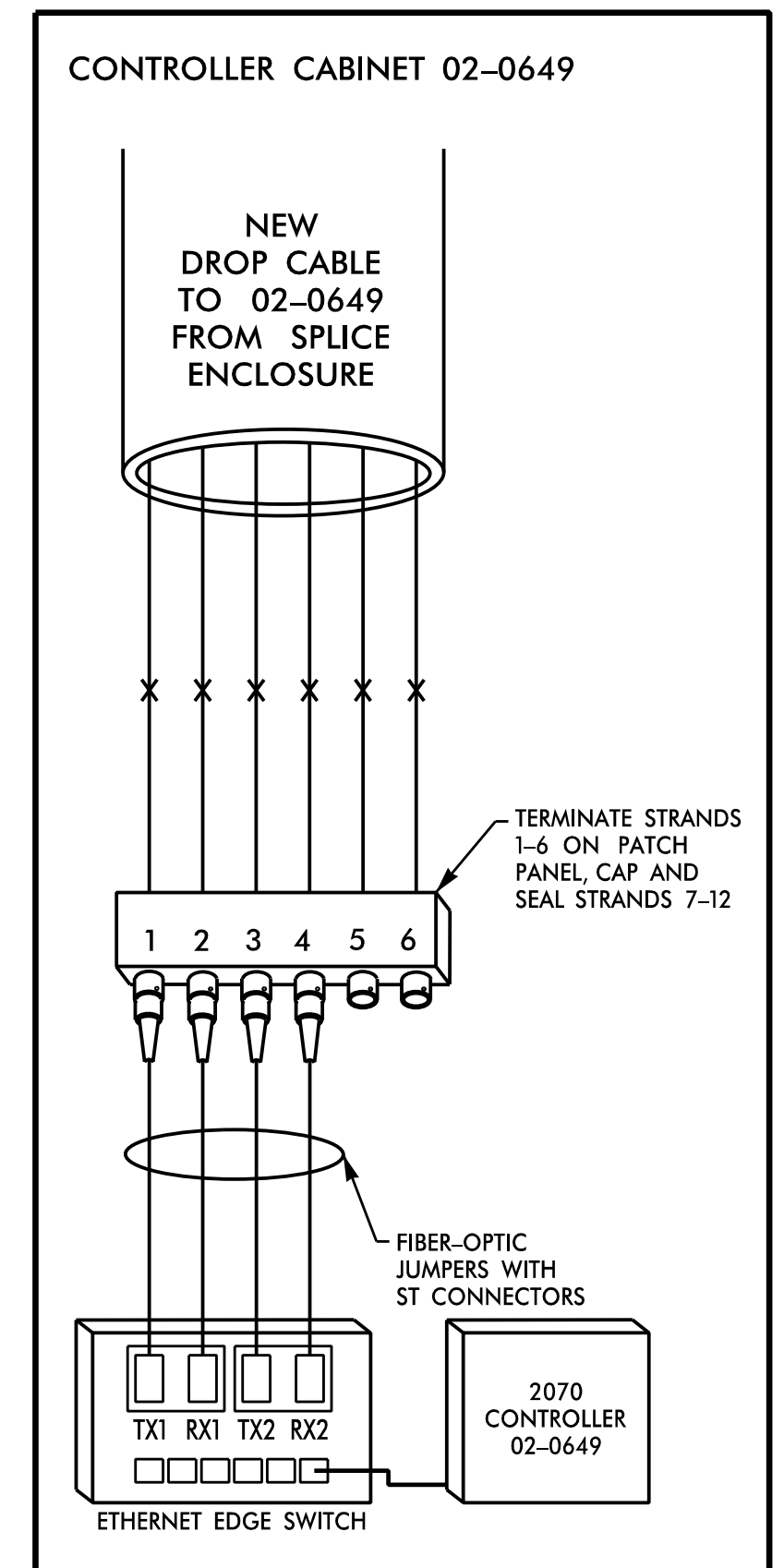
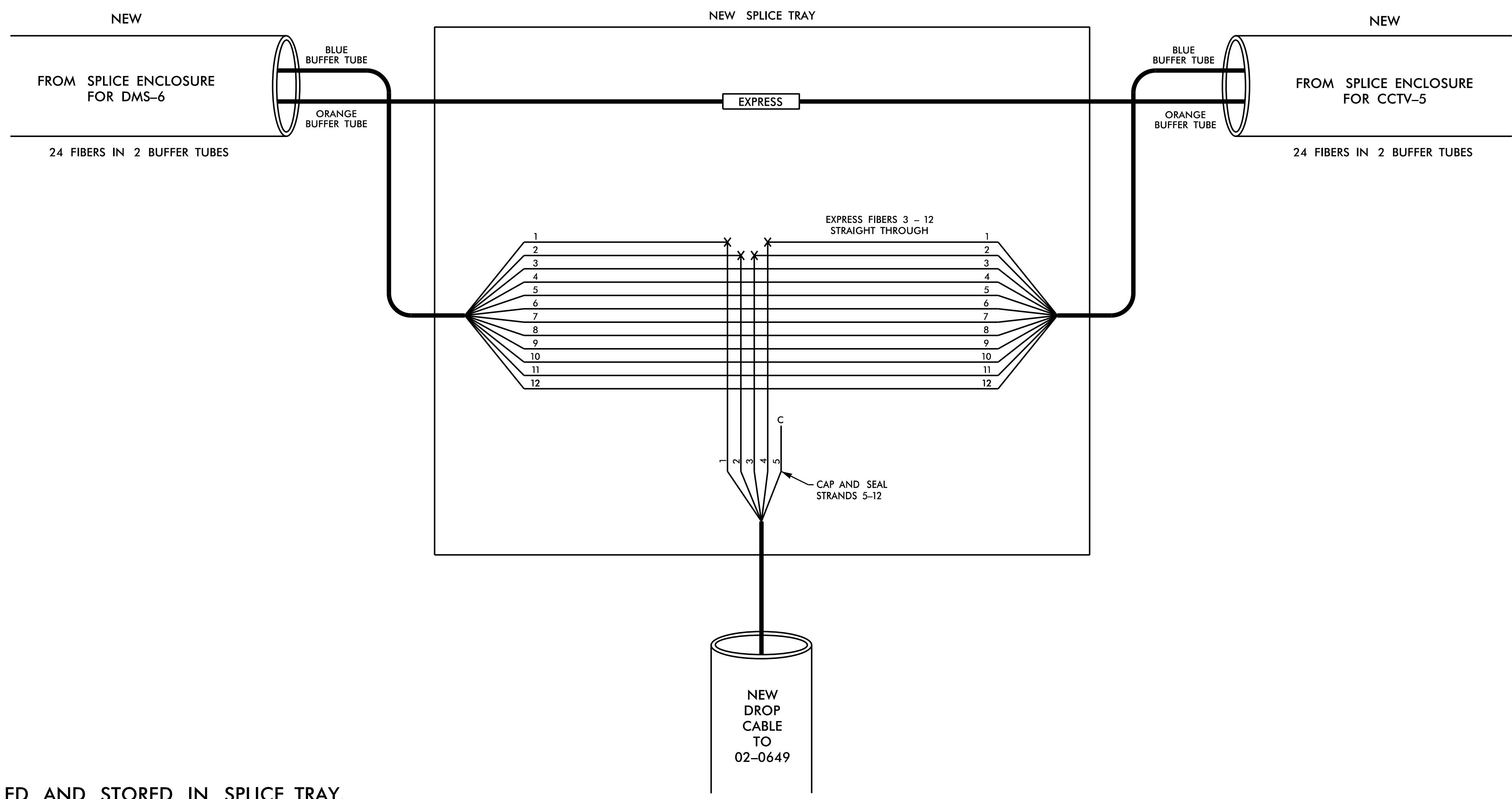
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 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554
 (919) 548-8997

Plans Prepared for: 250 N. Greenfield Place, Garner, NC 27529	US 70 HAVELOCK BYPASS SPLICE DETAILS		 SEAL NORTH CAROLINA PROFESSIONAL ENGINEER NATASHA R. SIMMONS
	Division 02 Craven Co. Havelock PLAN DATE: June 2018 REVIEWED BY: T.R. Terrell PREPARED BY: J.A. Wagner REVIEWED BY: N.R. Simmons	Documented by: Natasha R. Simmons 12/7/2018 SEAL DATE CADD File name: R1015_SCP-74.dgn	

02-0649
 US 70 BUSINESS (E MAIN STREET)
 AT SR 1824 (MCCOTTER BOULEVARD)

COLOR CODE TIA/EIA 598-C			LEGEND	
(1) BLUE	(7) RED	X = NEW FUSION SPLICE INDIVIDUAL FIBER		
(2) ORANGE	(8) BLACK	● = EXISTING FUSION SPLICE		
(3) GREEN	(9) YELLOW	C = CAP AND SEAL		
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DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

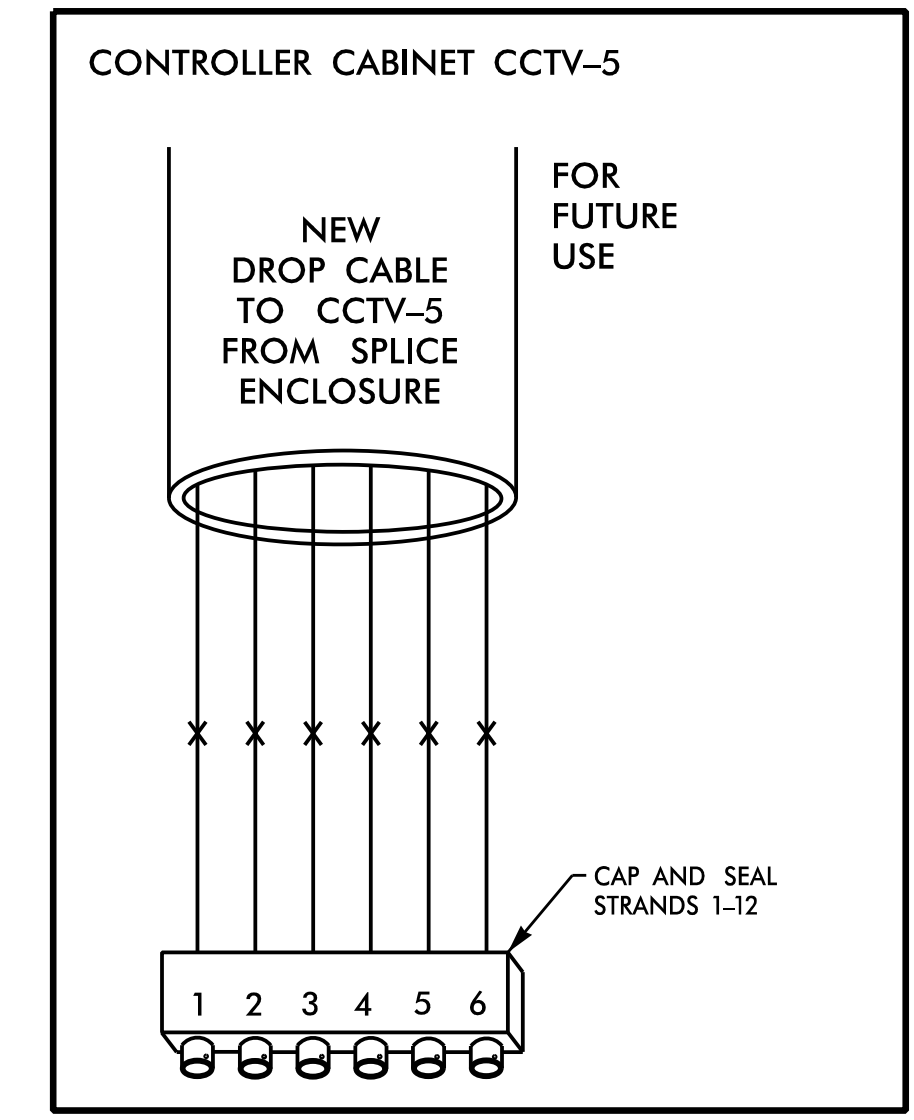
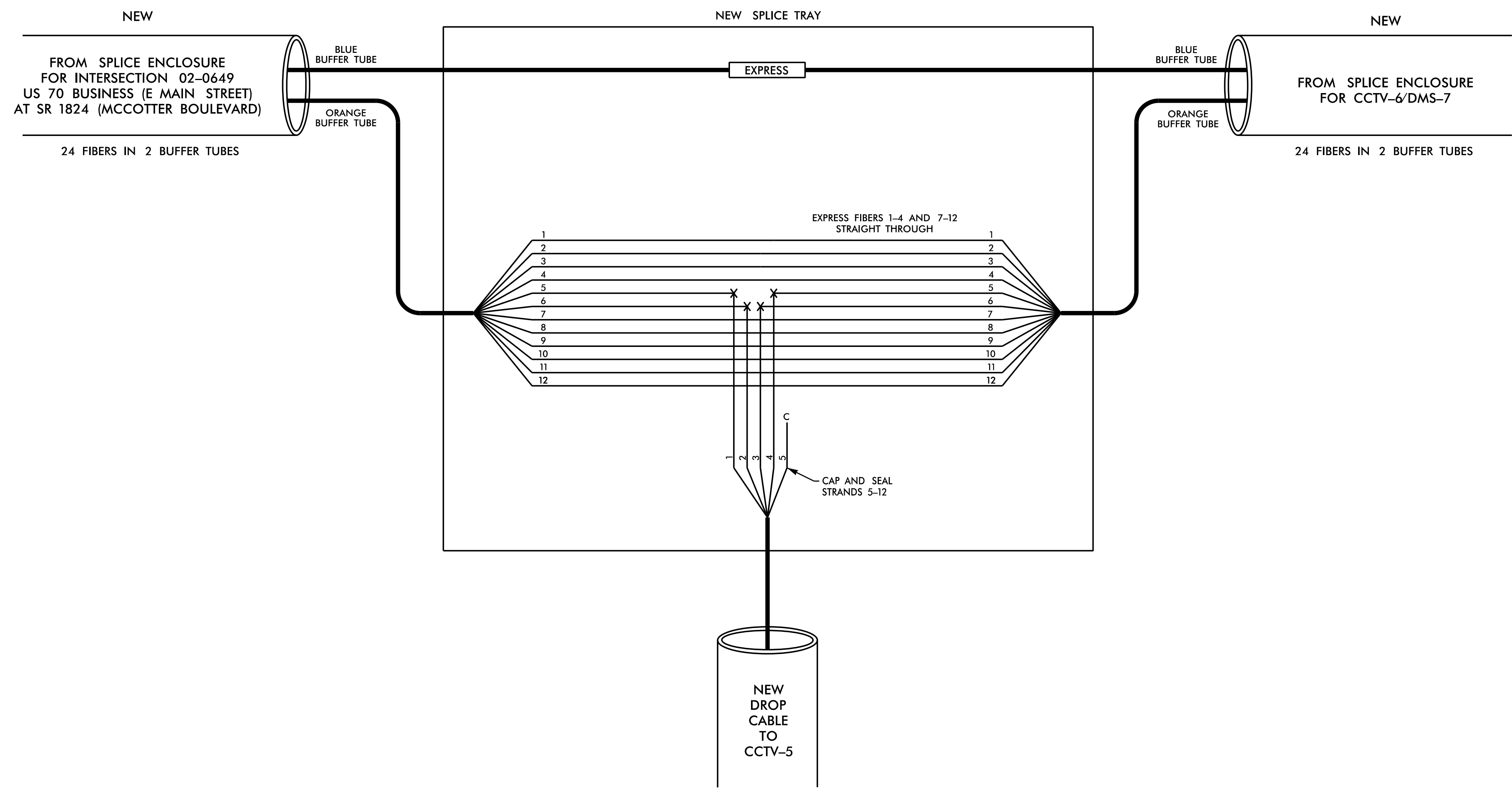
HNTB HNTB NORTH CAROLINA, P.C.
 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554
 (919) 548-8997

Plans Prepared for: 250 N. Greenfield Place, Garner, NC 27529	US 70 HAVELOCK BYPASS SPLICE DETAILS		SEAL SEAL 031464 NATASHA R. SIMMONS
	Division 02 Craven Co. Havelock PLAN DATE: June 2018 REVIEWED BY: T.R. Terrell PREPARED BY: J.A. Wagner REVIEWED BY: N.R. Simmons	2070 CONTROLLER 02-0649	
SCALE NONE	REVISIONS _____	INIT. _____	DATE _____

DocuSigned by:
 Natasha R. Simmons 12/7/2018
 FID480F3AD454
 SIGNATURE DATE
 CADD File name: R1015_SCP-75.dgn

CCTV-5
US 70 BUSINESS
EASTBOUND RAMP
1130' FROM US 70 BUSINESS

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



NOTES:

1. UNUSED FIBERS LEFT COILED AND STORED IN SPLICE TRAY.
2. UNUSED BUFFER TUBES LEFT COILED AND STORED IN SPLICE TRAY.
3. INCLUDE ON THE COVER OF EACH SPLICE TRAY THE FOLLOWING: REFERENCE SECTION 1731 "FIBER OPTIC SPLICE ENCLOSURE"

- (1) SPLICE
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- (4) NAME OF INDIVIDUAL PERFORMING THE SPLICING

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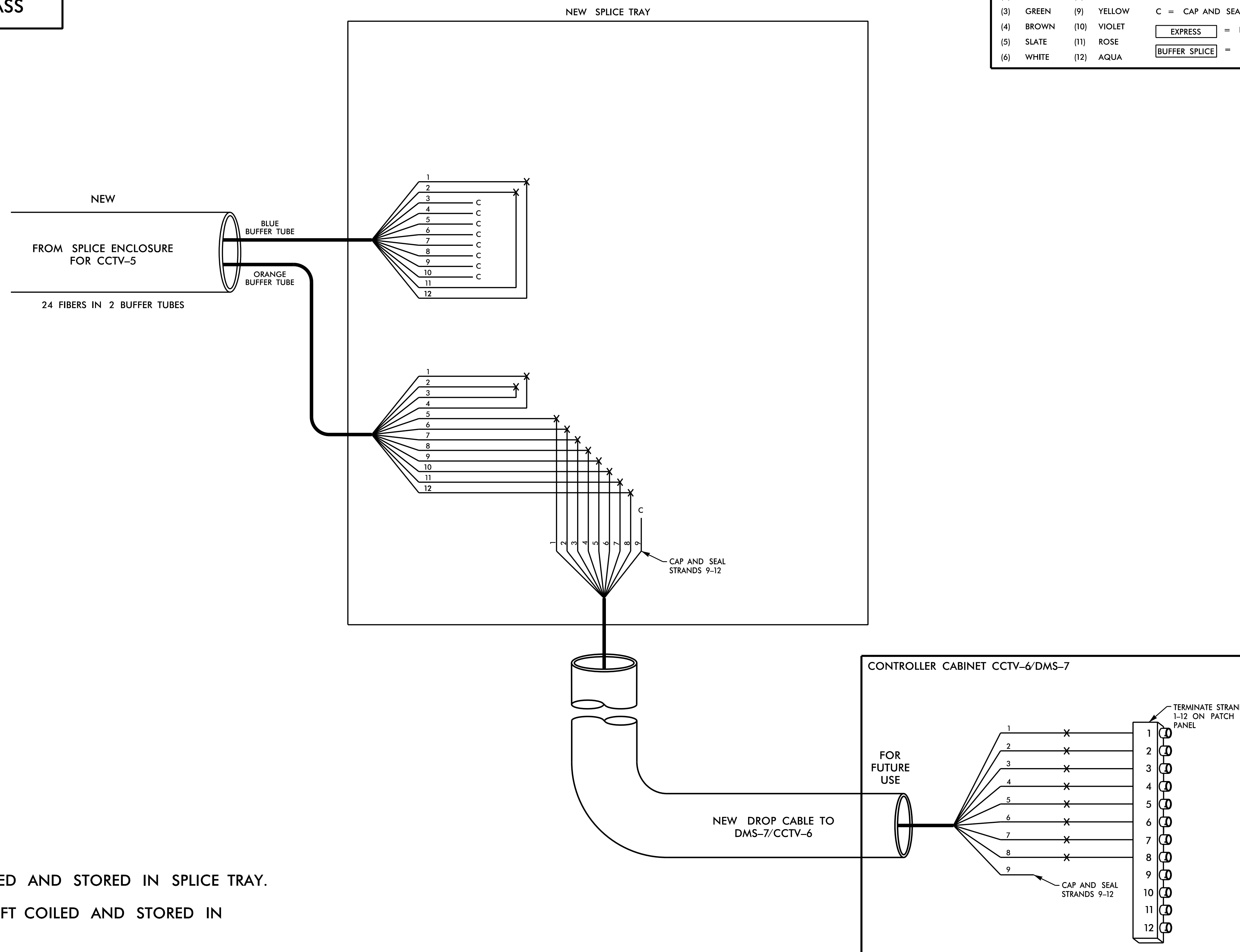
**DOCUMENT NOT CONSIDERED FINAL
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 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554
 (919) 548-8997

Plans Prepared for: 250 N. Greenfield Place, Garner, NC 27529	US 70 HAVELOCK BYPASS SPLICE DETAILS		SEAL SEAL NATASHA R. SIMMONS
	Division 02 Craven Co. Havelock PLAN DATE: June 2018 PREPARED BY: J.A. Wagner	REVIEWED BY: T.R. Terrell REVIEWED BY: N.R. Simmons	

CCTV-6/DMS-7
US 70 1½ MILE
EAST OF US 70 BYPASS

COLOR CODE TIA/EIA 598-C		LEGEND	
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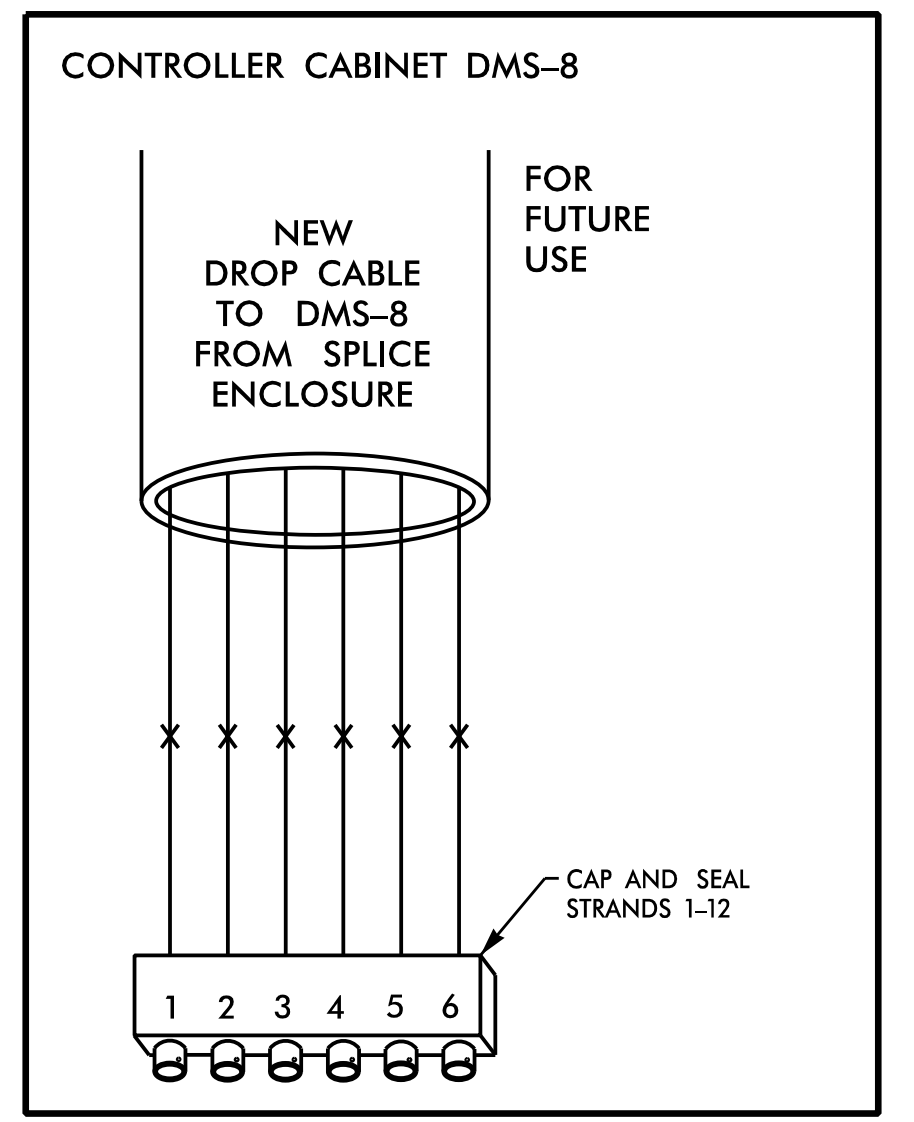
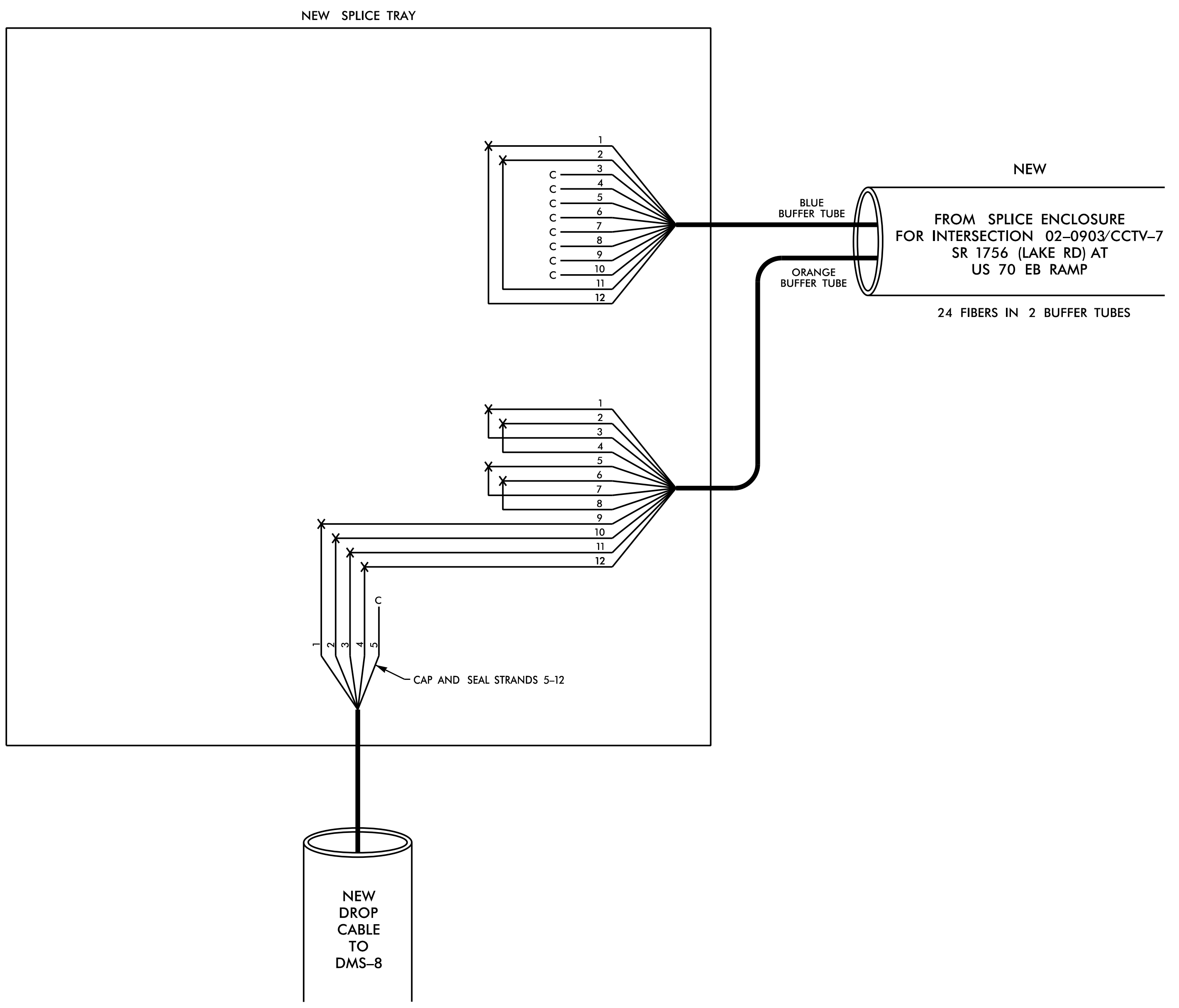
HNTB HNTB NORTH CAROLINA, P.C.
 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554
 (919) 548-8997

Plans Prepared for: 250 N. Greenfield Place, Garner, NC 27529	US 70 HAVELOCK BYPASS SPLICE DETAILS		 SEAL NORTH CAROLINA PROFESSIONAL ENGINEER NATASHA R. SIMMONS							
	Division 02 Craven Co. Havelock PLAN DATE: June 2018 REVIEWED BY: T.R. Terrell PREPARED BY: J.A. Wagner REVIEWED BY: N.R. Simmons	REVISIONS <table border="1"> <thead> <tr> <th>NO.</th> <th>REVISIONS</th> <th>INIT.</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		NO.	REVISIONS	INIT.	DATE			
NO.	REVISIONS	INIT.	DATE							

DocuSigned by:
 Natasha R Simmons 12/7/2018
 FID480F3AD464
 SIGNATURE DATE
 CADD File name: R1015_SCP-77.dgn

DMS-8
0.75 MILE WEST OF
INTERSECTION 02-0903

COLOR CODE TIA/EIA 598-C			LEGEND	
(1) BLUE	(7) RED	X = NEW FUSION SPLICE INDIVIDUAL FIBER		
(2) ORANGE	(8) BLACK	● = EXISTING FUSION SPLICE		
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(6) WHITE	(12) AQUA			



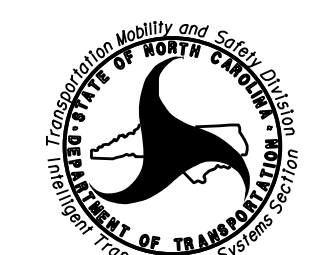
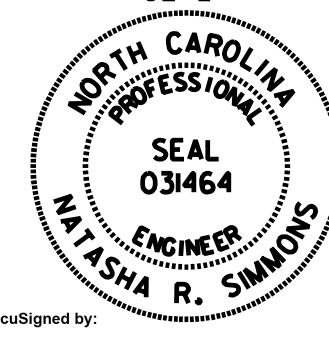
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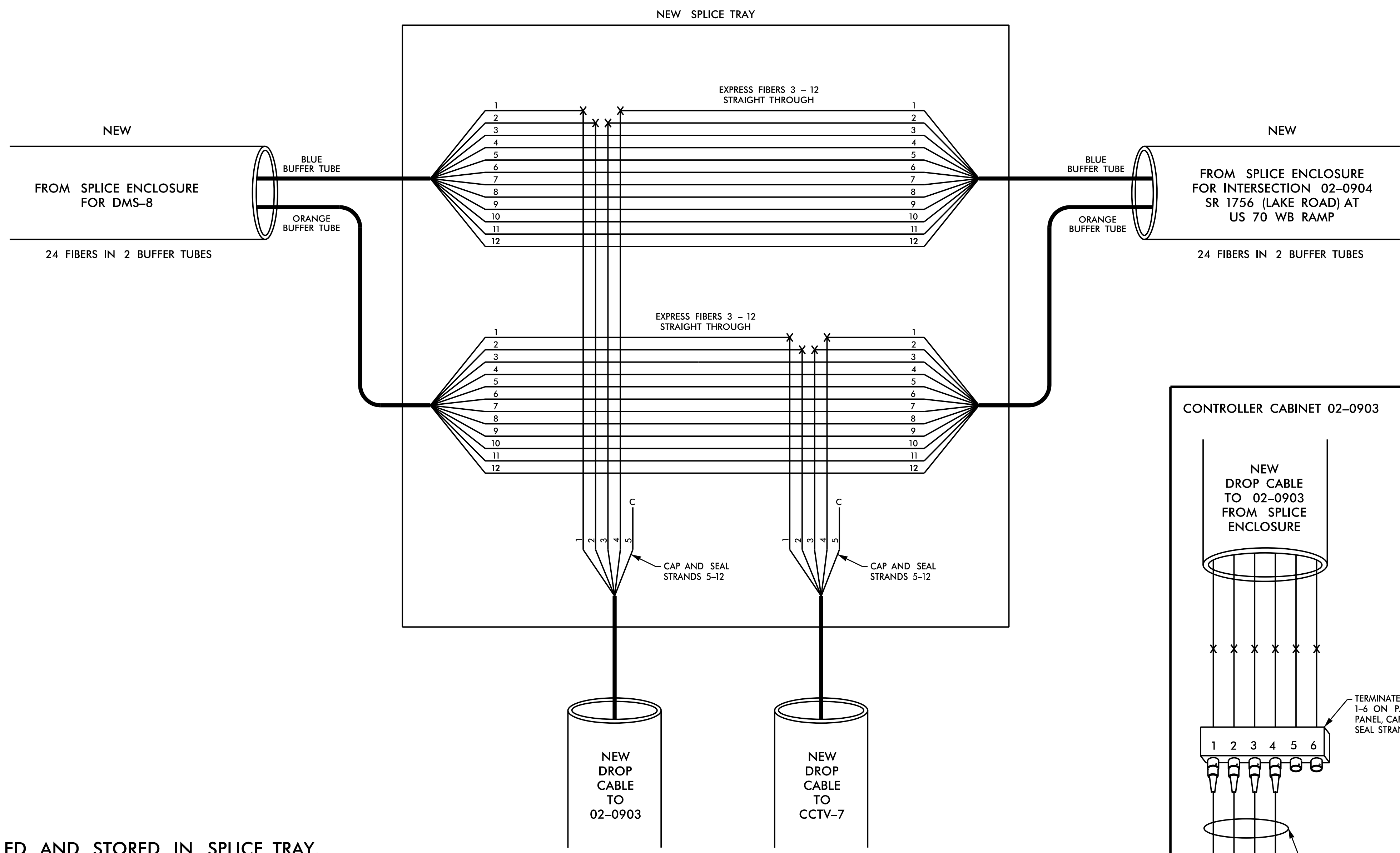
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343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554
(919) 548-8997

Plans Prepared for:  250 N. Greenfield Place, Garner, NC 27529		US 70 HAVELOCK BYPASS SPLICE DETAILS Division 02 Craven Co. Havelock PLAN DATE: June 2018 REVIEWED BY: T.R. Terrell PREPARED BY: J.A. Wagner REVIEWED BY: N.R. Simmons		SEAL  NATASHA R. SIMMONS ENGINEER
SCALE	NONE	REVISIONS	INIT.	DATE
		DocuSigned by: Natasha R. Simmons 12/7/2018 FID480F3AD45A SIGNATURE DATE		CADD File name: R1015_SCP-78.dgn

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UNLESS ALL SIGNATURES COMPLETED

02-0903/CCTV-7
SR 1756 (LAKE ROAD) AT
US 70 EB RAMP

COLOR CODE TIA/EIA 598-C			LEGEND	
(1) BLUE	(7) RED	X = NEW FUSION SPLICE INDIVIDUAL FIBER		
(2) ORANGE	(8) BLACK	● = EXISTING FUSION SPLICE		
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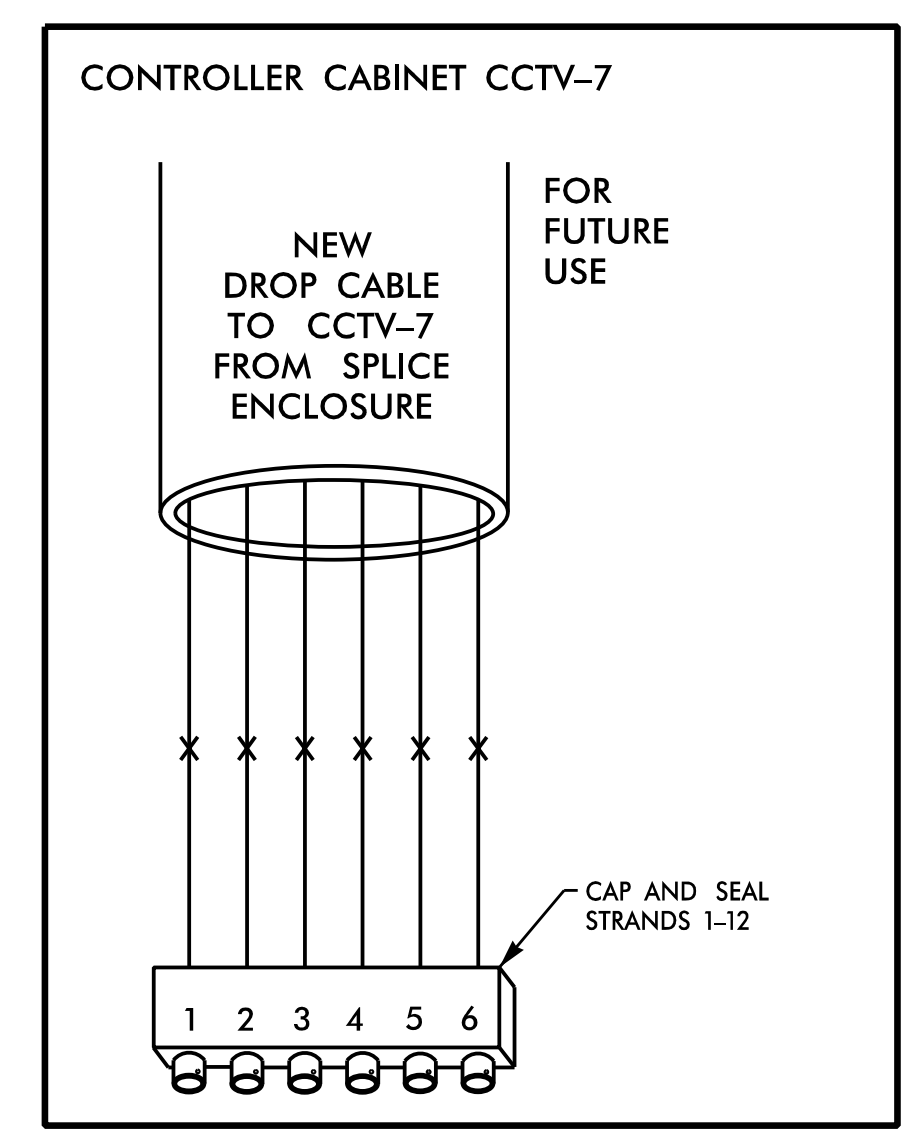
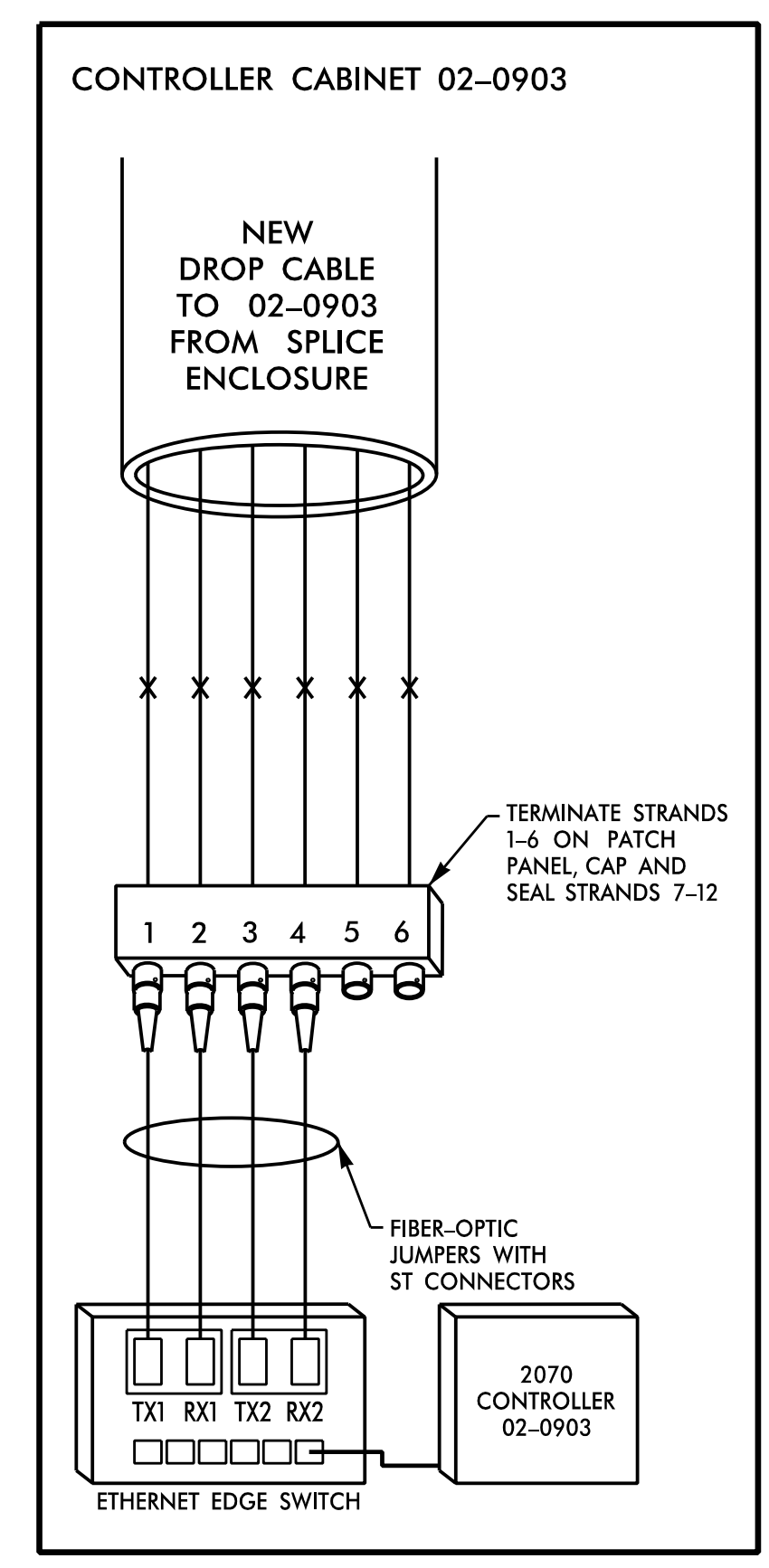
NOTES:

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3. ETHERNET SWITCH TERMINATION CONFIGURATIONS ARE GENERIC. CONTRACTOR IS RESPONSIBLE FOR DETERMINING / ENSURING PROPER TERMINATION.
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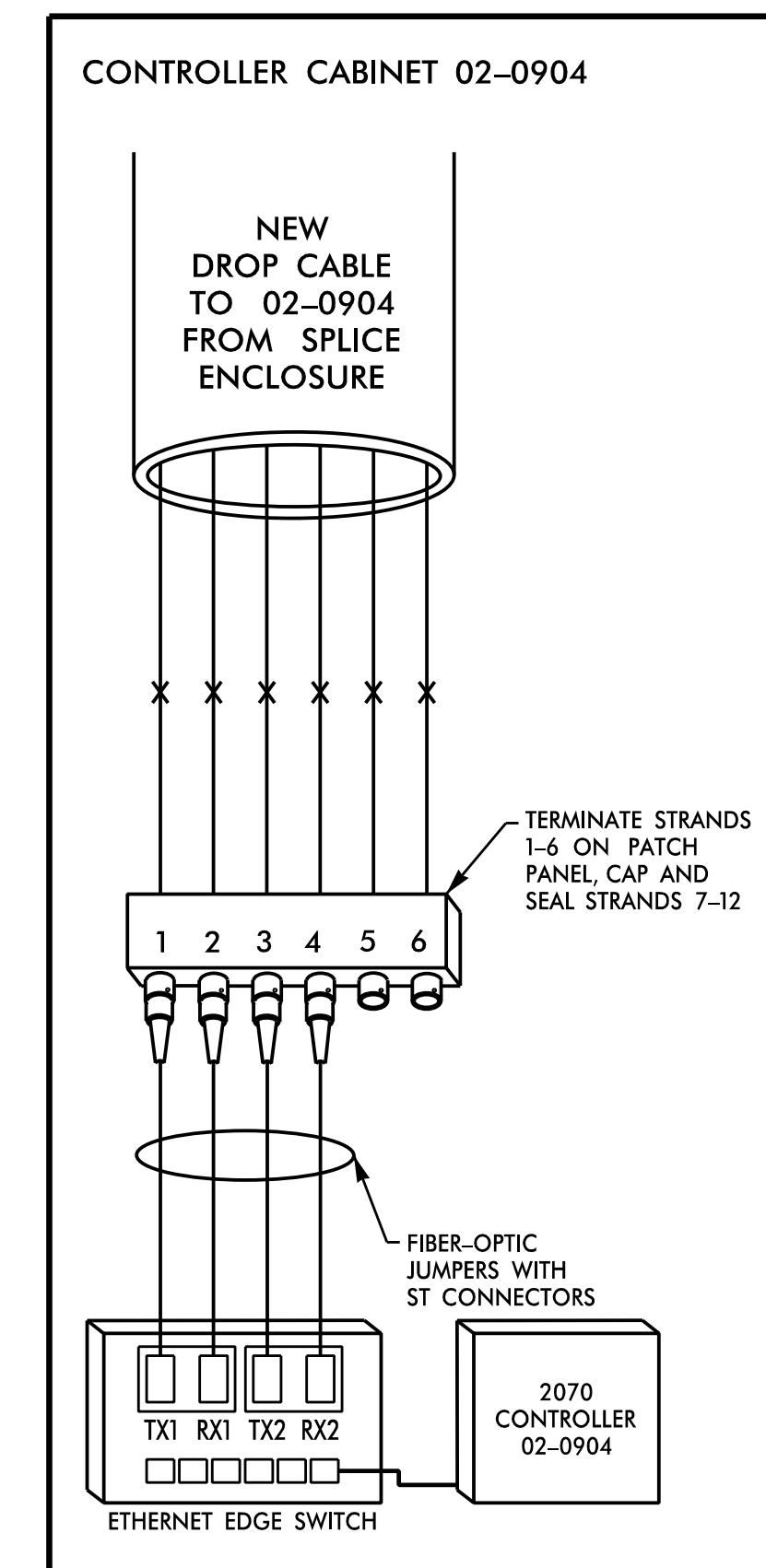
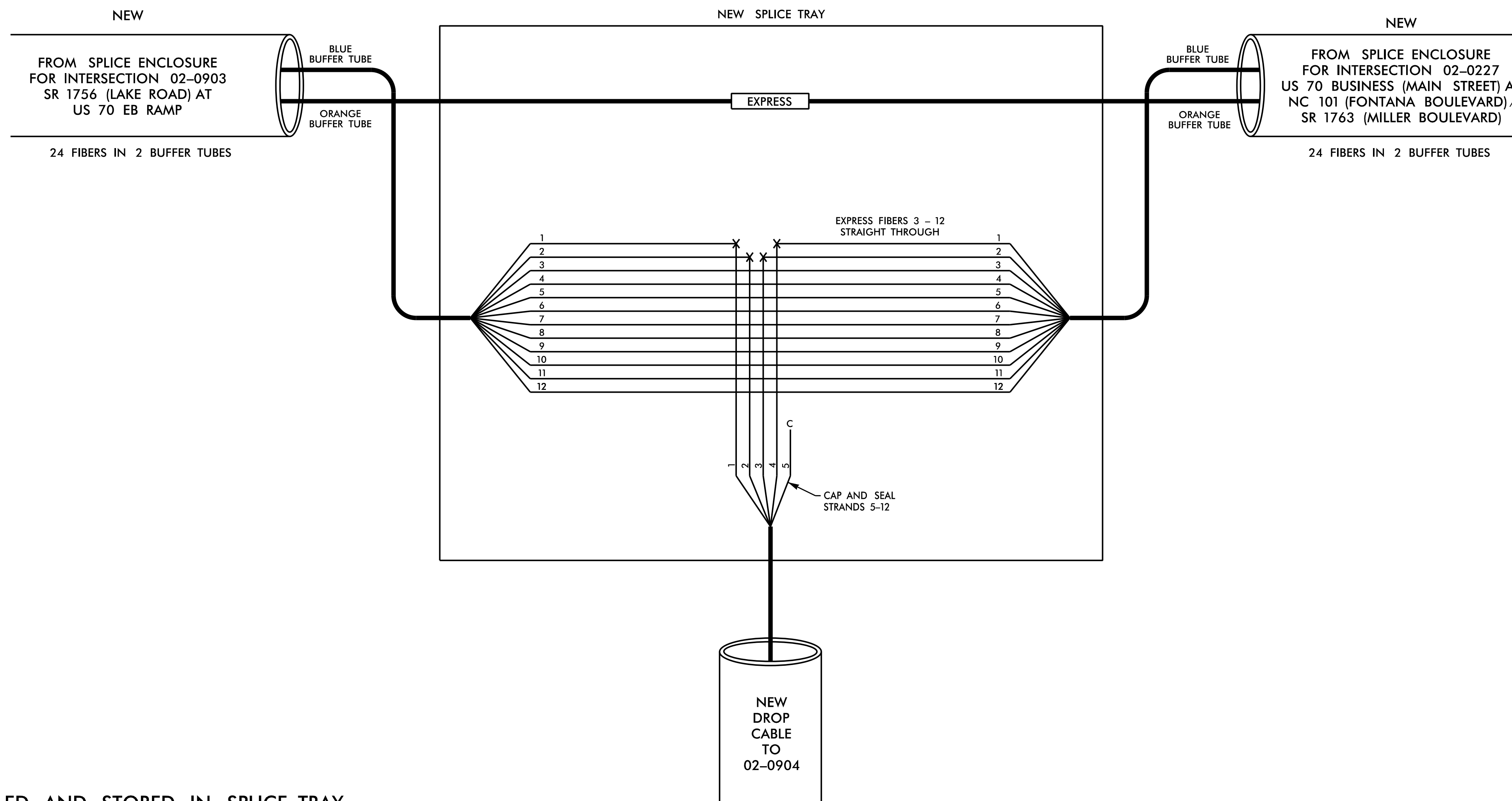


DOCUMENT NOT FOR CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

<p>Plans Prepared for:</p> <p>250 N. Greenfield Place, Garner, NC 27529</p>	<p>US 70 HAVELOCK BYPASS SPLICE DETAILS</p>		<p>SEAL</p> <p>SEAL 031464 NATASHA R. SIMMONS ENGINEER</p>								
	<p>Division 02 Craven Co. Havelock</p> <p>PLAN DATE: June 2018 REVIEWED BY: T.R. Terrell</p> <p>PREPARED BY: J.A. Wagner REVIEWED BY: N.R. Simmons</p>	<p>SCALE: NONE</p>									
<p>REVISIONS</p> <table border="1"> <thead> <tr> <th>NO.</th> <th>DESCRIPTION</th> <th>INIT.</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>				NO.	DESCRIPTION	INIT.	DATE				
NO.	DESCRIPTION	INIT.	DATE								
<p>DocuSigned by: <i>Natasha R. Simmons</i> 12/7/2018</p> <p>Signature: _____ Date: _____</p> <p>CADD File Name: R1015_SCP-79.dgn</p>											

02-0904
SR 1756 (LAKE ROAD) AT
US 70 WB RAMP

COLOR CODE TIA/EIA 598-C			LEGEND	
(1) BLUE	(7) RED	X = NEW FUSION SPLICE INDIVIDUAL FIBER		
(2) ORANGE	(8) BLACK	● = EXISTING FUSION SPLICE		
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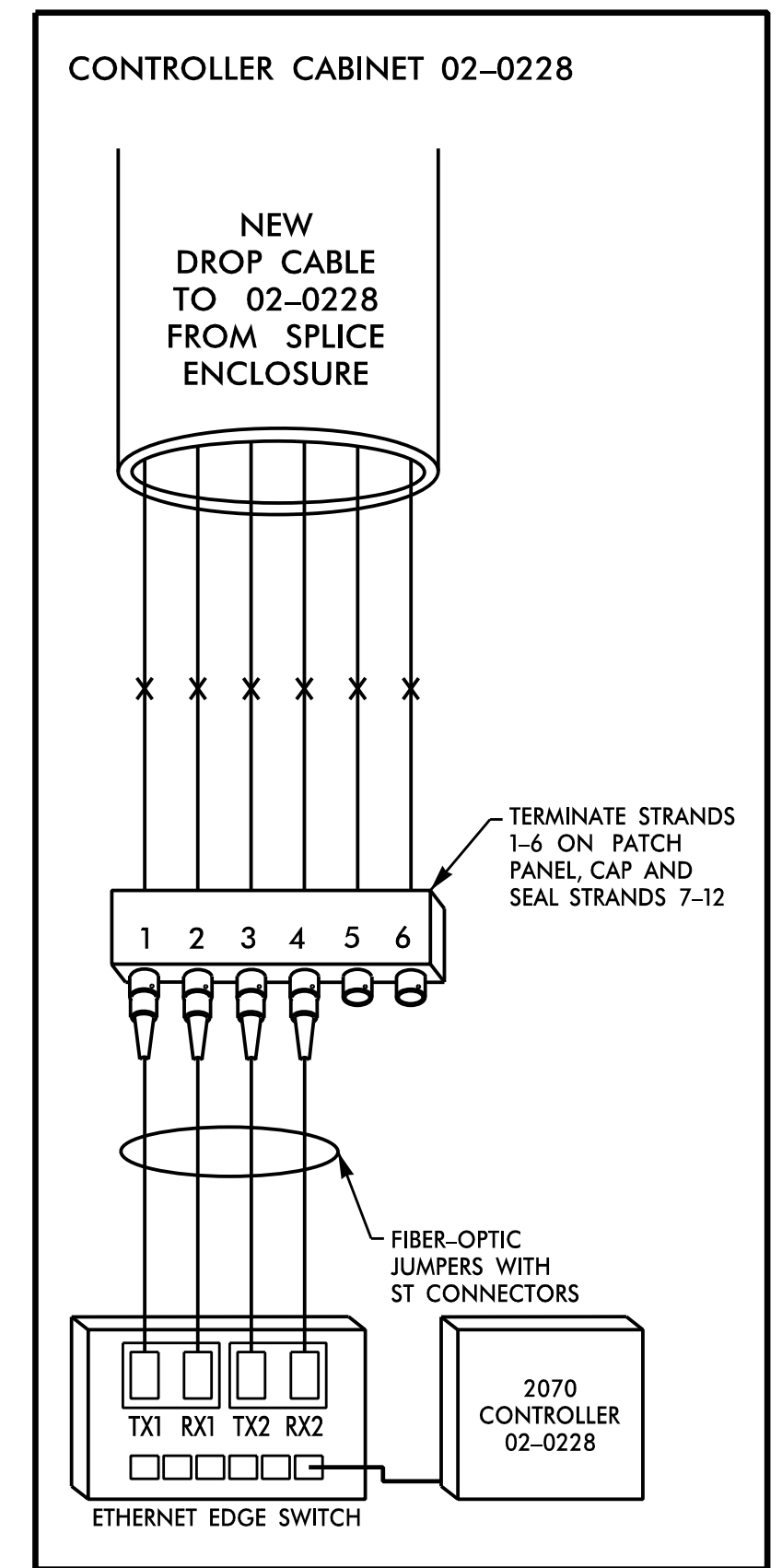
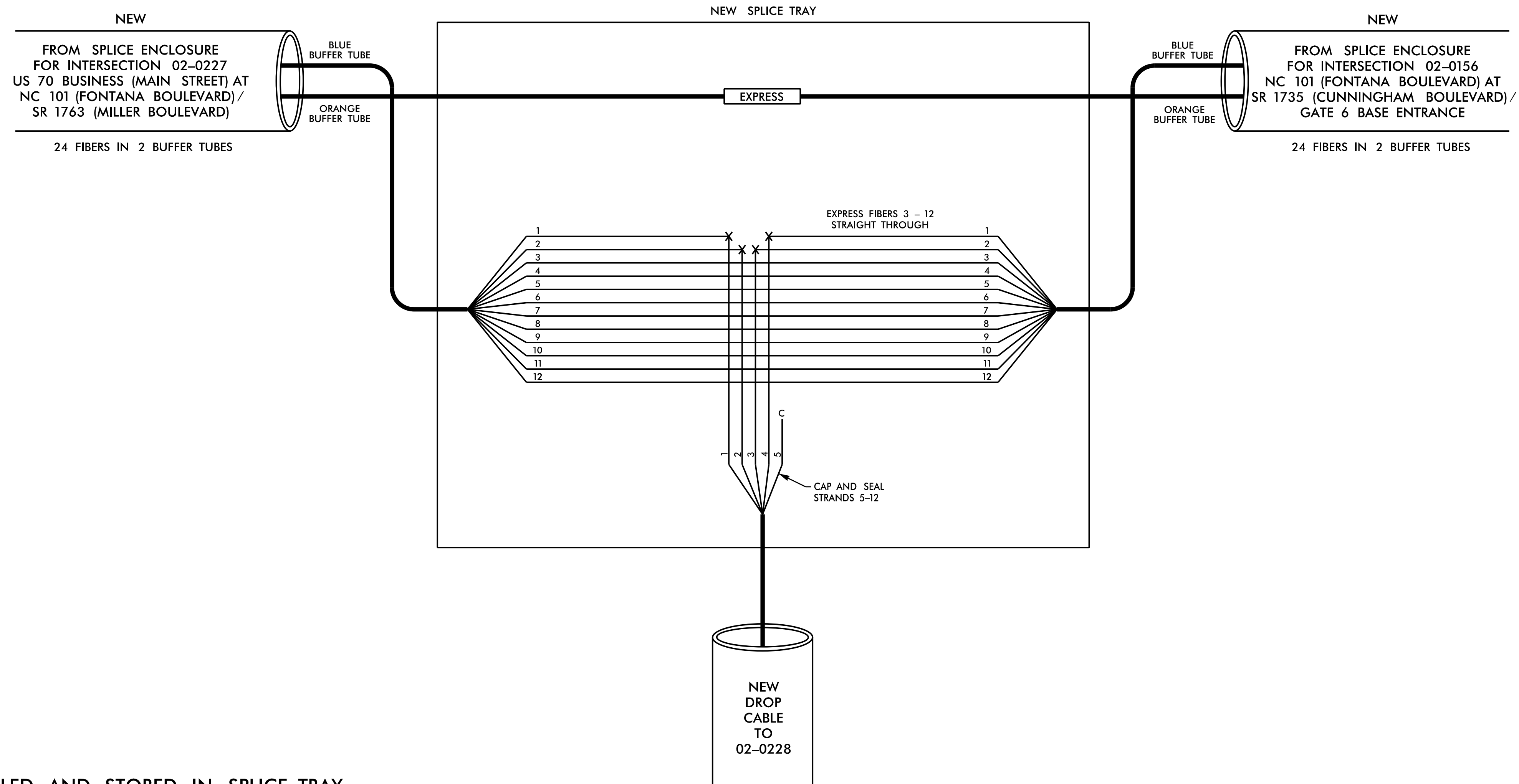
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

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343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554
(919) 548-8997

<p>Plans Prepared for:</p> <p>250 N. Greenfield Place, Garner, NC 27529</p>	<p>US 70 HAVELOCK BYPASS SPLICE DETAILS</p>		
	<p>Division 02 Craven Co. Havelock</p> <p>PLAN DATE: June 2018 REVIEWED BY: T.R. Terrell</p> <p>PREPARED BY: J.A. Wagner REVIEWED BY: N.R. Simmons</p>	<p>SCALE: NONE</p>	

02-0228
 NC 101 (FONTANA BOULEVARD) AT
 SR 1737 (ROOSEVELT BOULEVARD) /
 BASE ENTRANCE

COLOR CODE TIA/EIA 598-C			LEGEND	
(1) BLUE	(7) RED	X = NEW FUSION SPLICE INDIVIDUAL FIBER		
(2) ORANGE	(8) BLACK	● = EXISTING FUSION SPLICE		
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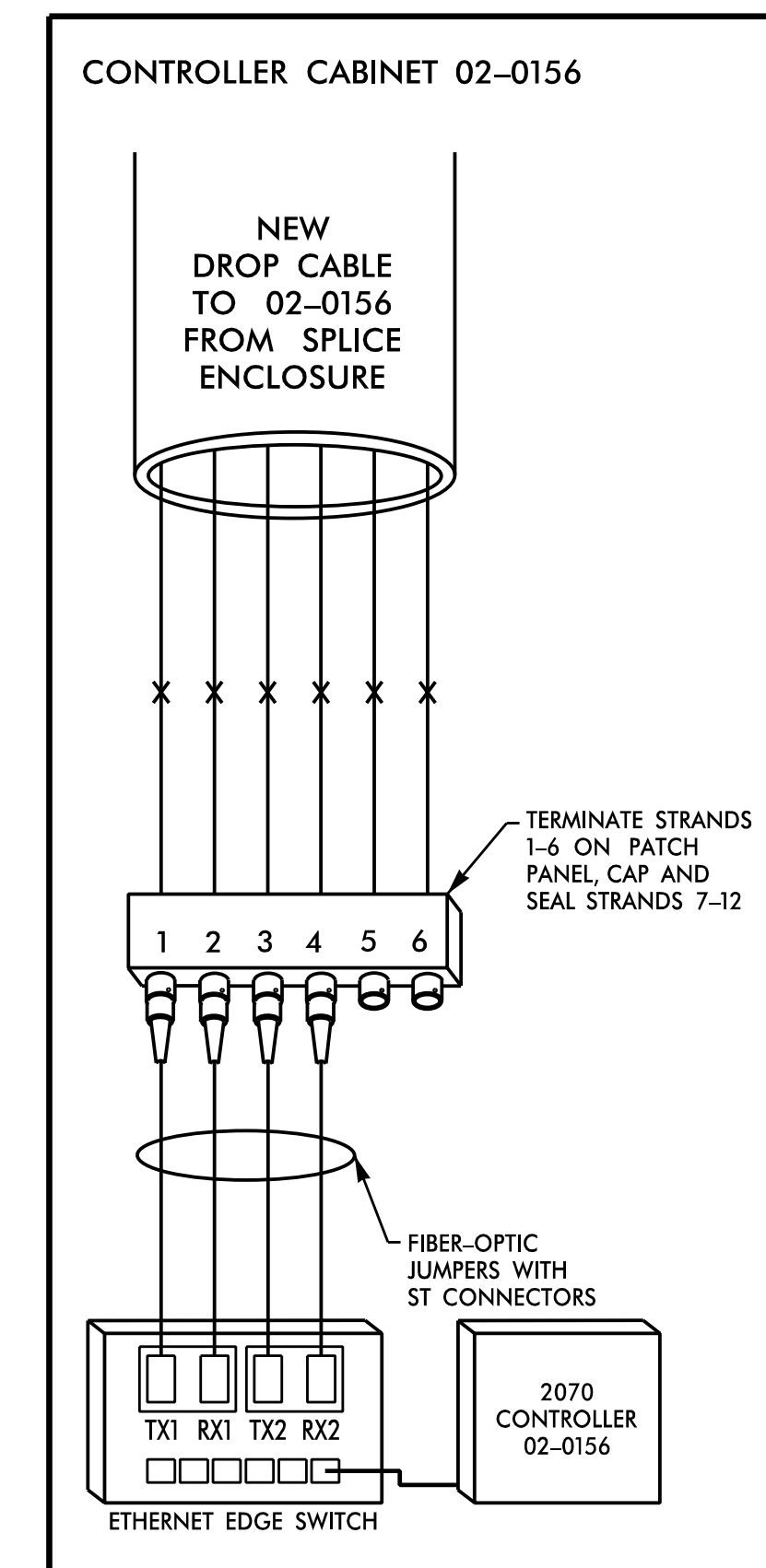
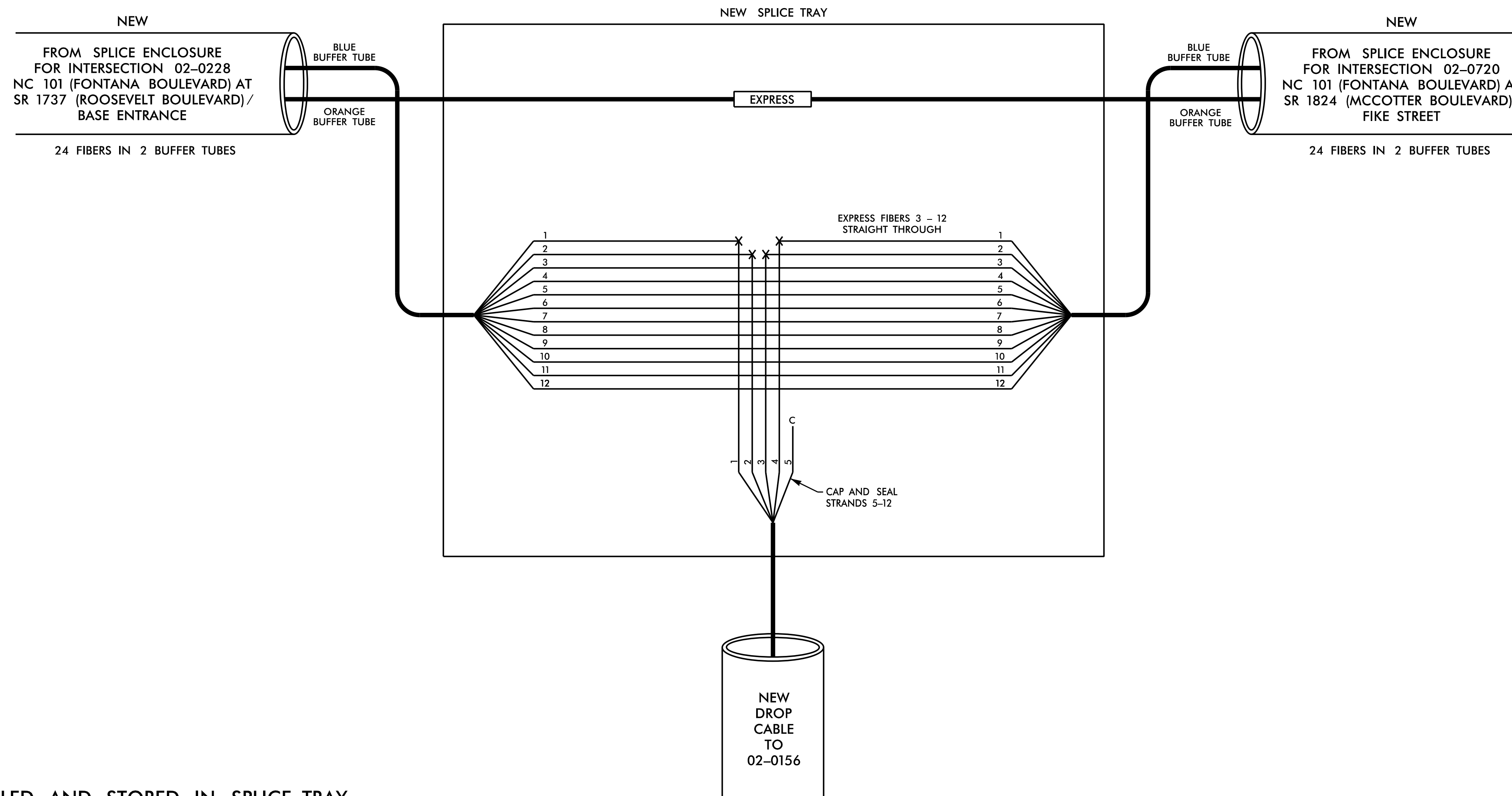
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 NC License No: C-1554
 (919) 548-8997

Plans Prepared for: 250 N. Greenfield Place, Garner, NC 27529	US 70 HAVELOCK BYPASS SPLICE DETAILS		SEAL SEAL NATASHA R. SIMMONS
	Division 02 Craven Co. Havelock PLAN DATE: June 2018 REVIEWED BY: T.R. Terrell PREPARED BY: J.A. Wagner REVIEWED BY: N.R. Simmons	SCALE: NONE REVISIONS: _____ INITI. DATE: _____	
DocuSigned by: Natasha R. Simmons 12/7/2018 FID480F3AD454 SIGNATURE DATE CADD File name: R1015_SCP-81.dgn			

02-0156
 NC 101 (FONTANA BOULEVARD) AT
 SR 1735 (CUNNINGHAM BOULEVARD)/
 GATE 6 BASE ENTRANCE

COLOR CODE TIA/EIA 598-C			LEGEND	
(1) BLUE	(7) RED	X = NEW FUSION SPLICE INDIVIDUAL FIBER		
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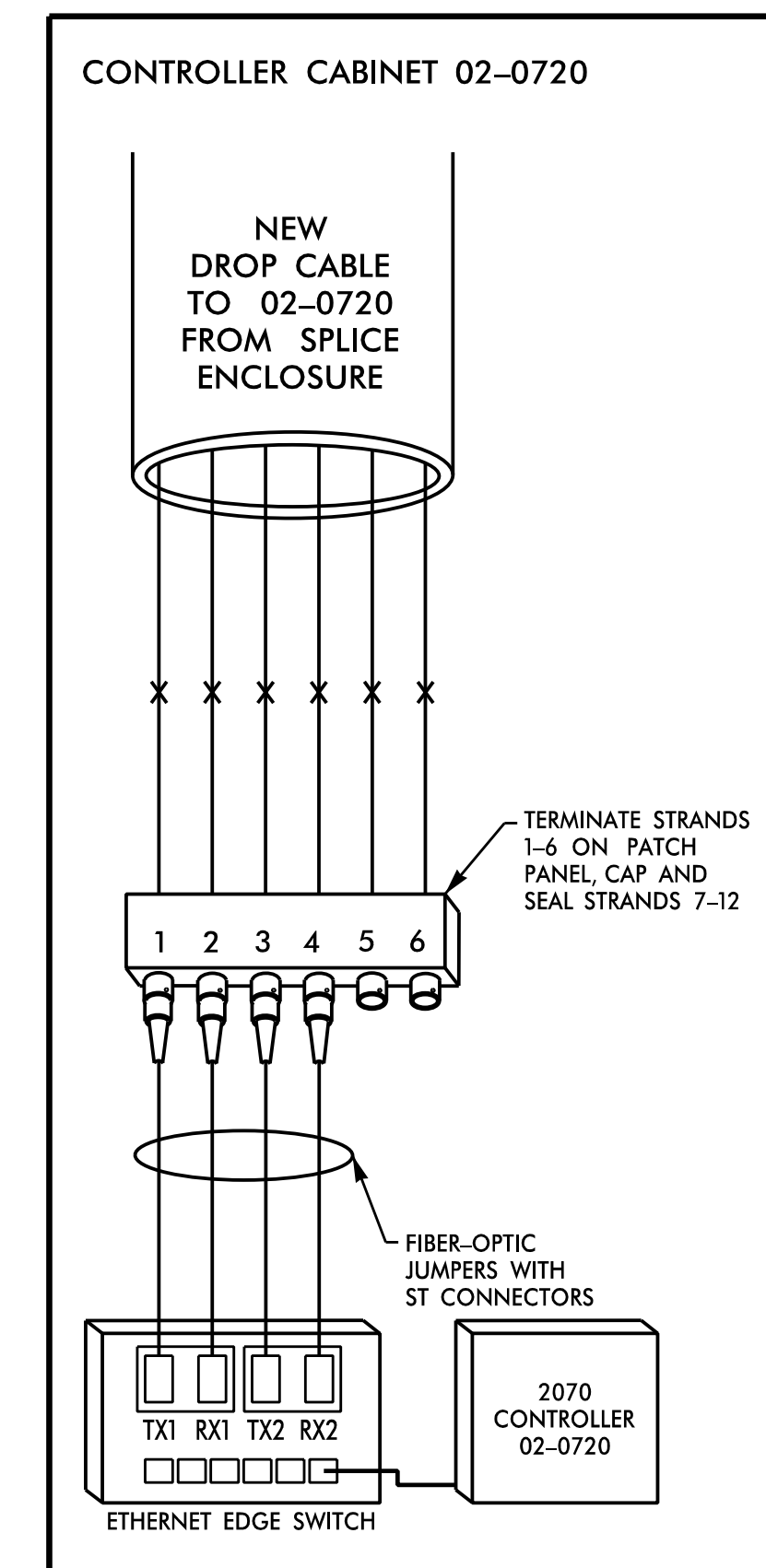
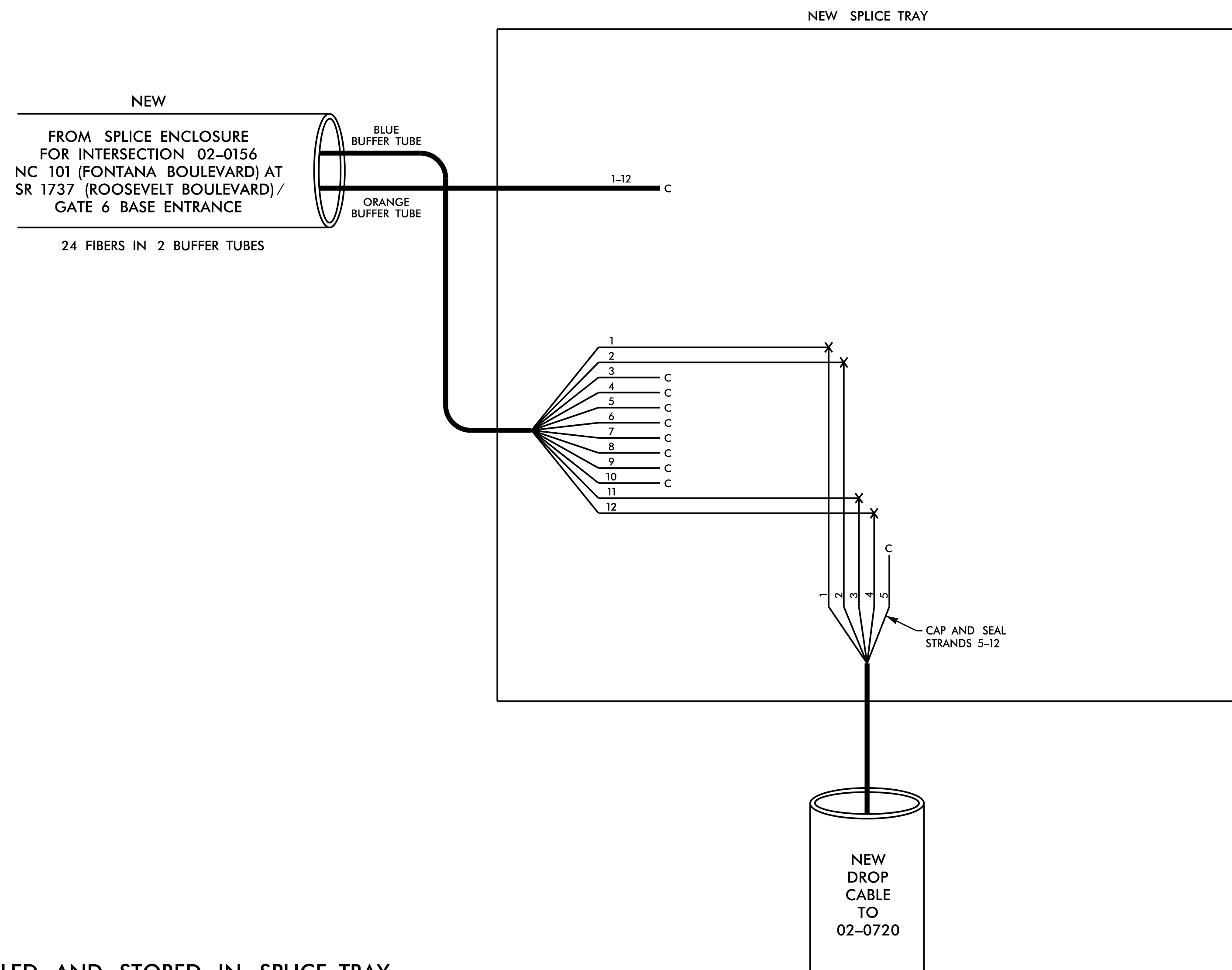
HNTB HNTB NORTH CAROLINA, P.C.
 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554
 (919) 548-8997

Plans Prepared for: 250 N. Greenfield Place, Garner, NC 27529		US 70 HAVELOCK BYPASS SPLICE DETAILS		SEAL NATASHA R. SIMMONS ENGINEER
Division 02 Craven Co. Havelock		PLAN DATE: June 2018 REVIEWED BY: T.R. Terrell		DocuSigned by: Natasha R. Simmons 12/7/2018 FID480F3AD4454 SIGNATURE DATE CADD File name: R1015_SCP-82.dgn
PREPARED BY: J.A. Wagner REVIEWED BY: N.R. Simmons		REVISIONS INIT. DATE		
SCALE: NONE				

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

02-0720
 NC 101 (FONTANA BOULEVARD) AT
 SR 1824 (MCCOTTER BOULEVARD) /
 FIKE ST

COLOR CODE TIA/EIA 598-C		LEGEND	
(1) BLUE	(7) RED	X = NEW FUSION SPLICE INDIVIDUAL FIBER	
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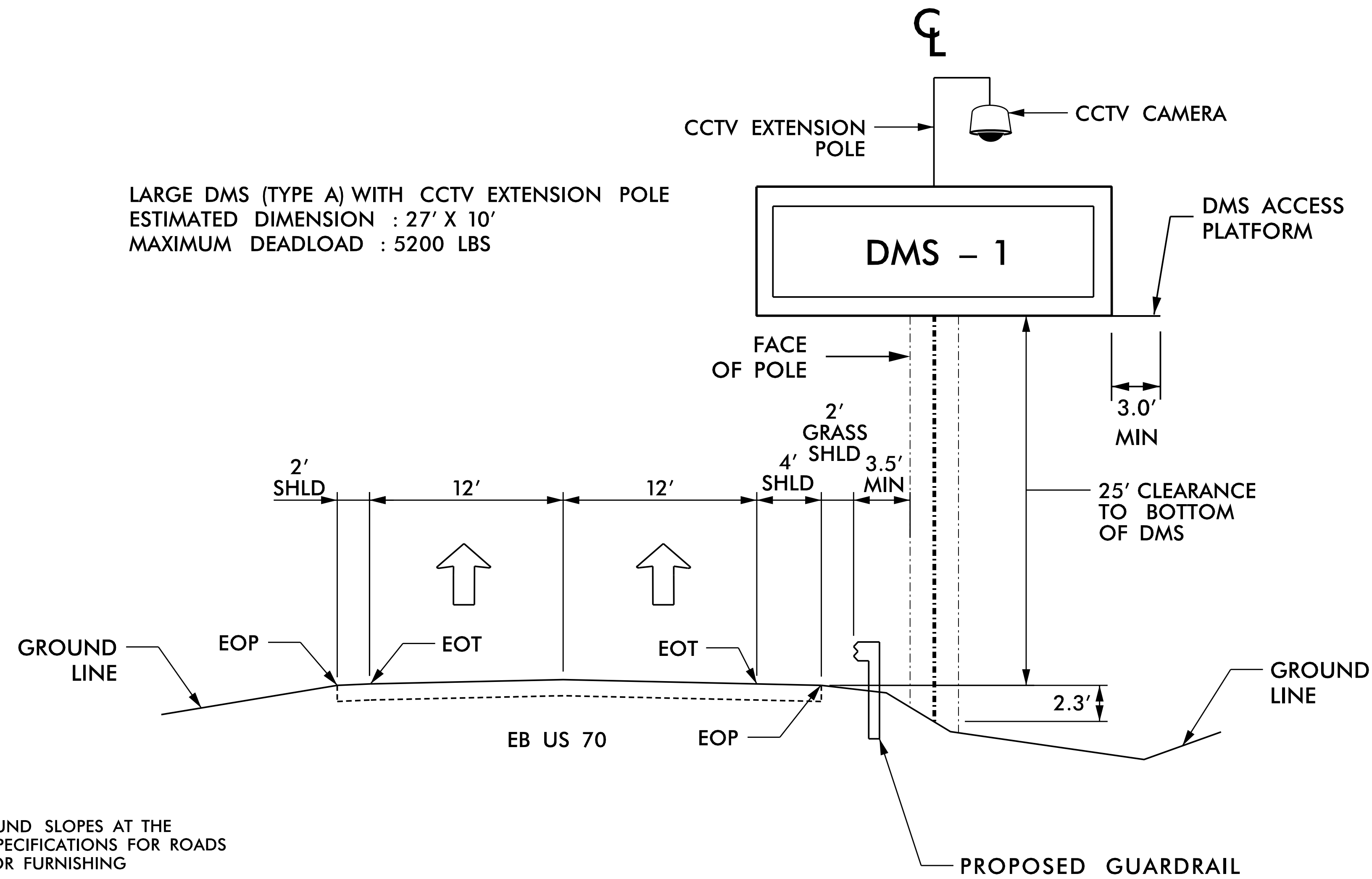
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 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554
 (919) 548-8997

Plans Prepared for: 250 N. Greenfield Pkwy., Garner, NC 27529	US 70 HAVELOCK BYPASS SPLICE DETAILS		SEAL SEAL 031464 NATASHA R. SIMMONS
	Division 02 PLAN DATE: June 2018 PREPARED BY: J.A. Wagner	Craven Co. REVIEWED BY: T.R. Terrell REVIEWED BY: N.R. Simmons	
SCALE NONE	REVISIONS	INIT. DATE	DocuSigned by: Natasha R. Simmons 12/7/2018 FEID480F3AD4454 SIGNATURE DATE CADD File name: R1015 SCP-83.dgn




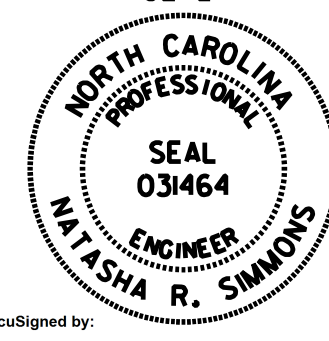
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 MAXIMUM DEADLOAD : 5200 LBS

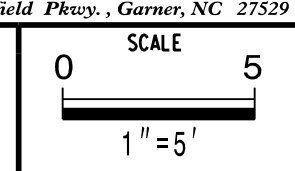
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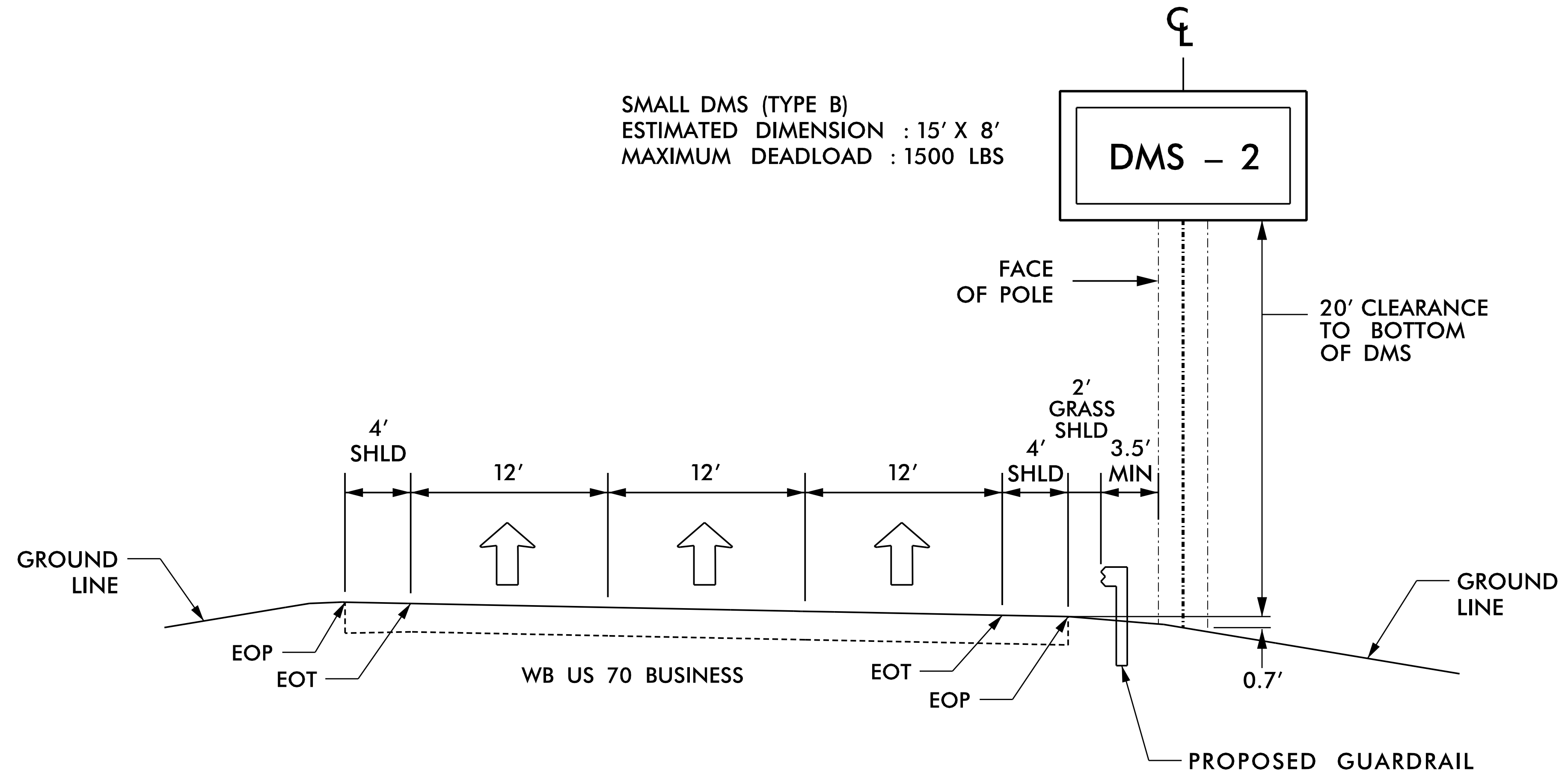
1. FIELD VERIFY ALL FOOTING ELEVATIONS AND GROUND SLOPES AT THE FOOTING USING THE LATEST NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES. CONTRACTOR IS RESPONSIBLE FOR FURNISHING ELEVATION DRAWINGS FOR ENGINEER'S APPROVAL.
2. PROVIDE A FIXED LADDER LEADING TO THE ACCESS PLATFORM.
3. EQUIP THE LADDER WITH A SECURITY COVER (LADDER GUARD) AND LOCK. START THE FIRST LADDER RUNG NO MORE THAN 18 INCHES ABOVE A CONCRETE LANDING PAD. DESIGN RUNGS ON 12 INCH CENTER-TO-CENTER TYPICAL SPACING.
4. INSTALL A LEVEL CONCRETE LANDING PAD MEASURING A MINIMUM 4 INCHES DEEP, 24 INCHES WIDE, AND 36 INCHES LONG DIRECTLY BENEATH THE LADDER.
5. USE ACTUAL DIMENSIONS AND WEIGHT OF THE DMS TO COMPLETE THE DESIGN OF THE DMS STRUCTURE.
6. ENSURE THAT THE TOP OF THE FOOTING EXTENDS AT LEAST 6 INCHES AND NOT MORE THAN 24 INCHES ABOVE THE HIGHEST POINT OF THE GROUND SURFACE AT THE FOOTING.
7. DESIGN AND CONSTRUCT THE PEDESTAL STRUCTURE AND DMS ENCLOSURE TO WITHSTAND WIND VELOCITIES OF 130 MPH.
8. VERIFY ALL UNDERGROUND UTILITY LOCATIONS BEFORE BEGINNING ANY UNDERGROUND WORK. DO NOT DAMAGE ANY EXISTING UTILITIES OR NCDOT CABLES DURING CONSTRUCTION.
9. DESIGN THE STRUCTURE TO ACCOMODATE THE INSTALLATION OF THE DMS WITH A CCTV CAMERA EXTENSION POLE AS DESCRIBED IN THE PROJECT SPECIAL PROVISIONS.

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 Raleigh, North Carolina 27609
 NC License No: C-1554
 (919) 546-8997

Plans Prepared for:  250 N. Greenfield Place, Garner, NC 27529	US 70 HAVELOCK BYPASS DMS-1 ELEVATION		SEAL  SEAL 031464 NATASHA R. SIMMONS ENGINEER
	Division 02 Craven Co. Havelock PLAN DATE: August 2018 PREPARED BY: A.H. Thornburg	REVIEWED BY: T.R. Terrell REVIEWED BY: N.R. Simmons	



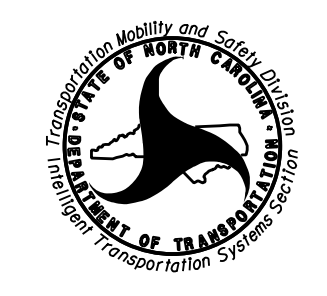



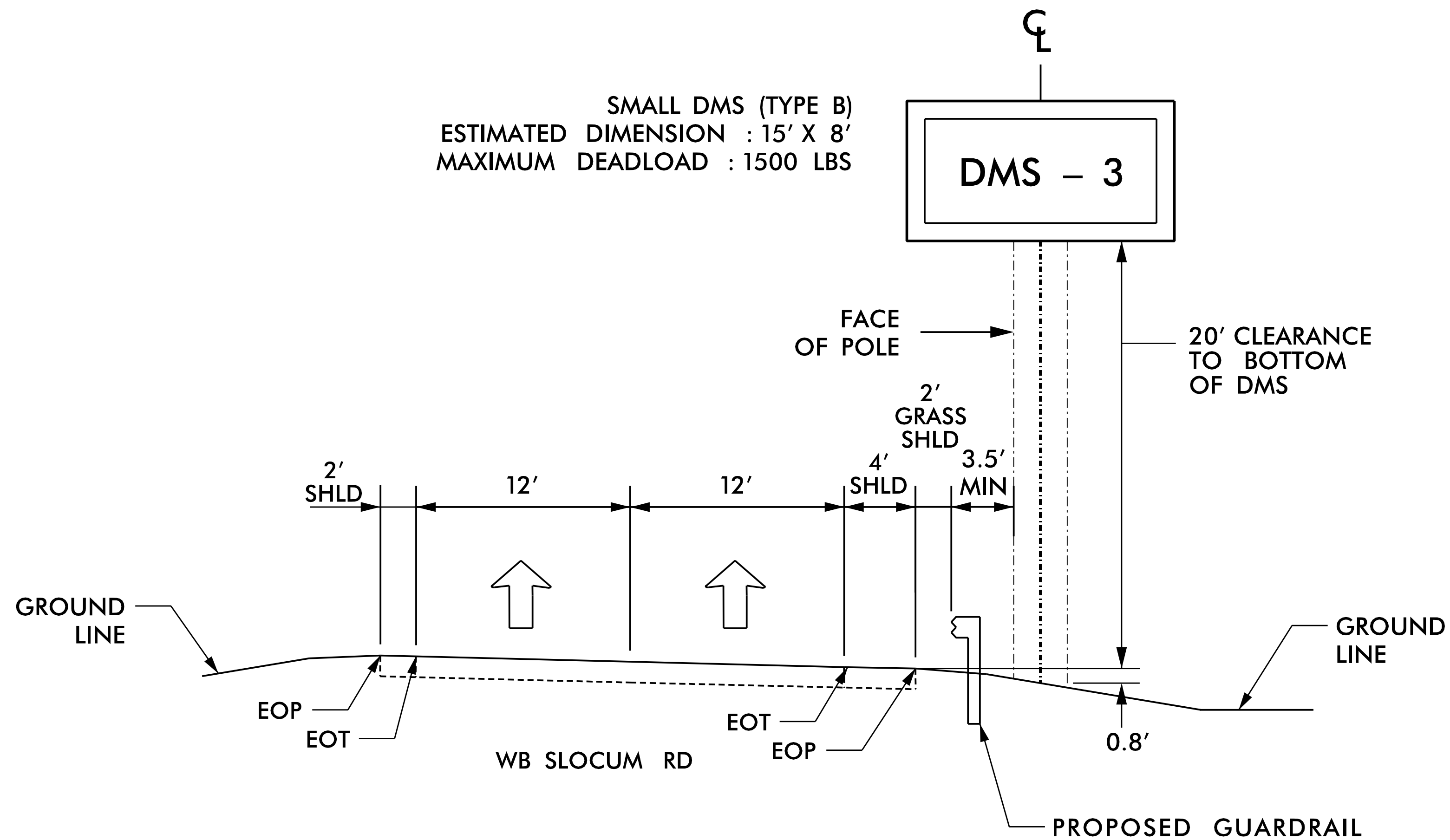
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<p>Plans Prepared for:</p>  <p>250 N. Greenfield Place, Garner, NC 27529</p>	<p>US 70 HAVELOCK BYPASS DMS-2 ELEVATION</p>		<p>SEAL</p>  <p>SEAL 031464 ENGINEER NATASHA R. SIMMONS</p>							
	<p>Division 02 Craven Co. Havelock</p> <p>PLAN DATE: August 2018 REVIEWED BY: T.R. Terrell</p> <p>PREPARED BY: N.C. Harmon REVIEWED BY: N.R. Simmons</p>	<p>REVISIONS</p> <table border="1"> <thead> <tr> <th>NO.</th> <th>DESCRIPTION</th> <th>INIT.</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		NO.	DESCRIPTION	INIT.	DATE			
NO.	DESCRIPTION	INIT.	DATE							



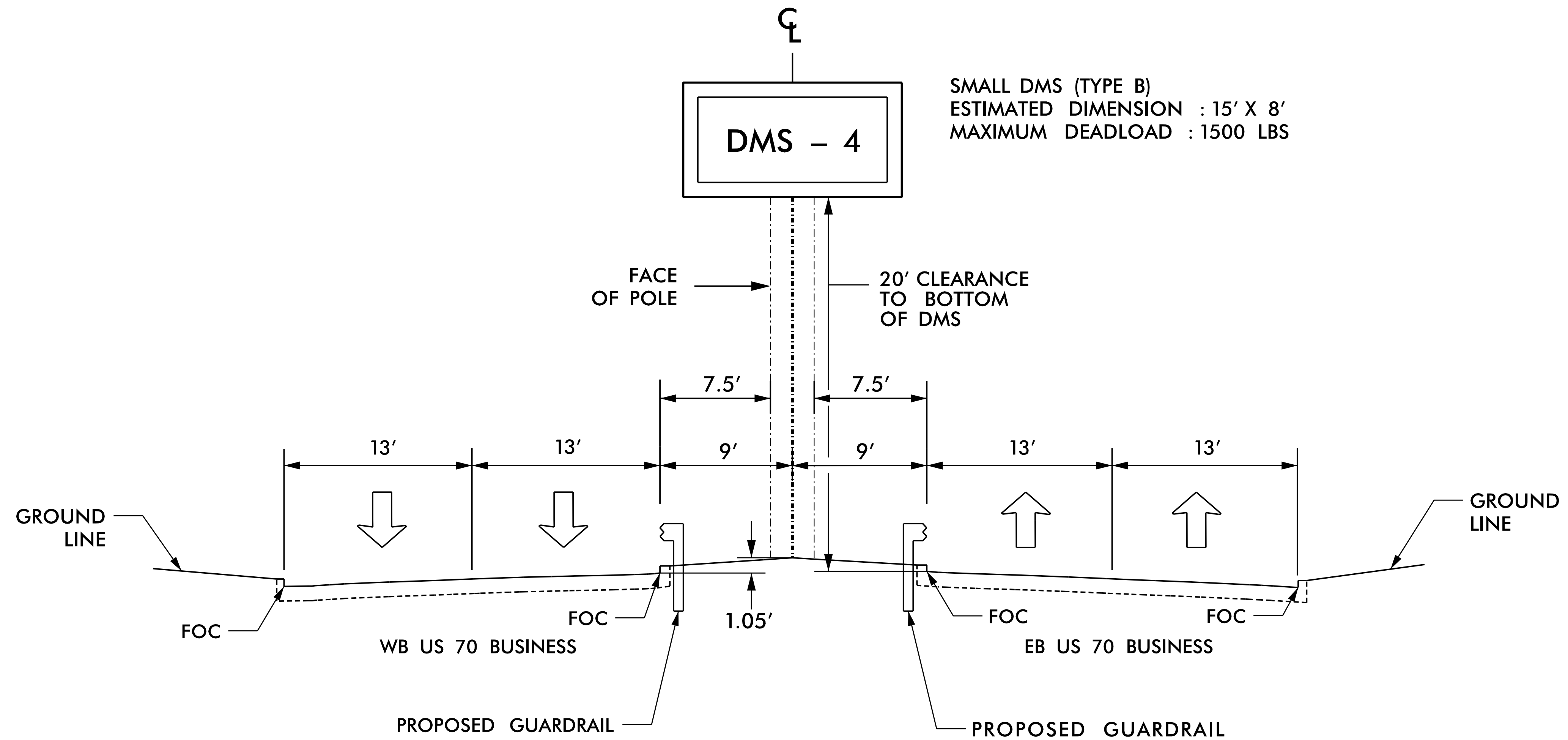
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	US 70 HAVELOCK BYPASS DMS-3 ELEVATION		SEAL
	Division 02 Craven Co. Havelock		
PLAN DATE: August 2018	REVIEWED BY: T.R. Terrell		
PREPARED BY: N.C. Harmon	REVIEWED BY: N.R. Simmons		
SCALE 0 5 1" = 5'	REVISIONS	INIT. DATE	DocuSigned by: Natasha R. Simmons 12/7/2018 SEAL SIGNATURE DATE
CADD Filename: R1015 scp_84-91.dgn			



SMALL DMS (TYPE B)
 ESTIMATED DIMENSION : 15' X 8'
 MAXIMUM DEADLOAD : 1500 LBS

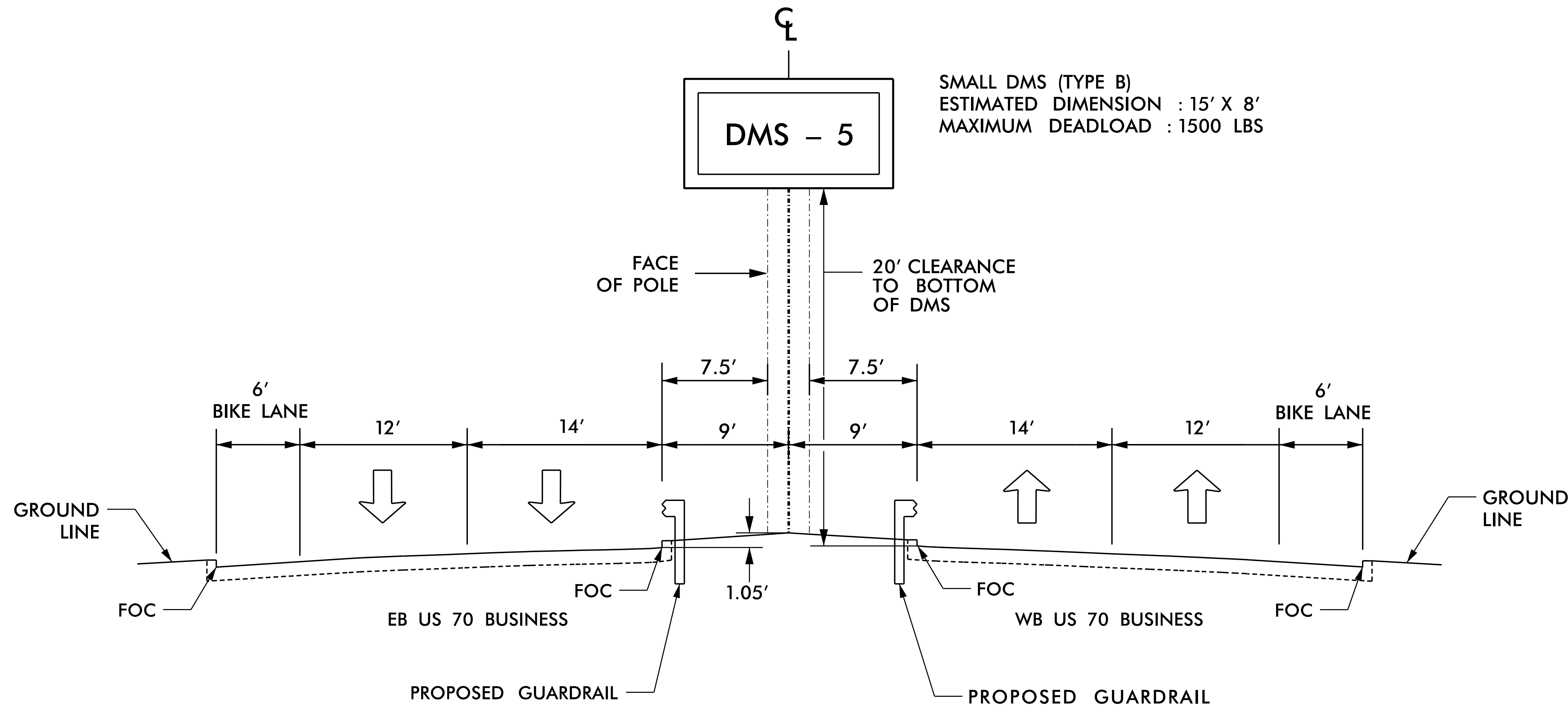
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	US 70 HAVELOCK BYPASS DMS-4 ELEVATION		
	Division 02 Craven Co. Havelock	PLAN DATE: August 2018 REVIEWED BY: T.R. Terrell	
250 N. Greenfield Place, Garner, NC 27529	PREPARED BY: N.C. Harmon	REVIEWED BY: N.R. Simmons	DocuSigned by: Natasha R. Simmons 12/7/2018 SEAL SIGNATURE DATE
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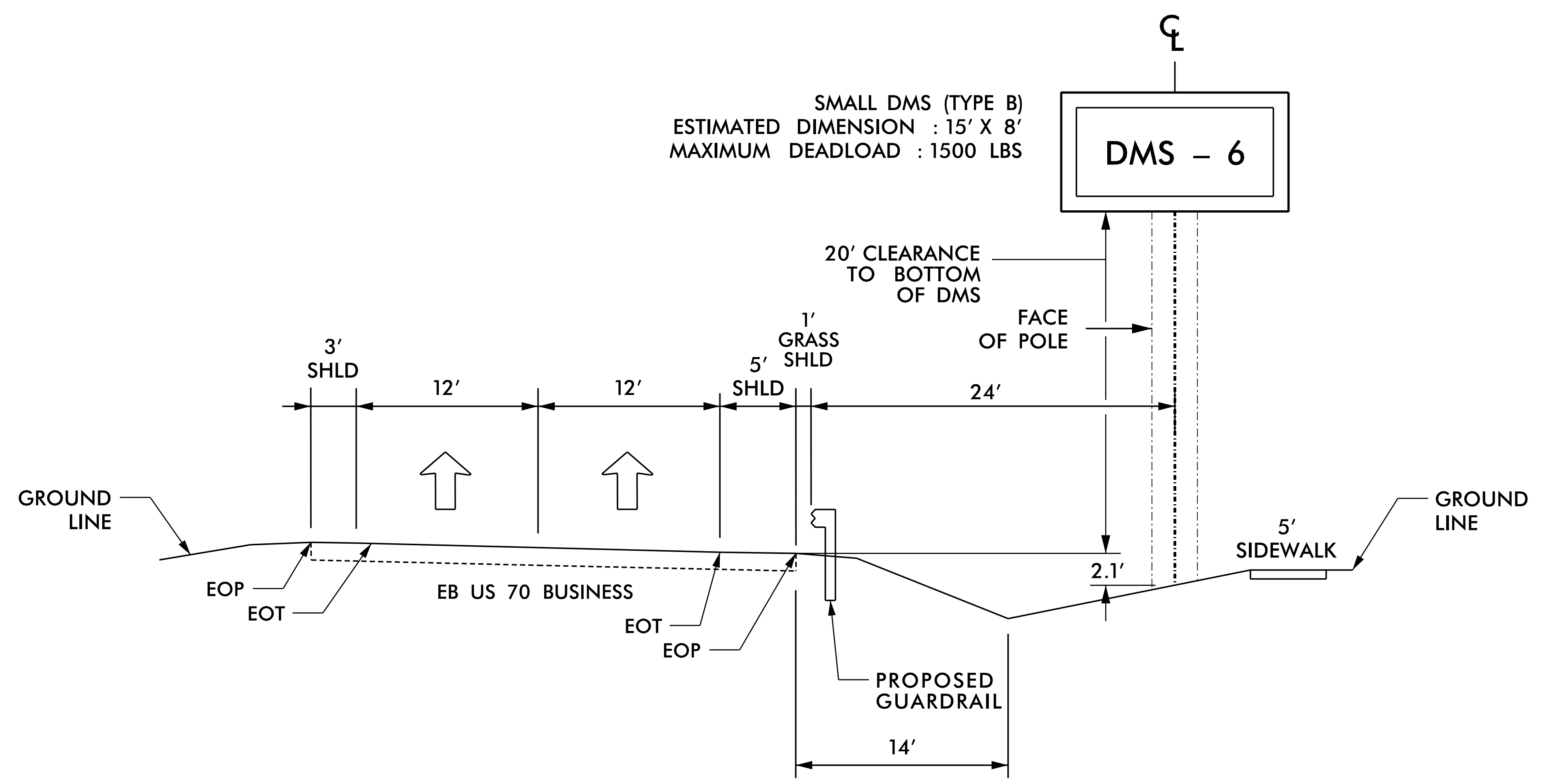
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Plans Prepared for: 250 N. Greenfield Place, Garner, NC 27529	US 70 HAVELOCK BYPASS DMS-5 ELEVATION		SEAL NATASHA R. SIMMONS ENGINEER SEAL 031464
	Division 02 PLAN DATE: August 2018 PREPARED BY: A.H. Thornburg	Craven Co. Havelock REVIEWED BY: T.R. Terrell REVIEWED BY: N.R. Simmons	

DocuSigned by:
 Natasha R. Simmons 12/7/2018
 CADD Filename: R1015 scp. 84-91.dgn

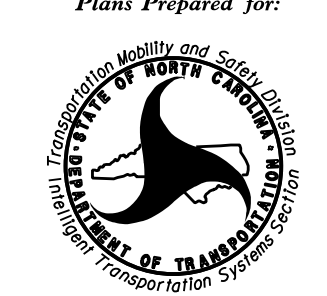
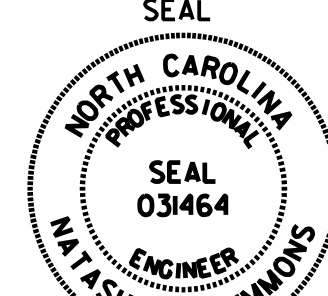


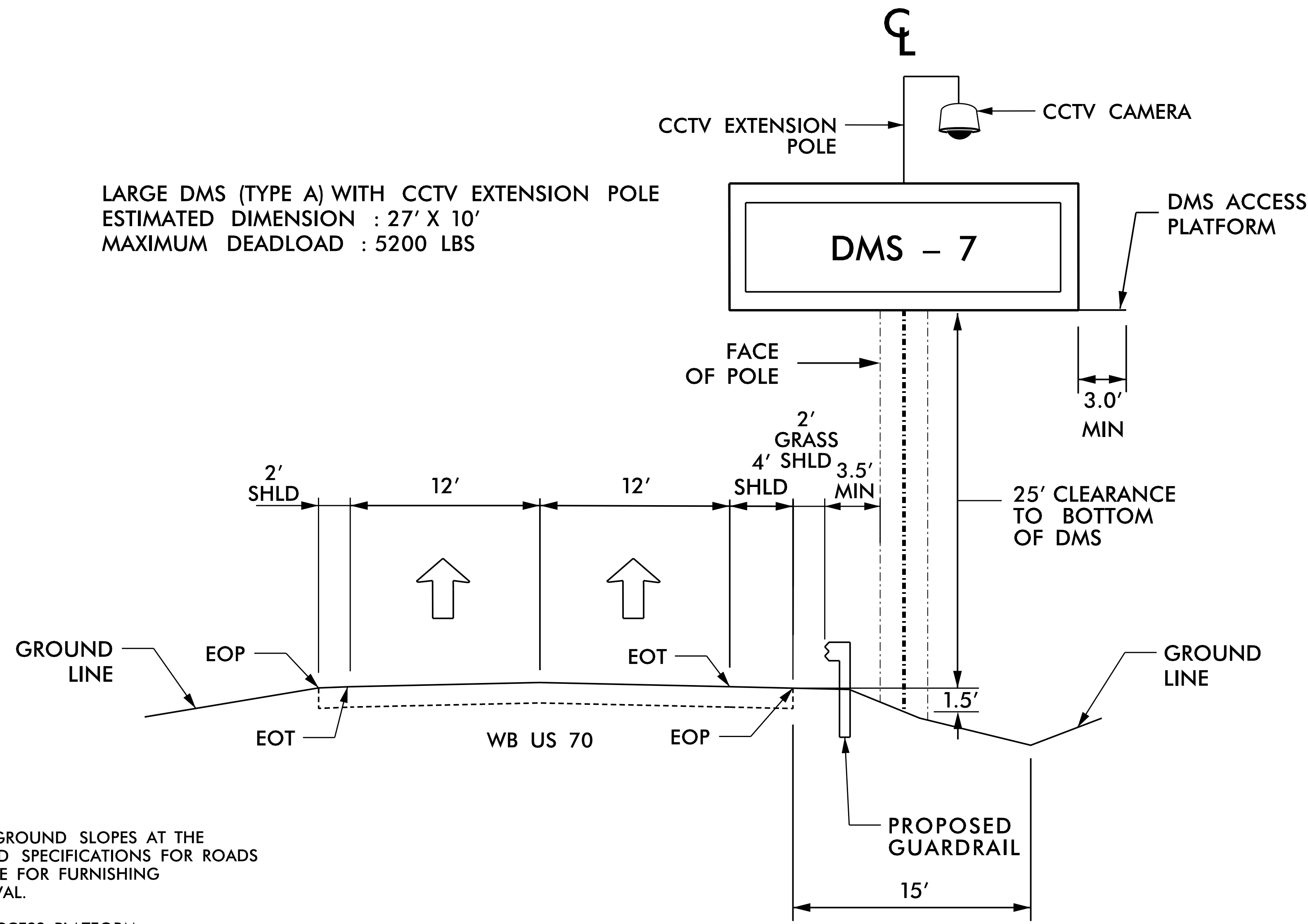
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Plans Prepared for:  250 N. Greenfield Place, Garner, NC 27529	US 70 HAVELOCK BYPASS DMS-6 ELEVATION		SEAL  NATASHA R. SIMMONS ENGINEER SEAL 031464
	Division 02 PLAN DATE: August 2018 PREPARED BY: A.H. Thornburg	Craven Co. Havelock REVIEWED BY: T.R. Terrell REVIEWED BY: N.R. Simmons	




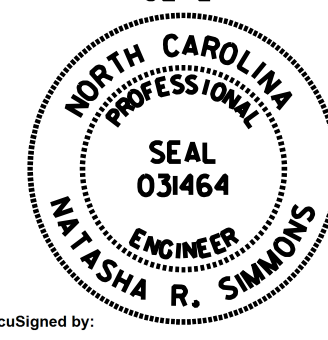
LARGE DMS (TYPE A) WITH CCTV EXTENSION POLE
 ESTIMATED DIMENSION : 27' X 10'
 MAXIMUM DEADLOAD : 5200 LBS

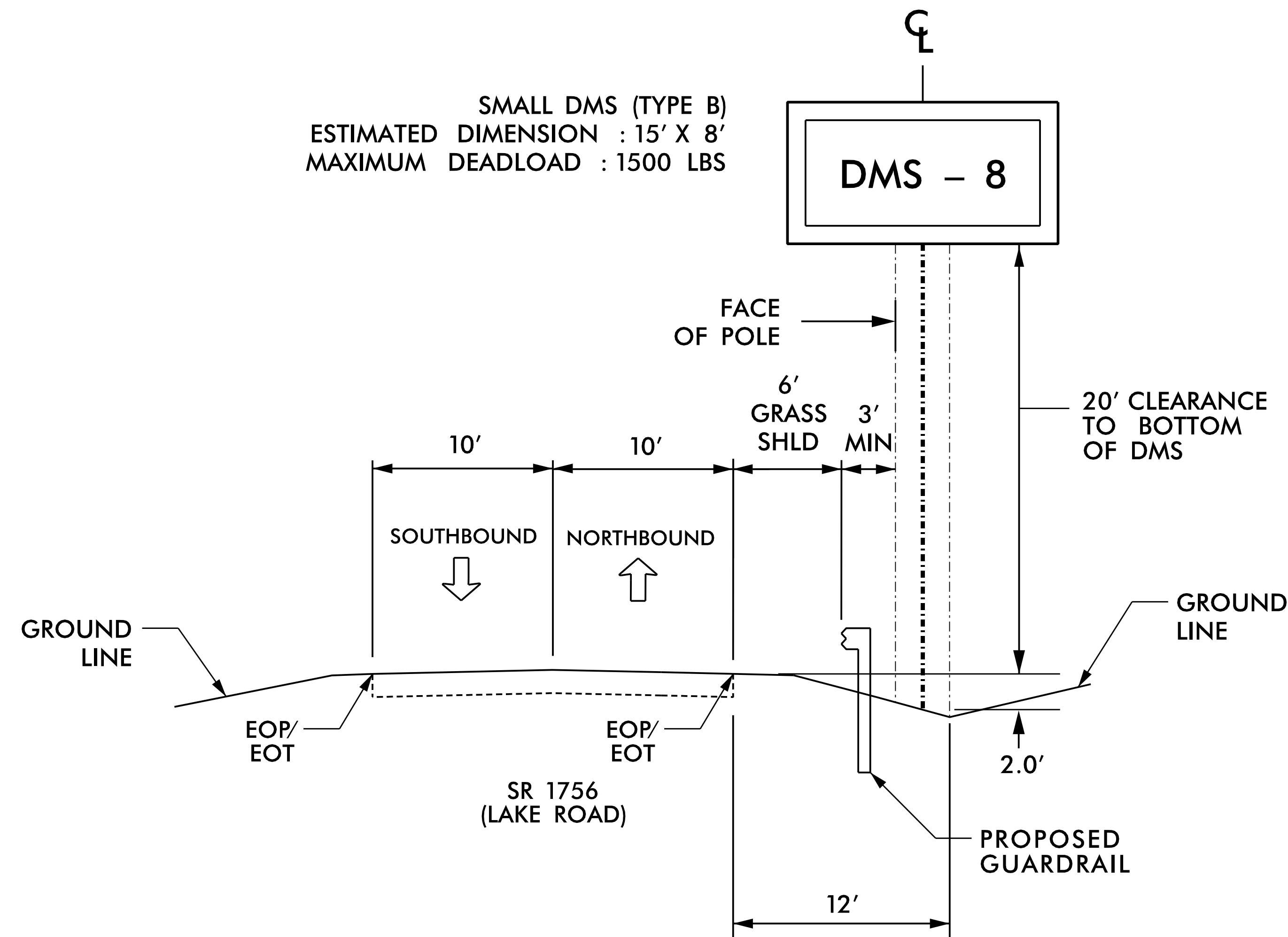
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Plans Prepared for:  250 N. Greenfield Place, Garner, NC 27529	US 70 HAVELOCK BYPASS DMS-7 ELEVATION		SEAL  NATASHA R. SIMMONS
	Division 02 PLAN DATE: August 2018 PREPARED BY: A.H. Thornburg	Craven Co. Havelock REVIEWED BY: T.R. Terrell REVIEWED BY: N.R. Simmons	



NOTES:

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	US 70 HAVELOCK BYPASS DMS-8 ELEVATION		
	Division 02 Craven Co. Havelock		
250 N. Greenfield Place, Garner, NC 27529	PLAN DATE: August 2018	REVIEWED BY: T.R. Terrell	
	PREPARED BY: A.H. Thornburg	REVIEWED BY: N.R. Simmons	
SCALE 0 5 1" = 5'	REVISIONS	INIT. DATE	DocuSigned by: Natasha R. Simmons 12/7/2018 SEAL SIGNATURE DATE
			CADD Filename: R1015 scp_84-91.dgn

COMPUTED BY:	NATHAN STUTTS	DATE:	10/2/2018
CHECKED BY:	JEFF HESS	DATE:	10/2/2018

**DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA**

PROJECT REFERENCE NO.	SHEET NO.
R-1015	

GUARDRAIL SUMMARY


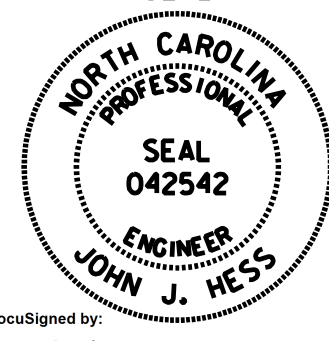
"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL
 TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
 FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL
 W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL

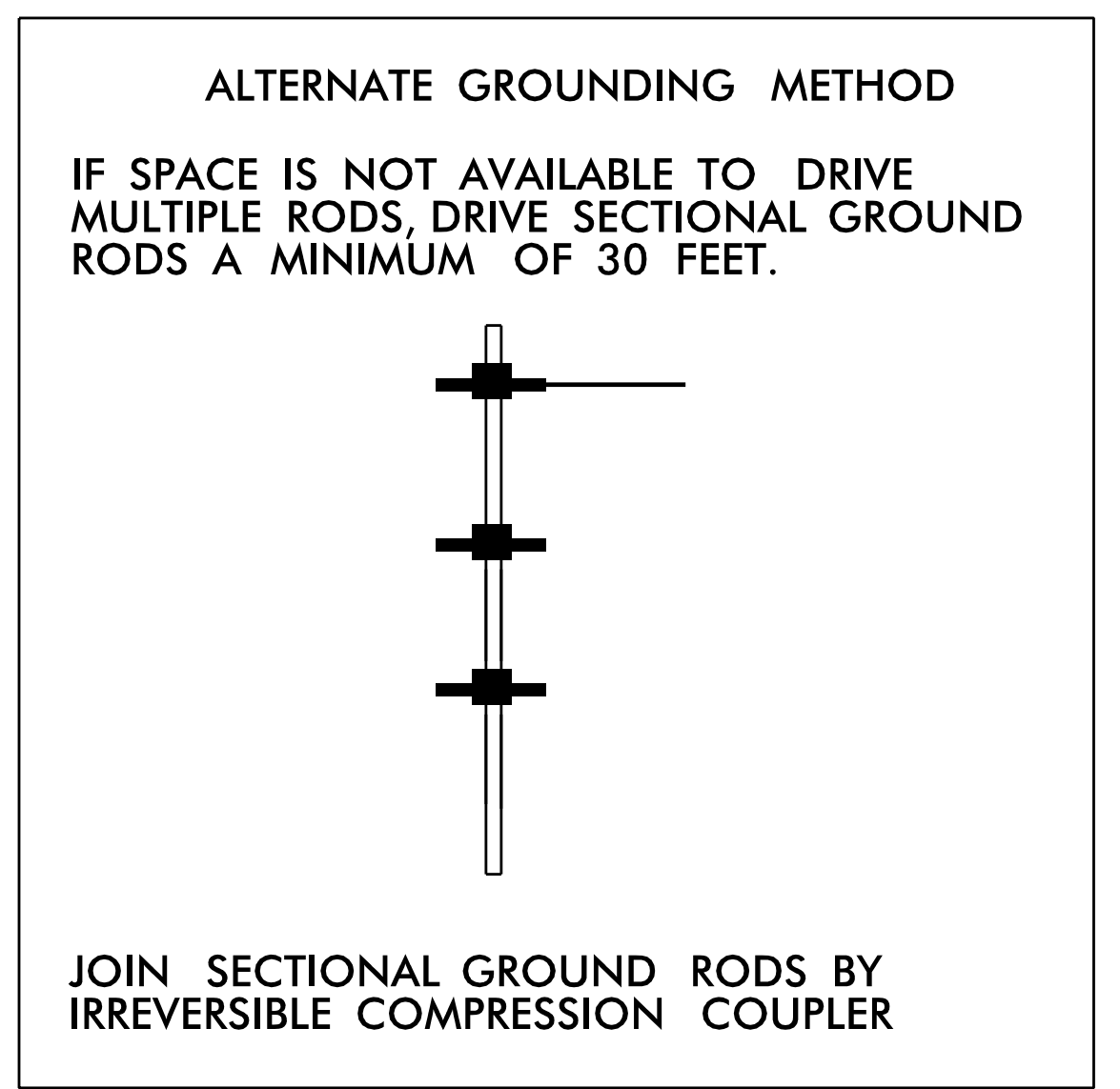
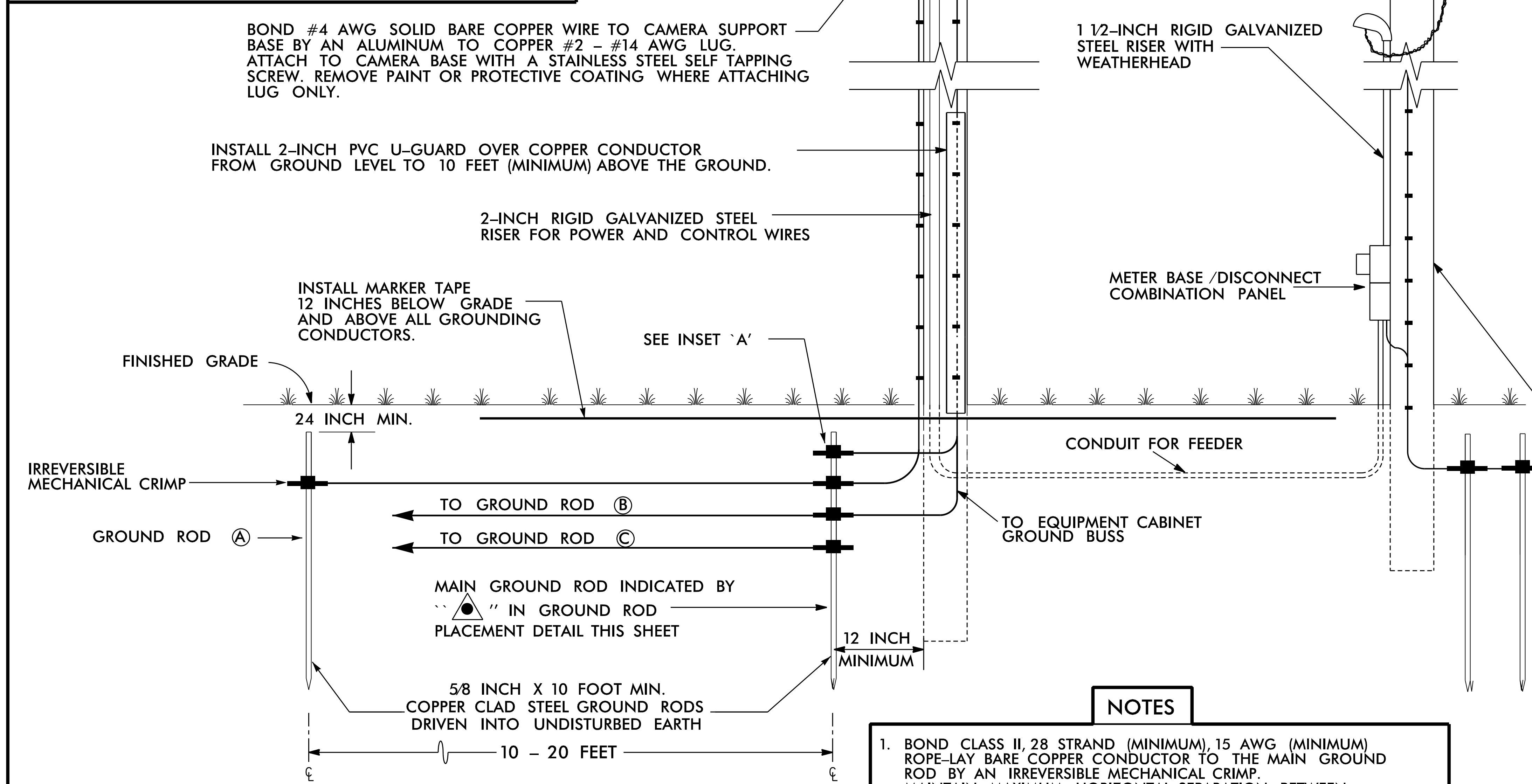
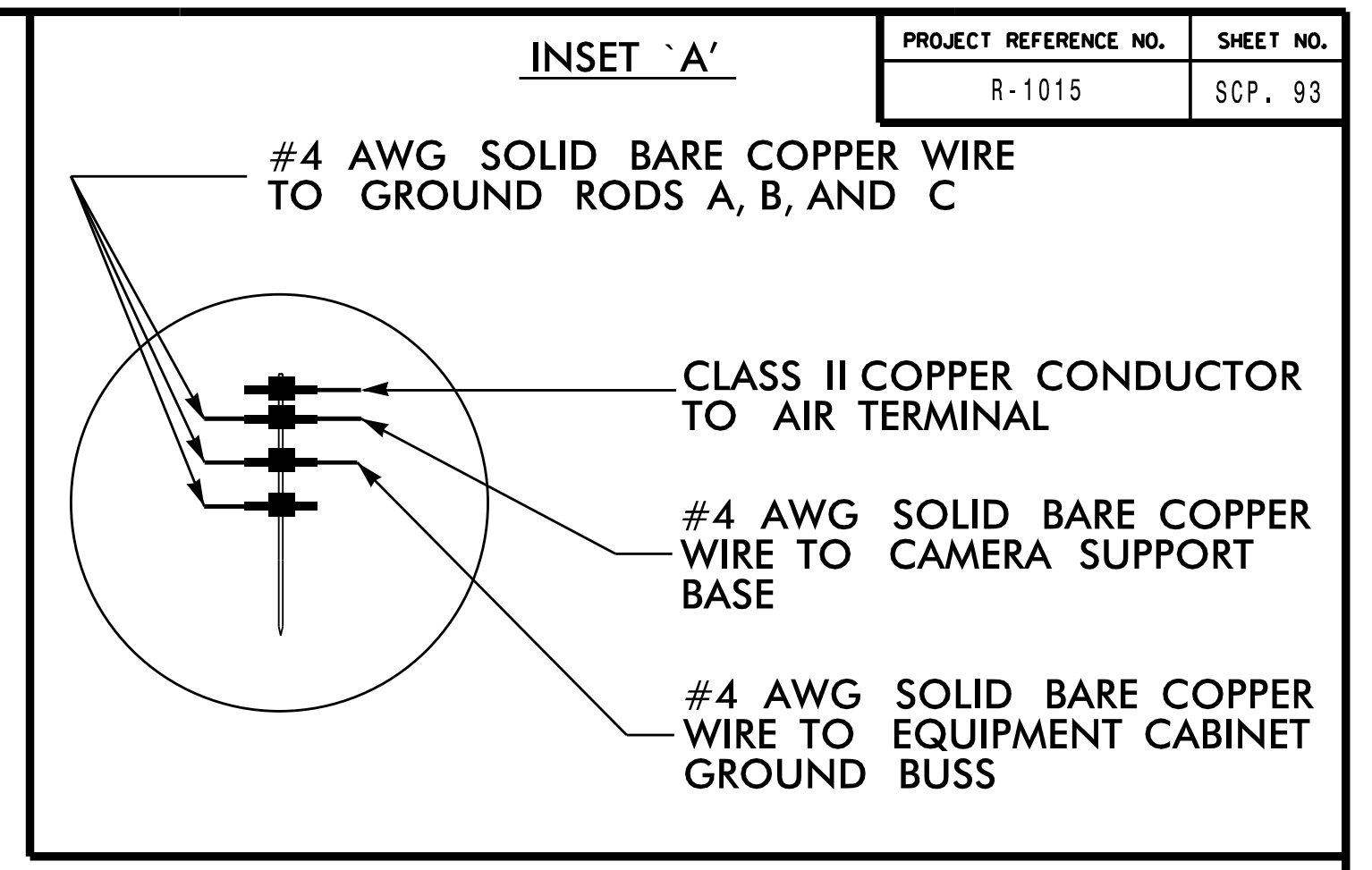
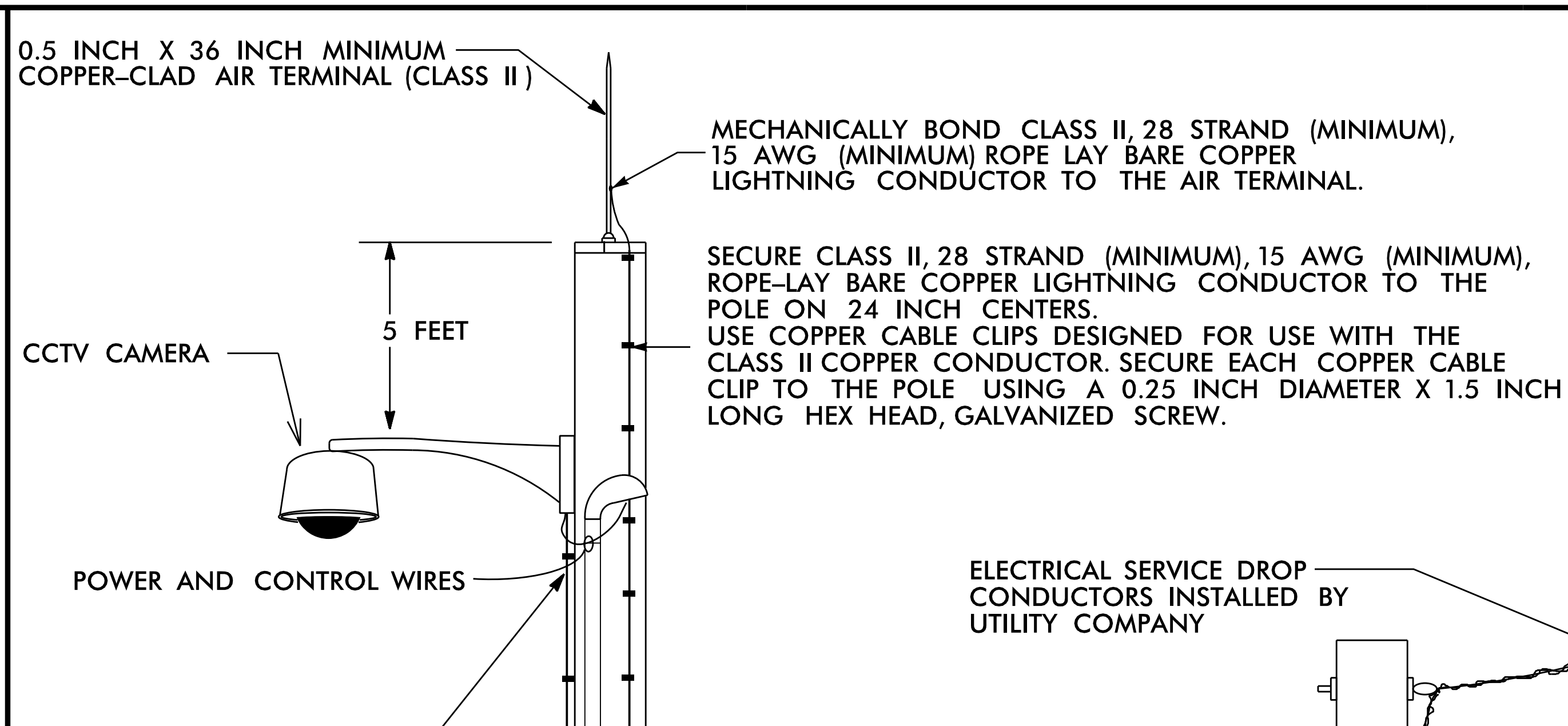
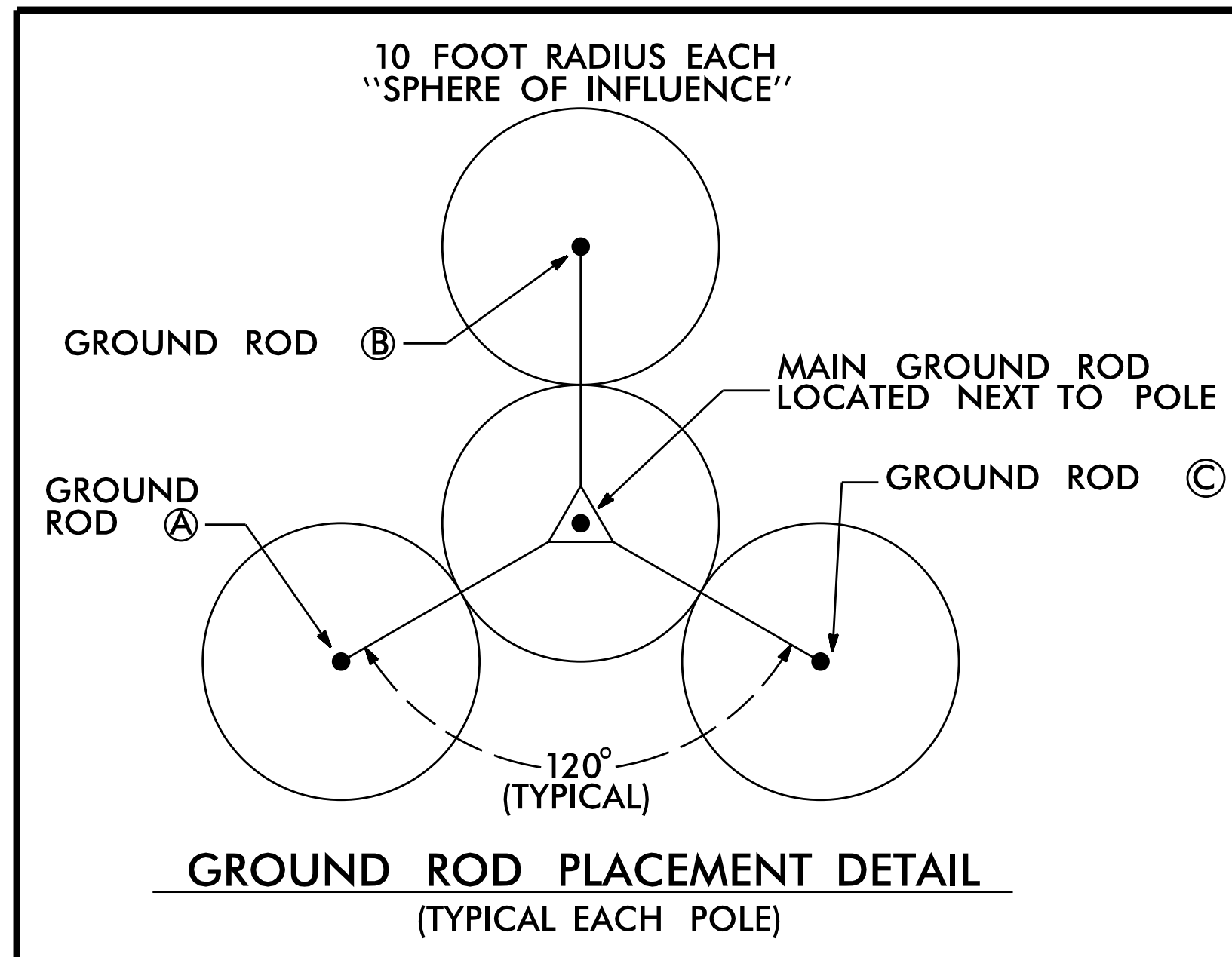
G = GATING IMPACT ATTENUATOR TYPE 350
 NG = NON-GATING IMPACT ATTENUATOR TYPE 350

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOULDER WIDTH	FLARE LENGTH		W		ANCHORS						IMPACT ATTENUATOR TYPE 350		SINGLE FACED CONCRETE BARRIER	REMOVE EXISTING GUARDRAIL	REMOVE & STOCKPILE EXISTING GUARDRAIL	REMARKS											
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	GREU, TL-2	GREU, TL-3	CAT-1	AT-1					G	NG															
DMS 1			RT	167'					6'	4'	50'									1	1																
DMS 2			LT	39'	39'				6'	4'	50'										1	1															
DMS 3			RT	105'					6'	4'	50'									1	1																
DMS 4			MEDIAN	408'					2'	N/A	50'	50'								2	2																
DMS 5			MEDIAN	357'					2'	N/A	50'	102'								2	2															NB GR, 25' parallel, 16:1 flare to 5' from EOT then 8:1 flare	
DMS 6			RT	60'	22'				6'	5'	50'										1	1															
DMS 7			LT	121'					6'	4'	50'										1	1															
DMS 8			RT	167'					6'	2'	50'										1	1															
			SUBTOTAL:	1424'	61'															5	3	10	2														
			LESS ANCHOR DEDUCTIONS:																																		
			CAT-1:	10 @ 6.25'		63'																															
			TL-3:	3 @ 50'		150'																															
			TL-2:	5 @ 50'		250'																															
			AT-1:	2 @ 6.25'		13'																															
			TOTAL:	1010'																																	
			SAY:	1012.5'																																	
			ADDITIONAL POST:	0																																	

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 Plans Prepared for: 250 N. Greenfield Place, Garner, NC 27529	US 70 HAVELOCK BYPASS SUMMARY OF GUARDRAIL		SEAL  JOHN J. HESS
	Division 02 Craven Co. Havelock PLAN DATE: August 2018 REVIEWED BY: T.R. Terrell PREPARED BY: N.K. Vlanich REVIEWED BY: N.R. Simmons	REVISIONS INIT. DATE _____ _____	



INSTALL ELECTRICAL SERVICE POLE NEAR RIGHT OF WAY OR AS DIRECTED BY THE ENGINEER.

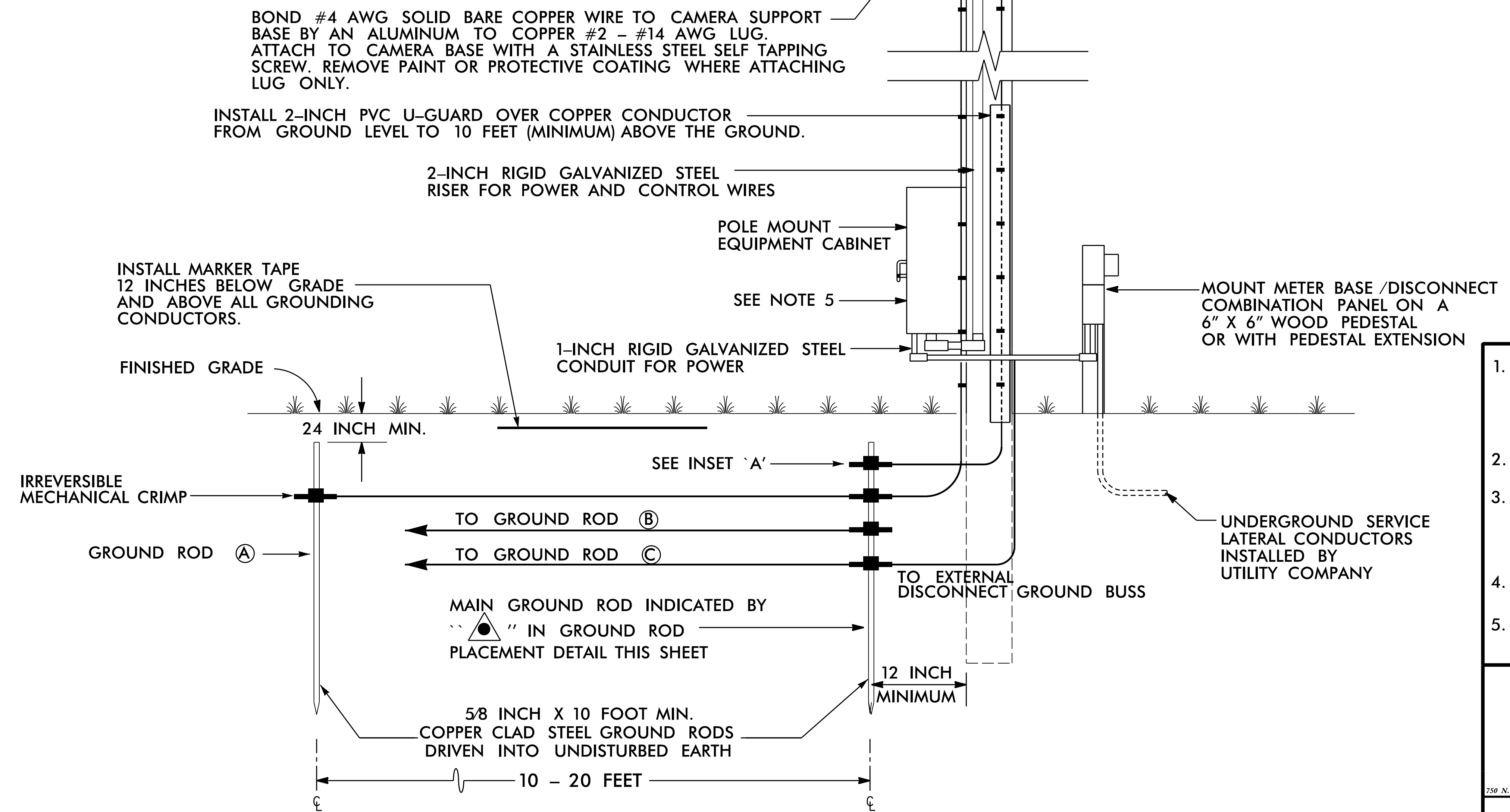
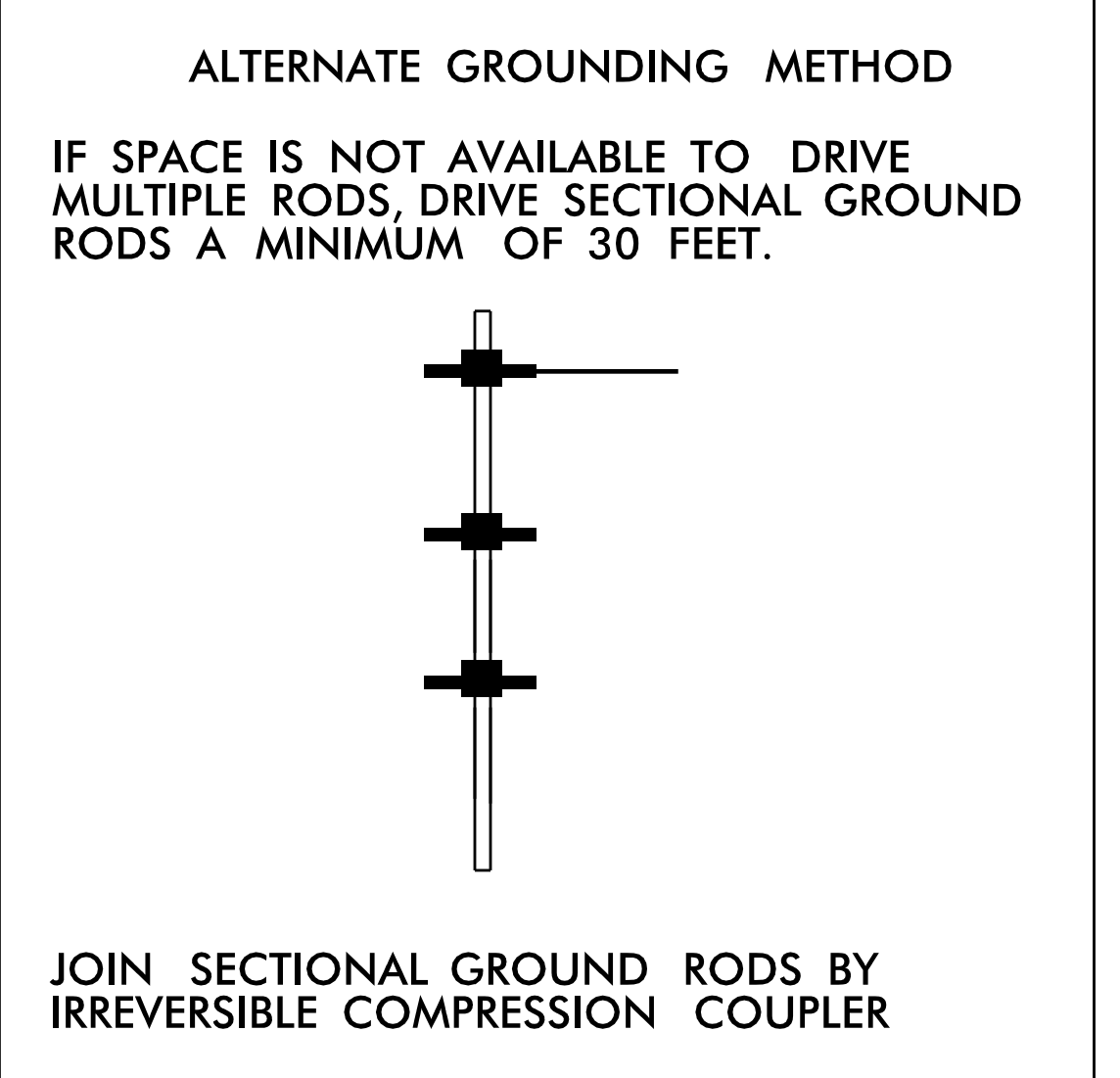
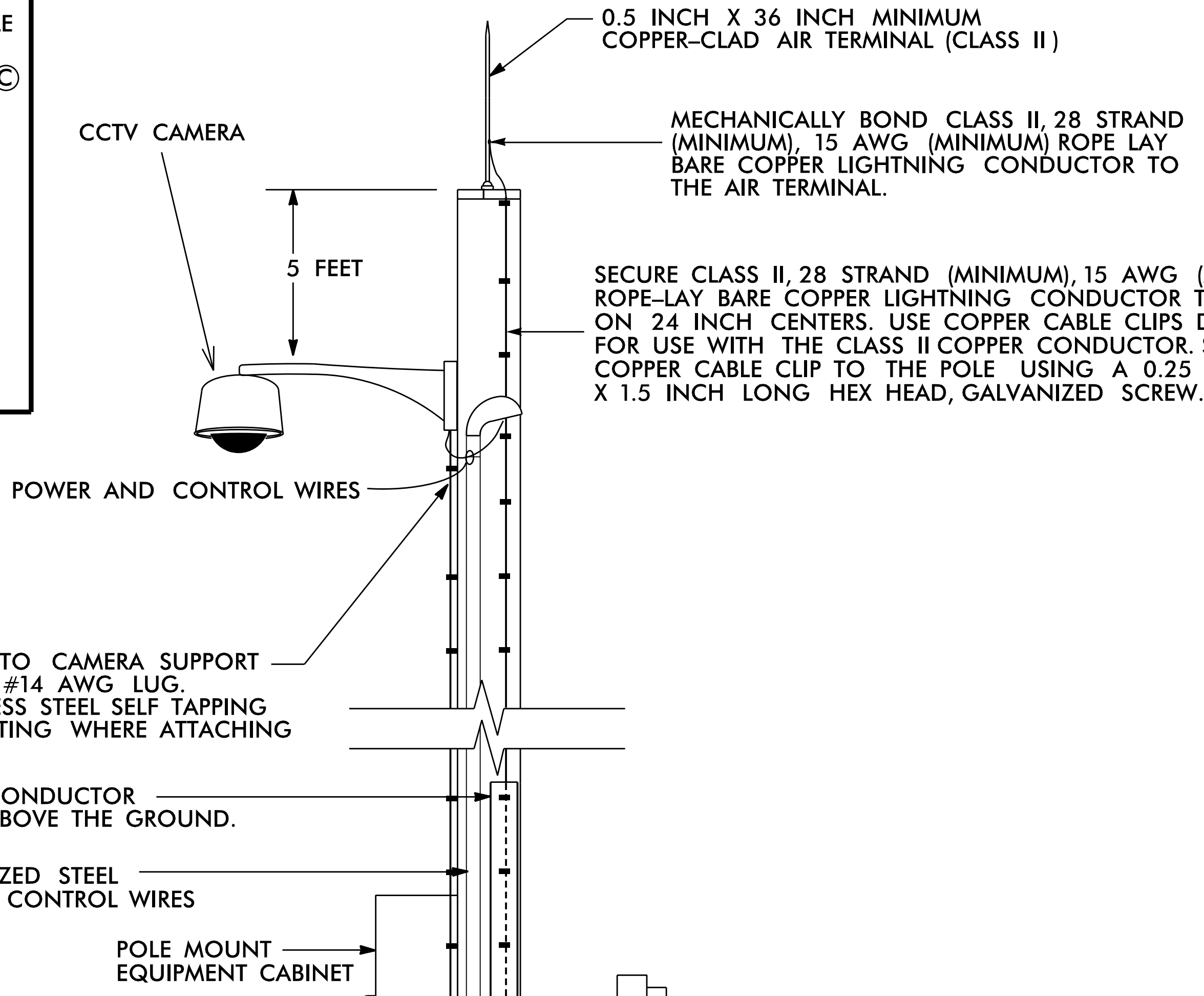
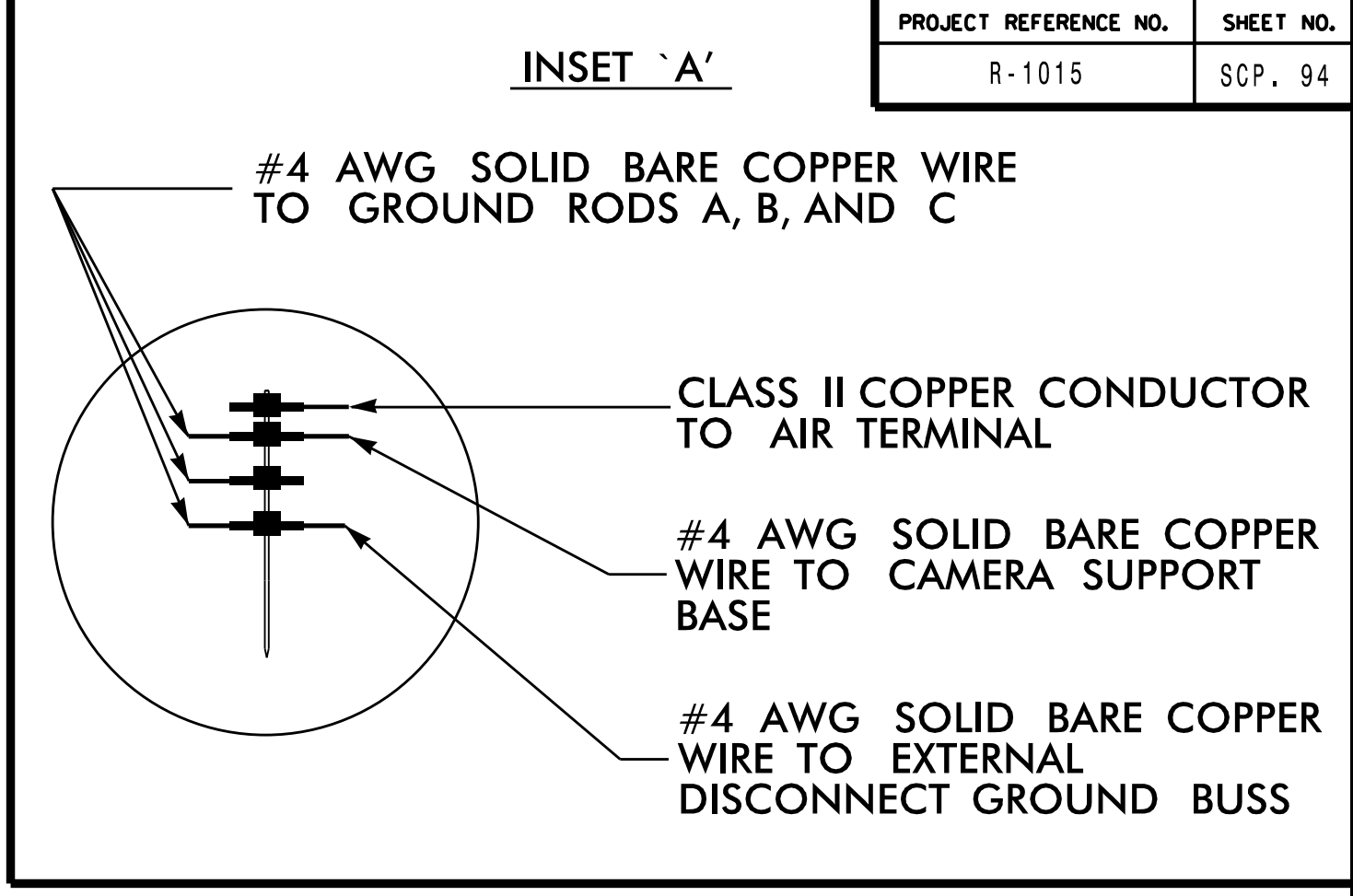
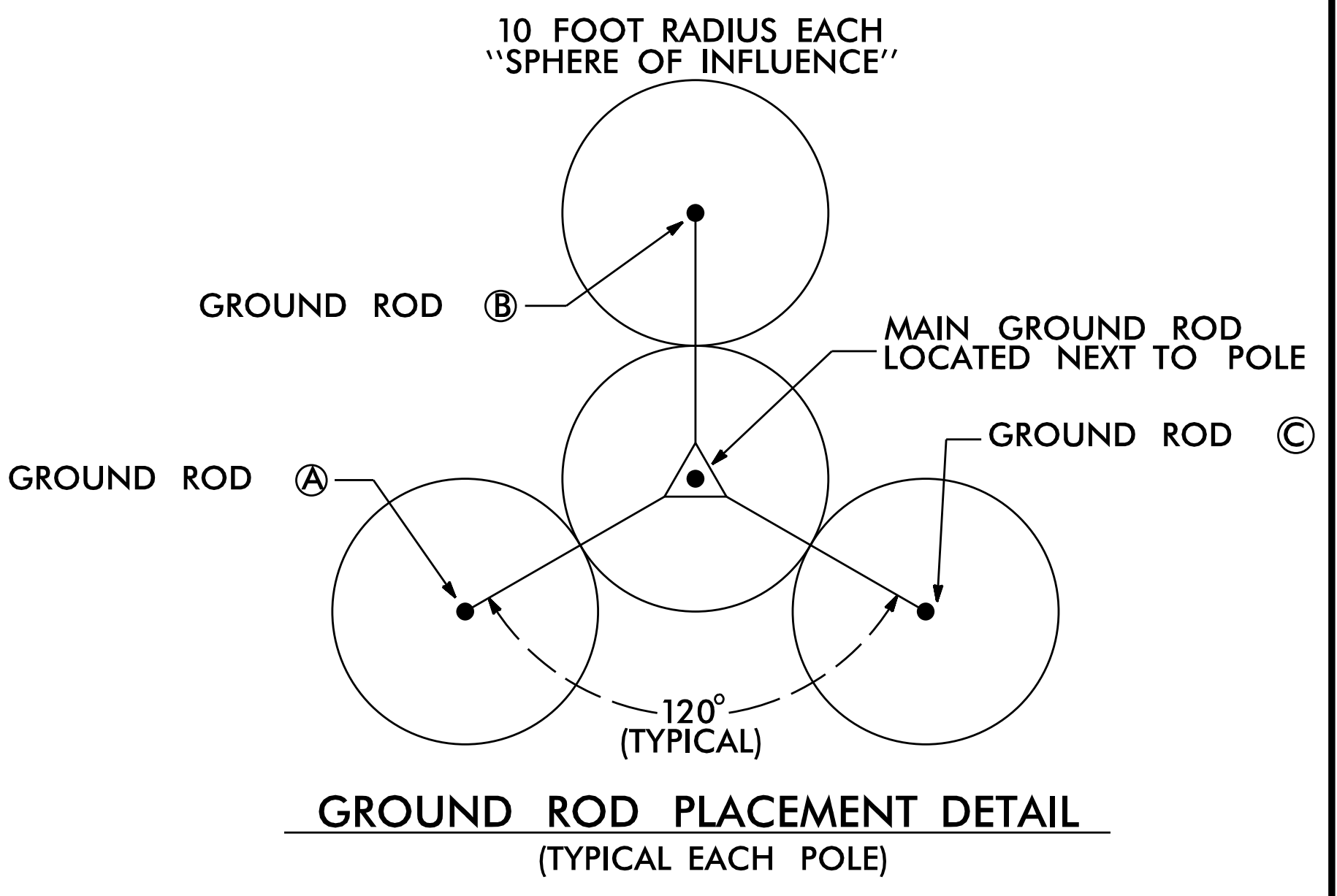
NOTES

1. BOND CLASS II, 28 STRAND (MINIMUM), 15 AWG (MINIMUM) ROPE-LAY BARE COPPER CONDUCTOR TO THE MAIN GROUND ROD BY AN IRREVERSIBLE MECHANICAL CRIMP METHOD. MAINTAIN MAXIMUM HORIZONTAL SEPARATION BETWEEN COPPER CONDUCTOR AND RISER.
2. ALL CONNECTIONS TO GROUND RODS SHOULD BE MADE WITH AN IRREVERSIBLE MECHANICAL CRIMP METHOD.
3. THE CONTRACTOR MAY, UPON APPROVAL OF THE ENGINEER, INSTALL A 30-FOOT SECTIONAL GROUND ROD FOR INSTANCES WHEN CONDITIONS WILL NOT ALLOW FOR THE INSTALLATION OF THE 3 - RADIAL GROUND RODS.
4. INSTALL MARKER TAPE DIRECTLY ABOVE ALL GROUNDING ELECTRODES AND CONDUCTORS AT A DEPTH OF 12 INCHES.

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<p>Plans Prepared for:</p> <p>250 N. Greenfield Place, Garner, NC 27529</p>	<p>US 70 HAVELOCK BYPASS CCTV CAMERA INSTALLATION FOR WOOD POLES WITH AERIAL ELECTRICAL SERVICE TYPICAL DETAIL</p>		<p>SEAL NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 031464 NATASHA R. SIMMONS</p>
	<p>Division 02 Craven Co. Havelock</p> <p>PLAN DATE: August 2018 REVIEWED BY: T.R. Terrell</p> <p>PREPARED BY: N.K. Vlanich REVIEWED BY: N.R. Simmons</p>	<p>DocuSigned by: Notasha R Simmons 12/7/2018</p> <p>SIGNATURE DATE</p>	



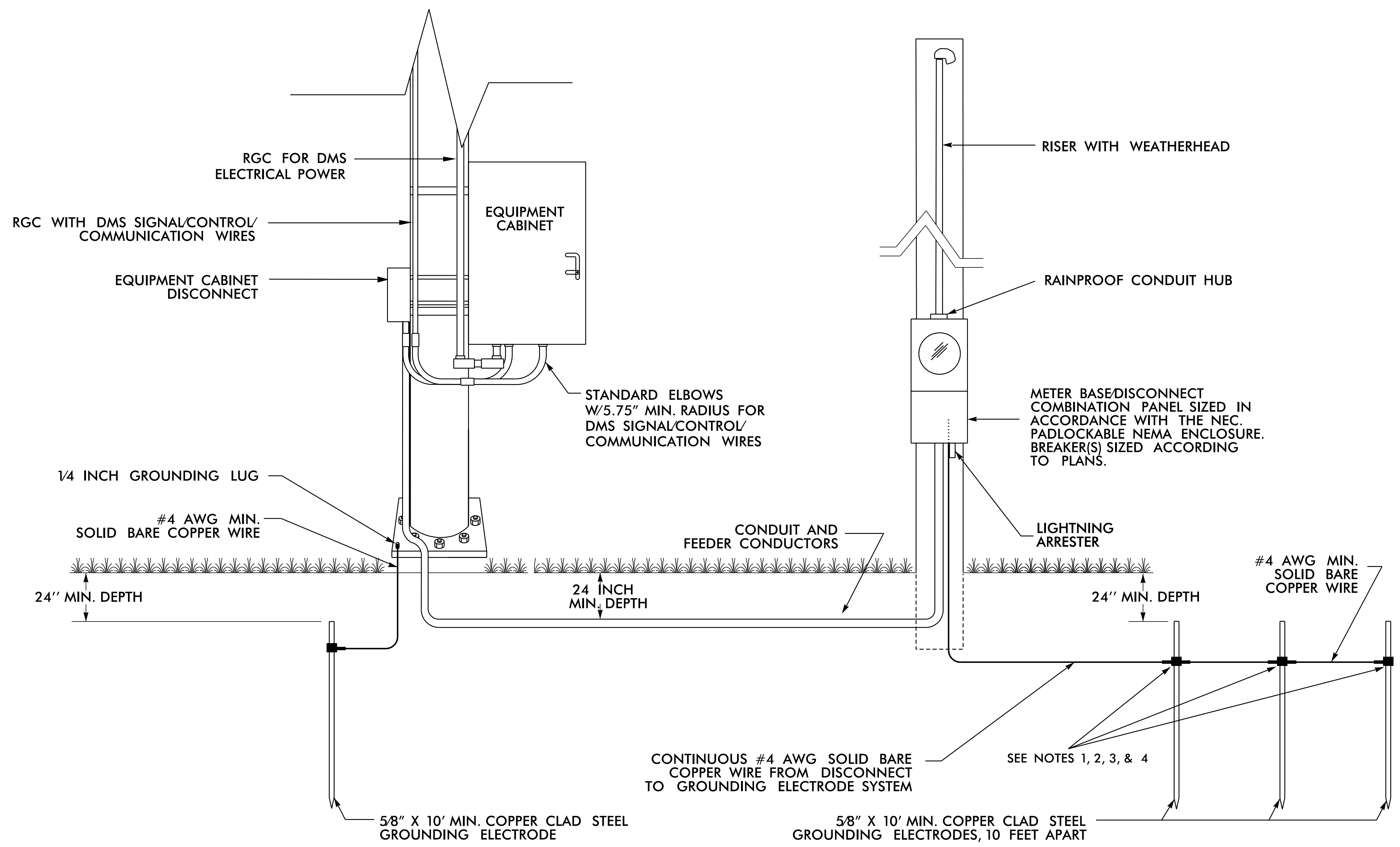
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1. BOND CLASS II, 28 STRAND (MINIMUM), 15 AWG (MINIMUM) ROPE-LAY BARE COPPER CONDUCTOR TO THE MAIN GROUND ROD BY AN IRREVERSIBLE MECHANICAL CRIMP. MAINTAIN MAXIMUM HORIZONTAL SEPARATION BETWEEN COPPER CONDUCTOR AND RISER.
 2. ALL CONNECTIONS TO GROUND RODS SHOULD BE MADE WITH AN IRREVERSIBLE MECHANICAL CRIMP METHOD.
 3. THE CONTRACTOR MAY, UPON APPROVAL OF THE ENGINEER, INSTALL A 30-FOOT SECTIONAL GROUND ROD FOR INSTANCES WHEN CONDITIONS WILL NOT ALLOW FOR THE INSTALLATION OF THE 3 - RADIAL GROUND RODS.
 4. INSTALL MARKER TAPE DIRECTLY ABOVE ALL GROUNDING ELECTRODES AND CONDUCTORS AT A DEPTH OF 12 INCHES.
 5. REMOVE BONDING JUMPER BETWEEN EQUIPMENT CABINET GROUND BUSS AND NEUTRAL BUSS.
- DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED**

	<p>US 70 HAVELOCK BYPASS CCTV CAMERA INSTALLATION FOR WOOD POLES WITH UNDERGROUND ELECTRICAL SERVICE TYPICAL DETAIL</p>		
	<p>Division 02 Craven Co. Havelock</p> <p>PLAN DATE: August 2018 REVIEWED BY: T.R. Terrell</p> <p>PREPARED BY: N.K. Vlanich REVIEWED BY: N.R. Simmons</p>	<p>SCALE: NONE</p>	

250 N. Greenfield Place, Garner, NC 27529

CADD File name: R1015_scp_94.dgn



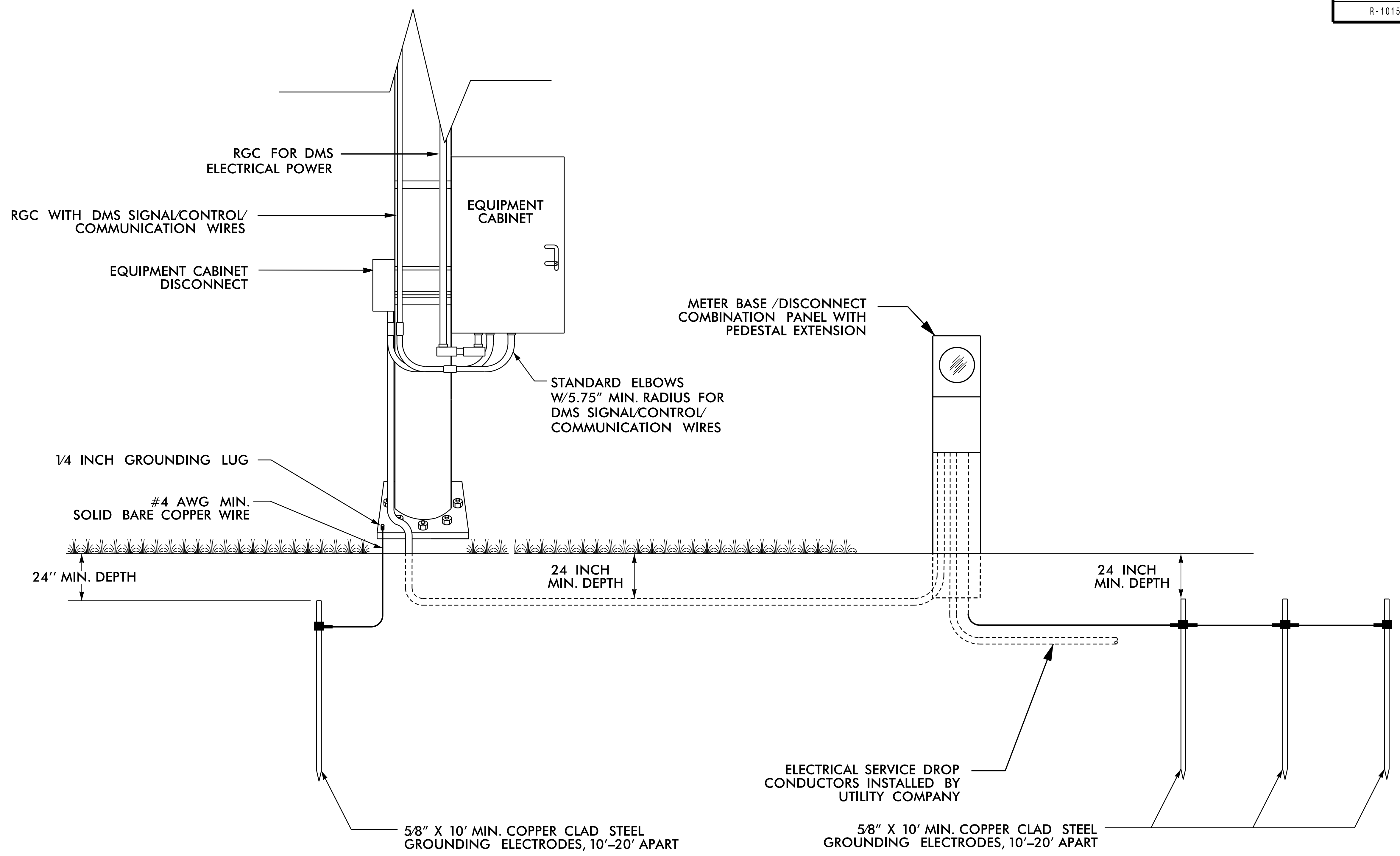
NOTES

1. INSTALL A MINIMUM OF 3 GROUNDING ELECTRODES SPACED A MINIMUM OF 10 FEET APART. ENSURE THAT EXISTING UNDERGROUND FACILITIES ARE NOT DAMAGED DURING INSTALLATION.
2. TEST GROUNDING SYSTEM USING AN APPROVED METHOD. SYSTEM SHALL MEASURE TWENTY (20) OHMS OR LESS. ADDITIONAL GROUNDING ELECTRODES SHALL BE INSTALLED AS DIRECTED BY THE ENGINEER TO MEET THIS REQUIREMENT.
3. IRREVERSABLE MECHANICAL CRIMP ALL CONNECTIONS TO GROUND RODS.
4. INSTALL MARKER TAPE DIRECTLY ABOVE ALL GROUNDING ELECTRODES AND CONDUCTORS AT A DEPTH OF 12 INCHES.
5. REMOVE BONDING JUMPER IN EQUIPMENT CABINET IF INSTALLED BETWEEN AC NEUTRAL AND EQUIPMENT GROUND.
6. BOND ALL RIGID GALVANIZED STEEL CONDUITS ENTERING THE CABINET TO "EQUIPMENT GROUND".
7. INSTALL CONDUIT BETWEEN DISCONNECT AND CABINET.
8. ENSURE EQUIPMENT GROUND IS ELECTRICALLY BONDED TO CABINET.

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 343 E. Six Forks Road, Suite 200
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	US 70 HAVELOCK BYPASS DYNAMIC MESSAGE SIGN NEW ELECTRICAL SERVICE AND GROUNDING DETAIL	
	Division 02 PLAN DATE: August 2018 PREPARED BY: N.K. Vlanich	Craven Co. Havelock REVIEWED BY: T.R. Terrell REVIEWED BY: N.R. Simmons
SCALE NONE	REVISIONS _____ _____ _____	INIT. DATE _____ _____ _____
CADD File name: R1015 scp 95.dgn		Notarized by: Natasha R. Simmons 12/7/2018





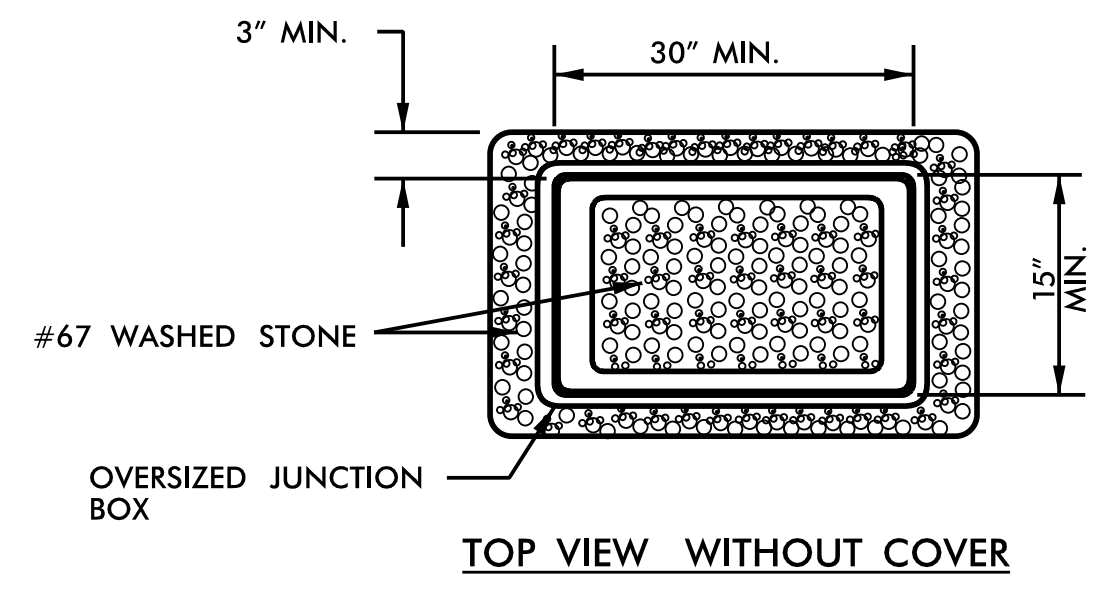
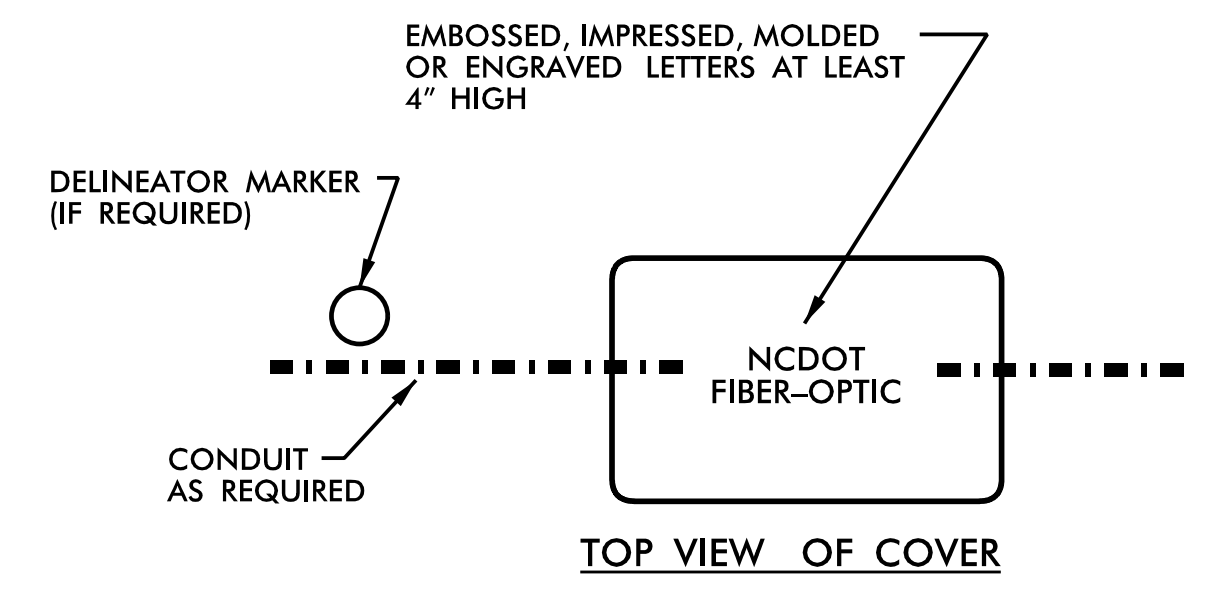
NOTES:

1. INSTALL A MINIMUM OF THREE (3) GROUNDING ELECTRODES SPACED A MINIMUM OF 10 FEET APART. ENSURE THAT EXISTING UNDERGROUND FACILITIES ARE NOT DAMAGED DURING INSTALLATION.
2. TEST GROUNDING SYSTEM USING AN APPROVED METHOD. SYSTEM SHALL MEASURE TWENTY (20) OHMS OR LESS. ADDITIONAL GROUNDING ELECTRODES SHALL BE INSTALLED AS DIRECTED BY THE ENGINEER TO MEET THIS REQUIREMENT.
3. IRREVERSABLE MECHANICAL CRIMP ALL CONNECTIONS TO GROUND RODS.
4. INSTALL MARKER TAPE DIRECTLY ABOVE ALL GROUNDING ELECTRODES AND CONDUCTORS AT A DEPTH OF 12 INCHES.
5. REMOVE BONDING JUMPER IN EQUIPMENT CABINET IF INSTALLED BETWEEN AC NEUTRAL AND EQUIPMENT GROUND.
6. BOND ALL RIGID GALVANIZED STEEL CONDUITS ENTERING THE CABINET TO "EQUIPMENT GROUND".
7. INSTALL CONDUIT BETWEEN DISCONNECT AND CABINET.
8. ENSURE EQUIPMENT GROUND IS ELECTRICALLY BONDED TO CABINET.

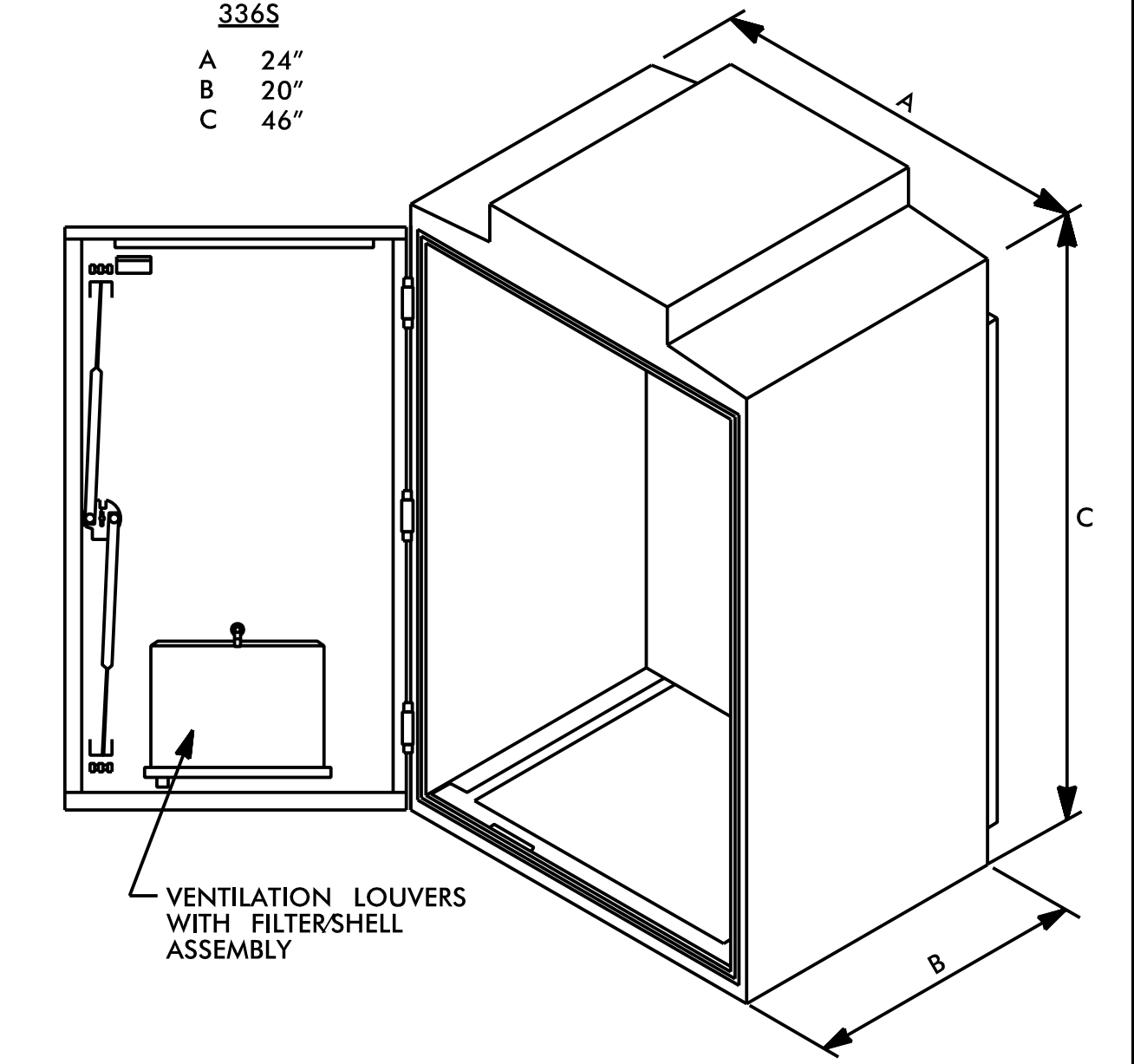
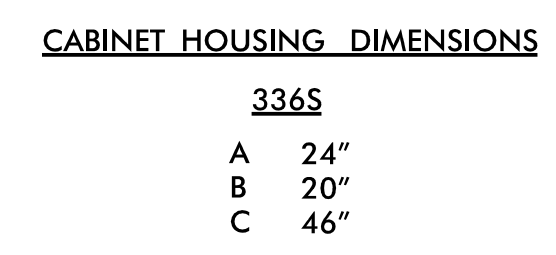
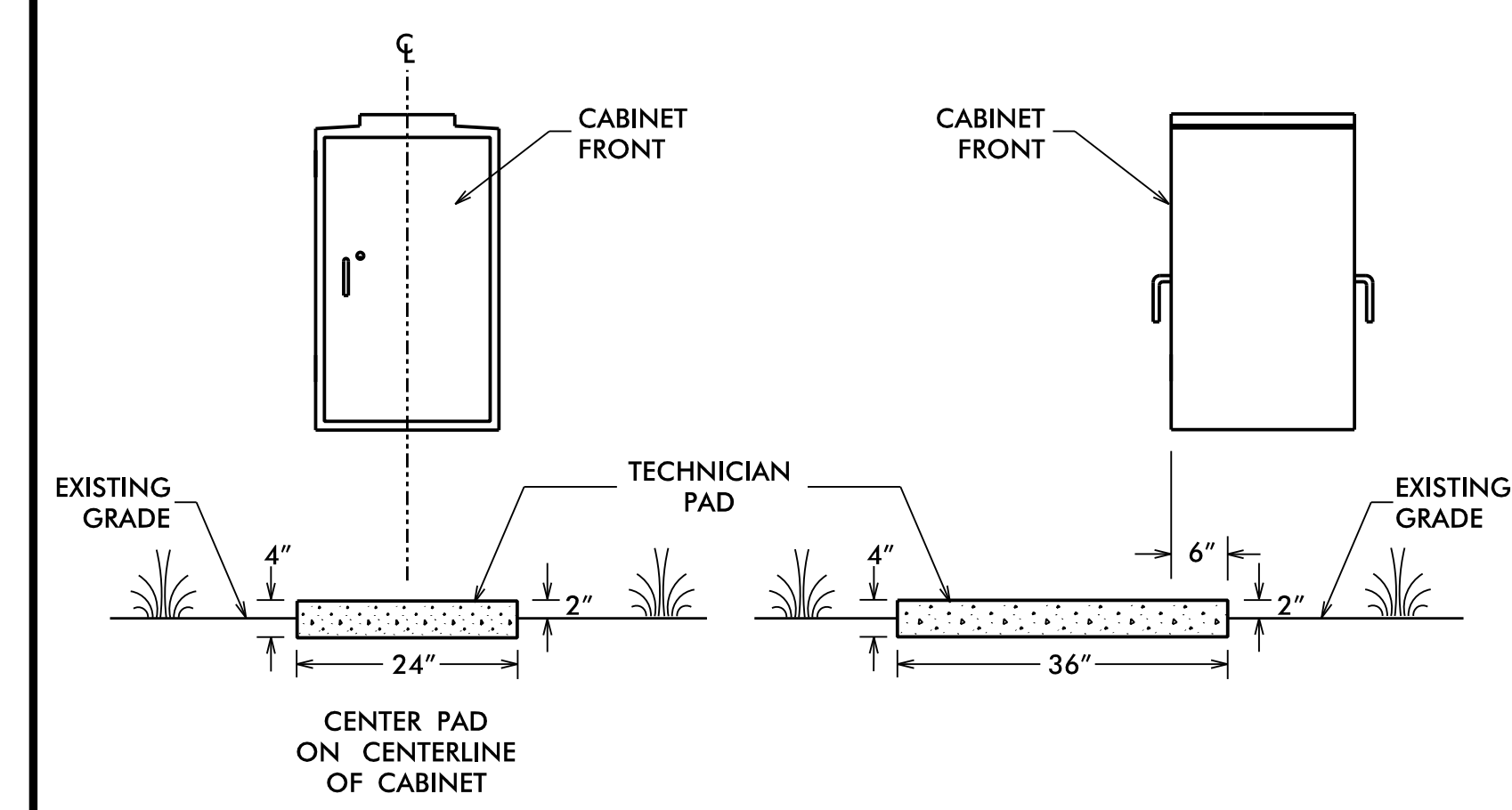
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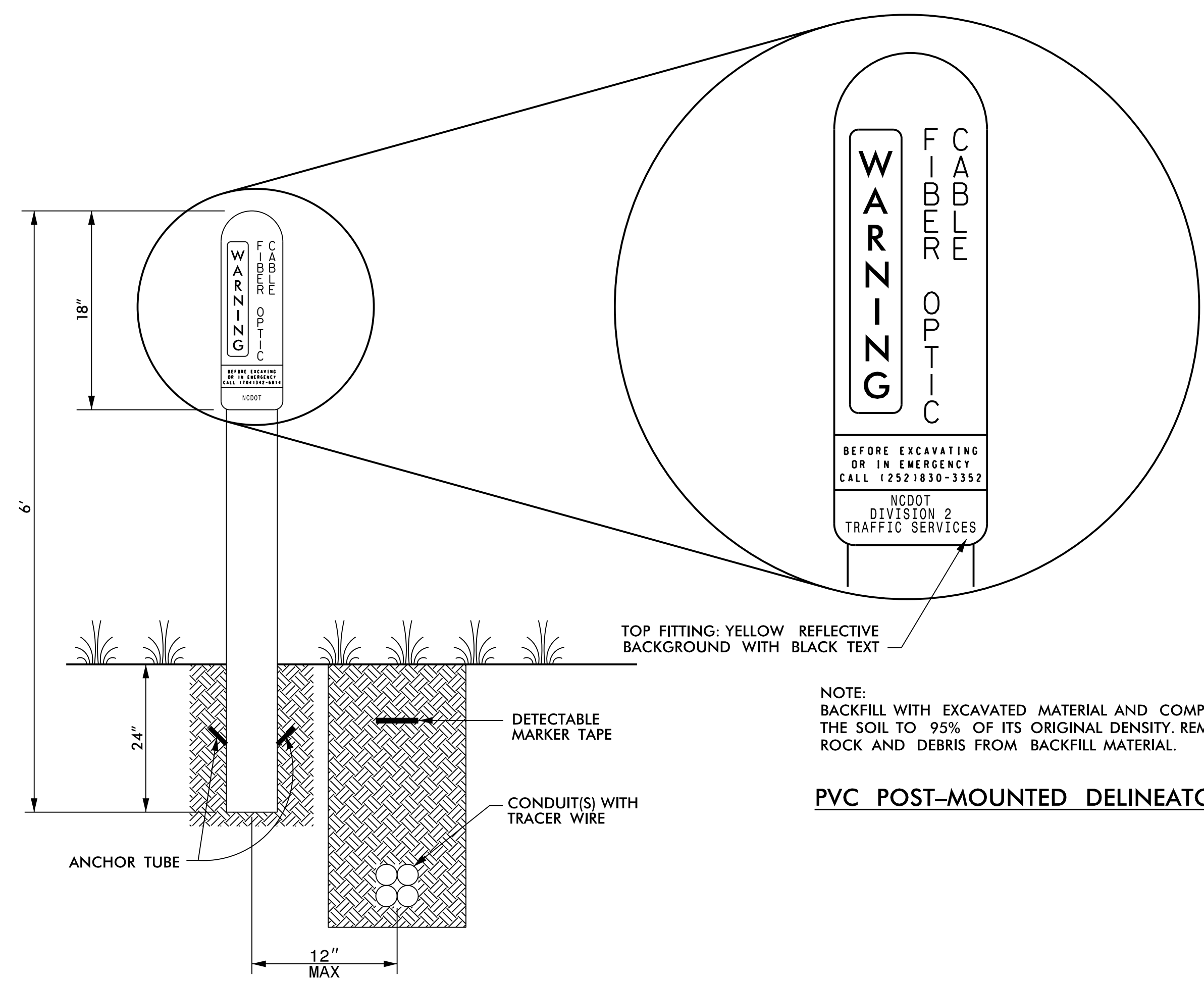
Plans Prepared for:  250 N. Greenfield Place, Garner, NC 27529	US 70 HAVELOCK BYPASS DYNAMIC MESSAGE SIGN NEW ELECTRICAL SERVICE AND GROUNDING DETAIL		SEAL  NATASHA R. SIMMONS ENGINEER
	Division 02 Craven Co. Havelock	PLAN DATE: August 2018 REVIEWED BY: T.R. Terrell	
SCALE NONE	REVISIONS _____ _____ _____	INIT. DATE _____ _____ _____	Notarized by: Natasha R. Simmons 12/7/2018 SEAL _____ SIGNATURE DATE CADD Filename: R1015_scp_96.dgn



OVERSIZED HEAVY DUTY JUNCTION BOX TYPICAL DETAIL

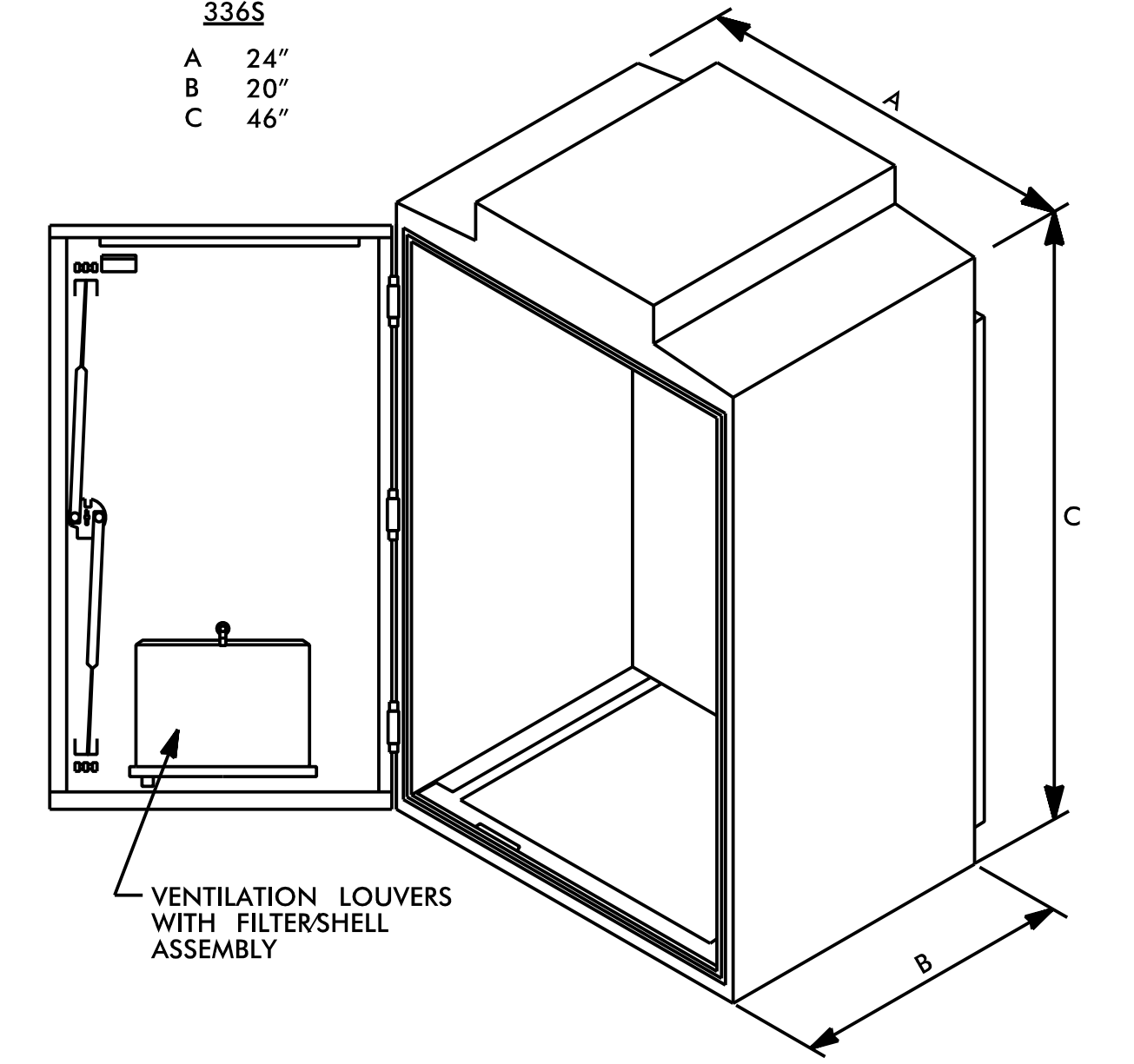
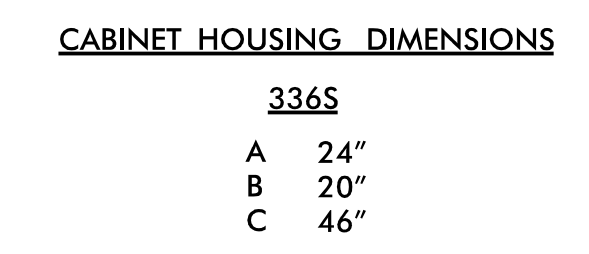
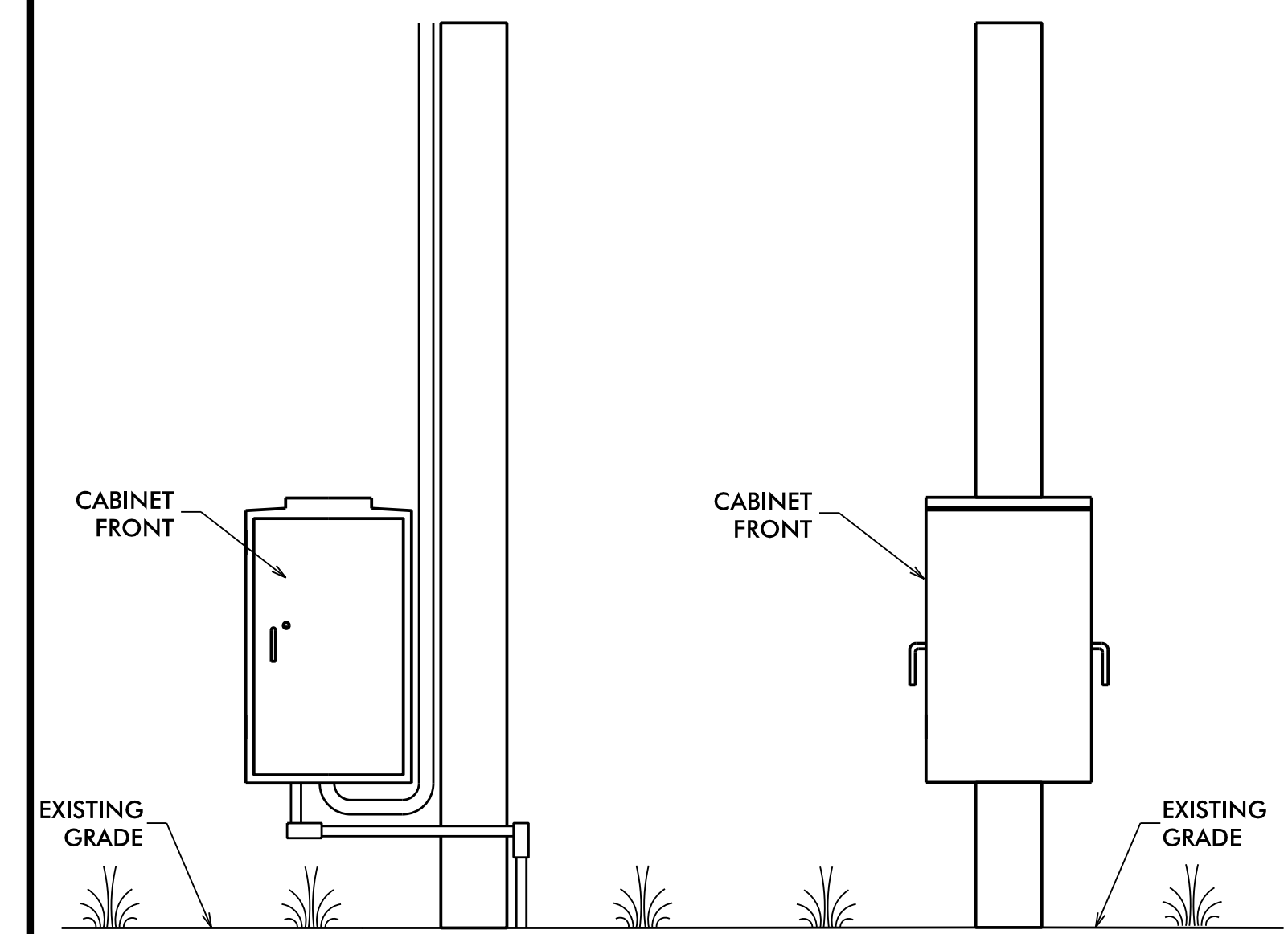


EQUIPMENT CABINET AND TECHNICIAN PAD



NOTE: BACKFILL WITH EXCAVATED MATERIAL AND COMPACT THE SOIL TO 95% OF ITS ORIGINAL DENSITY. REMOVE ROCK AND DEBRIS FROM BACKFILL MATERIAL.

PVC POST-MOUNTED DELINEATOR MARKER



EQUIPMENT CABINET

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<p>Plans Prepared for:</p> <p>250 N. Greenfield Place, Garner, NC 27529</p>	<p>US 70 HAVELock BYPASS TYPICAL DETAILS</p> <p>Division 02 Craven Co. Havelock</p>		<p>SEAL</p> <p>SEAL 031464</p> <p>ENGINEER</p> <p>NATASHA R. SIMMONS</p>
	<p>PLAN DATE: August 2018</p> <p>PREPARED BY: N.K. Vlanich</p>	<p>REVIEWED BY: T.R. Terrell</p> <p>REVIEWED BY: N.R. Simmons</p>	