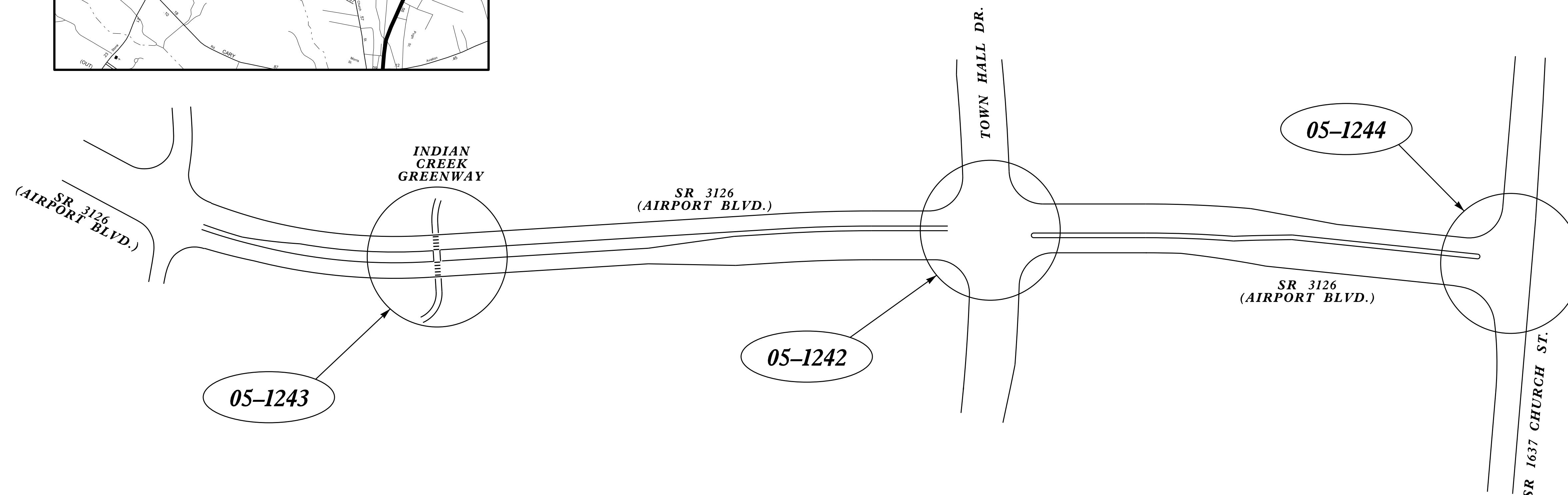
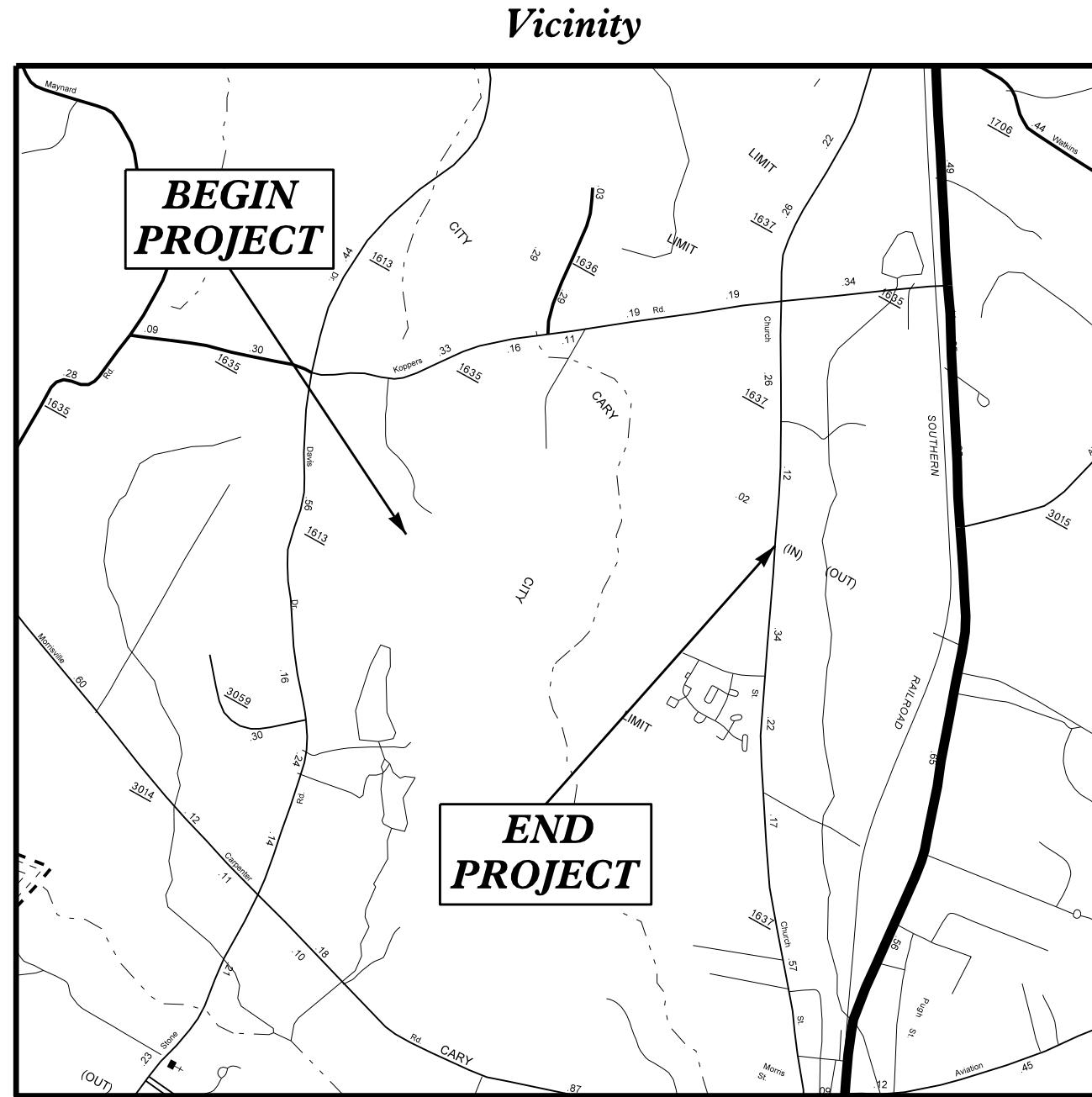


**CONTRACT: C204765****Project: HL-0033**STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYSProject No. **HL-0033** Sheet No. **Sig. 1.0****WAKE COUNTY****LOCATION: SR 3126 (AIRPORT BOULEVARD) FROM INDIAN CREEK GREENWAY TO SR 1637 (CHURCH STREET)****TYPE OF WORK: TRAFFIC SIGNALS AND SIGNAL COMMUNICATIONS**

Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specifications for Roads and Structures" dated January 2024.

Sheet #	Reference #
Sig. 1.0	-----
Sig. 2.0-2.2	05-1243
Sig. 3.0-3.6	05-1242
Sig. 4.0-4.4	05-1244
Sig. MIA-M9	-----
Sig. SCI 1-8A	-----

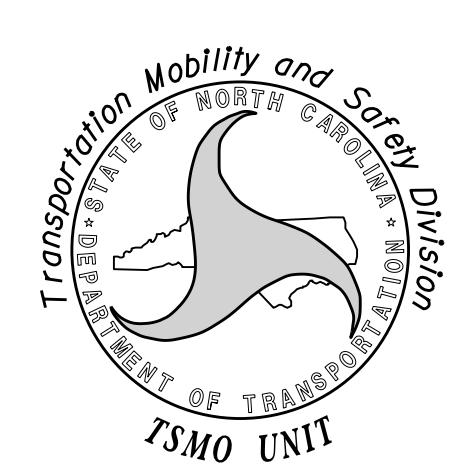
**Index of Plans****Location/Description**

Title Sheet
Pedestrian Hybrid Beacon on SR 3126 (Airport Boulevard) at Indian Creek Greenway
SR 3126 (Airport Boulevard) at Town Hall Drive
SR 1637 (Church Street) at SR 3126 (Airport Boulevard)
Standard Metal Pole Sheets
Signal Communication Plans

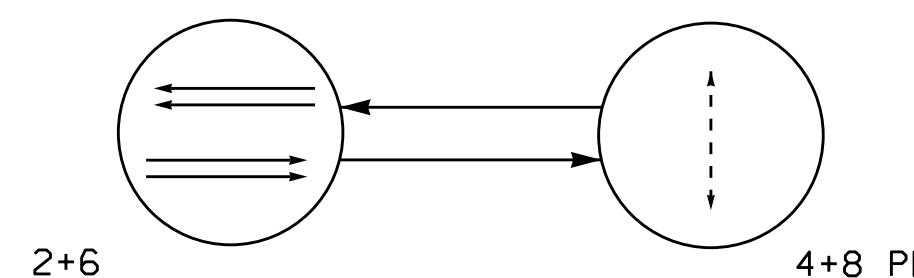
**TRANSPORTATION SYSTEMS  
MANAGEMENT & OPERATIONS****Contacts:**

**Robert J. Ziembra, PE** – Central Region Signals Engineer  
**Ryan W. Hough, PE** – Signal Equipment Design Engineer  
**Gregg Green** – Intelligent Transportation Systems Engineer

Prepared In the Office of:  
**DIVISION OF HIGHWAYS**  
**TRANSPORTATION MOBILITY & SAFETY DIVISION**



### PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

- Detected Movement: Solid arrow
- Undetected Movement (Overlap): Dashed arrow
- Unsignaled Movement: Dashed arrow with a dot
- Pedestrian Movement: Double-headed arrow

### TABLE OF OPERATION

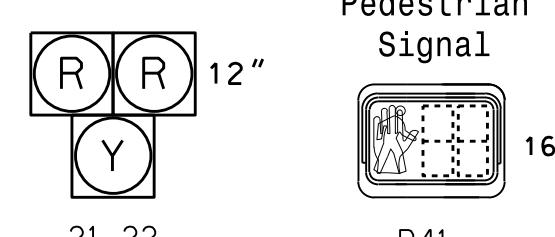
SIGNAL FACE	PHASE							
	2+6 DARK	ACTIVATION 6 Y	SEALE D	RED R	4+8 PED WALK	4+8 PED CLEAR	FLASH	
21, 22	DRK	FY	Y	R	R	FR*	Y	
61, 62	DRK	FY	Y	R	R	FR*	Y	
P41	DW	DW	DW	DW	W	DW	DRK	
P81	DW	DW	DW	DW	W	DW	DRK	

\* Alternating Flash

### SIGNAL FACE I.D.

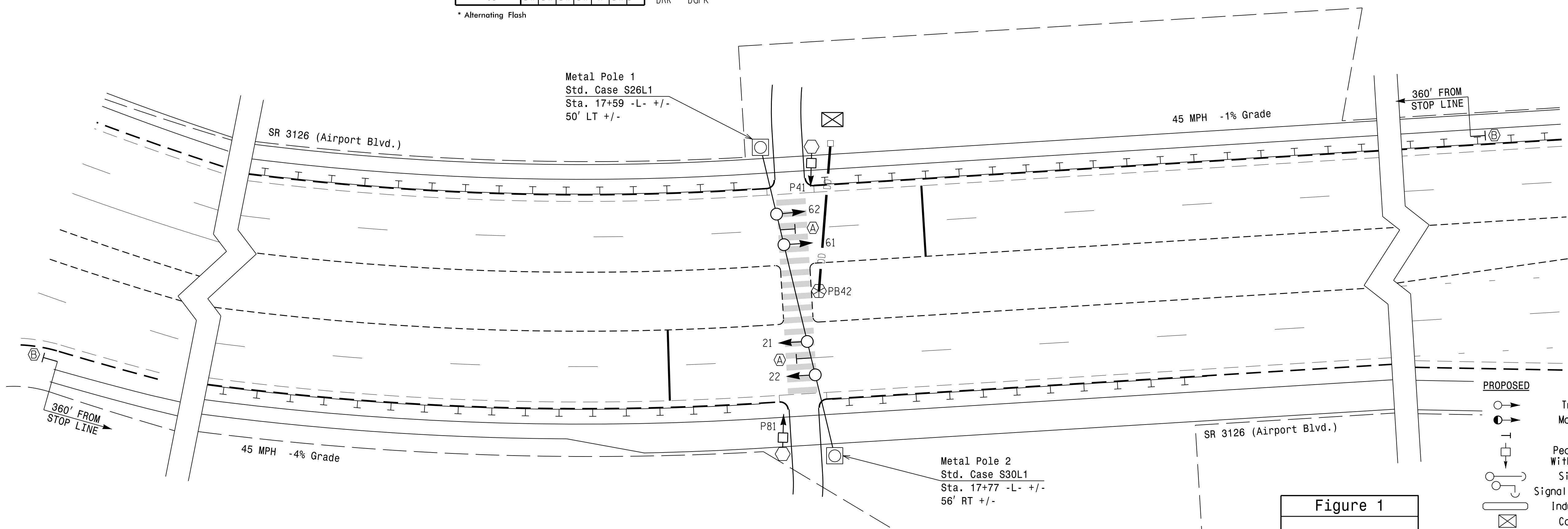
All Heads L.E.D.

Accessible Pedestrian Signal



- Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specifications for Roads and Structures" dated January 2024.
- Program pedestrian heads to countdown the flashing "Don't Walk" time only.
- This intersection features accessible pedestrian signals utilizing percussive tone walk indications and/or speech messages.
- Locate Pedestrian and Crosswalk advance signs in accordance with Table 2C-3 in Section 2C.04 of the 2023 MUTCD or as otherwise directed by the Engineer.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.

2 Phase  
Semi-Actuated  
Pedestrian Hybrid Beacon  
(Cary Signal System)

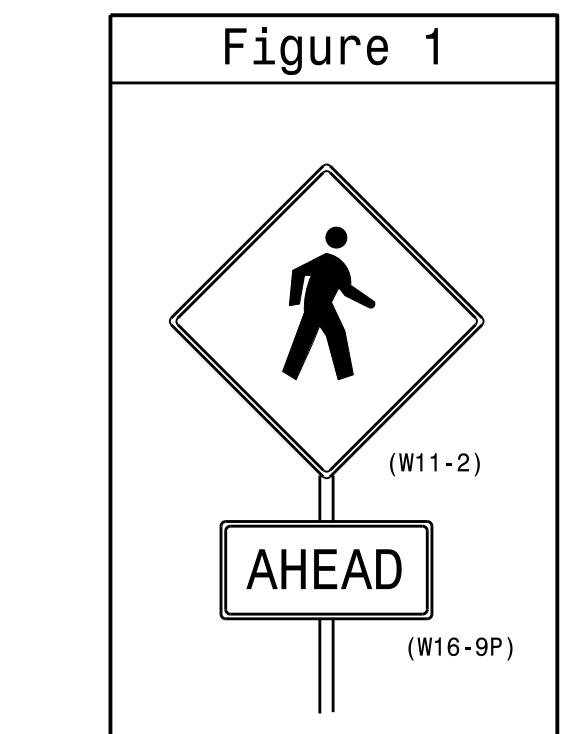


### TIMING CHART ASC/3-2070LXN2 CONTROLLER

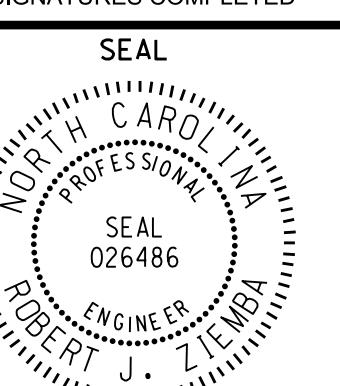
PHASE	02	04 PED	06	08 PED
MINIMUM GREEN *	12 SEC.	7 SEC.	12 SEC.	7 SEC.
VEHICLE EXT. *	- SEC.	- SEC.	- SEC.	- SEC.
YELLOW CHANGE INT.	4.9 SEC.	3.0 SEC.	4.9 SEC.	3.0 SEC.
RED CLEARANCE	4.0 SEC.	0.0 SEC.	4.0 SEC.	0.0 SEC.
MAX. 1 *	30 SEC.	7 SEC.	30 SEC.	7 SEC.
RECALL POSITION	PED RECALL	NONE	PED RECALL	NONE
LOCK DET.	OFF	OFF	OFF	OFF
WALK *	7 SEC.	7 SEC.	7 SEC.	7 SEC.
PED. CLEAR	5 SEC.	18 SEC.	5 SEC.	18 SEC.
ACTUATION B4 ADD *	- VEH.	- VEH.	- VEH.	- VEH.
SEC. PER ACTUATION *	- SEC.	- SEC.	- SEC.	- SEC.
MAX. INITIAL *	- SEC.	- SEC.	- SEC.	- SEC.
TIME B4 REDUCTION *	- SEC.	- SEC.	- SEC.	- SEC.
TIME TO REDUCE *	- SEC.	- SEC.	- SEC.	- SEC.
MINIMUM GAP	- SEC.	- SEC.	- SEC.	- SEC.
DUAL ENTRY	OFF	OFF	OFF	OFF
SIMULTANEOUS GAP	ON	ON	ON	ON

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

ACCESSIBLE PEDESTRIAN SIGNAL OPERATION			
SIGNAL FACE	VOICE TONES	INTERVAL	SPEECH MESSAGE
P41	- X	Walk	(Percussive Tone)
	X -	Flashing Don't Walk / Don't Walk	Wait. Wait to cross Airport.
P81	- X	Walk	(Percussive Tone)
	X -	Flashing Don't Walk / Don't Walk	Wait. Wait to cross Airport.



### New Installation

Prepared In the Offices of: Transportation Mobility and Safety Division State of North Carolina Signal Design Section 750 N. Greenfield Pkwy. Garner, NC 27529	SR 3126 (Airport Boulevard) at Indian Creek Greenway Division 5 Wake County Morrisville
PLAN DATE: October 2025	REVIEWED BY:
PREPARED BY: J.A. Lohr	REVIEWED BY:
REVISIONS	INIT. DATE
0	10/28/2025
1" = 20'	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 SEAL 026486 ROBERT J. ZEMBA Engineer Document Signed by Robert J. Zemba 10/28/2025 SIG. INVENTORY NO. 05-1243	

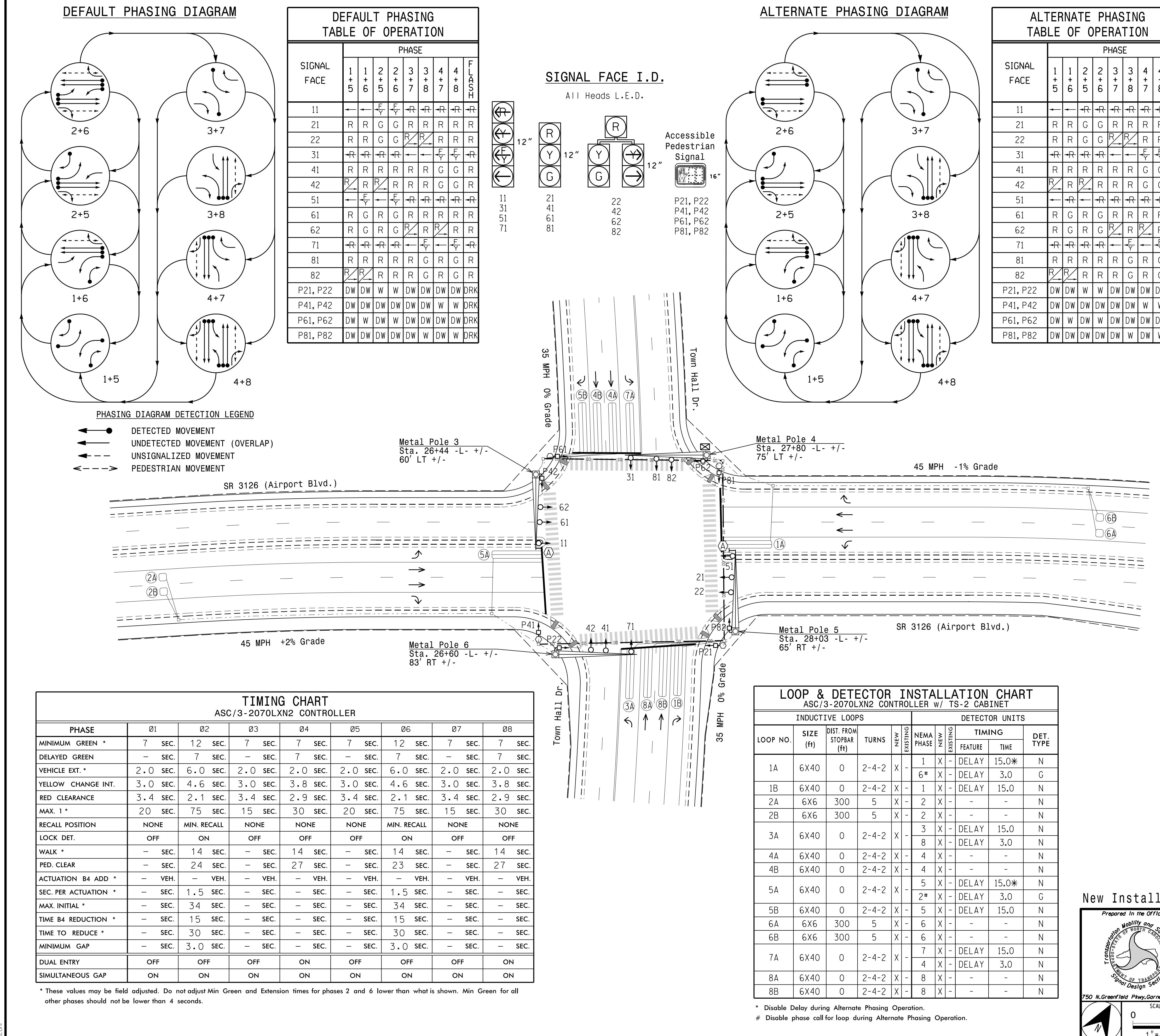




8 Phase  
Fully Actuated  
(Cary Signal System)

NOTES

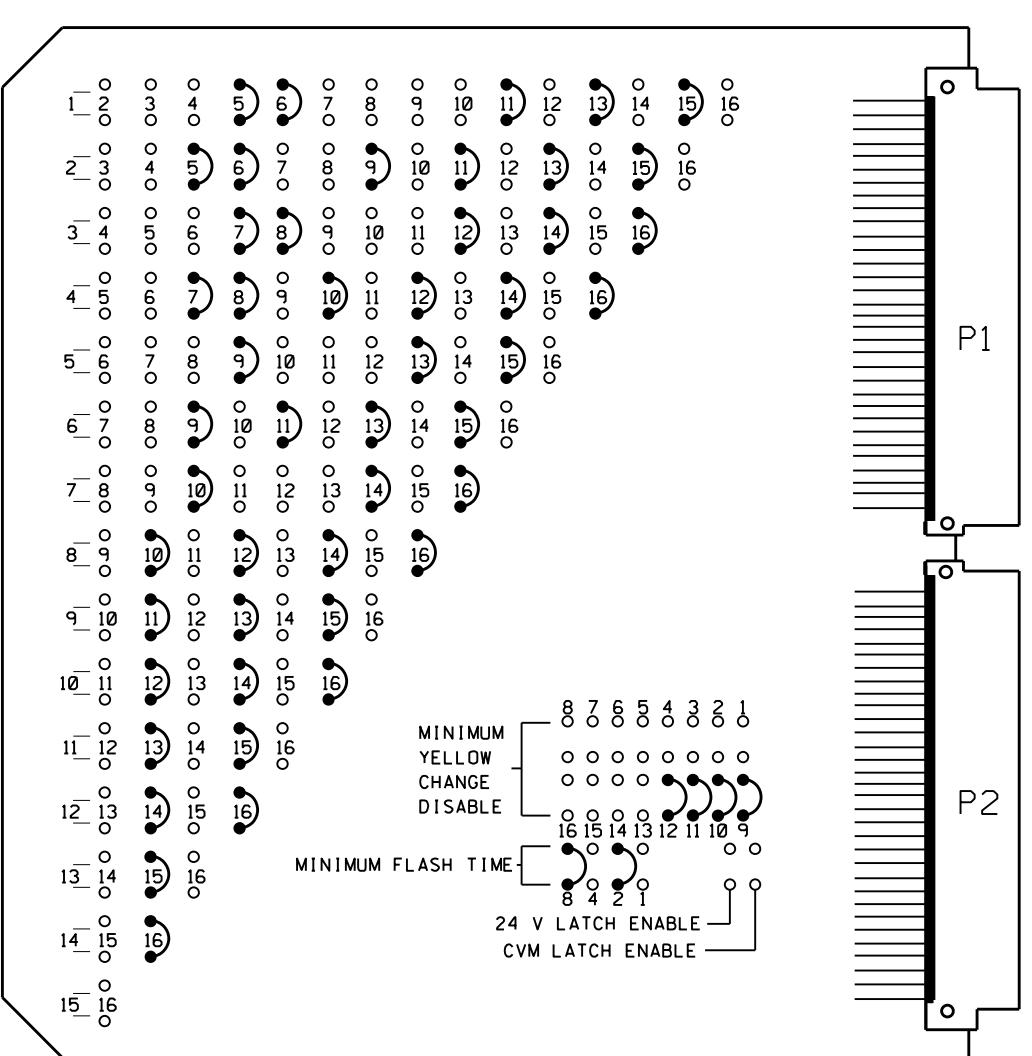
- Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specifications for Roads and Structures" dated January 2024.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 1 and/or phase 5 may be lagged.
- Phase 3 and/or phase 7 may be lagged.
- Set all detector units to presence mode.
- Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
- Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
- Program pedestrian heads to countdown the flashing "Don't Walk" time only.
- This intersection features accessible pedestrian signals utilizing percussive tone walk indications and/or speech messages.
- Pavement markings are existing unless otherwise shown.
- The Division (Town) Traffic Engineer will determine the hours of use for each phasing plan.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.



16 CHANNEL IP  
MALFUNCTION MANAGEMENT UNIT

PROGRAMMING DETAIL

(program card and tables as shown)



MMU PROGRAMMING CARD

ENSURE YELLOW CHANGE PLUS RED CLEARANCE MONITORING IS ENABLED FOR ALL CHANNELS.

UNIT OPTIONS	
OPTION	SETTING
RECURRENT PULSE	ON
WALK DISABLE	OFF
LOG CVM FAULTS	ON
EXTERN WATCHDOG	OFF
24V-212VDC	OFF
PGM CARD MEMORY	ON
LEDguard	ON
FORCE TYPE 16	OFF
TYPE12-SDLC	OFF
VM 3xDay Latch	ON

FIELD CHECK ENABLE	
DUAL IND ENABLE	
RED FAIL ENABLE	
CHANNEL NUMBER	ENABLE/DISABLE
1	ENABLE
2	ENABLE
3	ENABLE
4	ENABLE
5	ENABLE
6	ENABLE
7	ENABLE
8	ENABLE
9	ENABLE
10	ENABLE
11	ENABLE
12	ENABLE
13	ENABLE
14	ENABLE
15	ENABLE
16	ENABLE

FLASHING YELLOW ARROW	
CONFIG MODE	
ENABLE CHANNEL PAIR, FYA	
CH 1-13	ON
CH 3-14	ON
CH 5-15	ON
CH 7-16	ON

RED/YEL INPUT ENABLE	
CH 1	ON
CH 3	ON
CH 5	ON
CH 7	ON

FLASH RATE FAULT	
ON	
FYA TRAP DETECT	ON

24 V LATCH ENABLE CVM LATCH ENABLE

NOTES

- To prevent "flash-conflict" problems, wire all load switches to flash red. Verify that signal heads flash in accordance with the signal plans.
- There are no unused monitor channels; ensure all flash transfer relays are in place.
- Program controller to start up in phase 2 Green and 6 Green.
- Set power-up flash time to 10 seconds and implement on the Malfunction Management Unit. Set controller power-up flash time to 0 seconds.
- Enable simultaneous gap-out feature for all phases.
- Program detectors in accordance with the manufacturer's instructions to accomplish the detection schemes shown on the signal design plans.
- Program detector call delay and extension timing on the controller, unless otherwise specified.
- Set all detector card unit channels to "presence" mode.
- Program phases 2 and 6 for volume density operation.
- Program phases 4 and 8 for dual entry.
- The cabinet and controller are a part of the Cary Signal System.

PHASE	1	2	3	4	5	6	7	8	2 PED	4 PED	6 PED	8 PED	OLA	OLB	OLC	OLD
SIGNAL HEAD NO.	11★	82	21,22	31★	22	41,42	51★	42	61,62	71★	62	81,82	P21, P22	P41, P42	P61, P62	P81, P82
RED		*	2R		*	4R		*	6R		*	8R				
YELLOW			2Y			4Y			6Y			8Y				
GREEN			2G			4G			6G			8G				
RED ARROW																13R 14R 15R 16R
YELLOW ARROW			1Y			3Y			5Y			7Y				13Y 14Y 15Y 16Y
FLASHING YELLOW ARROW																13G 14G 15G 16G
GREEN ARROW	1G	1G		3G	3G		5G	5G		7G	7G					
													9R	10R	11R	12R
													9G	10G	11G	12G

\* Denotes install load resistor. See Load Resistor Installation Detail on this sheet.

★ See pictorial of head wiring detail this sheet.

NU = Not Used

DETECTOR RACK SET-UP DETAIL

INSERT DETECTOR CARDS IN RACK ACCORDING TO THE DETAIL SHOWN BELOW.  
PARTICULAR DETECTOR CHANNELS WILL CALL PHASES INDICATED.

RACK #1	BIU	CH1														
		L3	L1	L7	L5	L11	L9	S	L13	S	S	S	S	S	S	S
		Ø 2	Ø 1	Ø 6	Ø 4	Ø 1	Ø 3	Ø 7	7A	Ø 4	Ø 4	Ø 4	Ø 4	Ø 4	Ø 4	Ø 4
		2A	1A	6A	4B	1B	3A	E	CH2	E	M	M	M	M	M	M
		CH2	CH2	CH2	CH2	CH2	CH2	L14	Ø 8	Y	Y	Y	Y	Y	Y	Y
		L4	L2	L8	L6	L12	L10	Ø 4	Ø 8	Y	Y	Y	Y	Y	Y	Y
		Ø 2	Ø 5	Ø 6	Ø 5	Ø 8	Ø 8	Ø 4	Ø 4	Ø 4	Ø 4	Ø 4	Ø 4	Ø 4	Ø 4	Ø 4
		2B	5A	6B	5B	8B	8A	4A								

WIRE LOOPS TO TERMINALS ON LOOP PANEL AS SHOWN IN THE CHART BELOW

LOOP NO.	LOOP PANEL TERMINALS
1A	L1A,L1B
5A	L2A,L2B
2A	L3A,L3B
2B	L4A,L4B
4B	L5A,L5B
5B	L6A,L6B
6A	L7A,L7B
6B	L8A,L8B
3A	L9A,L9B
8A	L10A,L10B
1B	L11A,L11B
8B	L12A,L12B
7A	L13A,L13B
4A	L14A,L14B
NU	L15A,L15B
NU	L16A,L16B

NOTE

BE SURE TO PROGRAM DETECTOR TYPES AND TIMERS (EXTEND AND DELAY) AS SHOWN ON THE SIGNAL PLANS.

CONTROLLER DETECTOR NO.	FUNCTION	FEATURE	TIME (SEC)
1	Ø 1	DELAY	15
2	Ø 5	DELAY	15
3	Ø 2		
4	Ø 2		
5	Ø 4		
6	Ø 5	DELAY	15
7	Ø 6		
8	Ø 6		
9	Ø 3	DELAY	15
10	Ø 8		
11	Ø 1	DELAY	15
12	Ø 8		
13	Ø 7	DELAY	15
14	Ø 4		
15			
16			

★	61	Ø 6	DELAY	3



# ECONOLITE ASC/3-2070 LOGIC PROCESSOR PROGRAMMING DETAIL FOR LEADING PED INTERVAL (DELAYED GREEN) & LOGICAL DETECTORS

PROJECT REFERENCE NO. SHEET NO.  
HL-0033 Sig. 3.3

## (program controller as shown)

Logic processor configurations 1 through 2 holds the FYA's on signal heads 11 and 51 red for the duration of the delayed green time (leading ped interval) when serving a ped call on the opposing through phase. Logic processor configurations 3 through 10 program the logic detectors.

1. From Main Menu select **1. CONFIGURATION**

2. From CONFIGURATION Submenu select **8. LOGIC PROCESSOR**

3. From the LOGIC PROCESSOR Submenu select **2. LOGIC STATEMENTS**

ENTER A "1" IN THE LP# FIELD. PRESS 'ENTER'. AND PROGRAM AS SHOWN.

```
LP#: 1 COPY FROM: 1 ACTIVE: M (T/F)
IF PED ON PH WALK 2 IS ON
AND VEH GREEN ON PH 2 IS OFF

THEN SIG SET OLP RED 1 ON
SIG SET OLP YELLOW 1 OFF
SIG SET OVL GREEN 1 OFF

ELSE
```

HOLD SIGNAL HEAD 11 FYA  
RED DURING THE PHASE 2  
DELAYED GREEN TIME  
(LEADING PED INTERVAL)

ENTER A "2" IN THE LP# FIELD. PRESS 'ENTER'. AND PROGRAM AS SHOWN.

```
LP#: 2 COPY FROM: 2 ACTIVE: M (T/F)
IF PED ON PH WALK 6 IS ON
AND VEH GREEN ON PH 6 IS OFF

THEN SIG SET OLP RED 3 ON
SIG SET OLP YELLOW 3 OFF
SIG SET OVL GREEN 3 OFF

ELSE
```

HOLD SIGNAL HEAD 51 FYA  
RED DURING THE PHASE 6  
DELAYED GREEN TIME  
(LEADING PED INTERVAL)

ENTER A "3" IN THE LP# FIELD. PRESS 'ENTER'. AND PROGRAM AS SHOWN.

```
LP#: 3 COPY FROM: 3 ACTIVE: M (T/F)
IF DET 1 IS ON

THEN DET SET VEH 49-64 61 ON

ELSE
```

LOGIC FOR LOOP 1A  
(DETECTOR 1/DETECTOR 61)  
"ON".

ENTER A "4" IN THE LP# FIELD. PRESS 'ENTER'. AND PROGRAM AS SHOWN.

```
LP#: 4 COPY FROM: 4 ACTIVE: M (T/F)
IF DET 1 IS OFF

THEN DET SET VEH 49-64 61 OFF

ELSE
```

LOGIC FOR LOOP 1A  
(DETECTOR 1/DETECTOR 61)  
"OFF".

ENTER A "5" IN THE LP# FIELD. PRESS 'ENTER'. AND PROGRAM AS SHOWN.

```
LP#: 5 COPY FROM: 5 ACTIVE: M (T/F)
IF DET 9 IS ON

THEN DET SET VEH 49-64 62 ON

ELSE
```

LOGIC FOR LOOP 3A  
(DETECTOR 9/DETECTOR 62)  
"ON".

END PROGRAMMING

ENTER A "6" IN THE LP# FIELD. PRESS 'ENTER'. AND PROGRAM AS SHOWN.

```
LP#: 6 COPY FROM: 6 ACTIVE: M (T/F)
IF DET 9 IS OFF

THEN DET SET VEH 49-64 62 OFF

ELSE
```

LOGIC FOR LOOP 3A  
(DETECTOR 9/DETECTOR 62)  
"OFF".

ENTER A "7" IN THE LP# FIELD. PRESS 'ENTER'. AND PROGRAM AS SHOWN.

```
LP#: 7 COPY FROM: 7 ACTIVE: M (T/F)
IF DET 2 IS ON

THEN DET SET VEH 49-64 63 ON

ELSE
```

LOGIC FOR LOOP 5A  
(DETECTOR 2/DETECTOR 63)  
"ON".

ENTER A "8" IN THE LP# FIELD. PRESS 'ENTER'. AND PROGRAM AS SHOWN.

```
LP#: 8 COPY FROM: 8 ACTIVE: M (T/F)
IF DET 2 IS OFF

THEN DET SET VEH 49-64 63 OFF

ELSE
```

LOGIC FOR LOOP 5A  
(DETECTOR 2/DETECTOR 63)  
"OFF".

ENTER A "9" IN THE LP# FIELD. PRESS 'ENTER'. AND PROGRAM AS SHOWN.

```
LP#: 9 COPY FROM: 9 ACTIVE: M (T/F)
IF DET 13 IS ON

THEN DET SET VEH 49-64 64 ON

ELSE
```

LOGIC FOR LOOP 7A  
(DETECTOR 13/DETECTOR 64)  
"ON".

ENTER A "10" IN THE LP# FIELD. PRESS 'ENTER'. AND PROGRAM AS SHOWN.

```
LP#: 10 COPY FROM: 10 ACTIVE: M (T/F)
IF DET 13 IS OFF

THEN DET SET VEH 49-64 64 OFF

ELSE
```

LOGIC FOR LOOP 7A  
(DETECTOR 13/DETECTOR 64)  
"OFF".

1. From Main Menu select **1. CONFIGURATION**

2. From CONFIGURATION Submenu select **8. LOGIC PROCESSOR**

3. From the LOGIC PROCESSOR Submenu select **1. LOGIC STATEMENT CONTROL**

ENABLE LOGIC PROCESSOR STATEMENTS 1-10 BY POSITIONING THE CURSOR OVER THE FIELDS SHOWN BELOW AND USING THE TOGGLE KEY TO ENABLE THEM.

1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
LP 1-15	E	E	E	E	E	E	E	E	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

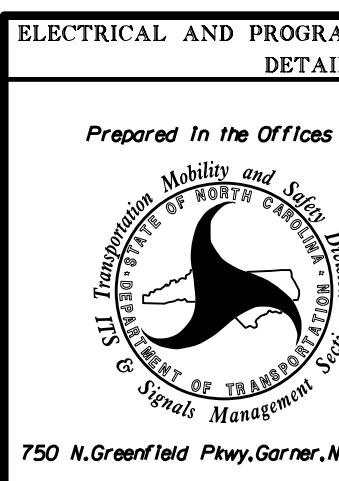
END PROGRAMMING

## ACCESSIBLE PEDESTRIAN SIGNAL (APS) INSTALLATION NOTES

1. Install push buttons and APS equipment per manufacturer's instructions.
2. Provide a dedicated cable to each push button per manufacturer's instructions.
3. If APS equipment is mounted in cabinet, use filtered power (i.e., Controller Receptacle) to power APS equipment. Do not use Equipment Receptacle, which is a GFCI outlet.
4. Never attempt to operate a standard contact closure push button with the APS system unless cabinet is re-wired for standard button operation or unless explicitly allowed by the manufacturer.
5. Place manufacturer's instructions in cabinet with cabinet prints, signal plans, and electrical details.
6. An APS push button station that is designed to work without the need for interfacing with a pedestrian signal head shall be installed for applications where a push button is installed in a median without a pedestrian signal head.
7. A push button with a single tactile arrow that point in both directions of travel shall be installed if the median separates two parallel crosswalks.

THIS ELECTRICAL DETAIL IS FOR  
THE SIGNAL DESIGN: 05-1242  
DESIGNED: October 2025  
SEALED: 10/28/2025  
REVISED: N/A

### Electrical Detail - Sheet 3 of 4



ELECTRICAL AND PROGRAMMING DETAILS FOR:  
Prepared in the Offices of:  
SR 3126 (Airport Boulevard)  
at  
Town Hall Drive  
Division 5 Wake County Morrisville  
PLAN DATE: October 2025 REVIEWED BY:  
PREPARED BY: S. Kirkpatrick REVIEWED BY:  
REVISIONS INIT. DATE  
750 N. Greenfield Pkwy, Garner, NC 27529

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
SEAL		
NORTH CAROLINA PROFESSIONAL ENGINEER TODD JOYCE 031001		
Doc Signed by: Todd Joyce 10/28/2025 DATE		
SIG. INVENTORY NO. 05-1242		

## ALTERNATE PHASING ACTIVATION DETAIL

TO RUN ALT. PHASING DURING FREE RUN - PROGRAM CHANGES (SHOWN BELOW) IN A TIME BASED ACTION PLAN. SCHEDULE A DAY PLAN THAT INCLUDES THE ACTION PLAN PROGRAMMED TO SELECT VEH DET PLAN 2 AND ENABLE SF BITS 1 & 5.

TO RUN ALT. PHASING DURING COORDINATION - SELECT THE TIME BASED ACTION PLAN THAT IS PROGRAMMED TO SELECT VEH DET PLAN 2 AND ENABLE SF BITS 1 & 5.

PHASING	VEH DET PLAN	SF BITS ENABLED
ACTIONS REQUIRED TO RUN <u>DEFAULT PHASING</u>	1	NONE
ACTIONS REQUIRED TO RUN <u>ALTERNATE PHASING</u>	2	1, 5

IMPORTANT: IF ALT. PHASING IS USED DURING FREE RUN AND COORDINATION, DO NOT OPERATE TIME OF DAY EVENTS CONCURRENTLY WITH COORDINATION PLAN EVENTS IN THE EVENT SCHEDULER. (EX. FREE RUN EVENT SHOULD END BEFORE COORDINATION PLAN EVENT STARTS AND VICE-VERSA).

### ALTERNATE PHASING CHANGE SUMMARY

THE FOLLOWING IS A SUMMARY OF WHAT TAKES PLACE WHEN SF BITS 1 & 5 AND VEH DET PLAN 2 ACTIVATE TO CALL THE "ALTERNATE PHASING":

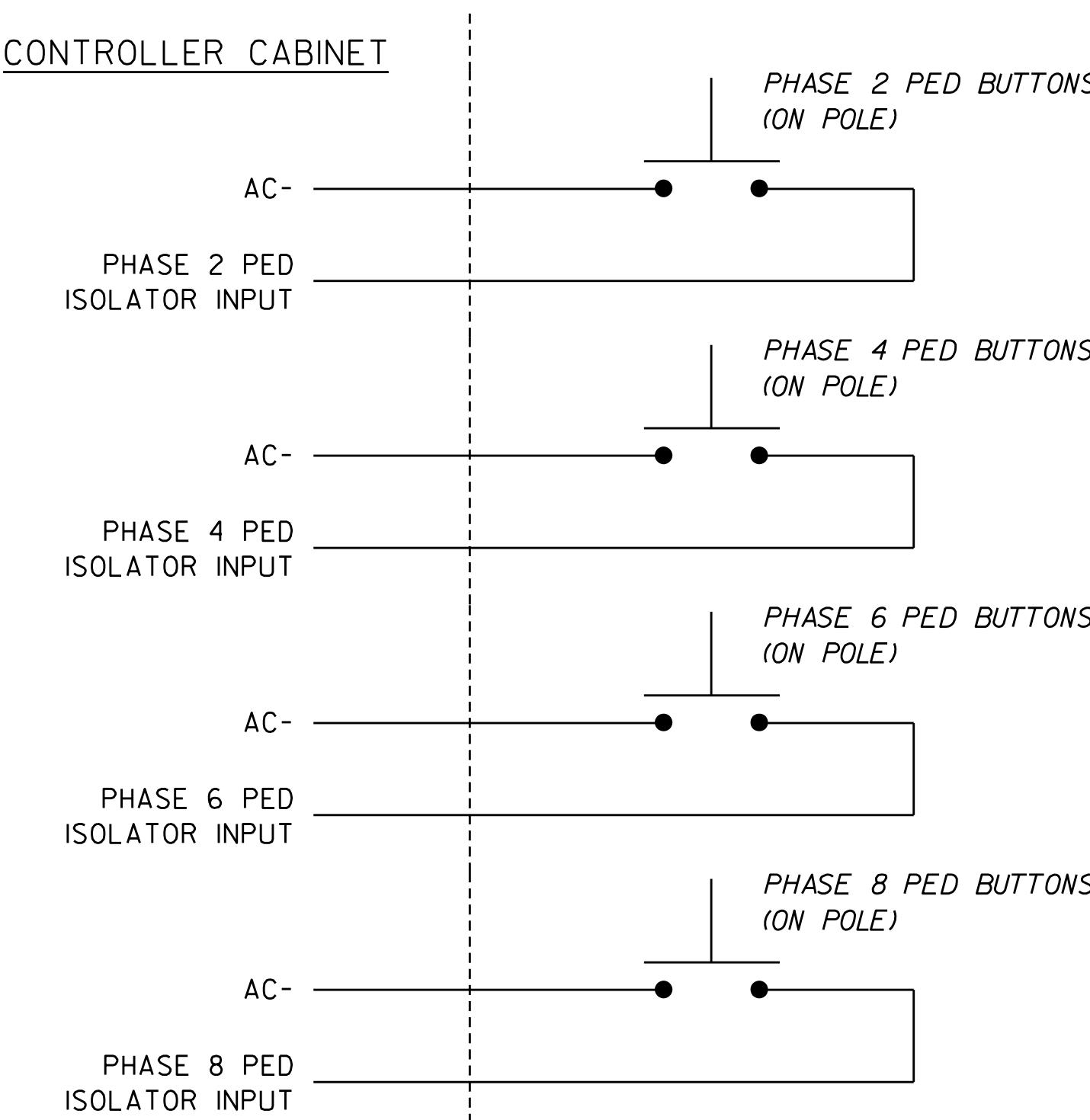
SF BITS 1 & 5: Modifies overlap parent phases for heads 11 and 51 to run protected turns only.

VEH DET PLAN 2: Disables phase 6 call on loop 1A and reduces delay time for phase 1 call on loop 1A to 0 seconds.

Disables phase 2 call on loop 5A and reduces delay time for phase 5 call on loop 5A to 0 seconds.

### PEDESTRIAN PUSH BUTTON WIRING DETAIL

(wire push buttons as shown)



## ECONOLITE ASC/3-2070 STARTUP AND SOFTWARE FLASH PROGRAMMING DETAIL

(program controller as shown)

1. From Main Menu select **2. CONTROLLER**

2. From CONTROLLER Submenu select **5. START/FLASH**

START/FLASH DATA  
-----START UP-----  
1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6  
PHASE G G  
A B C D E F G H I J K L M N O P  
OVERLAP X X X X X X X X X X X X X X X X  
FLASH>MON. NO FL TIME.. 0 ALL RED... 6  
PWR START SEQ.. 1 MUTCD> YES Y- G: NO

Scroll down on this screen and set "Exit F1" to Green "G"

## ECONOLITE ASC/3-2070 ACTION PLAN PROGRAMMING DETAIL

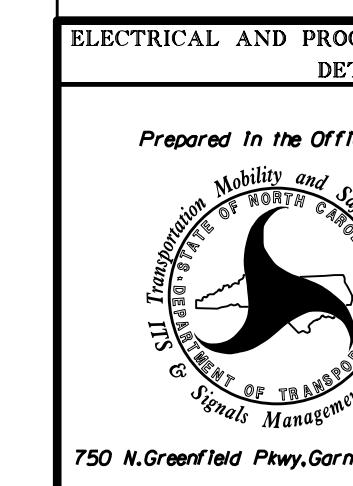
1. From Main Menu select **5. TIME BASE**
2. From TIME BASE Submenu select **2. ACTION PLAN**

ACTION PLAN... [ * ]																
PATTERN.....	AUTO	SYS OVERRIDE....	NO													
TIMING PLAN.....	0	SEQUENCE.....	0													
VEH DETECTOR PLAN..	2	DET LOG.....	NONE													
FLASH.....	--	RED REST.....	NO													
VEH DET DIAG PLN...	0	PED DET DIAG PLN..	0													
DIMMING ENABLE..	NO	PRIORITY RETURN..	NO													
PED PR RETURN..	NO	QUEUE DELAY.....	NO													
PMT COND DELAY	NO															
PHASE	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
PED RCL	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
WALK 2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
VEX 2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
VEH RCL	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
MAX RCL	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
MAX 2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
PHASE	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
MAX 3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
CS INH	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
DMIT	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
SPC FCT	X	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.
AUX FCT	.	.	.	(1-3)	.	.	.	.	.	.	.	.	.	.	.	.
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

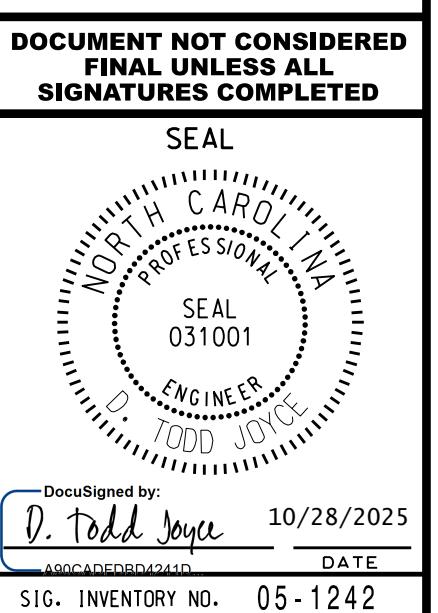
\* The Action Plan number(s) are to be determined by the Division and/or City Traffic Engineer.

THIS ELECTRICAL DETAIL IS FOR  
THE SIGNAL DESIGN: 05-1242  
DESIGNED: October 2025  
SEALED: 10/28/2025  
REVISED: N/A

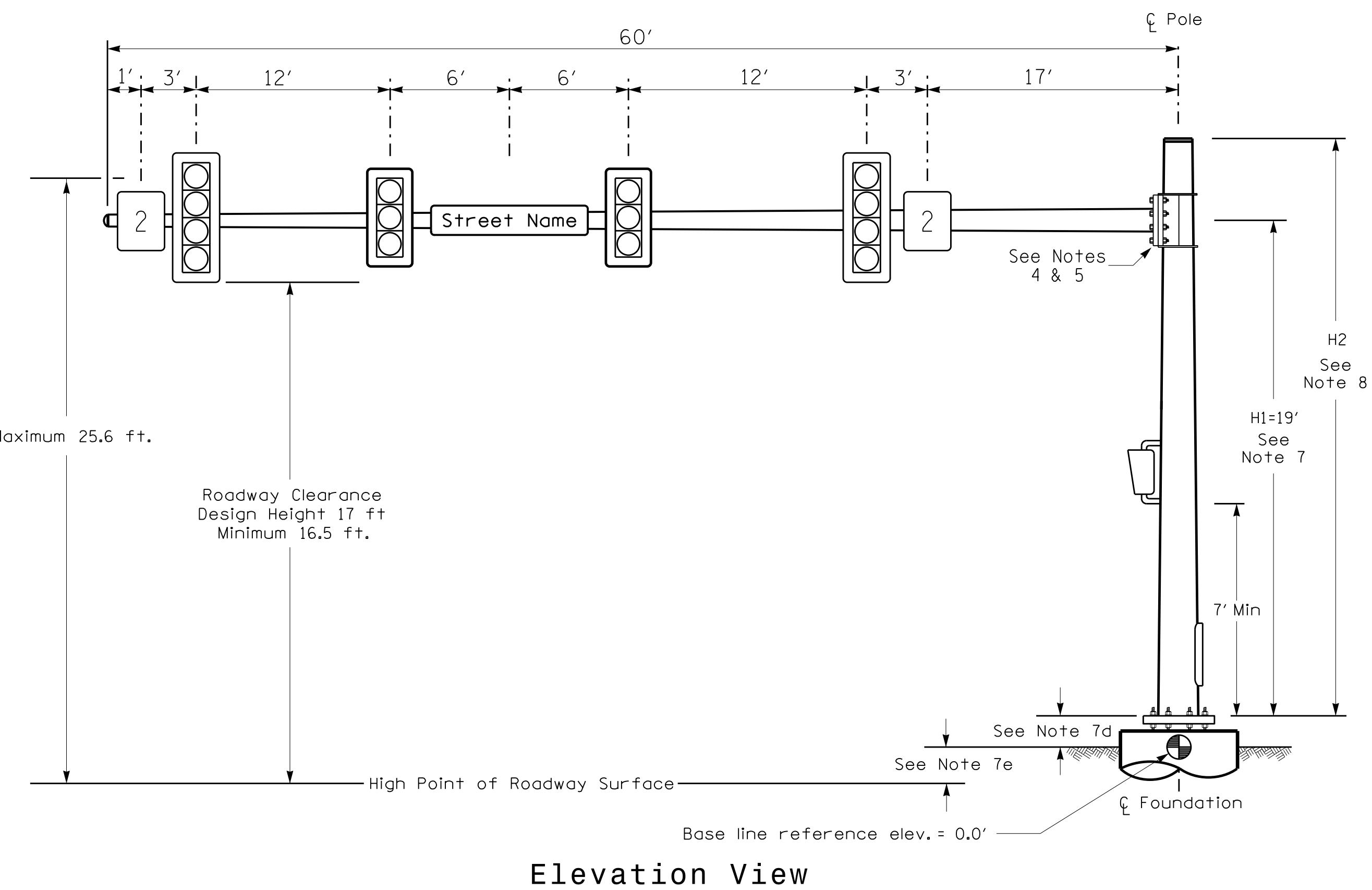
Electrical Detail - Sheet 4 of 4



SR 3126 (Airport Boulevard)  
at  
Town Hall Drive  
Division 5 Wake County Morrisville  
PLAN DATE: October 2025 REVIEWED BY:  
PREPARED BY: S. Kirkpatrick REVIEWED BY:  
REVISIONS INIT. DATE  
750 N. Greenfield Pkwy, Garner, NC 27529



## Design Loading for METAL POLE NO. 3



## SPECIAL NOTE

The contractor is responsible for verifying that the mast arm attachment height (H1) will provide the "Design Height" clearance from the roadway before submitting final shop drawings for approval. Verify elevation data below which was obtained by field measurement or from available project survey data.

## Elevation Data for Mast Arm Attachment (H1)

Elevation Differences for:	Pole 3	Pole 4
Baseline reference point at $\mathbb{C}$ Foundation @ ground level	0.0 ft.	0.0 ft.
Elevation difference at High point of roadway surface	0.0 ft.	+0.6 ft.
Elevation difference at Edge of travelway or face of curb	0.0 ft.	+0.3 ft.

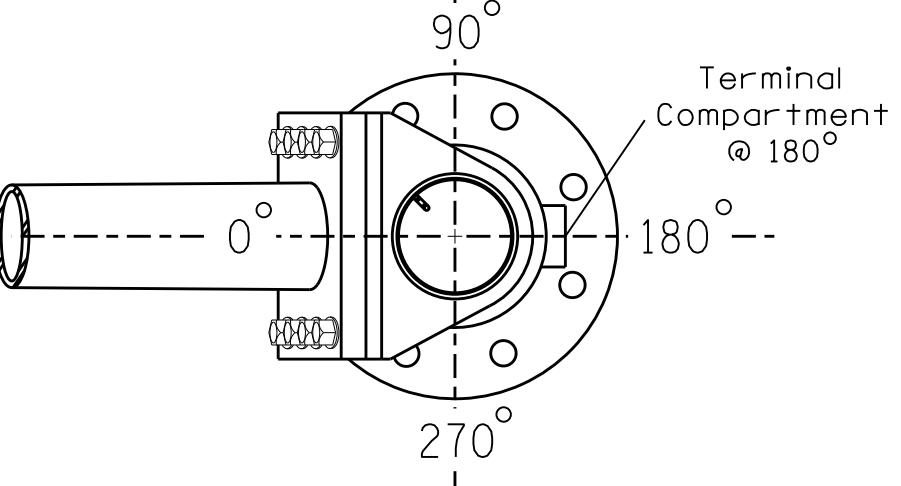
## MAST ARM LOADING SCHEDULE

LOADING SYMBOL	DESCRIPTION	AREA	SIZE	WEIGHT
	RIGID MOUNTED SIGNAL HEAD 12"-4 SECTION-WITH BACKPLATE	11.5 S.F.	25.5" W X 66.0" L	74 LBS
	RIGID MOUNTED SIGNAL HEAD 12"-3 SECTION-WITH BACKPLATE	9.3 S.F.	25.5" W X 52.5" L	60 LBS
	PEDESTRIAN SIGNAL HEAD WITH MOUNTING HARDWARE	2.2 S.F.	18.5" W X 17.0" L	21 LBS
	SIGN RIGID MOUNTED	7.5 S.F.	30.0" W X 36.0" L	14 LBS
	STREET NAME SIGN RIGID MOUNTED	16.0 S.F.	24.0" W X 96.0" L	36 LBS

## NOTES

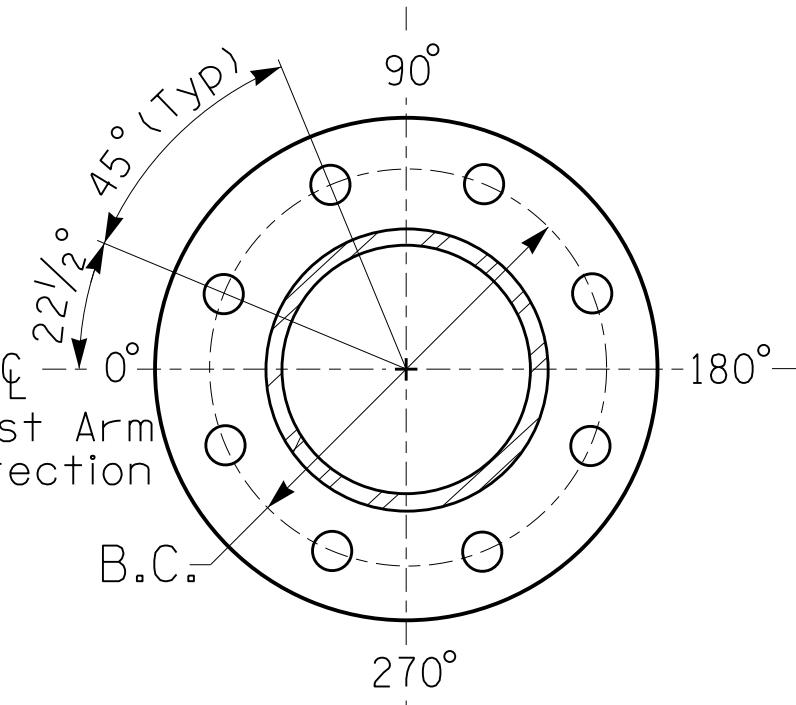
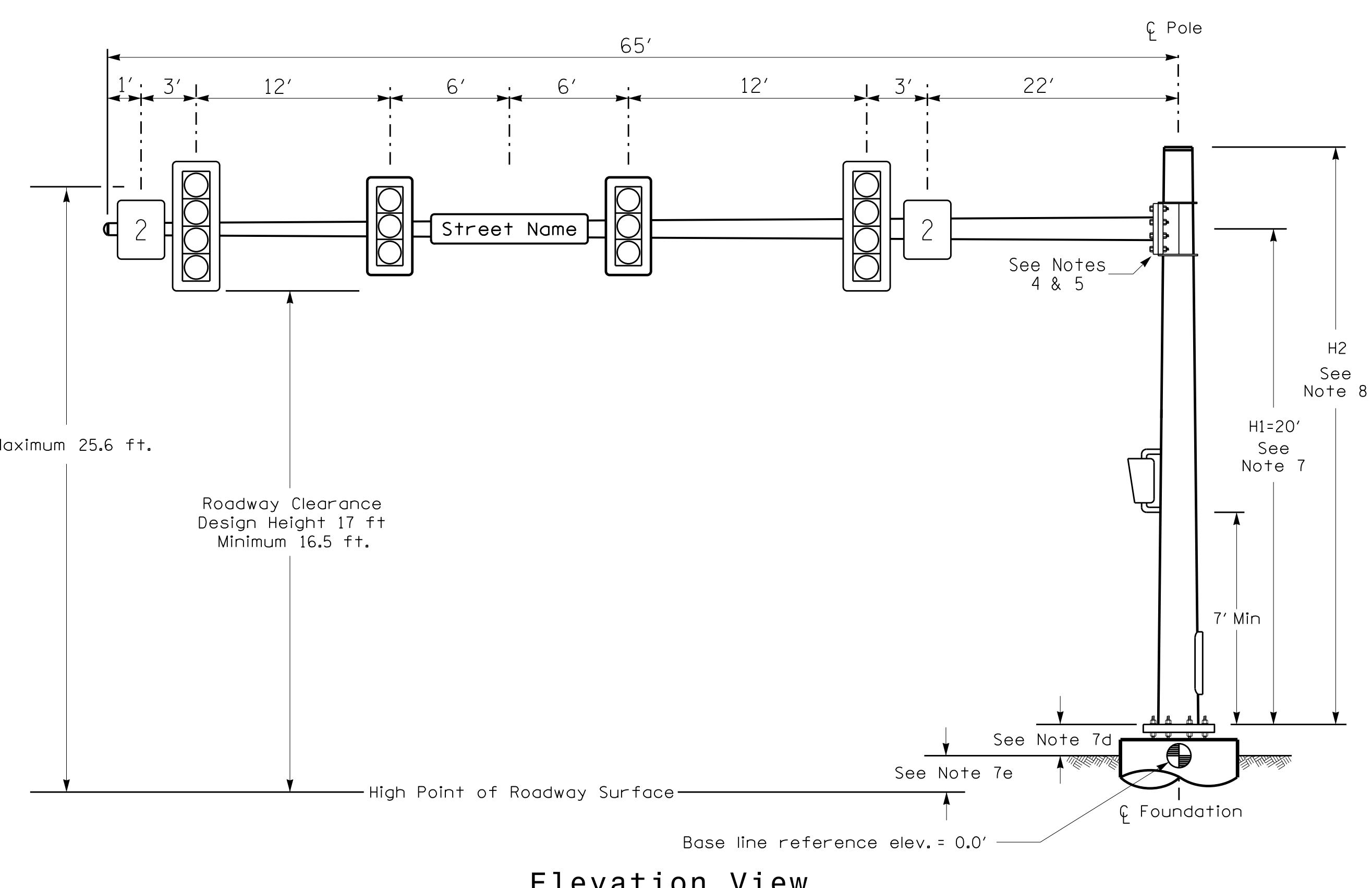
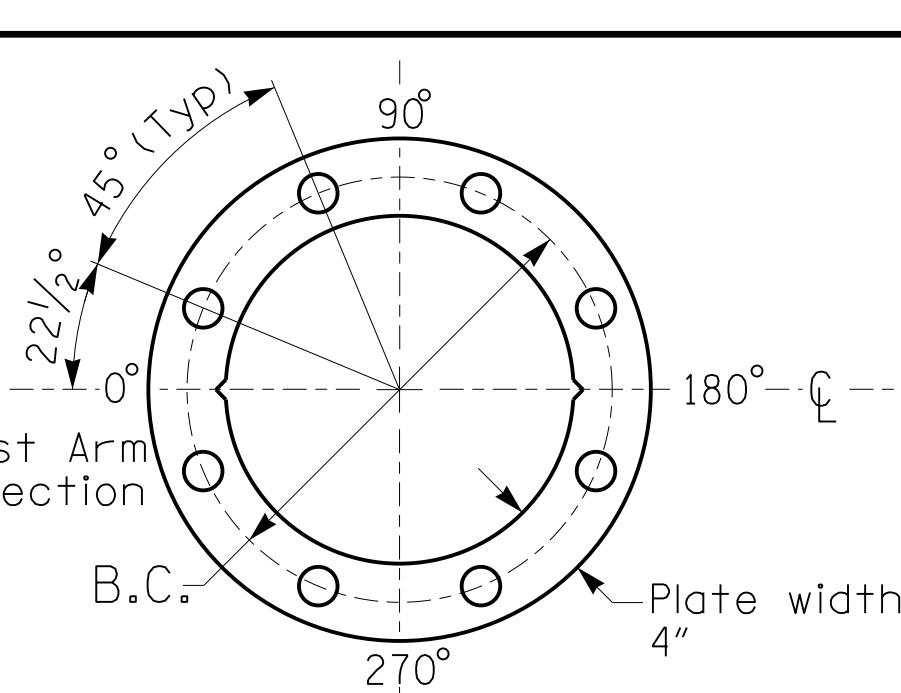
## DESIGN REFERENCE MATERIAL

1. Design the traffic signal structure and foundation in accordance with:
  - The 1st Edition 2015 AASHTO LRFD "Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, including all of the latest interim revisions.
  - The 2024 NCDOT "Standard Specifications for Roads and Structures." The latest addenda to the specifications can be found in the traffic signal project special provisions.
  - The 2024 NCDOT Roadway Standard Drawings.
  - The traffic signal project plans and special provisions.
  - The NCDOT "Metal Pole Standards" located at the following NCDOT website: <https://connect.ncdot.gov/resources/safety/Pages/ITS-Design-Resources.aspx>



## POLE RADIAL ORIENTATION

## Design Loading for METAL POLE NO. 4

8 BOLT BASE PLATE DETAIL  
See Note 6BASE PLATE TEMPLATE & ANCHOR BOLT  
LOCK PLATE DETAIL  
For 8 Bolt Base Plate

## NCDOT Wind Zone 4 (120 mph)

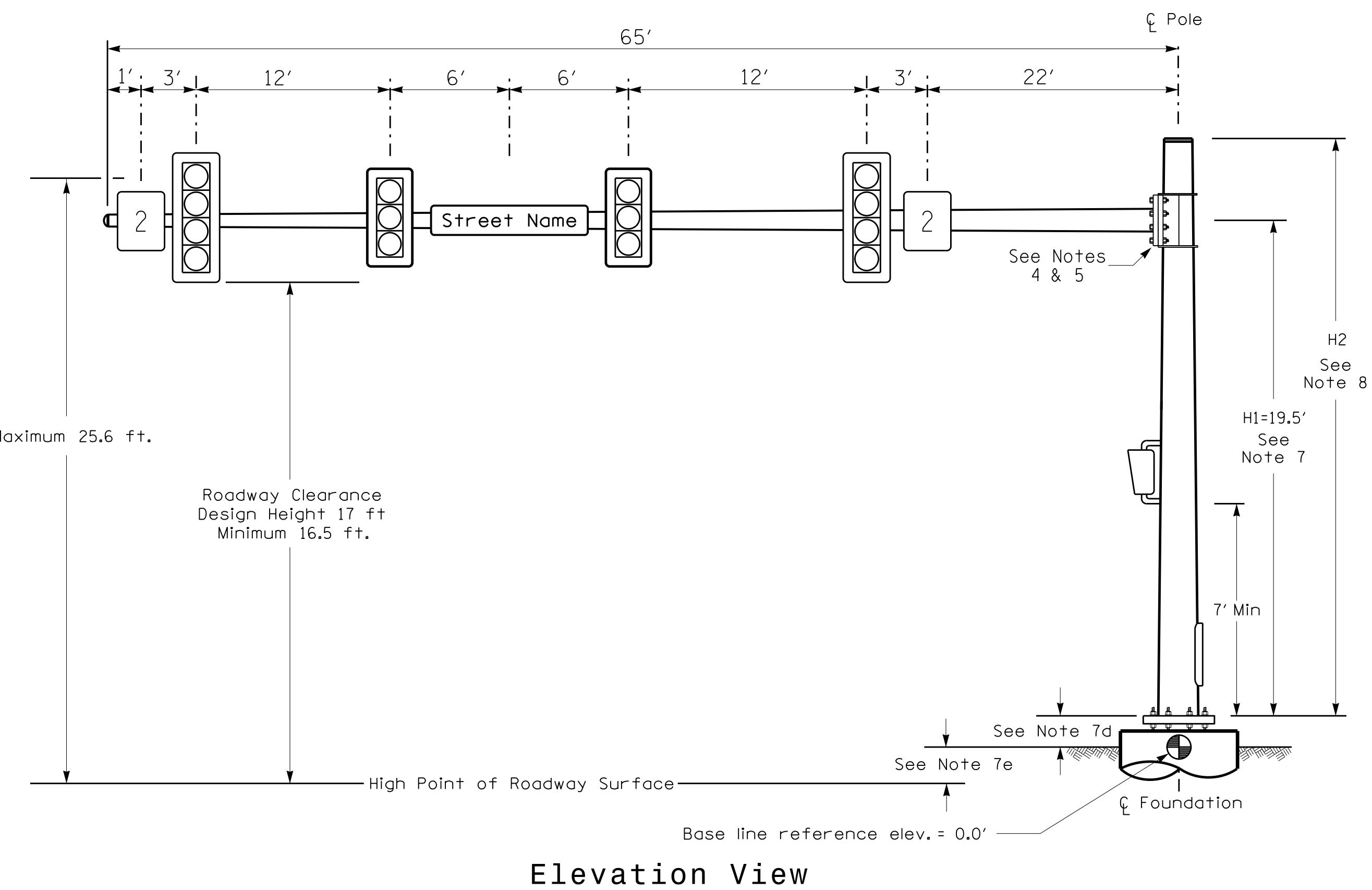
Prepared In the Offices of: 	SR 3126 (Airport Boulevard) at Town Hall Drive		
Division 5 Wake County	November 2023	REVIEWED BY:	Morrisville
PLAN DATE:	PREPARED BY:	REVIEWED BY:	01/31/2024
750 N. Greenfield Pkwy. Garner, NC 27529	J. A. Lohr	01/31/2024	01/31/2024
SCALE	INIT.	DATE	
0 N/A			
N/A			

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL  
NORTH CAROLINA  
PROFESSIONAL ENGINEER  
ROBERT J. ZEMBA  
026486  
01/31/2024  
05-1242

Document ID: 24-JAN-2024 10:03  
S: #TS5511 TS: Signal Design Section Central Region 010 v 5.0 2023 Airport Blvd#051242-sign-pole-2023md.dgn

## Design Loading for METAL POLE NO. 5



## SPECIAL NOTE

The contractor is responsible for verifying that the mast arm attachment height (H1) will provide the "Design Height" clearance from the roadway before submitting final shop drawings for approval. Verify elevation data below which was obtained by field measurement or from available project survey data.

## Elevation Data for Mast Arm Attachment (H1)

Elevation Differences for:	Pole 5	Pole 6
Baseline reference point at $\mathbb{C}$ Foundation @ ground level	0.0 ft.	0.0 ft.
Elevation difference at High point of roadway surface	+0.4 ft.	-0.2 ft.
Elevation difference at Edge of travelway or face of curb	0.0 ft.	-0.5 ft.

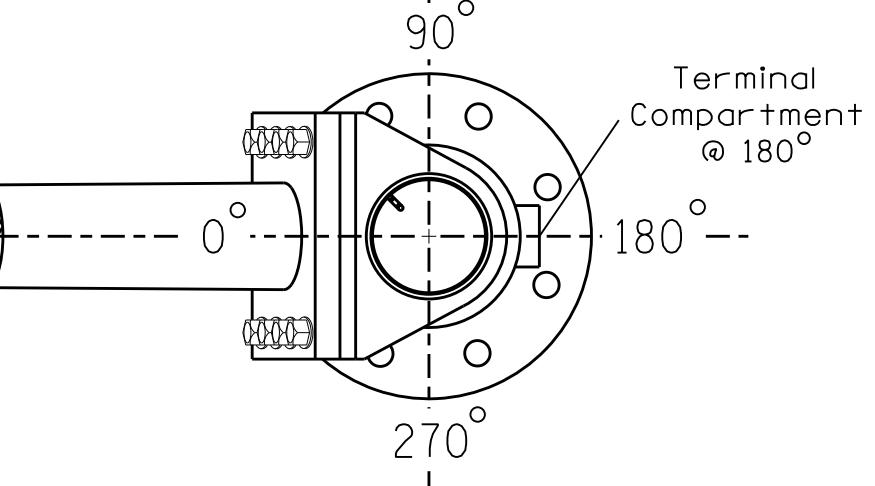
## MAST ARM LOADING SCHEDULE

LOADING SYMBOL	DESCRIPTION	AREA	SIZE	WEIGHT
	RIGID MOUNTED SIGNAL HEAD 12"-4 SECTION-WITH BACKPLATE	11.5 S.F.	25.5" W X 66.0" L	74 LBS
	RIGID MOUNTED SIGNAL HEAD 12"-3 SECTION-WITH BACKPLATE	9.3 S.F.	25.5" W X 52.5" L	60 LBS
	PEDESTRIAN SIGNAL HEAD WITH MOUNTING HARDWARE	2.2 S.F.	18.5" W X 17.0" L	21 LBS
	SIGN RIGID MOUNTED	7.5 S.F.	30.0" W X 36.0" L	14 LBS
	STREET NAME SIGN RIGID MOUNTED	16.0 S.F.	24.0" W X 96.0" L	36 LBS

## NOTES

## DESIGN REFERENCE MATERIAL

1. Design the traffic signal structure and foundation in accordance with:
  - The 1st Edition 2015 AASHTO LRFD "Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, including all of the latest interim revisions.
  - The 2024 NCDOT "Standard Specifications for Roads and Structures." The latest addenda to the specifications can be found in the traffic signal project special provisions.
  - The 2024 NCDOT Roadway Standard Drawings.
  - The traffic signal project plans and special provisions.
  - The NCDOT "Metal Pole Standards" located at the following NCDOT website: <https://connect.ncdot.gov/resources/safety/Pages/ITS-Design-Resources.aspx>



## POLE RADIAL ORIENTATION

2. Design the traffic signal structure using the loading conditions shown in the elevation views. These are anticipated worst case "design loads" and may not represent the actual loads that will be applied at the time of the installation. The contractor should refer to the traffic signal plans for the actual loads that will be applied at the time of the installation.

3. Design all signal supports using force ratios that do not exceed 0.9.
4. The camber design for the mast arm deflection should provide an appearance of a low pitched arch where the tip or the free end of the mast arm does not deflect below horizontal when fully loaded.

5. A clamp-type bolted mast arm-to-pole connection may be used instead of the welded ring stiffened box connection shown as long as the connection meets all of the design requirements.

6. Design base plate with 8 anchor bolt holes. Provide 2 inch x 60 inch anchor bolts.

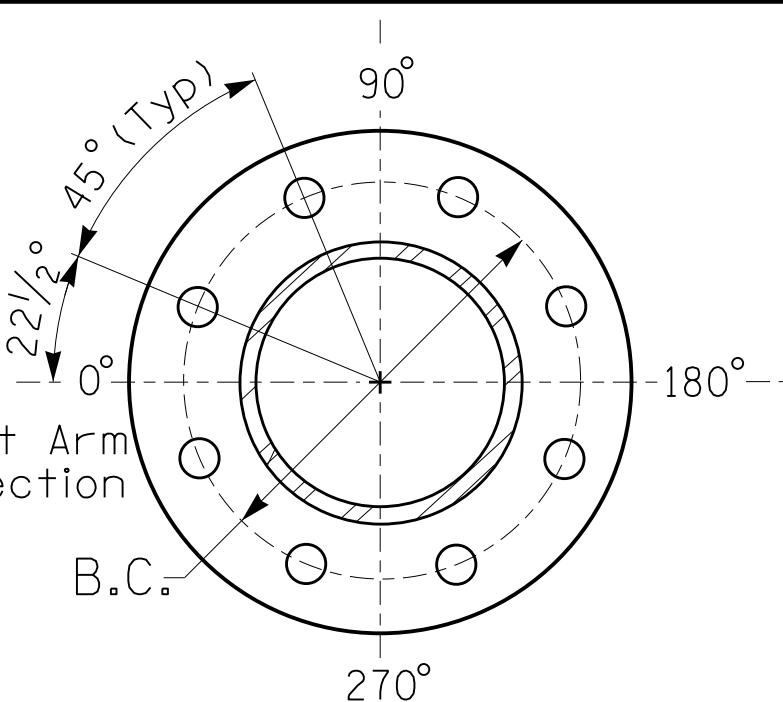
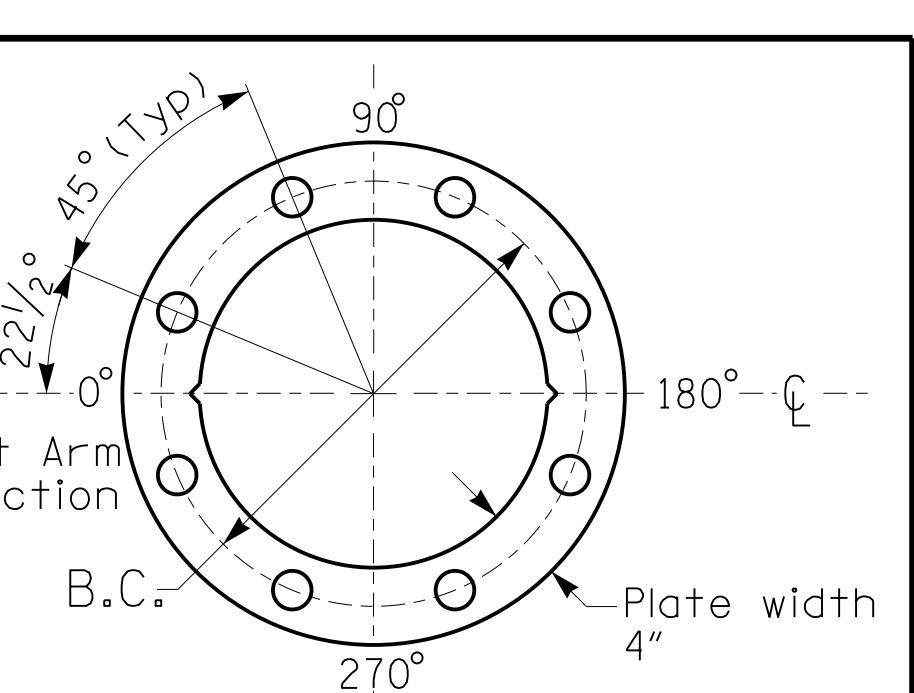
7. The mast arm attachment height (H1) shown is based on the following design assumptions:
  - Mast arm slope and deflection are not considered in determining the arm attachment height as they are assumed to offset each other.
  - Signal heads are rigidly mounted and vertically centered on the mast arm.
  - The roadway clearance height for design is as shown in the elevation views.
  - The top of the pole base plate is 0.75 feet above the ground elevation.
  - Refer to the Elevation Data Chart for the elevation differences between the proposed foundation ground level and the high point of the roadway.

8. The pole manufacturer will determine the total height (H2) of each pole using the greater of the following:
  - Mast arm attachment height (H1) plus 2 feet, or
  - H1 plus 1/2 of the total height of the mast arm attachment assembly plus 1 foot.

9. If pole location adjustments are required, the contractor must gain approval from the Engineer as this may affect the mast arm lengths and arm attachment heights. The contractor may contact the Signal Design Section Senior Structural Engineer for assistance at (919) 814-5000.

10. The contractor is responsible for verifying that the mast arm length shown will allow proper positioning of the signalheads over the roadway.

11. The contractor is responsible for providing soil/penetration testing data (SPT) to the pole manufacturer so site specific foundations can be designed.

8 BOLT BASE PLATE DETAIL  
See Note 6BASE PLATE TEMPLATE & ANCHOR BOLT  
LOCK PLATE DETAIL  
For 8 Bolt Base Plate

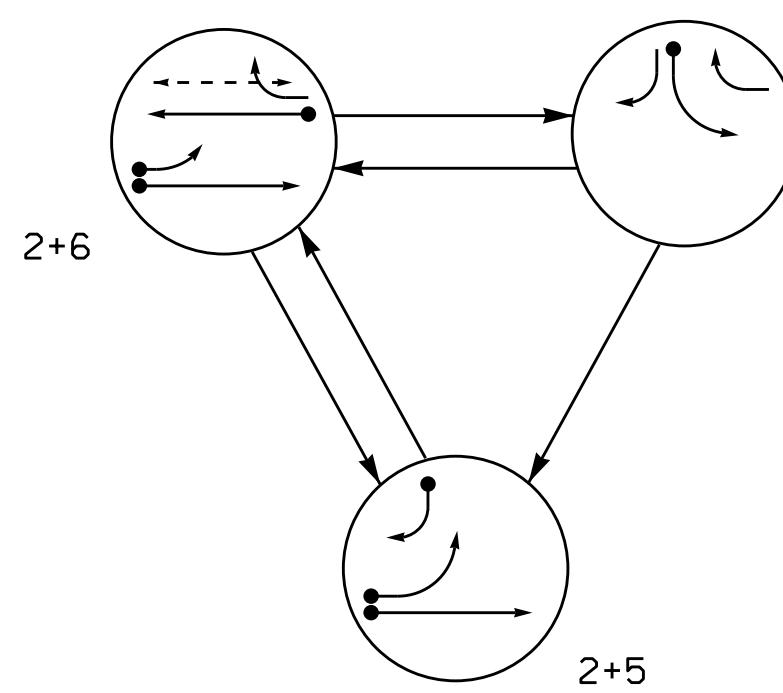
## NCDOT Wind Zone 4 (120 mph)

Prepared In the Offices of: 	SR 3126 (Airport Boulevard) at Town Hall Drive		
Division 5 Wake County	Reviewed By:	Morrisville	
PLAN DATE: November 2023	REVIEWED BY:		
PREPARED BY: J.A. Lohr	REVIEWED BY:		
SCALE: 0	N/A	INIT. DATE	
REVISIONS	N/A	01/31/2024	
0 N/A			
N/A			

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL  
NORTH CAROLINA  
PROFESSIONAL ENGINEER  
ROBERT J. ZEMBA  
01/31/2024  
026486  
Sig. Inventory No. 05-1242

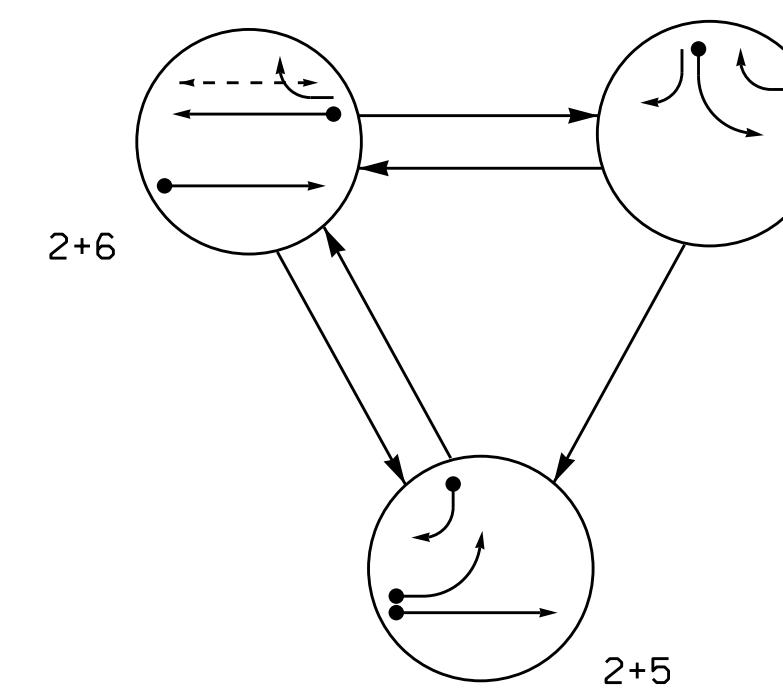
DEFAULT PHASING DIAGRAM



DEFAULT PHASING TABLE OF OPERATION

SIGNAL FACE	PHASE			
	2 5	2 6	4	FLASH
21, 22	G	G	R	R
41, 43	-R	-R	-R	
42	-R	R	R	
51	-R	F	R	R
61, 62	R	G	R	R
63	R	F	R	R
P61, P62	DW	W	DW	DRK

ALTERNATE PHASING DIAGRAM



ALTERNATE PHASING TABLE OF OPERATION

SIGNAL FACE	PHASE			
	2 5	2 6	4	FLASH
21, 22	G	G	R	R
41, 43	-R	-R	-R	
42	-R	R	R	
51	-R	R	R	
61, 62	R	G	R	R
63	R	F	R	R
P61, P62	DW	W	DW	DRK

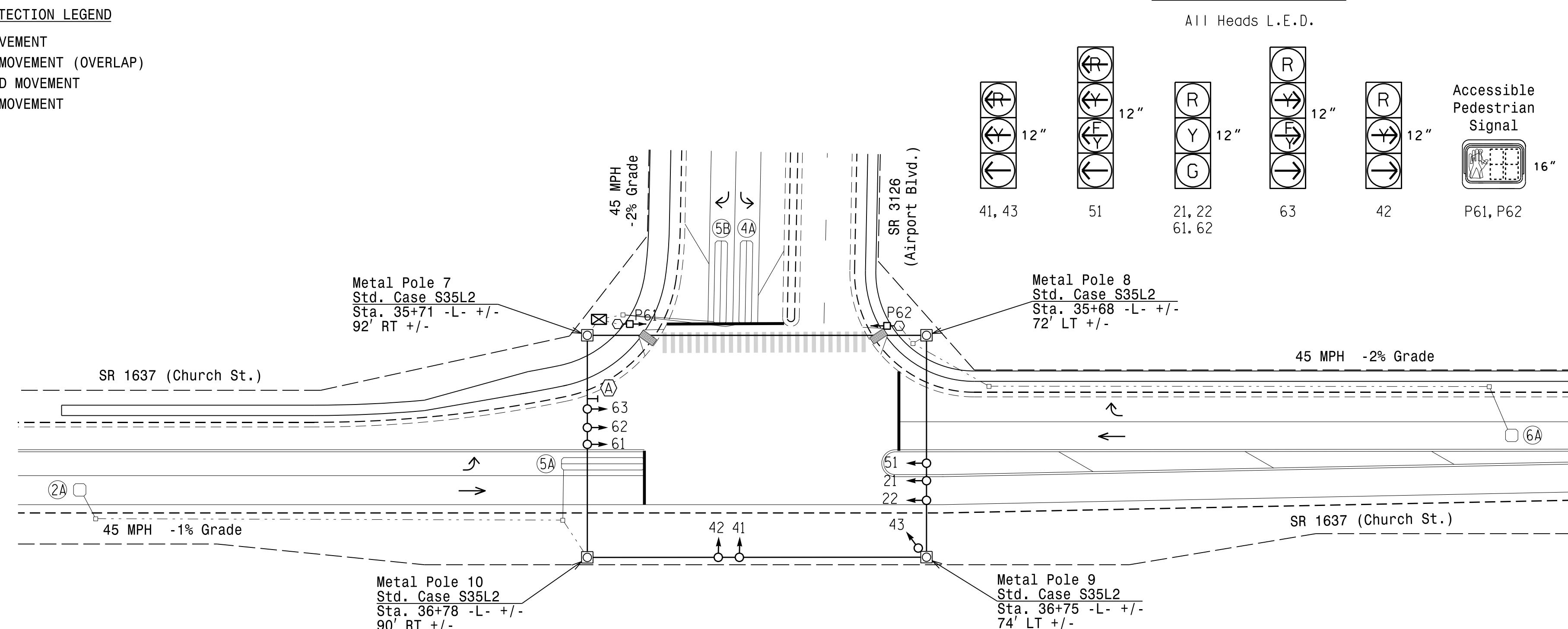
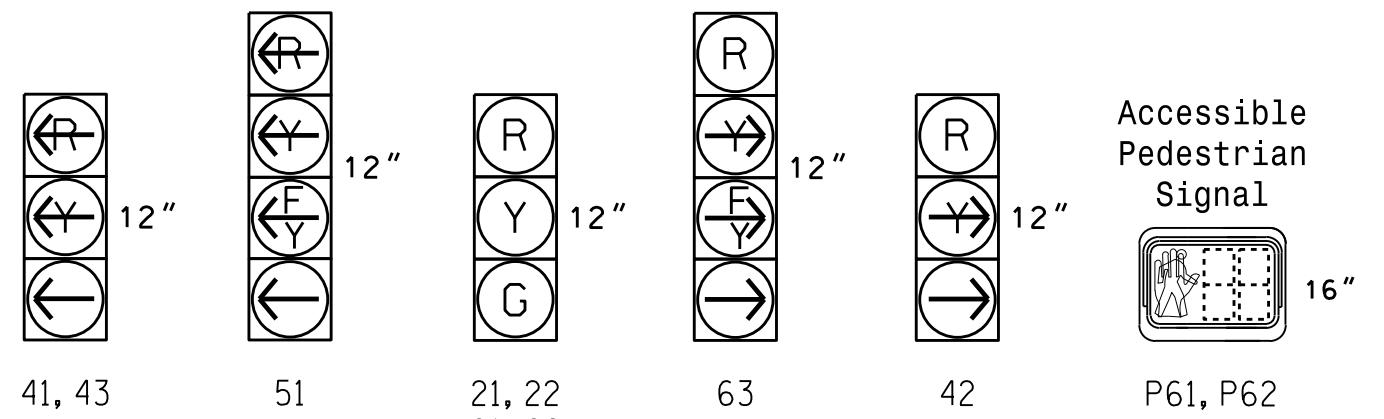
3 Phase  
Fully Actuated  
(Cary Signal System)

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specifications for Roads and Structures" dated January 2024.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 5 may be lagged.
- Set all detector units to presence mode.
- Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
- Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
- Program pedestrian heads to countdown the flashing "Don't Walk" time only.
- This intersection features accessible pedestrian signals utilizing percussive tone walk indications and/or speech messages.
- The Division (Town) Traffic Engineer will determine the hours of use for each phasing plan.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.

SIGNAL FACE I.D.

All Heads L.E.D.



TIMING CHART  
ASC/3-2070LXN2 CONTROLLER

PHASE	02	04	05	06
MINIMUM GREEN *	12 SEC.	7 SEC.	7 SEC.	12 SEC.
DELAYED GREEN *	- SEC.	- SEC.	- SEC.	7 SEC.
VEHICLE EXT. *	6.0 SEC.	2.0 SEC.	2.0 SEC.	6.0 SEC.
YELLOW CHANGE INT.	4.7 SEC.	3.0 SEC.	3.0 SEC.	4.7 SEC.
RED CLEARANCE	1.6 SEC.	3.2 SEC.	3.2 SEC.	1.6 SEC.
MAX. 1 *	75 SEC.	30 SEC.	15 SEC.	75 SEC.
RECALL POSITION	MIN. RECALL	NONE	NONE	MIN. RECALL
LOCK DET.	ON	OFF	OFF	ON
WALK *	- SEC.	- SEC.	- SEC.	14 SEC.
PED. CLEAR	- SEC.	- SEC.	- SEC.	25 SEC.
ACTUATION B4 ADD *	- VEH.	- VEH.	- VEH.	- VEH.
SEC. PER ACTUATION *	2.5 SEC.	- SEC.	- SEC.	2.5 SEC.
MAX. INITIAL *	34 SEC.	- SEC.	- SEC.	34 SEC.
TIME B4 REDUCTION *	15 SEC.	- SEC.	- SEC.	15 SEC.
TIME TO REDUCE *	30 SEC.	- SEC.	- SEC.	30 SEC.
MINIMUM GAP	3.0 SEC.	- SEC.	- SEC.	3.0 SEC.
DUAL ENTRY	OFF	OFF	OFF	OFF
SIMULTANEOUS GAP	ON	ON	ON	ON

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

LOOP & DETECTOR INSTALLATION CHART  
ASC/3-2070LXN2 CONTROLLER w/ TS-2 CABINET

LOOP NO.	SIZE (ft)	DIST. FROM STOPBAR (ft)	TURNS	INDUCTIVE LOOPS		DETECTOR UNITS		DET. TYPE
				NEW	EXISTING	NEW	EXISTING	
2A	6X6	300	5	X	-	2	X	-
4A	6X40	0	2-4-2	X	-	4	X	-
5A	6X40	0	2-4-2	X	-	5	X	DELAY 15.0*
				2#	X	-	DELAY 3.0	C
5B	6X40	0	2-4-2	X	-	5	X	DELAY 15.0
6A	6X6	300	5	X	-	6	X	-

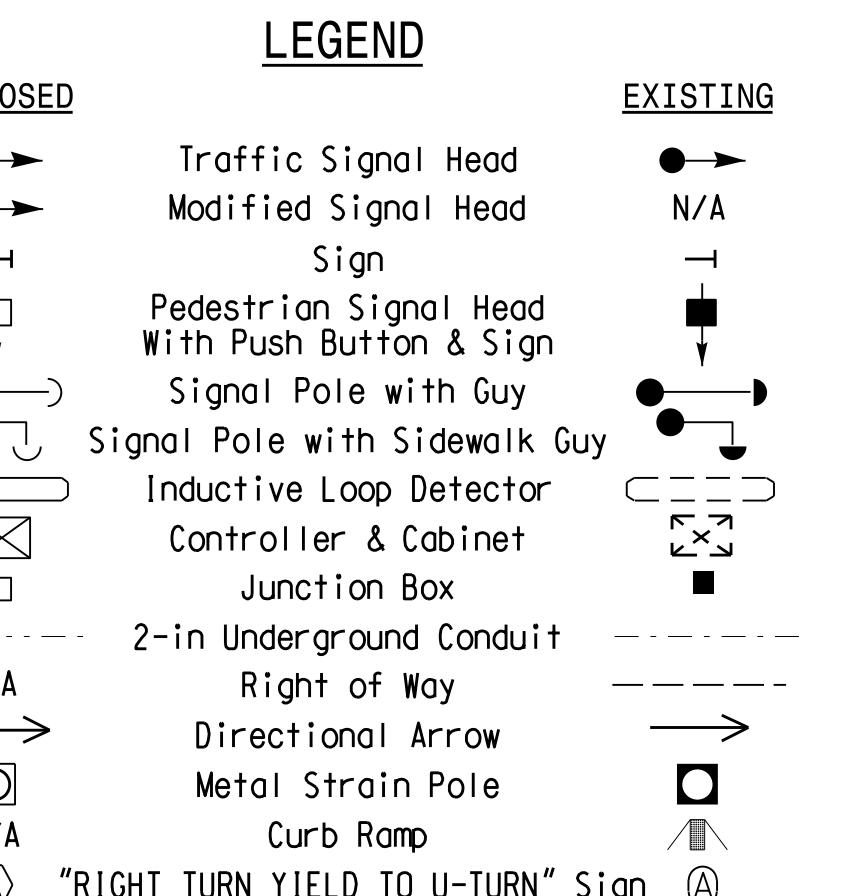
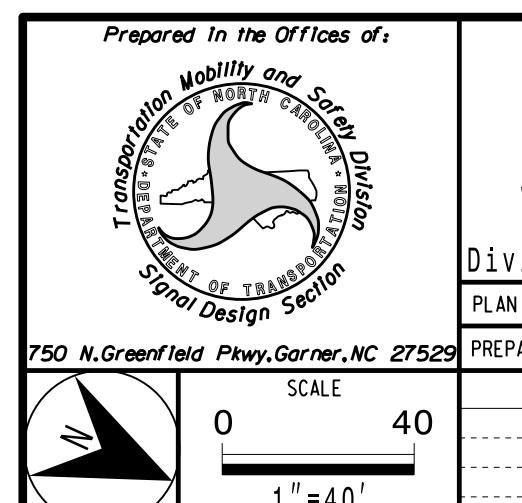
\* Disable delay during Alternate Phasing Operation.

# Disable phase call for loop during Alternate Phasing Operation.

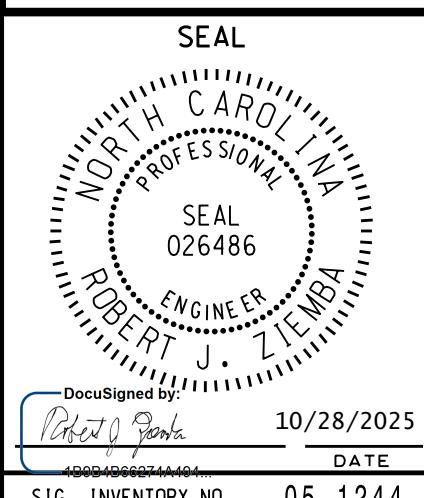
ACCESSIBLE PEDESTRIAN SIGNAL OPERATION

SIGNAL FACE	VOICE	TONES	INTERVAL		SPEECH MESSAGE
			WALK	FLASHING DON'T WALK / DON'T WALK	
P61, P62	-	X	Walk		(Percussive Tone)
	X	-	Flashing Don't Walk / Don't Walk		Wait. Wait to cross Airport.

New Installation



DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED



Prepared In the Offices of:	SR 1637 (Church Street)
Transportation Mobility and Safety Division	at
Division 5 Wake County Morrisville	SR 3126 (Airport Boulevard)
PLAN DATE: October 2025	REVIEWED BY:
PREPARED BY: J.A. Lohr	REVIEWED BY:
REVISIONS	INIT. DATE
0	10/28/2025
1" = 40'	

Document Signed by: Robert J. Zemka, P.E. 10/28/2025  
SIG. INVENTORY NO. 05-1244



## ECONOLITE ASC/3-2070 LOAD SWITCH ASSIGNMENT DETAIL

(program controller as shown)

To assign load switch 1 as OLG, program LD SWITCH 1 as OVLP '7' TYPE '0' as shown below.

1. From Main Menu select 1. CONFIGURATION
2. From CONFIGURATION Submenu select 3. LOAD SW ASSIGN

LD SWITCH ASSIGN									
PHASE		DIMMING ---FLASH---							
/OVLP		TYPE R Y G D PWR AUT TGR							
1	7	O	.	.	+	A	R	X	
2	2	V	.	.	+	A	R	.	
3	3	V	.	.	+	A	R	X	
4	4	V	.	.	+	A	R	.	
5	5	V	.	.	-	A	R	.	
6	6	V	.	.	-	A	R	X	
7	7	V	.	.	-	A	R	.	
8	8	V	.	.	-	A	R	X	
9	2	P	.	.	+	A	.	.	
10	4	P	.	.	+	A	.	.	
11	6	P	.	.	-	A	.	.	
12	8	P	.	.	-	A	.	.	
13	1	O	.	.	+	A	R	X	
14	2	O	.	.	-	A	R	X	
15	3	O	.	.	+	A	R	.	
16	4	O	.	.	-	A	R	.	

## ECONOLITE ASC/3-2070 STARTUP AND SOFTWARE FLASH PROGRAMMING DETAIL

(program controller as shown)

1. From Main Menu select 2. CONTROLLER
2. From CONTROLLER Submenu select 5. START/FLASH

START/FLASH DATA									
-----START UP-----									
1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6									
PHASE G G									
OVERLAP A B C D E F G H I J K L M N O P									
FLASH>MON. NO FL TIME.. 0 ALL RED... 6									
PWR START SEQ.. 1 MUTCD> YES Y- G: NO									

Scroll down on this screen and set "Exit F1" to Green "G"

## ECONOLITE ASC/3-2070 OVERLAP PROGRAMMING DETAIL

(program controller as shown)

1. From Main Menu select 2. CONTROLLER
2. From CONTROLLER Submenu select 2. VEHICLE OVERLAPS

**OVERLAP G**  
Select TMG VEH OVLP [G] and 'NORMAL'  
TMG VEH OVLP...[G] TYPE: ..... **NORMAL**  
PHASES 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6  
INCLUDED . . . X . . . . . . . . . . . . . .  
LAG GRN 0.0 YEL 0.0 RED 0.0

Toggle Until Overlap A Is Reached

**OVERLAP A**  
Select TMG VEH OVLP [A] and 'PPLT FYA'  
TMG VEH OVLP...[A] TYPE: ..... **PPLT FYA**  
PROTECTED LEFT TURN.... OVERLAP G  
OPPOSING THROUGH..... PHASE 6  
FLASHING ARROW OUTPUT.....CH13 ISOLATE  
DELAY START OF: FYA..0.0 CLEARANCE..0.0  
ACTION PLAN SF BIT DISABLE..... 0

Toggle Twice

**OVERLAP C**  
Select TMG VEH OVLP [C] and 'PPLT FYA'  
TMG VEH OVLP...[C] TYPE: ..... **PPLT FYA**  
PROTECTED LEFT TURN.... PHASE 5  
OPPOSING THROUGH..... PHASE 6  
FLASHING ARROW OUTPUT.....CH15 ISOLATE  
DELAY START OF: FYA..0.0 CLEARANCE..0.0  
ACTION PLAN SF BIT DISABLE..... 5

Toggle Once

**OVERLAP D**  
Select TMG VEH OVLP [D] and 'NORMAL'  
TMG VEH OVLP...[D] TYPE: ..... **NORMAL**  
PHASES 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6  
INCLUDED . . . X X . . . . . . . . . . . . . .  
LAG GRN 0.0 YEL 0.0 RED 0.0

END PROGRAMMING

NOTICE ACTION PLAN  
SF BIT "5"

END PROGRAMMING

## ECONOLITE ASC/3-2070 SPECIAL MMU PROGRAMMING

(program controller as shown)

1. From Main Menu select 1. CONFIGURATION
2. From CONFIGURATION Submenu select 4. PORT 1 (SDLC)
3. From PORT 1 (SDLC) Submenu select 2. MMU PROGRAM

### CAUTION!

Set intersection to Flash before attempting to enter or change any MMU programming data.

This programming and that of the MMU programming card must match exactly. If they do not, the intersection will be placed into Flash.

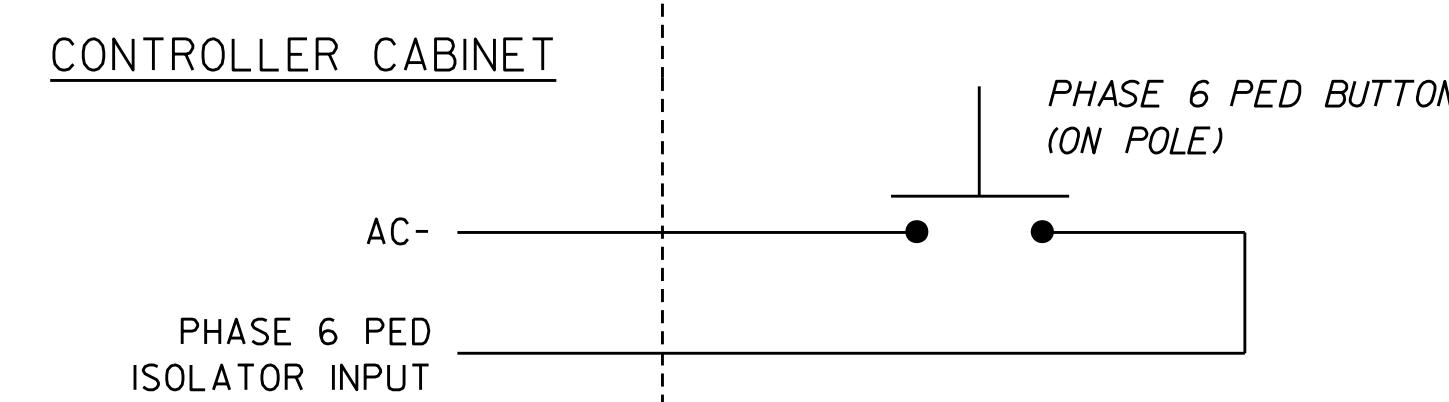
**MMU PROGRAM [ MANUAL ]**  
CH 6 5 4 3 2 1 0 9 8 7 6 5 4 3 2  
1 X . . X . . . . . . . . . . . . X . .  
2 X X . X . X . . . . . . X X . .  
3 .  
4 X . . X . . . . . . . . . . . . . . . .  
5 X X . . . . . . . . . . . . . . . . . .  
6 . X . X . X . . . . . . . . . . . . . .  
7 .  
8 .  
9 .  
10 .  
11 . X . X . . . . . . . . . . . . . . . .  
12 .  
13 X X . . . . . . . . . . . . . . . . . .  
14 .  
15 X .

END PROGRAMMING

THIS ELECTRICAL DETAIL IS FOR  
THE SIGNAL DESIGN: 05-1244  
DESIGNED: October 2025  
SEALED: 10/28/2025  
REVISED: N/A

## PEDESTRIAN PUSH BUTTON WIRING DETAIL

(wire push buttons as shown)



Electrical Detail - Sheet 2 of 4

ELECTRICAL AND PROGRAMMING DETAILS FOR:		
Prepared in the Offices of:		
S.C. Transportation, Mobility, and Safety Division State of South Carolina Department of Transportation 750 N. Greenfield Pkwy., Garner, NC 27529		
SR 1637 (Church Street)	at	SR 3126 (Airport Boulevard)
Division 5	Wake County	Morrisville
PLAN DATE: October 2025	REVIEWED BY:	
PREPARED BY: S.Kirkpatrick	REVIEWED BY:	
REVISIONS	INIT.	DATE
Document Not Considered Final Unless All Signatures Completed		
SEAL		
S.C. TRANSPORTATION, MOBILITY, AND SAFETY DIVISION STATE OF SOUTH CAROLINA PROFESSIONAL ENGINEER TODD JOYCE DATE: 10/28/2025 SIGNATURE: D. Todd Joyce ACCREDITED BY DATE: 10/28/2025 SIG. INVENTORY NO. 05-1244		



## ALTERNATE PHASING ACTIVATION DETAIL

TO RUN ALT. PHASING DURING FREE RUN - PROGRAM CHANGES (SHOWN BELOW) IN A TIME BASED ACTION PLAN.  
SCHEDULE A DAY PLAN THAT INCLUDES THE ACTION PLAN PROGRAMMED TO SELECT VEH DET PLAN 2 AND ENABLE SF BIT 5.

TO RUN ALT. PHASING DURING COORDINATION - SELECT THE TIME BASED ACTION PLAN THAT IS PROGRAMMED TO SELECT VEH DET PLAN 2 AND ENABLE SF BIT 5.

PHASING	VEH DET PLAN	SF BITS ENABLED
ACTIONS REQUIRED TO RUN <u>DEFAULT PHASING</u>	1	NONE
ACTIONS REQUIRED TO RUN <u>ALTERNATE PHASING</u>	2	5

IMPORTANT: IF ALT. PHASING IS USED DURING FREE RUN AND COORDINATION, DO NOT OPERATE TIME OF DAY EVENTS CONCURRENTLY WITH COORDINATION PLAN EVENTS IN THE EVENT SCHEDULER. (EX. FREE RUN EVENT SHOULD END BEFORE COORDINATION PLAN EVENT STARTS AND VICE-VERSA).

### ALTERNATE PHASING CHANGE SUMMARY

THE FOLLOWING IS A SUMMARY OF WHAT TAKES PLACE WHEN SF BIT 5 AND VEH DET PLAN 2 ACTIVATE TO CALL THE "ALTERNATE PHASING":

SF BIT 5: Modifies overlap parent phases for head 51 to run protected turns only.

VEH DET PLAN 2: Disables phase 2 call on loop 5A and reduces delay time for phase 5 call on loop 5A to 0 seconds.

## ACCESSIBLE PEDESTRIAN SIGNAL (APS)

### INSTALLATION NOTES

1. Install push buttons and APS equipment per manufacturer's instructions.
2. Provide a dedicated cable to each push button per manufacturer's instructions.
3. If APS equipment is mounted in cabinet, use filtered power (i.e., Controller Receptacle) to power APS equipment. Do not use Equipment Receptacle, which is a GFCI outlet.
4. Never attempt to operate a standard contact closure push button with the APS system unless cabinet is re-wired for standard button operation or unless explicitly allowed by the manufacturer.
5. Place manufacturer's instructions in cabinet with cabinet prints, signal plans, and electrical details.
6. An APS push button station that is designed to work without the need for interfacing with a pedestrian signal head shall be installed for applications where a push button is installed in a median without a pedestrian signal head.
7. A push button with a single tactile arrow that point in both directions of travel shall be installed if the median separates two parallel crosswalks.

## ECONOLITE ASC/3-2070 ACTION PLAN PROGRAMMING DETAIL

1. From Main Menu select **5. TIME BASE**

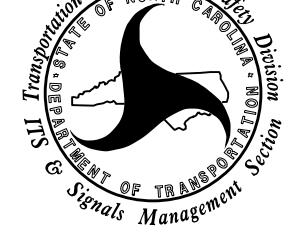
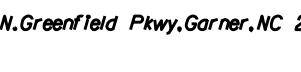
2. From TIME BASE Submenu select **2. ACTION PLAN**

ACTION PLAN... [ * ]													
PATTERN.....	AUTO	SYS OVERRIDE....	NO										
TIMING PLAN.....	0	SEQUENCE.....	0										
VEH DETECTOR PLAN..	2	DET LOG.....	NONE										
FLASH.....	--	RED REST.....	NO										
VEH DET DIAG PLN...	0	PED DET DIAG PLN..	0										
DIMMING ENABLE..	NO	PRIORITY RETURN.	NO										
PED PR RETURN..	NO	QUEUE DELAY....	NO										
PMT COND DELAY	NO												
PHASE	1	2	3	4	5	6	7	8	9	0	1	2	3
PED RCL	.	.	.	.	.	.	.	.	.	.	.	.	.
WALK 2	.	.	.	.	.	.	.	.	.	.	.	.	.
VEX 2	.	.	.	.	.	.	.	.	.	.	.	.	.
VEH RCL	.	.	.	.	.	.	.	.	.	.	.	.	.
MAX RCL	.	.	.	.	.	.	.	.	.	.	.	.	.
MAX 2	.	.	.	.	.	.	.	.	.	.	.	.	.
PHASE	1	2	3	4	5	6	7	8	9	0	1	2	3
MAX 3	.	.	.	.	.	.	.	.	.	.	.	.	.
CS INH	.	.	.	.	.	.	.	.	.	.	.	.	.
OMIT	.	.	.	.	.	.	.	.	.	.	.	.	.
SPC FCT	.	.	.	.	X	.	.	.	.	.	.	.	.
AUX FCT	.	.	.	(1-3)									
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.	.	.	.

\* The Action Plan number(s) are to be determined by the Division and/or City Traffic Engineer.

THIS ELECTRICAL DETAIL IS FOR  
THE SIGNAL DESIGN: 05-1244  
DESIGNED: October 2025  
SEALED: 10/28/2025  
REVISED: N/A

Electrical Detail - Sheet 4 of 4

ELECTRICAL AND PROGRAMMING DETAILS FOR:		
Prepared in the Offices of:		
North Carolina Department of Transportation Division of Mobility and Safety Office of Transportation Signal Management		
750 N. Greenfield Pkwy, Garner, NC 27529		
Division 5	Wake County	Morrisville
PLAN DATE: October 2025	REVIEWED BY:	
PREPARED BY: S. Kirkpatrick	REVIEWED BY:	
REVISIONS	INIT.	DATE
Doc Signed by:  10/28/2025 APPROVED BY:  DATE		
SIG. INVENTORY NO. 05-1244		

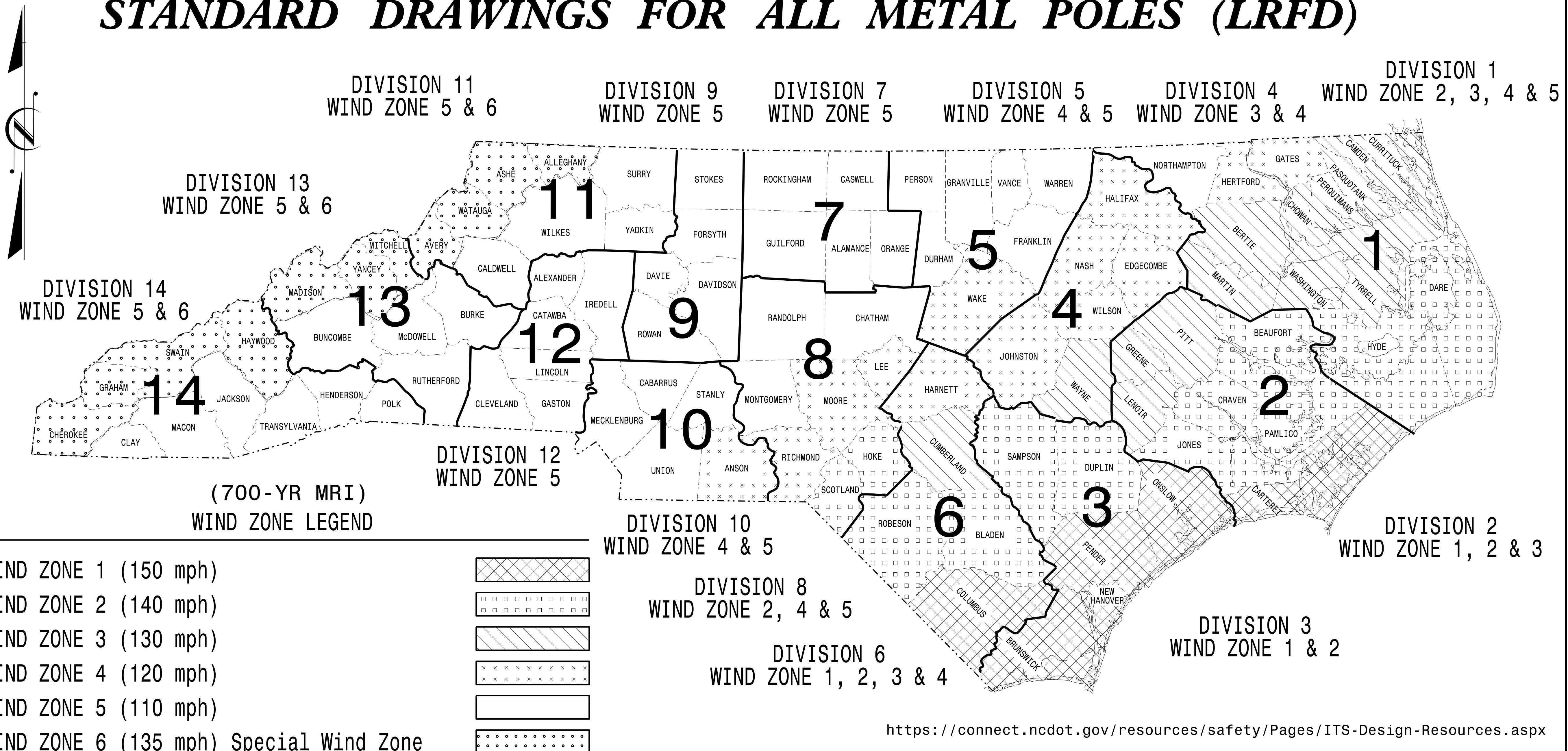
# NCDOT METAL POLE STANDARDS

03-OCT-2023 12:07:07 Signal Design Sections Structures Drawings for LRFD2024 Sig. M1A Standard All Metal Pole (700-yr MRI).dgn

## STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

PROJECT I.D. NO.	SHEET NO.
HL-0033	Sig. M1A

### STANDARD DRAWINGS FOR ALL METAL POLES (LRFD)



Prepared in the Offices of:  
  
 Transportation Mobility and Safety  
Division  
DEPARTMENT OF TRANSPORTATION  
Signal Design Section  
750 N. Greenfield Pkwy.  
Garner, NC 27529

Designed in conformance  
with the latest  
2020 Interim to the  
1st Edition 2015  
**AASHTO  
LRFD**  
Standard Specifications for  
Highway Signs, Luminaires,  
and Traffic Signals

DRAWING NUMBER	INDEX OF PLANS DESCRIPTION
Sig. M 1A	Statewide Wind Zone Map (700-yr MRI)
Sig. M 1B	Statewide Wind Zone Map (10-yr MRI)
Sig. M 2	Typical Fabrication Details-All Metal Poles
Sig. M 3	Typical Fabrication Details-Strain Poles
Sig. M 4	Typical Fabrication Details-Mast Arm Poles
Sig. M 5	Typical Fabrication Details-Mast Arm Connection
Sig. M 6	Typical Fabrication Details-Strain Pole Attachments
Sig. M 7	Construction Details-Foundations
Sig. M 8	Standard Strain Pole Foundation-All Soil Conditions
Sig. M 9	Typical Fabrication Details-CCTV Camera Poles

MOBILITY AND SAFETY DIVISION -  
TRANSPORTATION SYSTEMS MANAGEMENT  
AND OPERATIONS UNIT

D.Y. ISHAK - STATE SIGNALS ENGINEER  
K. DURIGON, P.E. - ITS AND SIGNALS STRUCTURAL ENGINEER  
B. WALKER, P.E. - ITS AND SIGNALS STRUCTURAL ENGINEER

SEAL  
  
 NORTH CAROLINA  
PROFESSIONAL  
ENGINEER  
SEAL  
036626  
KEVIN C. DURIGON

DocuSigned by:  
  
 Kevin Durigon  
4B23DC79B3784DA

DATE  
09/21/2023

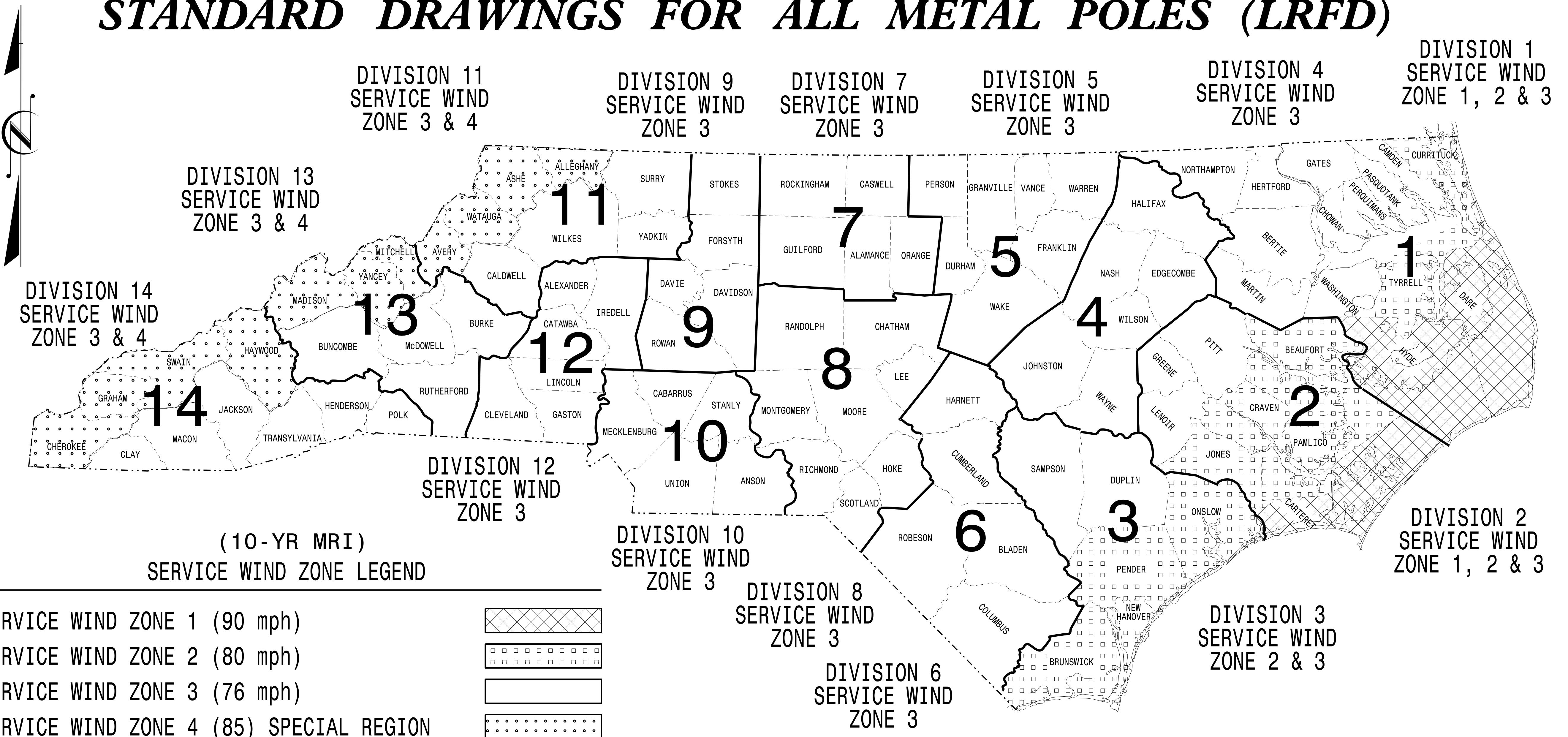
# NCDOT METAL POLE STANDARDS

03-OCT-2023 12:21:21 Signal Design Sections\Structures\Drawings\2024\_Metal Pole Std Drawings for LRFD\2024 Sig\_M1B Standard All Metal Pole 10-yr MRI1.dgn

# STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

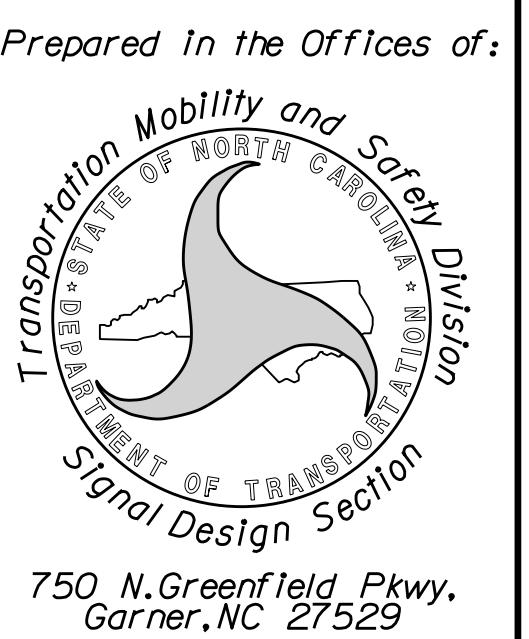
PROJECT I.D. NO.	SHEET NO.
HL-0033	Sig.M1B

## STANDARD DRAWINGS FOR ALL METAL POLES (LRFD)



- SERVICE WIND ZONE 1 (90 mph)
- SERVICE WIND ZONE 2 (80 mph)
- SERVICE WIND ZONE 3 (76 mph)
- SERVICE WIND ZONE 4 (85) SPECIAL REGION

<https://connect.ncdot.gov/resources/safety/Pages/ITS-Design-Resources.aspx>



Designed in conformance  
with the latest  
2020 Interim to the  
1st Edition 2015

**AASHTO  
LRFD**

Standard Specifications for  
Highway Signs, Luminaires,  
and Traffic Signals

DRAWING  
NUMBER

### INDEX OF PLANS DESCRIPTION

Sig. M 1A	Statewide Wind Zone Map (700-yr MRI)
Sig. M 1B	Statewide Wind Zone Map (10-yr MRI)
Sig. M 2	Typical Fabrication Details-All Metal Poles
Sig. M 3	Typical Fabrication Details-Strain Poles
Sig. M 4	Typical Fabrication Details-Mast Arm Poles
Sig. M 5	Typical Fabrication Details-Mast Arm Connection
Sig. M 6	Typical Fabrication Details-Strain Pole Attachments
Sig. M 7	Construction Details-Foundations
Sig. M 8	Standard Strain Pole Foundation-All Soil Conditions
Sig. M 9	Typical Fabrication Details-CCTV Camera Poles

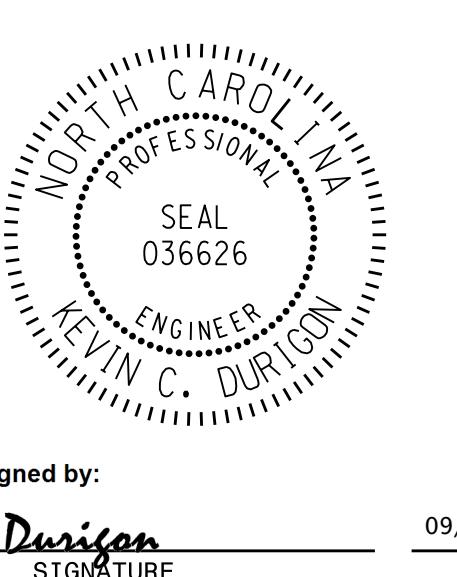
### NCDOT CONTACTS: MOBILITY AND SAFETY DIVISION - TRANSPORTATION SYSTEMS MANAGEMENT AND OPERATIONS UNIT

**D.Y. ISHAK - STATE SIGNALS ENGINEER**

**K. DURIGON, P.E. - ITS AND SIGNALS STRUCTURAL ENGINEER**

**B. WALKER, P.E. - ITS AND SIGNALS STRUCTURAL ENGINEER**

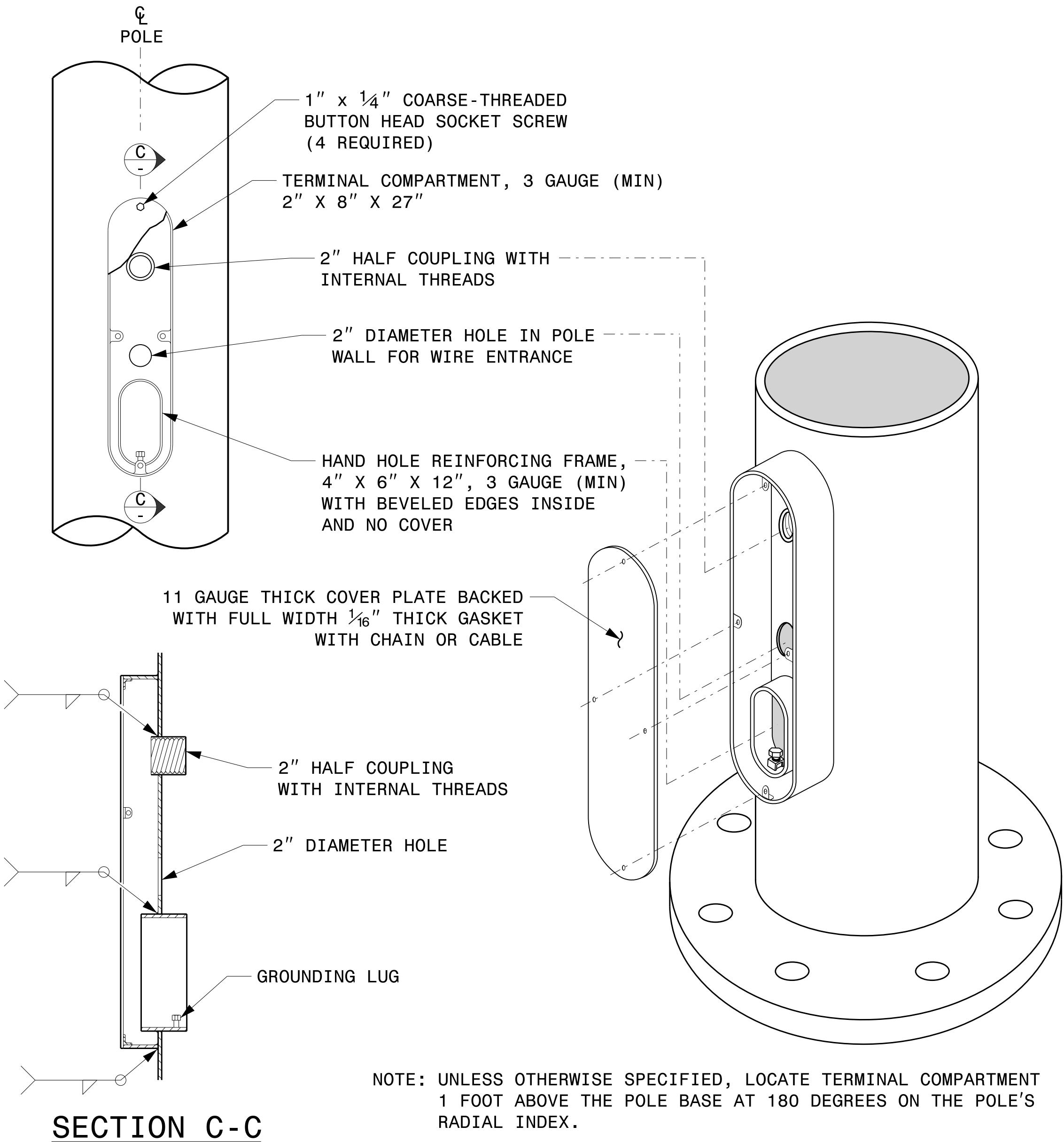
SEAL



DocuSigned by:  
Kevin Durigon  
4B23DC79B3784DA..

DATE  
09/21/2023

# Fabrication Details – All Metal Poles



NOTE: UNLESS OTHERWISE SPECIFIED, LOCATE TERMINAL COMPARTMENT 1 FOOT ABOVE THE POLE BASE AT 180 DEGREES ON THE POLE'S RADIAL INDEX.

## TERMINAL COMPARTMENT DETAIL

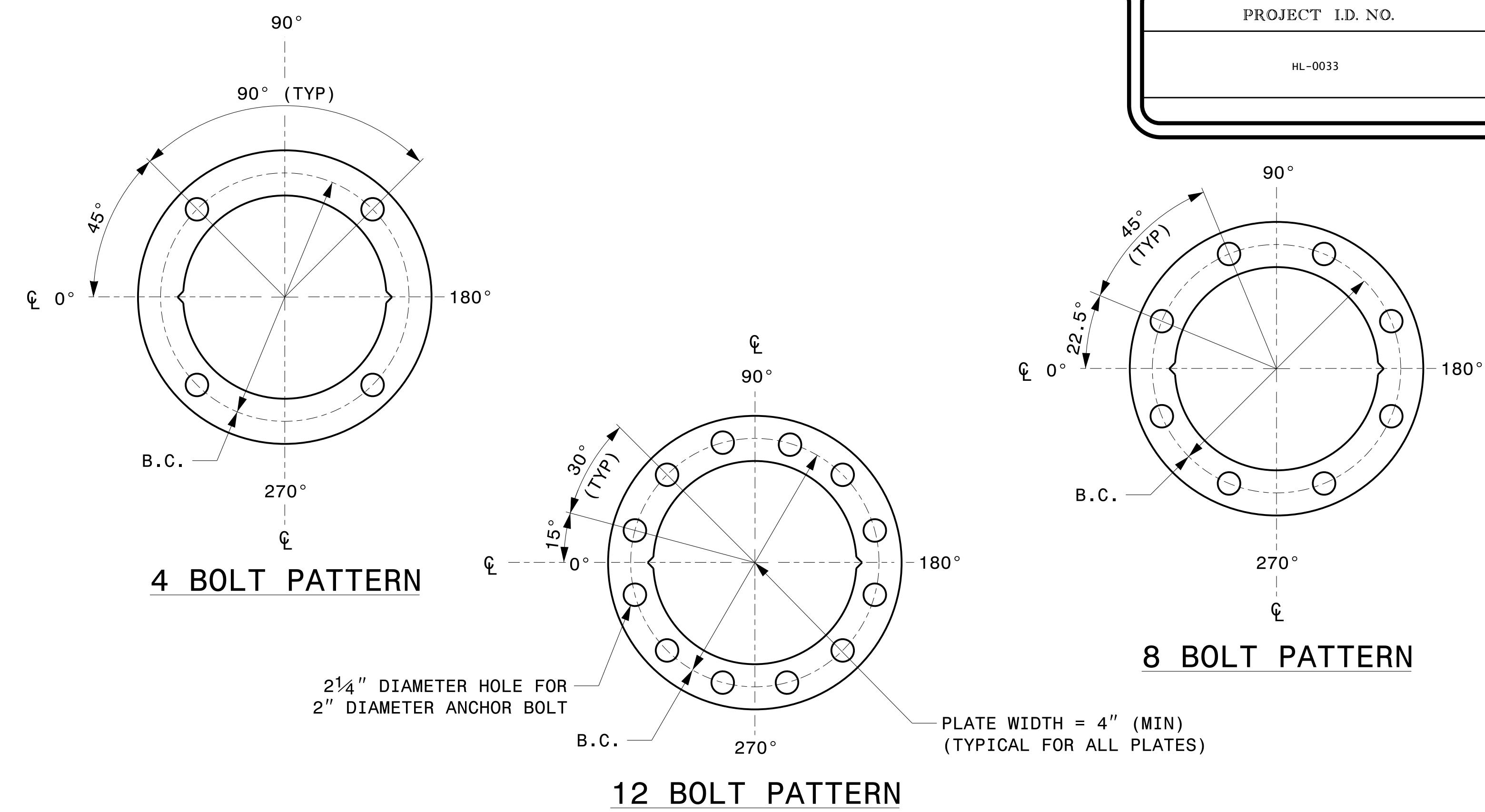
MFG _____	MFG. DATE: MM/YY
SHAFT D/T/L/Y	-----/-----/-----
ARM-A D/T/L/Y	-----/-----/-----
ARM-B D/T/L/Y	-----/-----/-----
A.B. DIA./B.C./L/Y	-----/-----/-----
NCDOT SIG. INV. NO.	-----
NCDOT POLE NO.	-----

SHAFT I.D. TAG  
(PROVIDE ON SHAFT OF STRAIN POLES AND MAST ARM POLE SHAFT)

### NOTES:

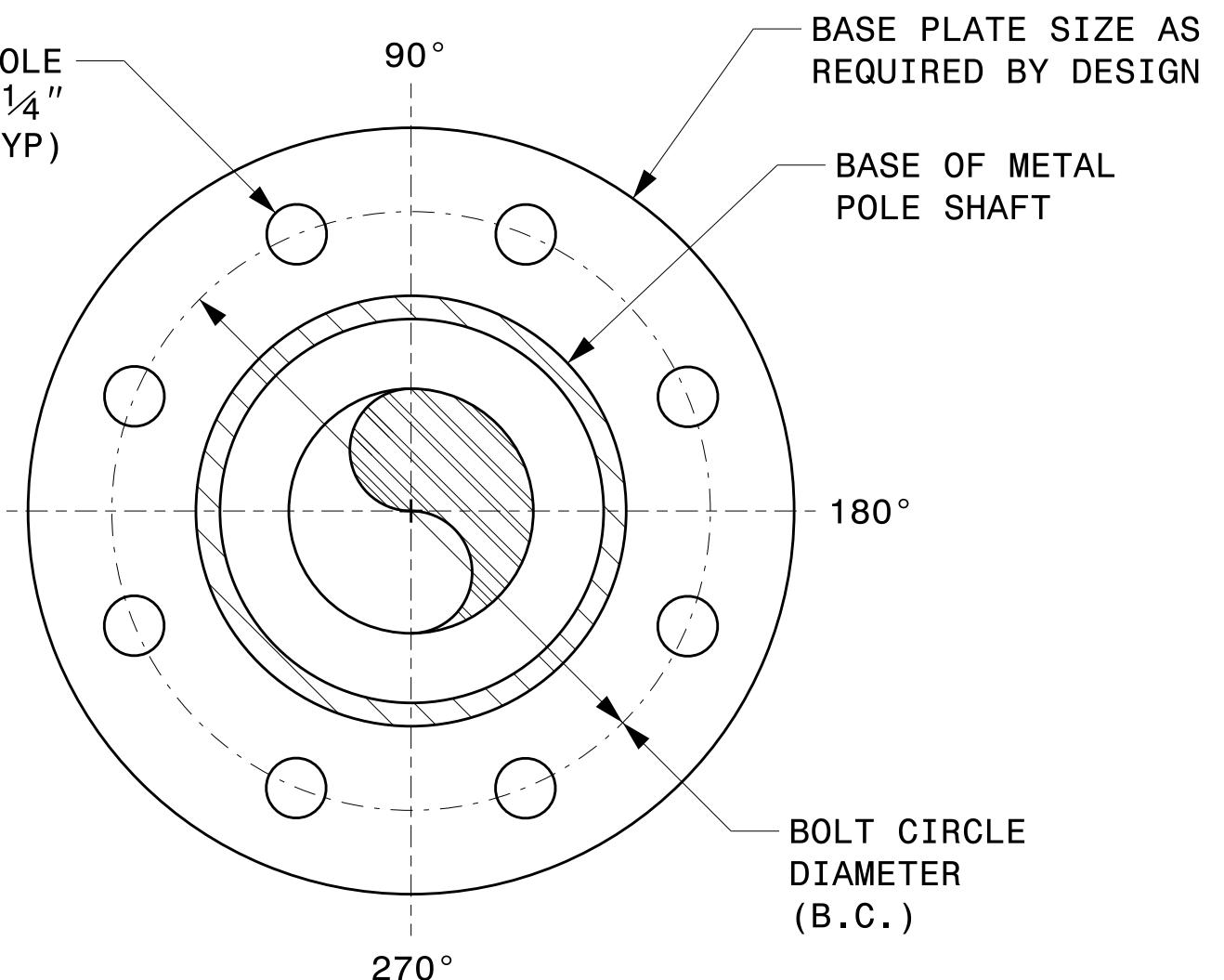
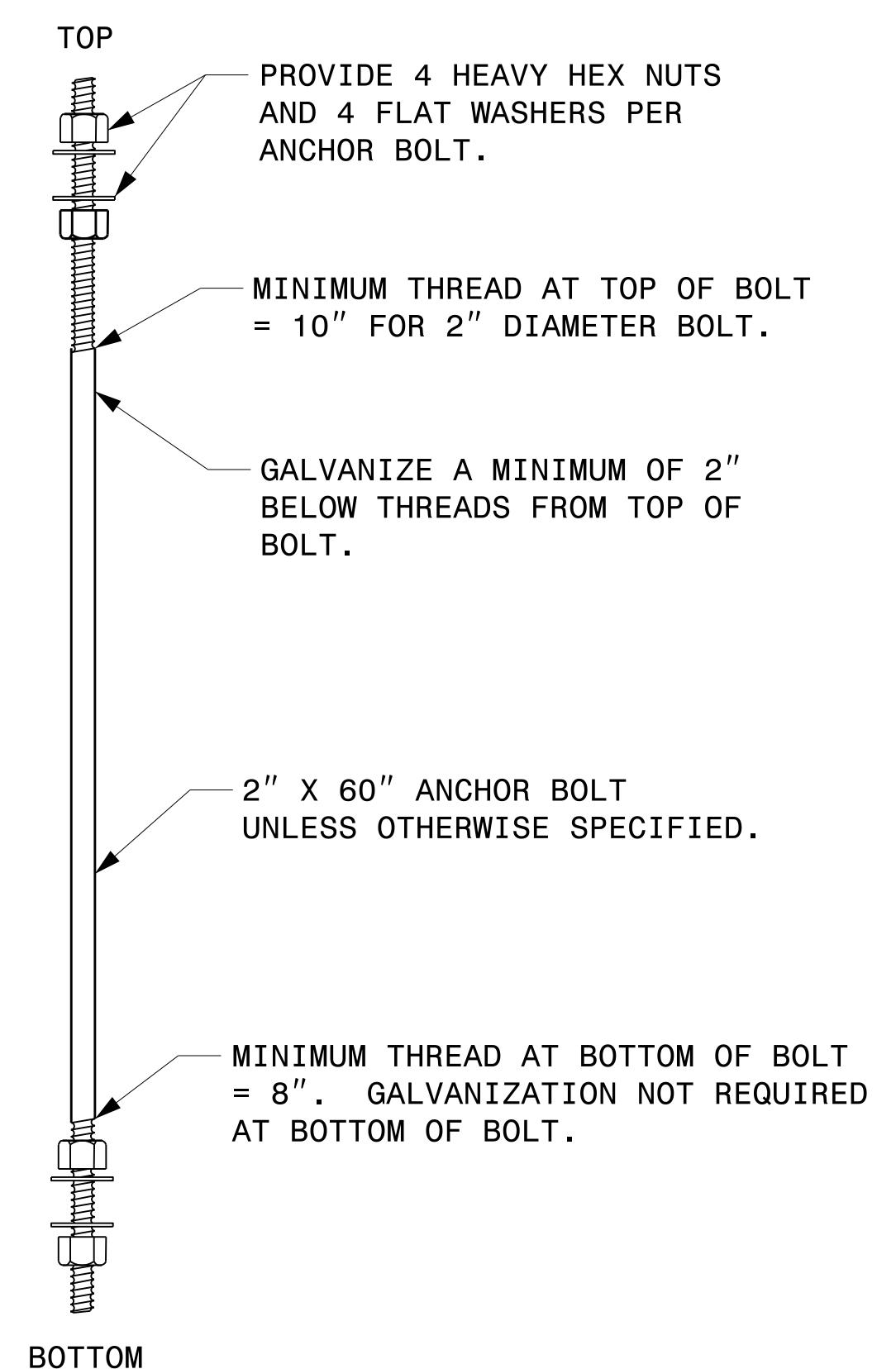
1. D = DIAMETER, T = THICKNESS, L = LENGTH, Y = YIELD STRENGTH
2. A.B. = ANCHOR BOLT
3. B.C. = BOLT CIRCLE OF ANCHOR BOLTS
4. IF STANDARD DESIGN, INCLUDE CASE NUMBER IN ADDITION TO POLE NUMBER ON "NCDOT POLE NO." LINE.
5. SIGNAL INV. NUMBER AND POLE I.D. NUMBER.  
SEE DRAWING M3 AND M4 FOR MOUNTING POSITIONS OF I.D. TAGS.

## IDENTIFICATION TAG DETAILS



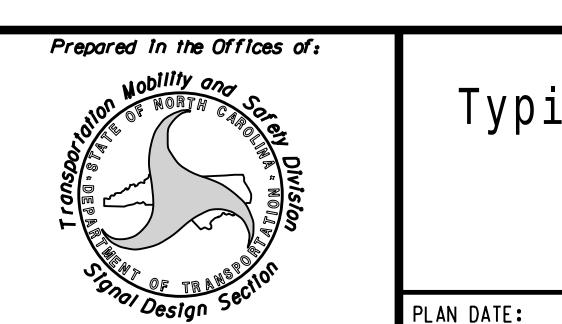
CONSTRUCT TEMPLATES AND PLATES FROM 1/4" (MIN) THICK STEEL. GALVANIZING IS NOT REQUIRED.

## BASE PLATE TEMPLATE AND ANCHOR BOLT LOCK PLATE DETAILS



NOTE: BASE PLATE MAY BE CIRCULAR, OCTAGONAL, SQUARE OR RECTANGULAR IN SHAPE.

## TYPICAL BASE PLATE DETAIL



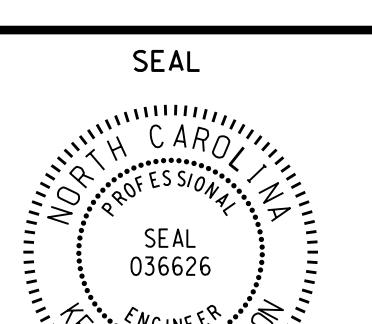
Typical Fabrication Details  
For  
All Metal Poles

PLAN DATE: SEPTEMBER 2023 DESIGNED BY: C.F. ANDREWS

PREPARED BY: K.C. DURIGON REVIEWED BY: D.C. SARKAR

SCALE: 0 NA REVISIONS: INIT. DATE

NONE



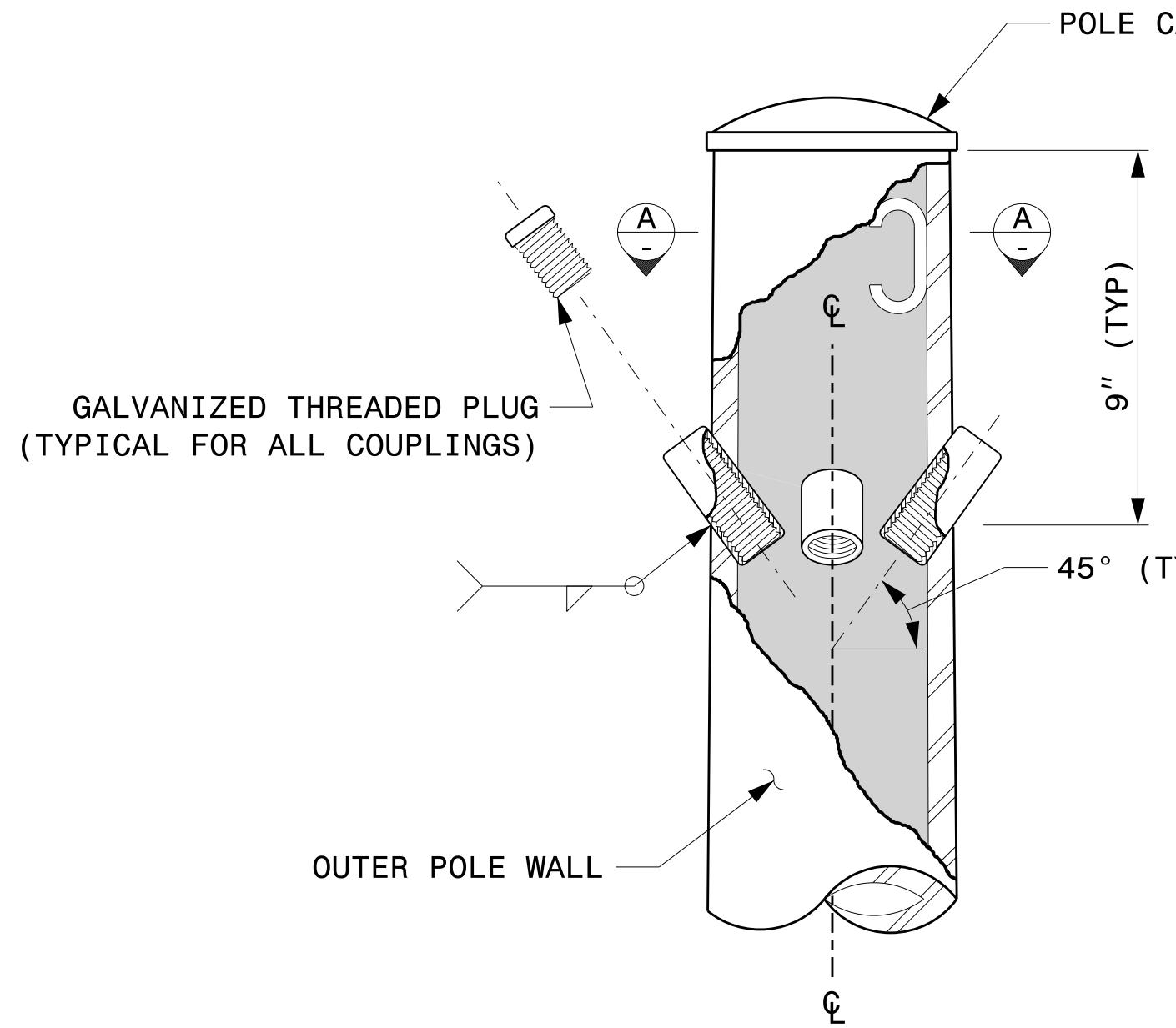
DocuSigned by:  
Kevin Durigon  
4B23DC79B3784DA

09/21/2023

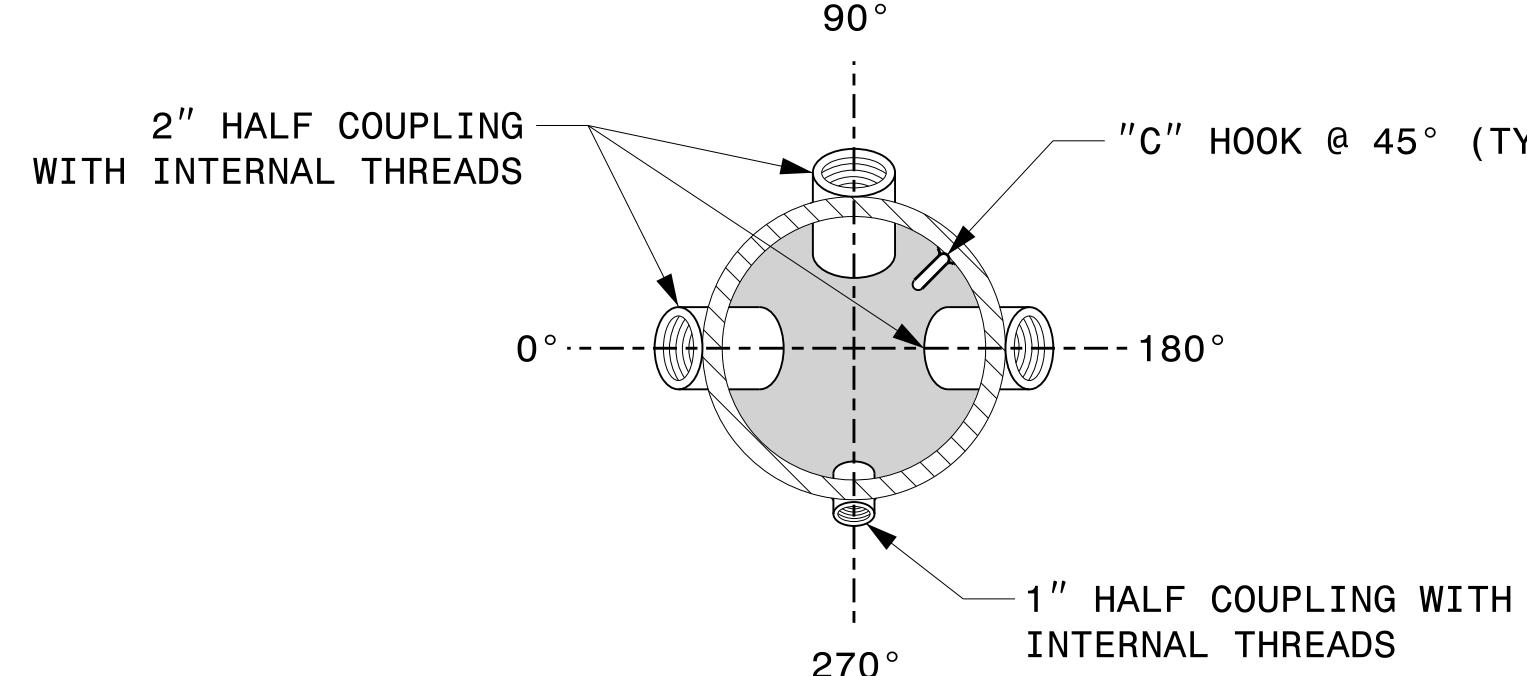
DATE

# Fabrication Details – Strain Poles

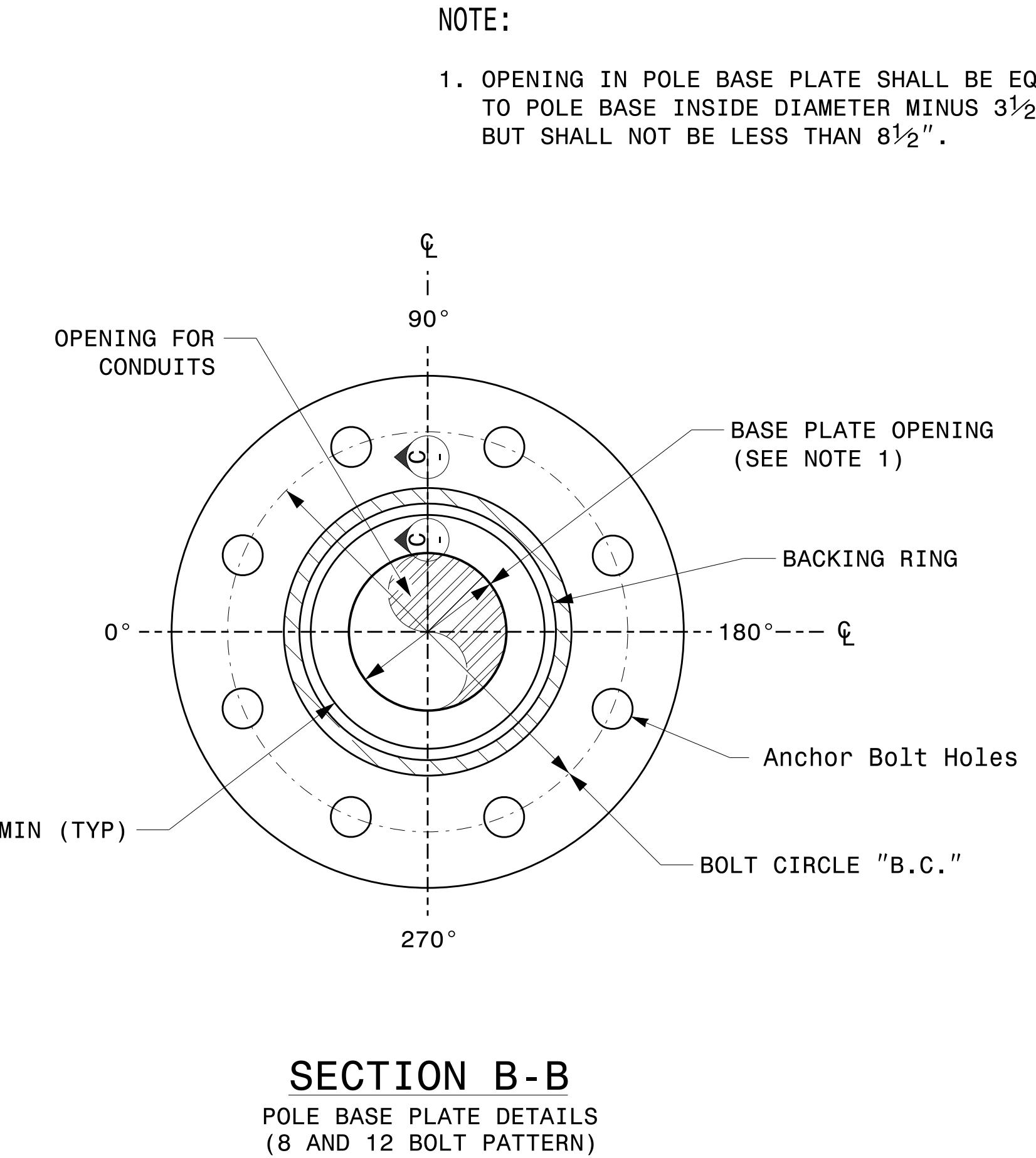
PROJECT I.D. NO. SHEET NO.  
HL-0033 Sig.M3



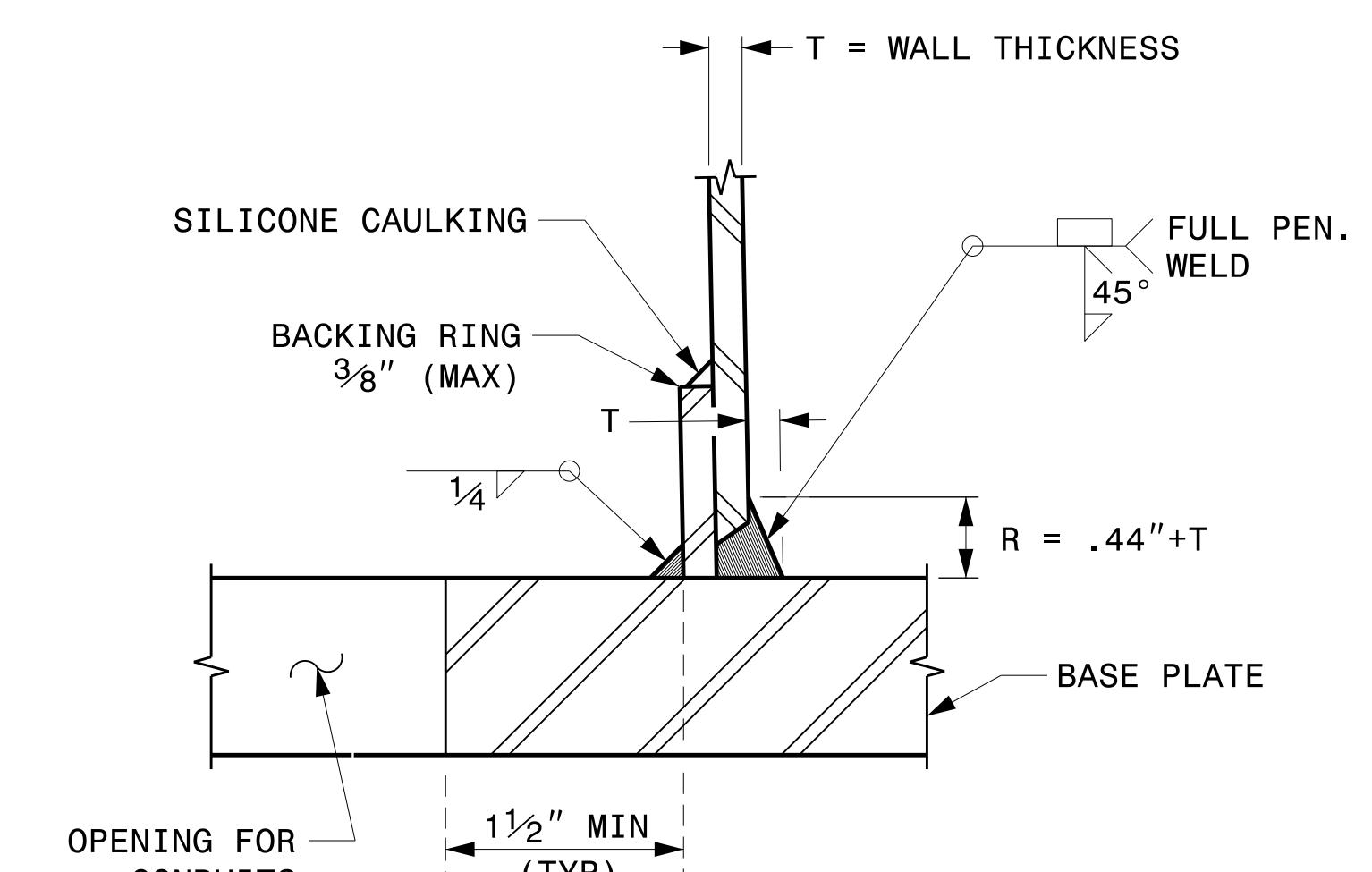
CABLE ENTRANCES AT TOP OF POLE



RADIAL ORIENTATION OF FACTORY INSTALLED ACCESSORIES AT TOP OF POLE

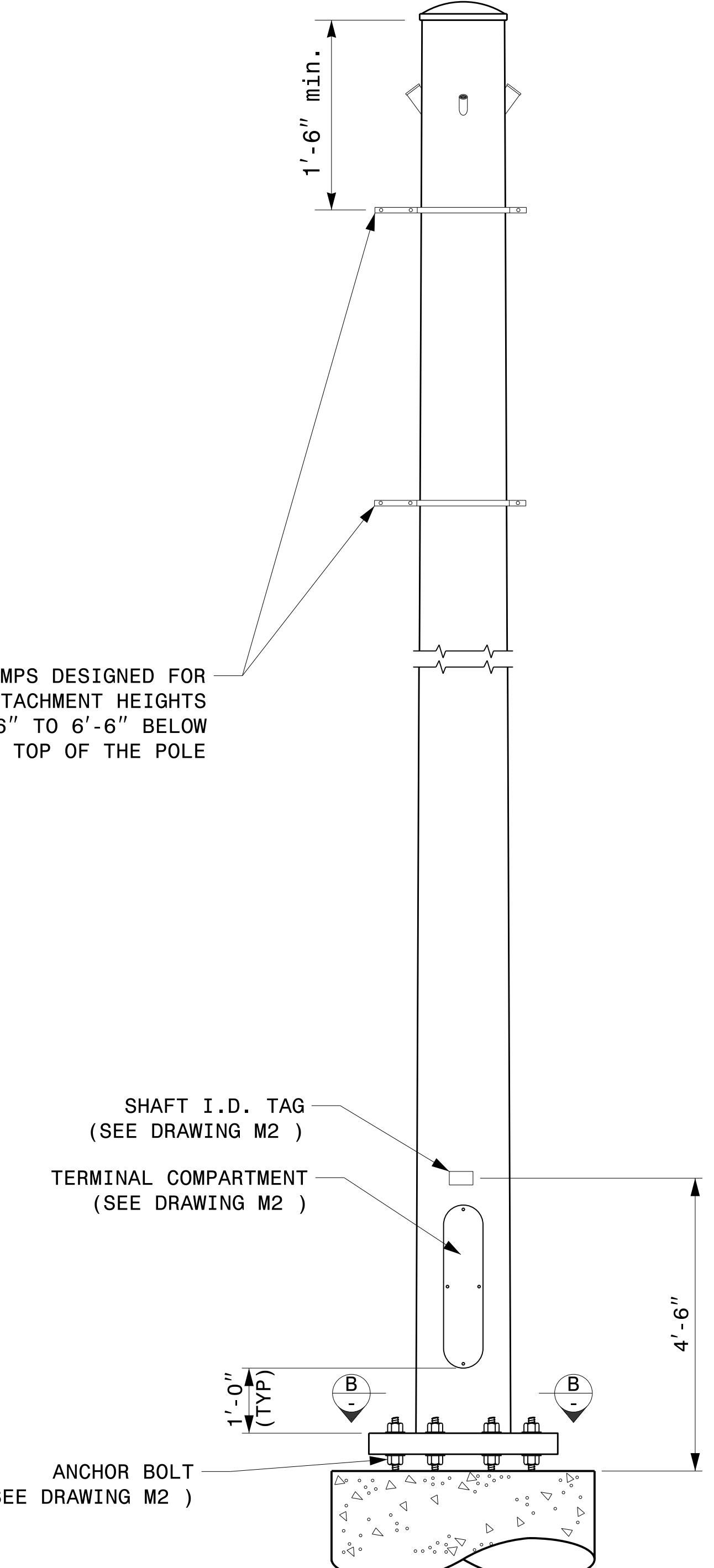


SECTION B-B  
POLE BASE PLATE DETAILS  
(8 AND 12 BOLT PATTERN)

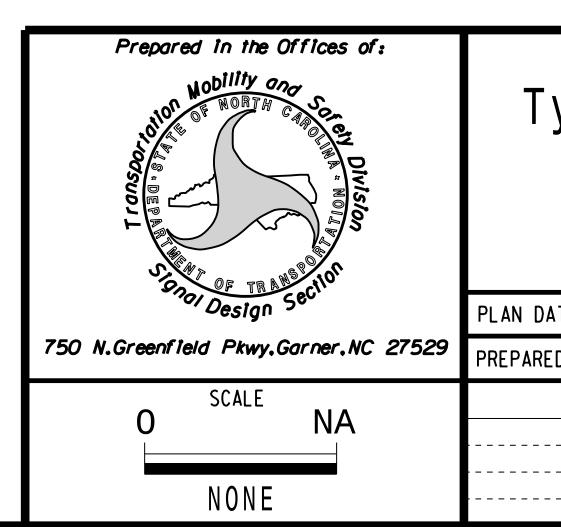


SECTION C-C  
(POLE ATTACHMENT TO BASE PLATE)

FULL-PENETRATION GROOVE WELD DETAIL



MONOTUBE STRAIN POLE



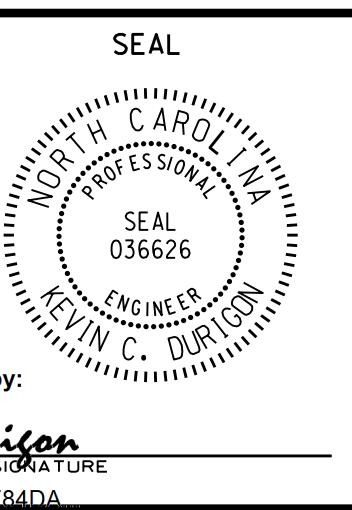
Typical Fabrication Details  
For  
Strain Poles

PLAN DATE: SEPTEMBER 2023 DESIGNED BY: K.C. DURIGON

PREPARED BY: K.C. DURIGON REVIEWED BY: D.C. SARKAR

SCALE: 0 NA REVISIONS: INIT. DATE

NONE



DocuSigned by:  
Kevin Durigon  
4B23DC79B3784DA

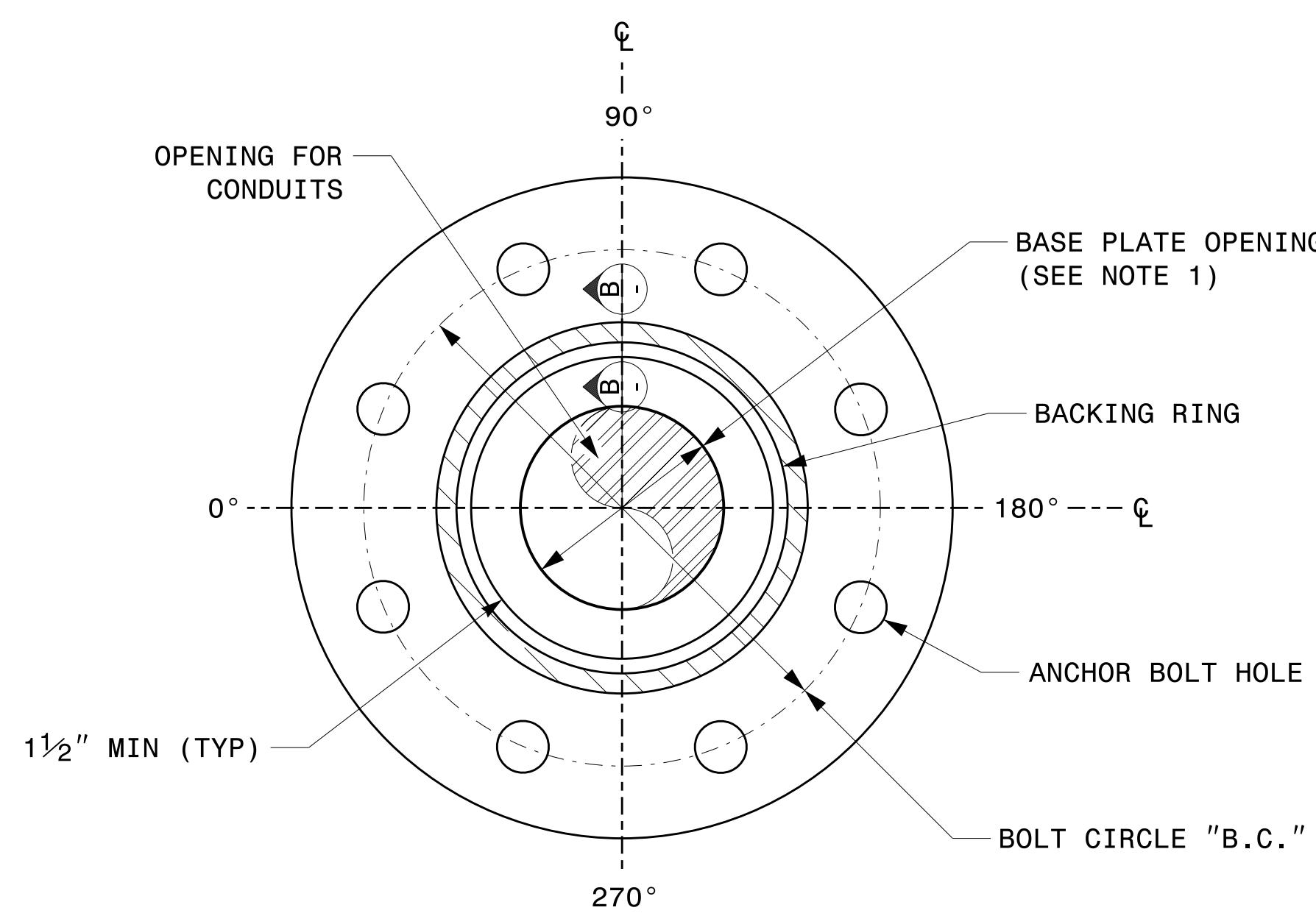
09/21/2023

# Fabrication Details – Mast Arm Poles

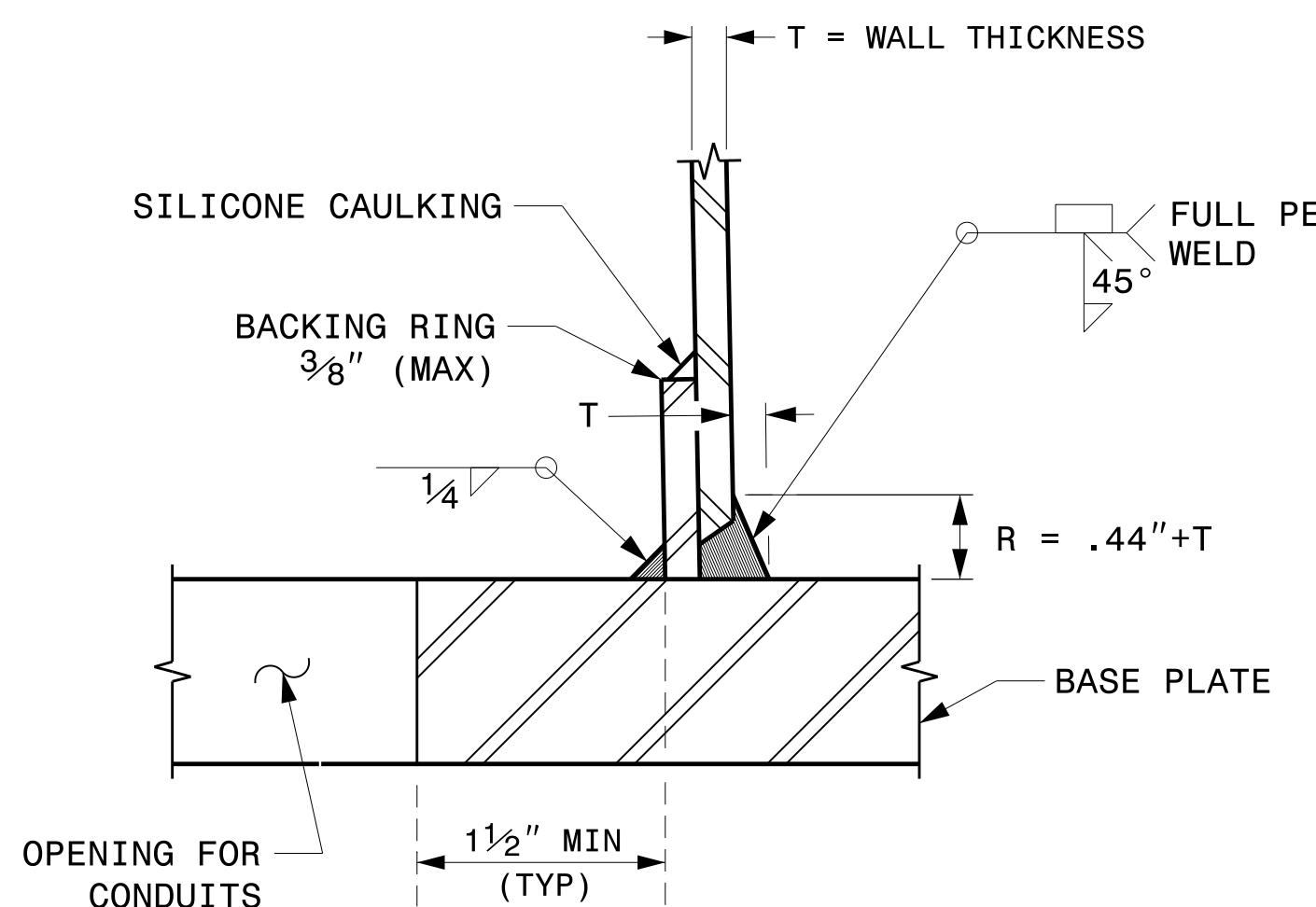
PROJECT I.D. NO. SHEET NO.  
HL-0033 Sig.M4

## NOTE:

- OPENING IN POLE BASE PLATE SHALL BE EQUAL TO POLE BASE INSIDE DIAMETER MINUS  $3\frac{1}{2}$ " BUT SHALL NOT BE LESS THAN  $8\frac{1}{2}$ ".

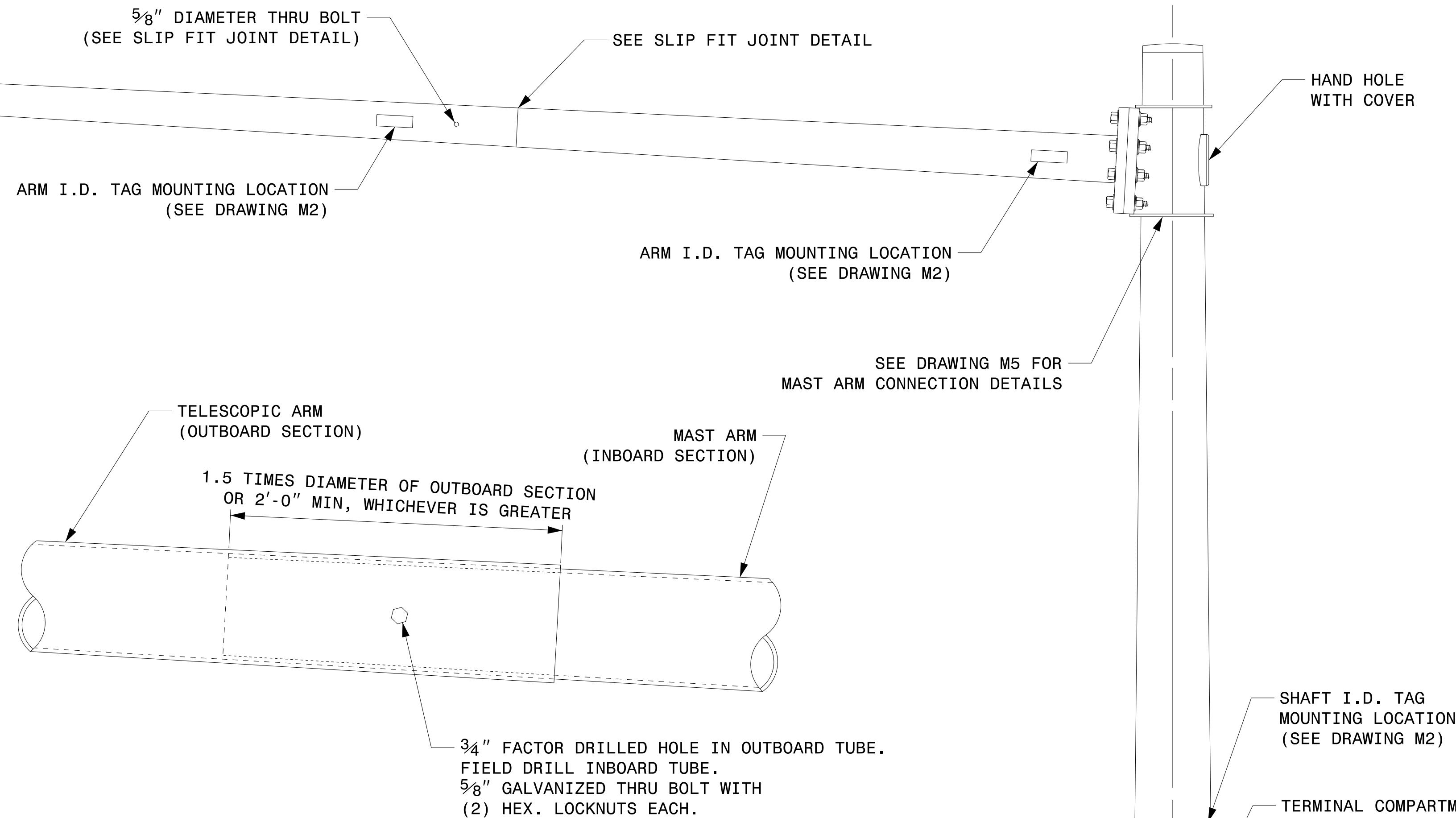


SECTION A-A  
POLE BASE PLATE DETAILS

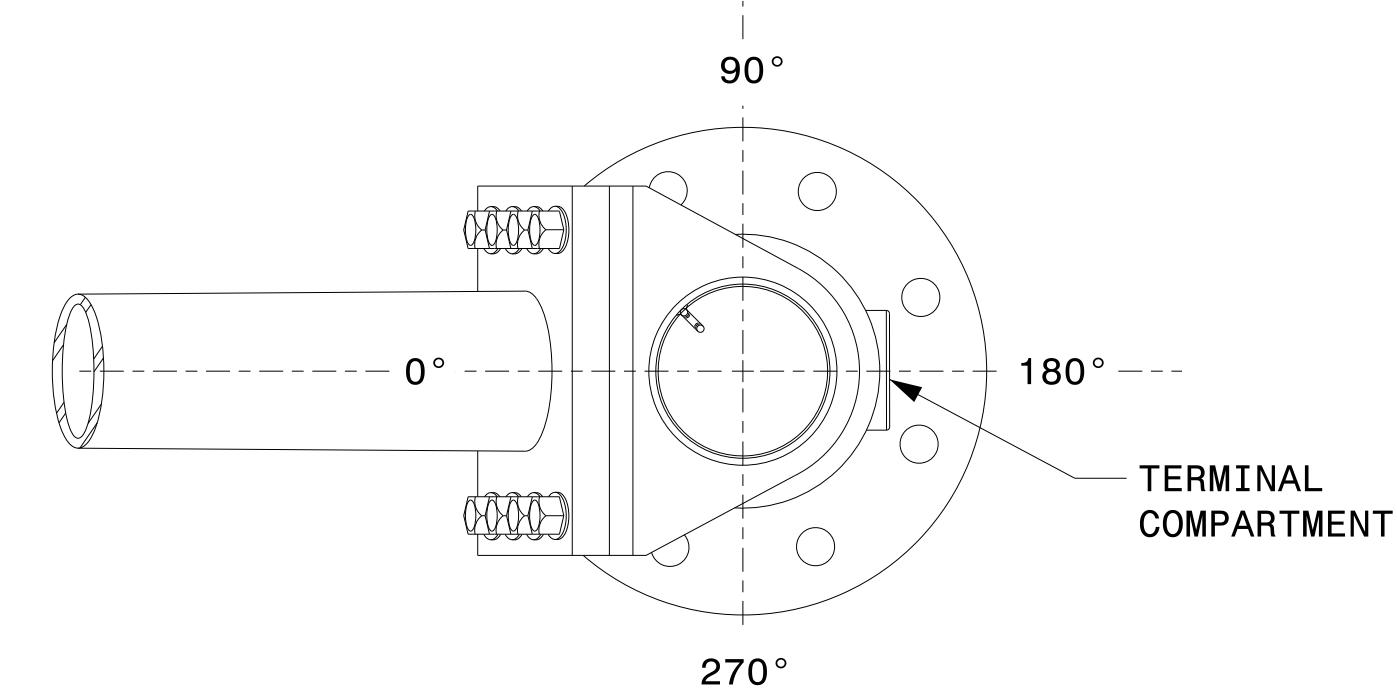


SECTION B-B  
(POLE ATTACHMENT TO BASE PLATE)

FULL-PENETRATION  
GROOVE WELD DETAIL



SLIP FIT JOINT DETAIL FOR MAST ARM

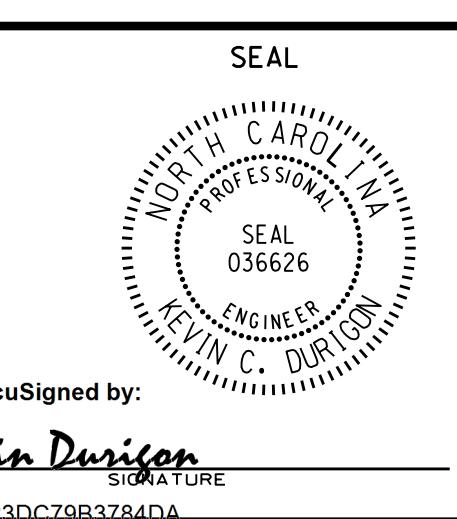


MAST ARM RADIAL ORIENTATION

Prepared In the Offices of:  
Transit, Mobility and Safety Division  
Spartanburg Design Section  
750 N. Greenfield Pkwy, Garner, NC 27529

PLAN DATE: SEPTEMBER 2023	DESIGNED BY: K.C. DURIGON
PREPARED BY: K.C. DURIGON	REVIEWED BY: D.C. SARKAR
SCALE: 0	INIT. DATE: NA
REVISIONS	
NONE	

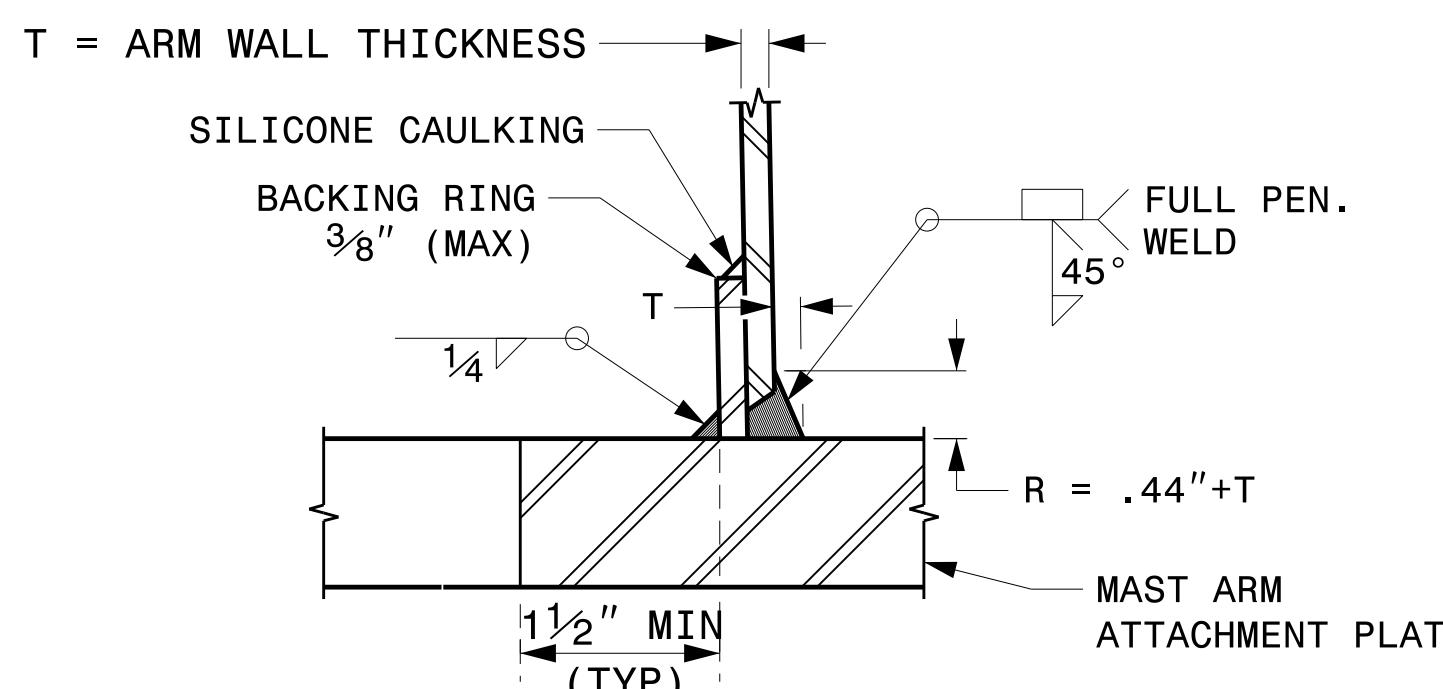
Typical Fabrication Details  
For  
Mast Arm Poles



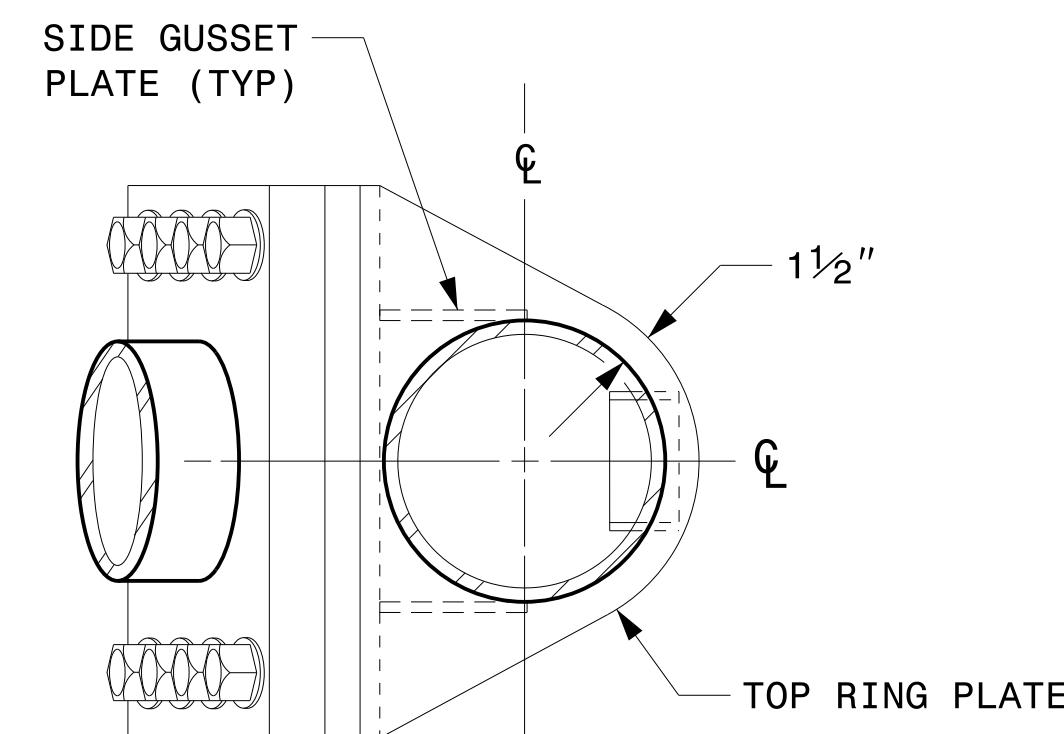
DocuSigned by:  
Kevin Durigon  
4B23DC79B3784DA

# WELDED RING STIFFENED MAST ARM CONNECTION

PROJECT I.D. NO. SHEET NO.  
HL-0033 Sig.M5

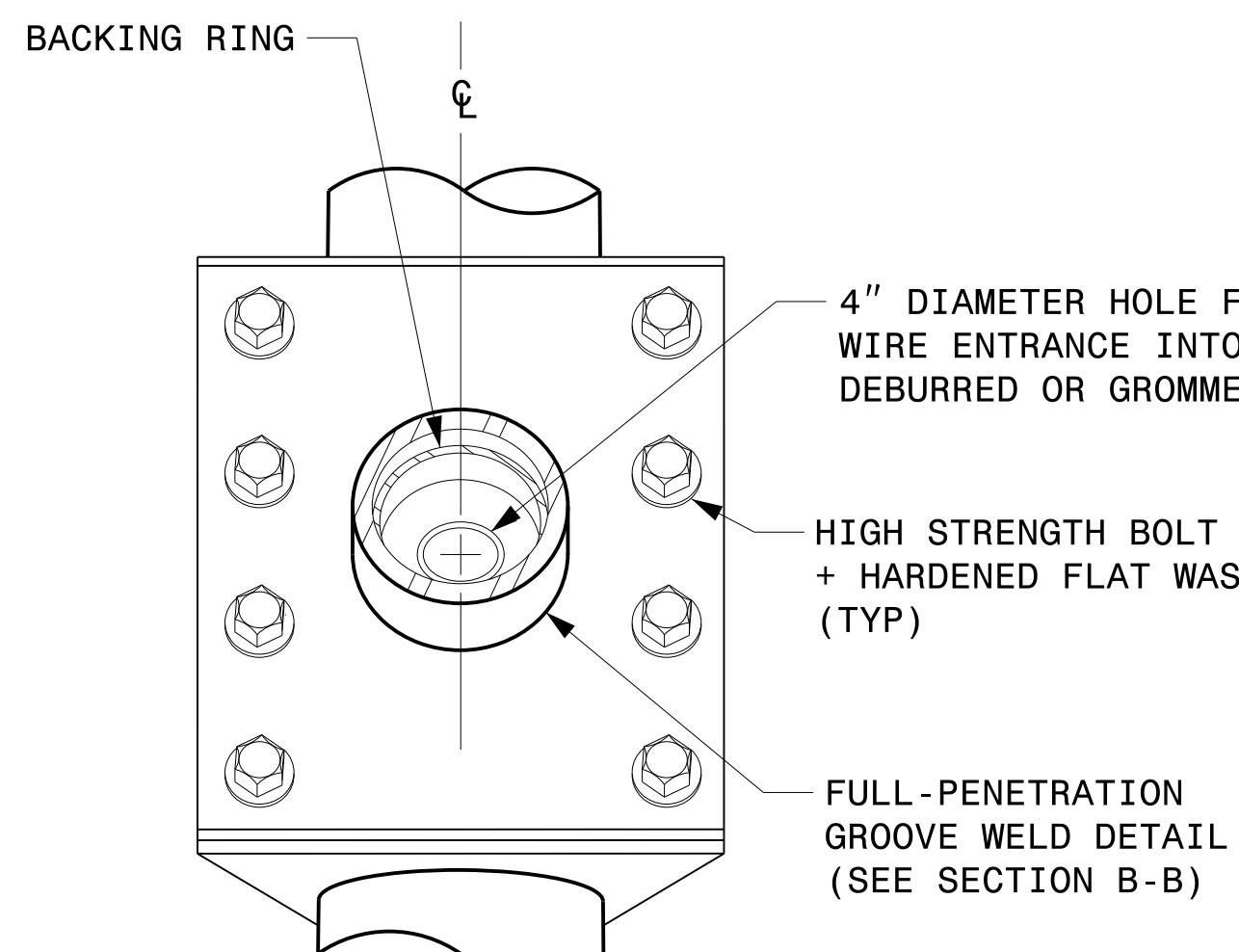


SECTION B-B  
FULL-PENETRATION GROOVE WELD DETAIL

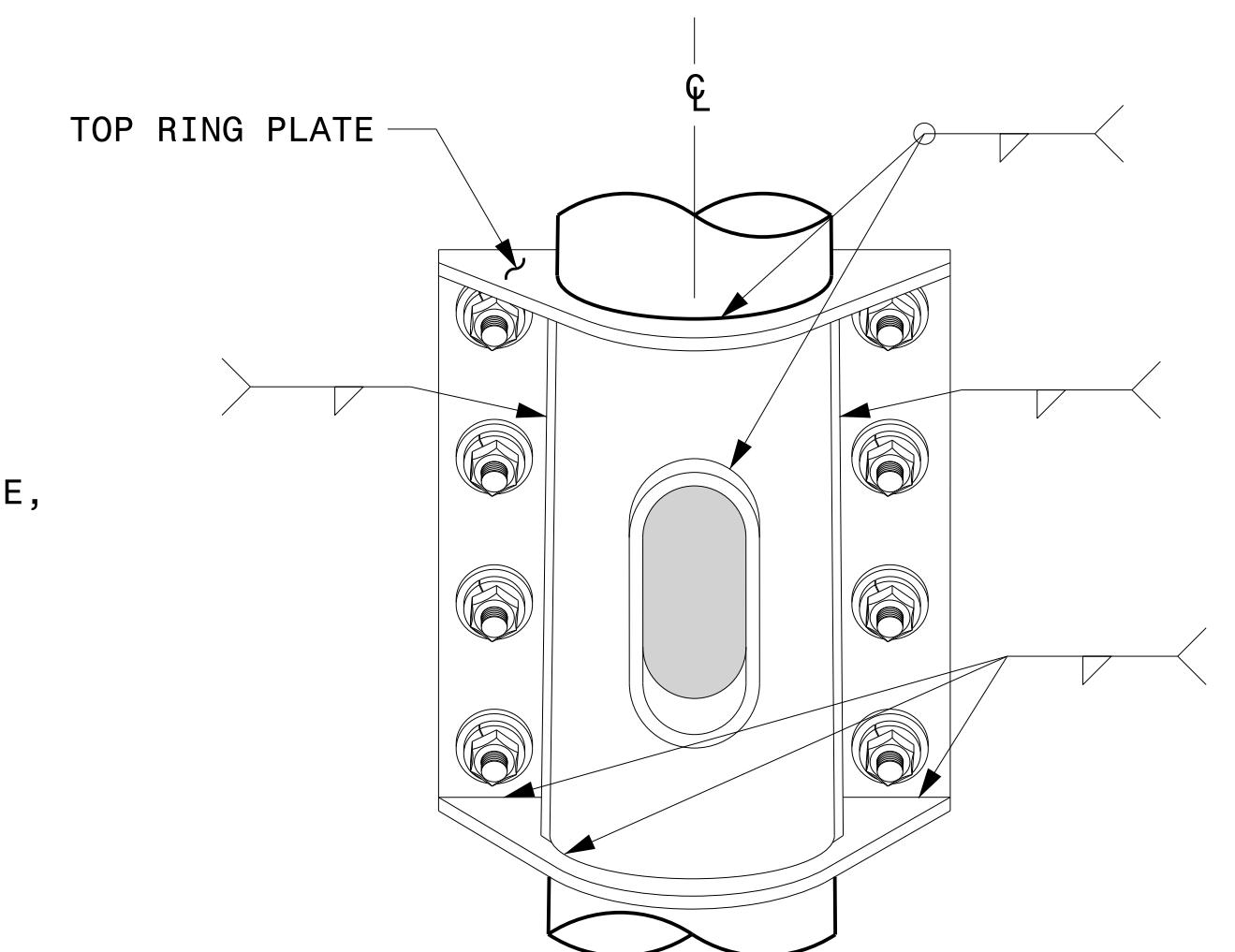
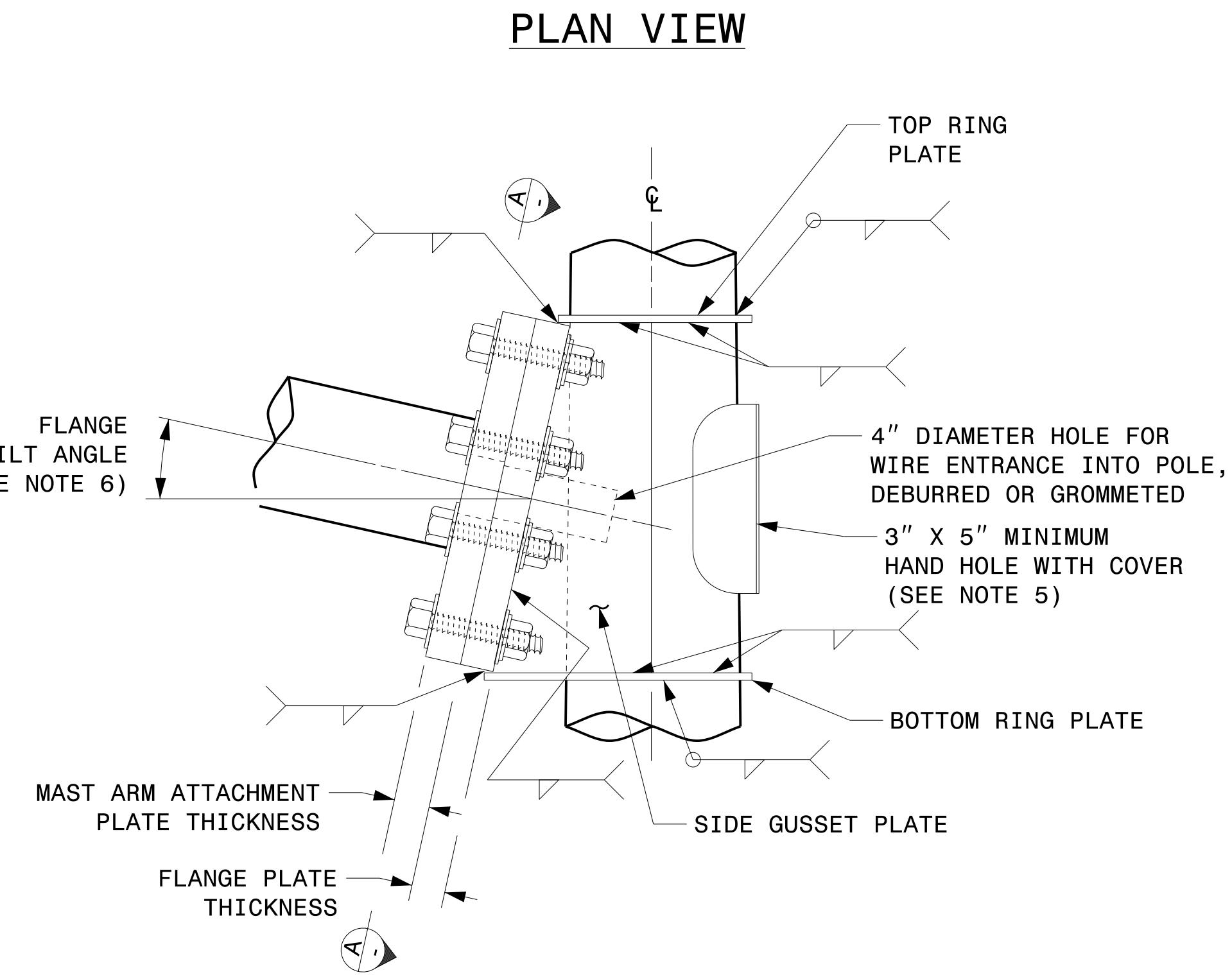


## NOTES:

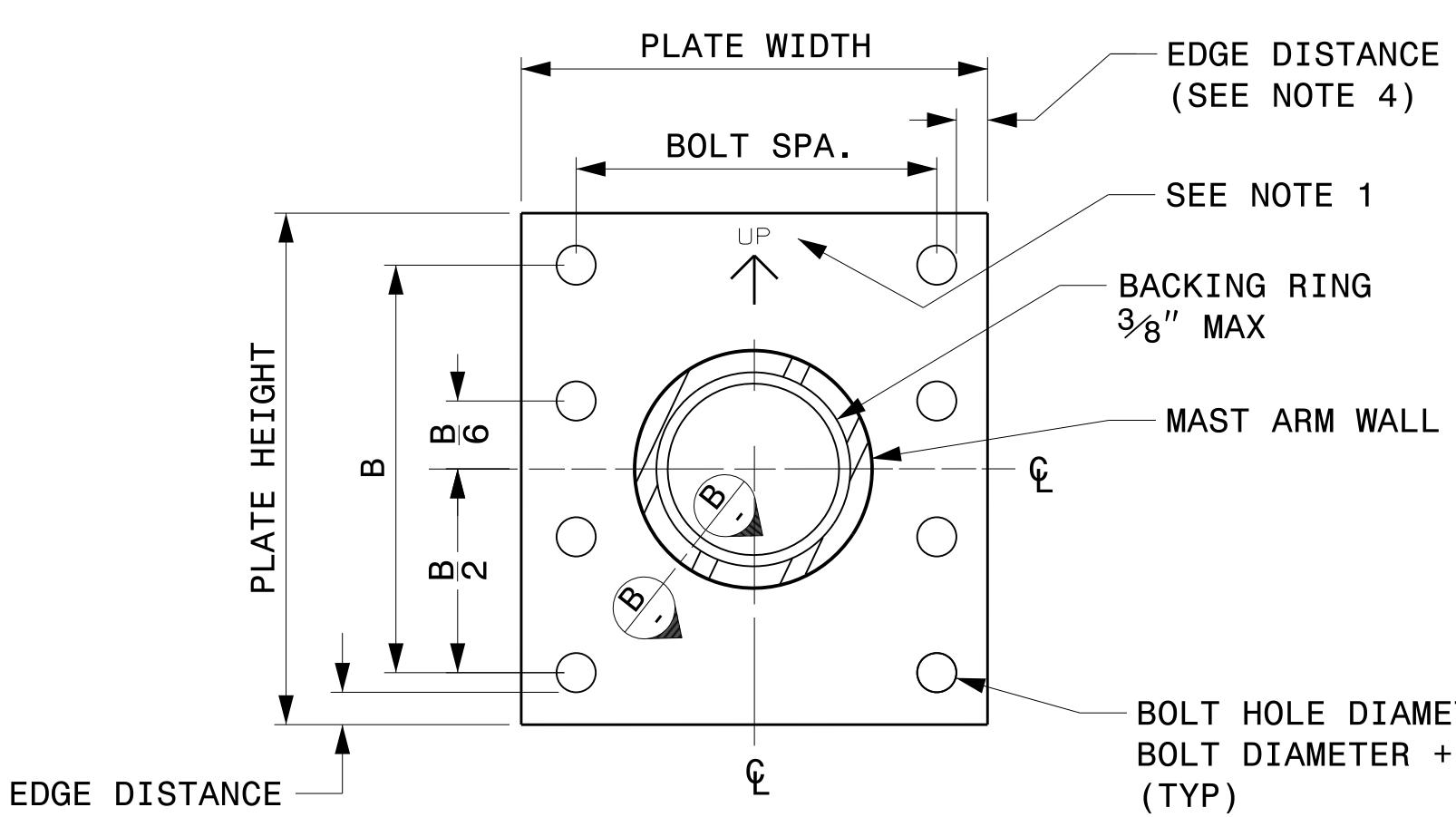
1. PROVIDE A PERMANENT MEANS OF IDENTIFICATION ABOVE THE MAST ARM TO INDICATE PROPER ATTACHMENT ORIENTATION OF THE MAST ARM.
2. DESIGNER WILL DETERMINE THE SIZE OF ALL STRUCTURAL COMPONENTS, PLATES, FASTENERS, AND WELDS SHOWN UNLESS THEY ARE ALREADY SPECIFIED.
3. FABRICATOR IS RESPONSIBLE FOR PROVIDING APPROPRIATE HOLES AT DRAINAGE POINTS TO DRAIN GALVANIZING MATERIALS.
4. FOR MINIMUM EDGE DISTANCE AND NOMINAL BOLT HOLE SIZE, FOLLOW THE LATEST AISC STEEL CONSTRUCTION MANUAL.
5. PROVIDE UPPER HANDHOLE AS NECESSARY WHEN SHAFT EXTENSIONS ARE REQUIRED FOR LUMINAIRE ARMS OR CAMERA. FOR POLES WITHOUT LUMINAires/CAMERA, WIRING CAN BE DONE THROUGH THE TOP OF POLE.
6. ALLOWABLE RANGE OF FLANGE TILT ANGLE WILL VARY FROM 0° TO AS REQUIRED.



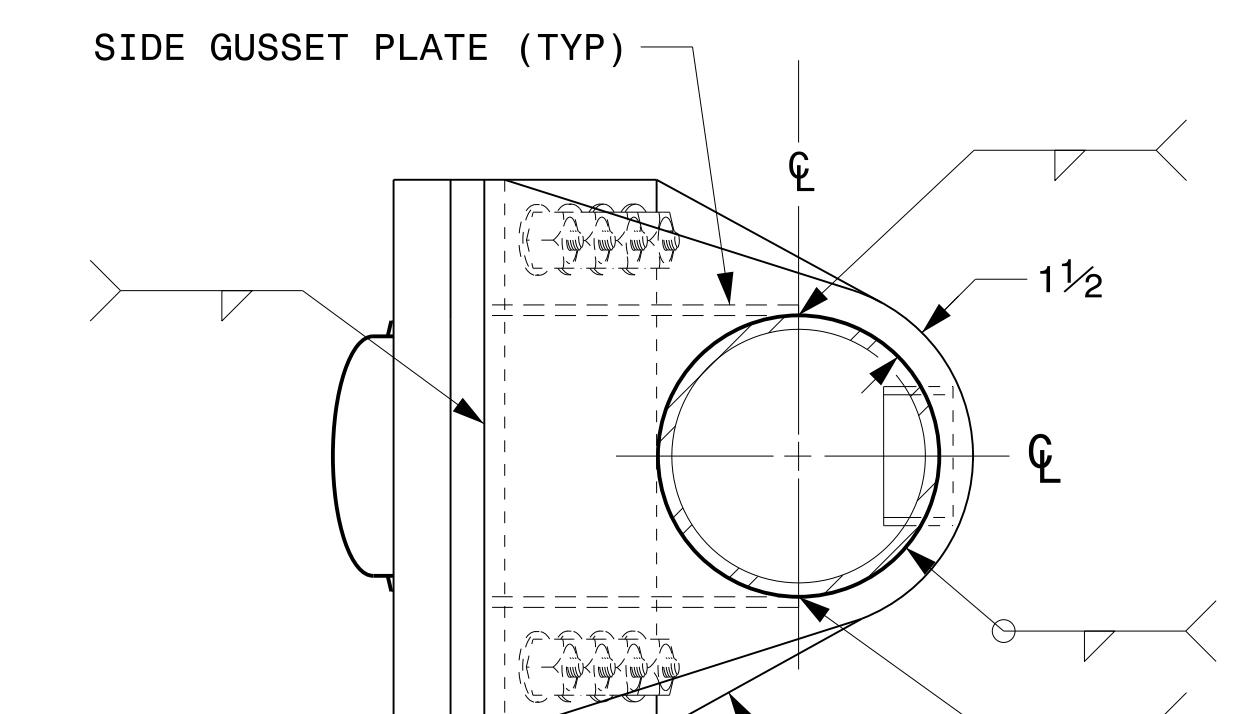
FRONT ELEVATION VIEW



BACK ELEVATION VIEW



SECTION A-A  
MAST ARM ATTACHMENT PLATE



BOTTOM VIEW

Prepared in the Offices of:  
Transportation Mobility and Safety Division  
State of North Carolina  
750 N. Greenfield Pkwy, Garner, NC 27529

Typical Fabrication Details  
For  
Mast Arm Connection To Pole

PLAN DATE: SEPTEMBER 2023 DESIGNED BY: C.F. ANDREWS

PREPARED BY: K.C. DURIGON REVIEWED BY: D.C. SARKAR

0

SCALE NA

REVISIONS

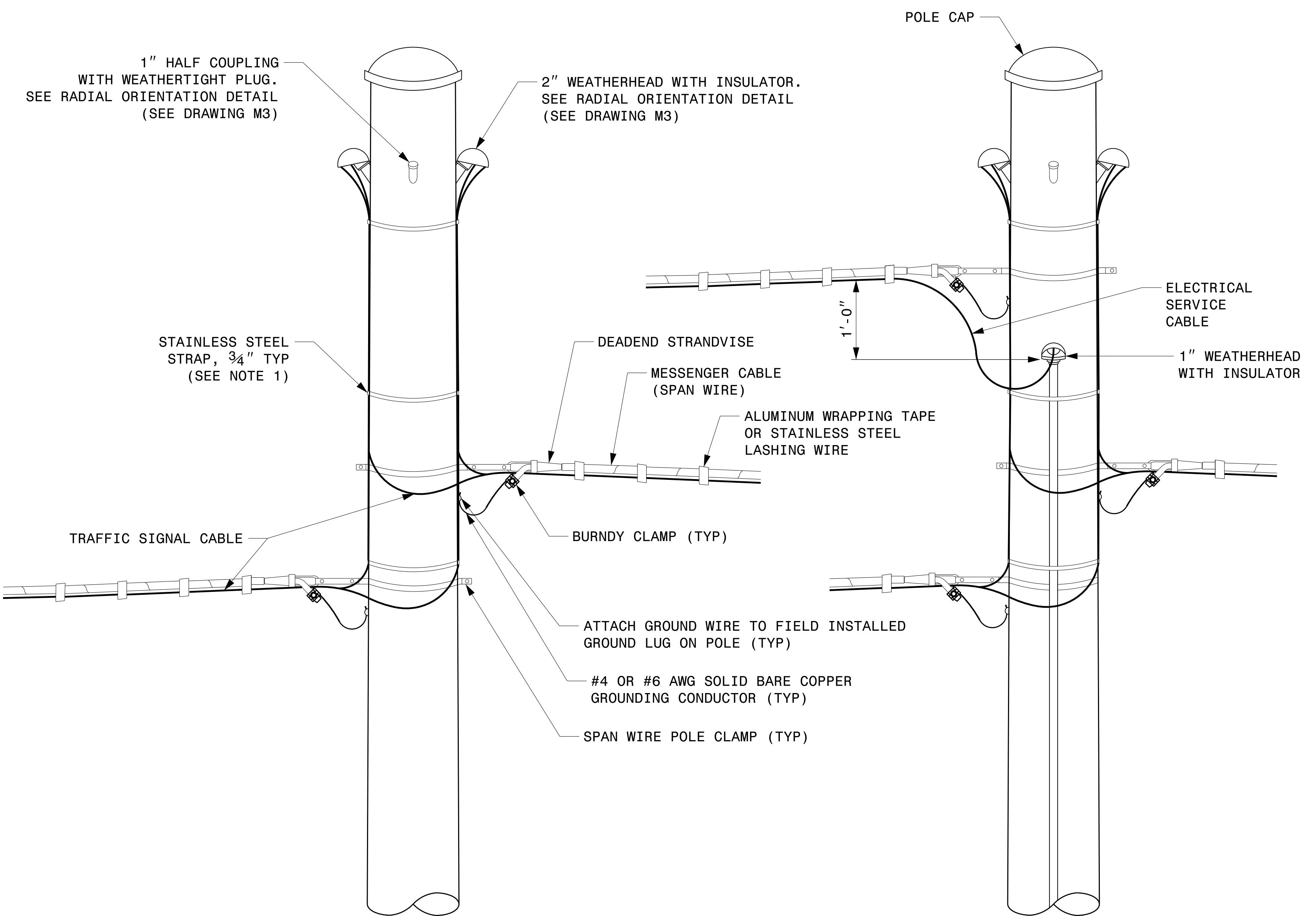
INIT. DATE

NONE

SEAL  
NORTH CAROLINA  
PROFESSIONAL  
ENGINEER  
KEVIN C. DURIGON  
4B23DC79B3784DA

DocuSigned by:  
Kevin Durigon  
4B23DC79B3784DA

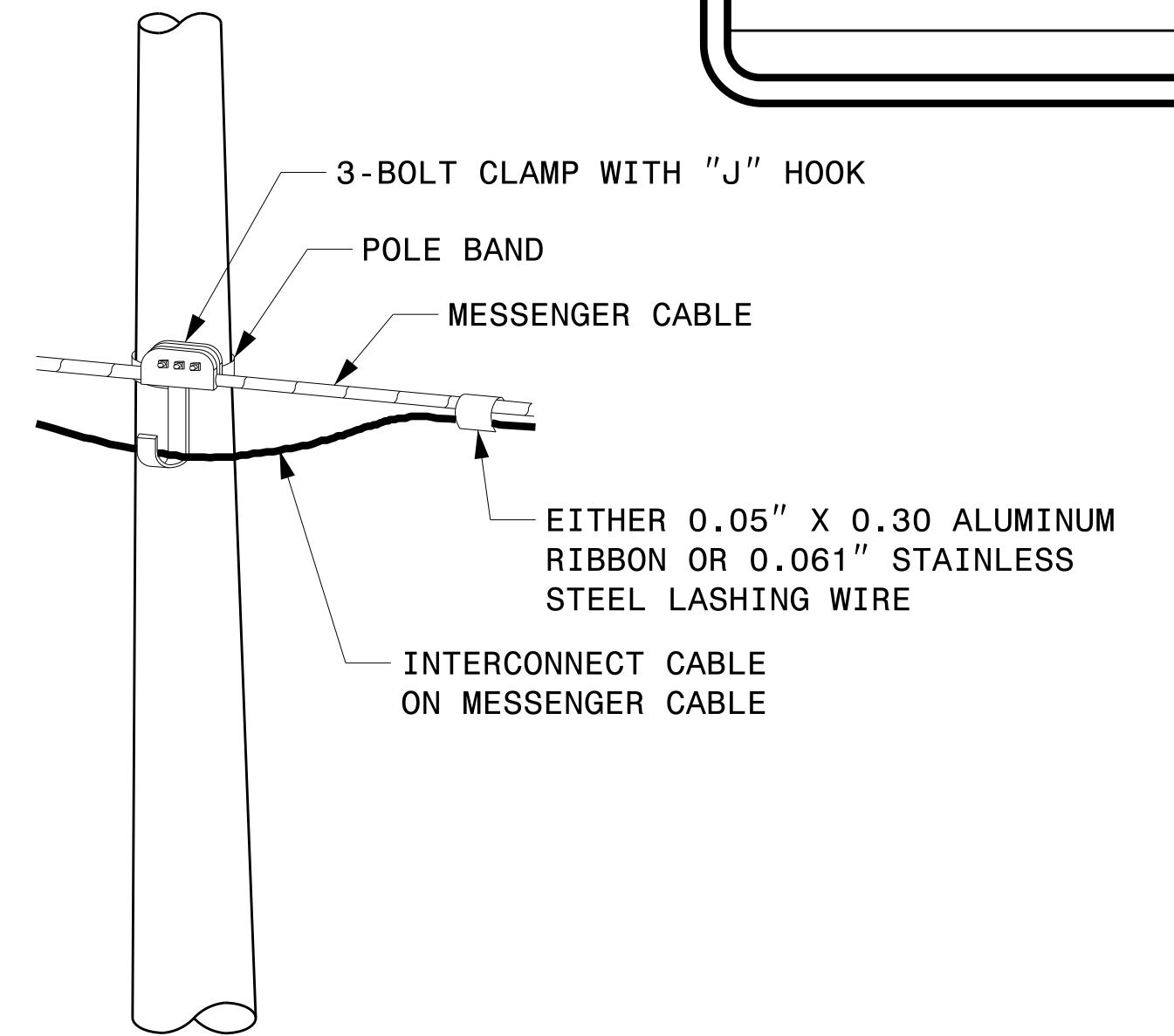
# Fabrication Details – Strain Pole Attachments



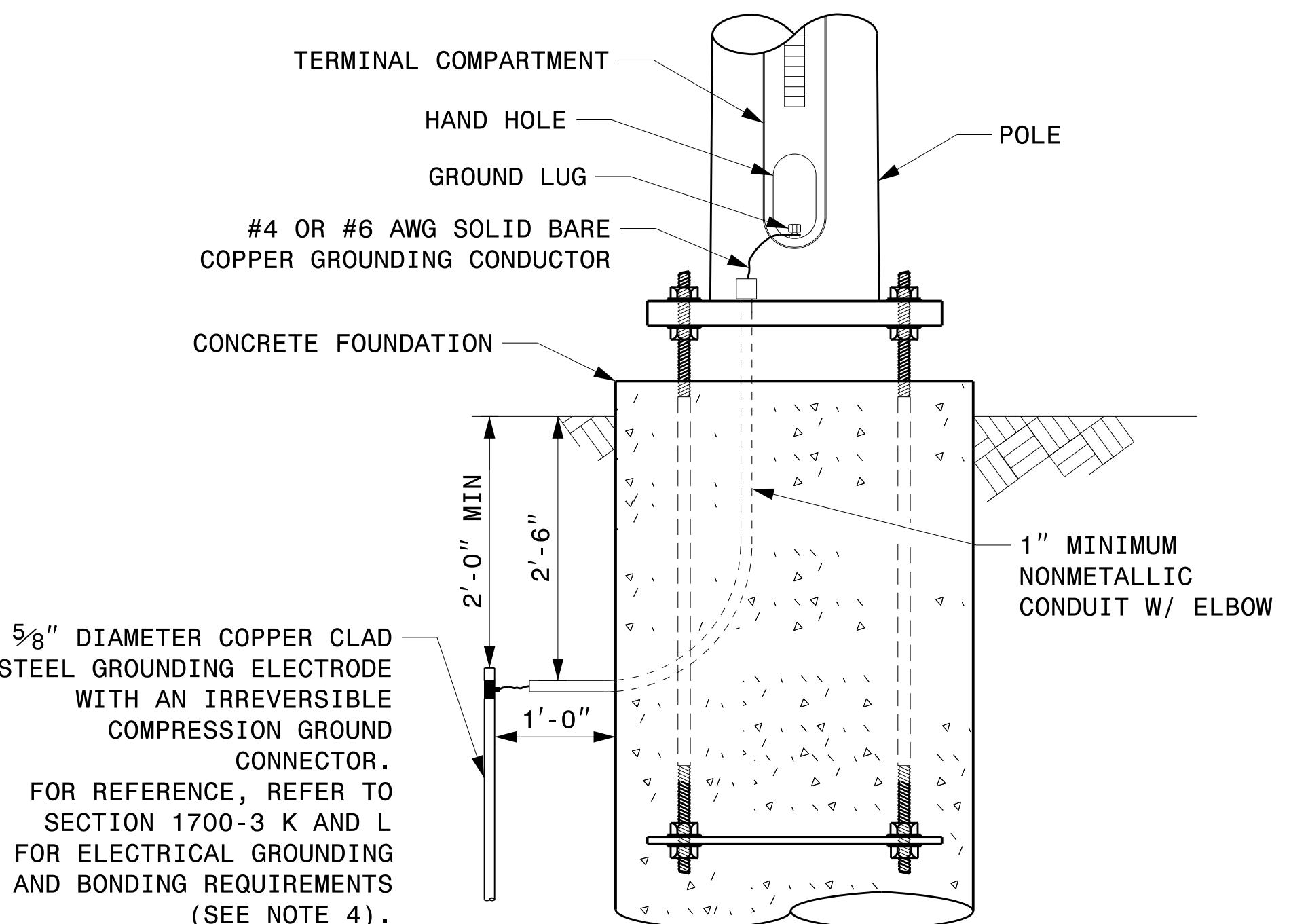
## STRAIN POLE ATTACHMENTS

### NOTES:

1. STRAP ALL SIGNAL CABLES TO THE SIDE OF THE POLE WITH  $\frac{3}{4}$ " STAINLESS STEEL STRAPS WHEN THE DISTANCE BETWEEN SPAN WIRE ATTACHMENT CLAMP AND WEATHERHEADS EXCEEDS 3'-0".
2. PROVIDE MINIMUM TWO SPAN WIRE POLE CLAMPS PER POLE.
3. IT IS PROHIBITED TO ATTACH TWO SPAN WIRES AT ONE POLE CLAMP.
4. FOR GENERAL REQUIREMENTS, REFER TO NCDOT STANDARD SPECIFICATIONS FOR ROADWAY AND STRUCTURES, JANUARY 2024.



## ATTACHMENT OF CABLE TO INTERMEDIATE METAL POLE



## METAL POLE GROUNDING DETAIL FOR STRAIN POLE AND MAST ARM

Prepared in the Offices of:  
TRANSITION Mobility and Safety Division  
SIGNAL DESIGN SECTION  
750 N. Greenfield Pkwy, Garner, NC 27529

Typical Fabrication Details  
For  
Strain Pole Attachments

PLAN DATE: SEPTEMBER 2023 DESIGNED BY: C.F. ANDREWS  
PREPARED BY: K.C. DURIGON REVIEWED BY: D.C. SARKAR

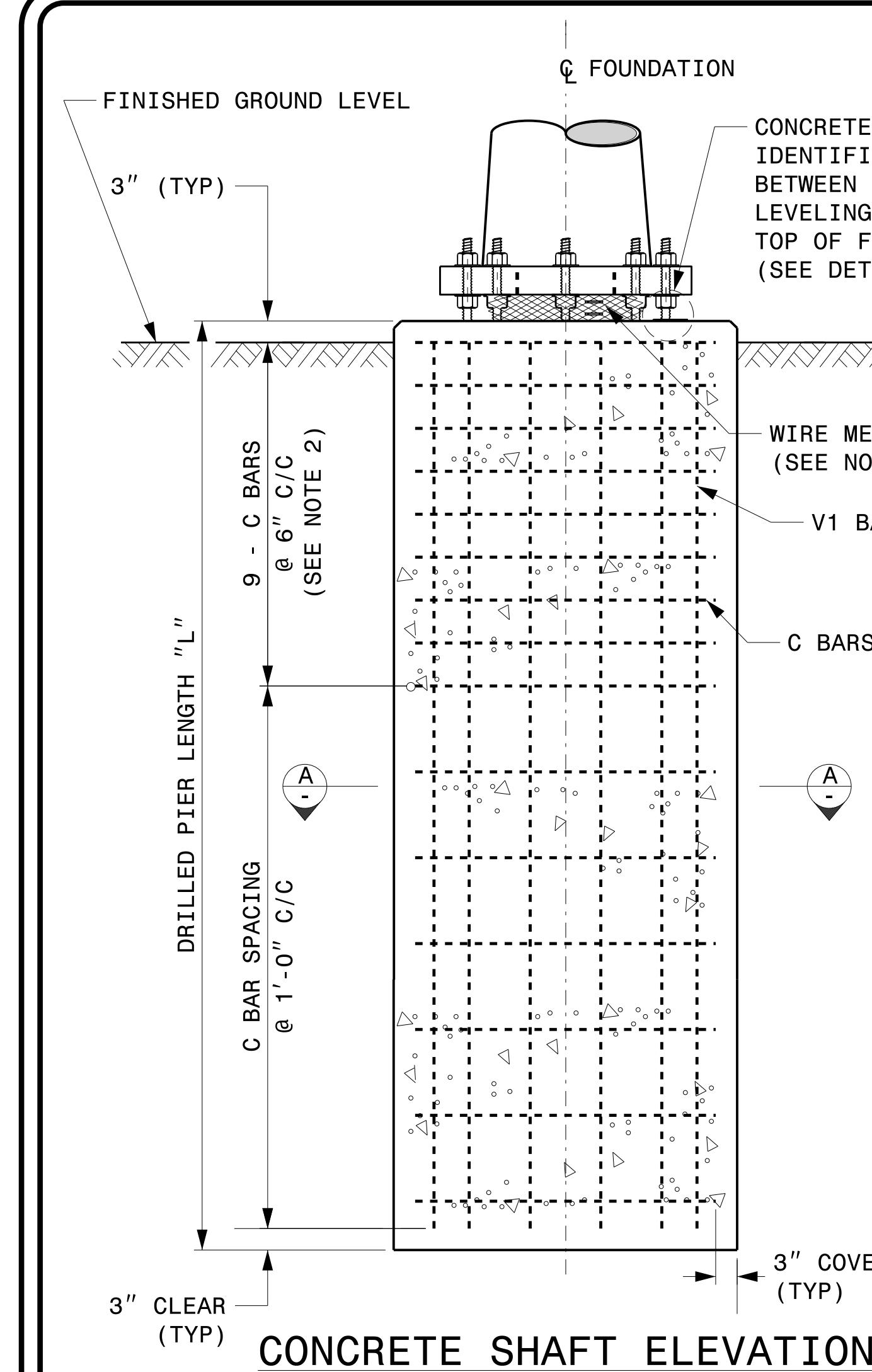
SCALE	0	NA	REVISIONS	INIT.	DATE
			NONE		

SEAL  
NORTH CAROLINA  
PROFESSIONAL  
ENGINEER  
KEVIN C. DURIGON  
4B23DC79B3784DA...

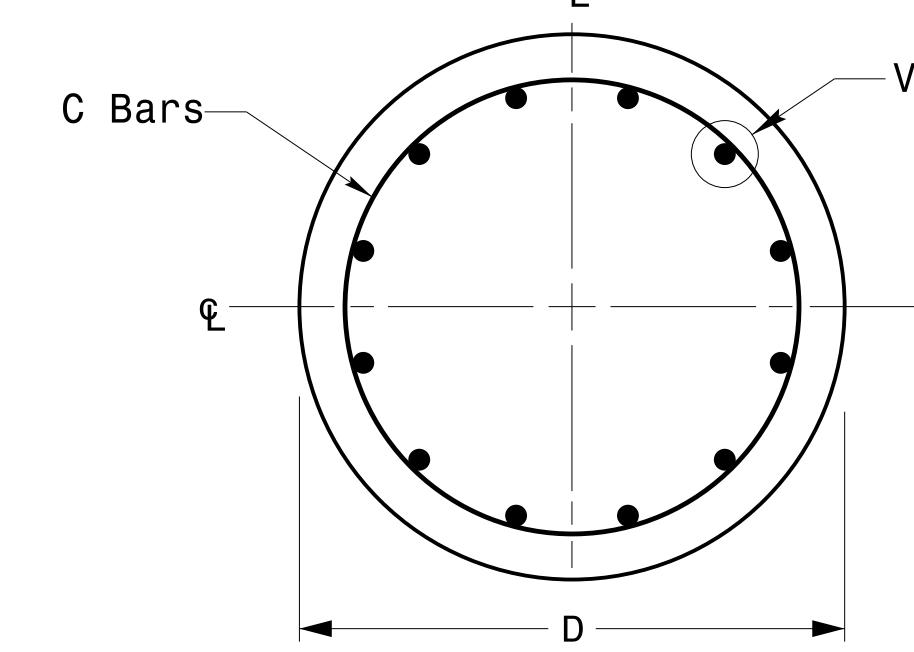
DocuSigned by:  
Kevin Durigon  
SIGNATURE  
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DATE  
09/21/2023

# Construction Details – Foundations

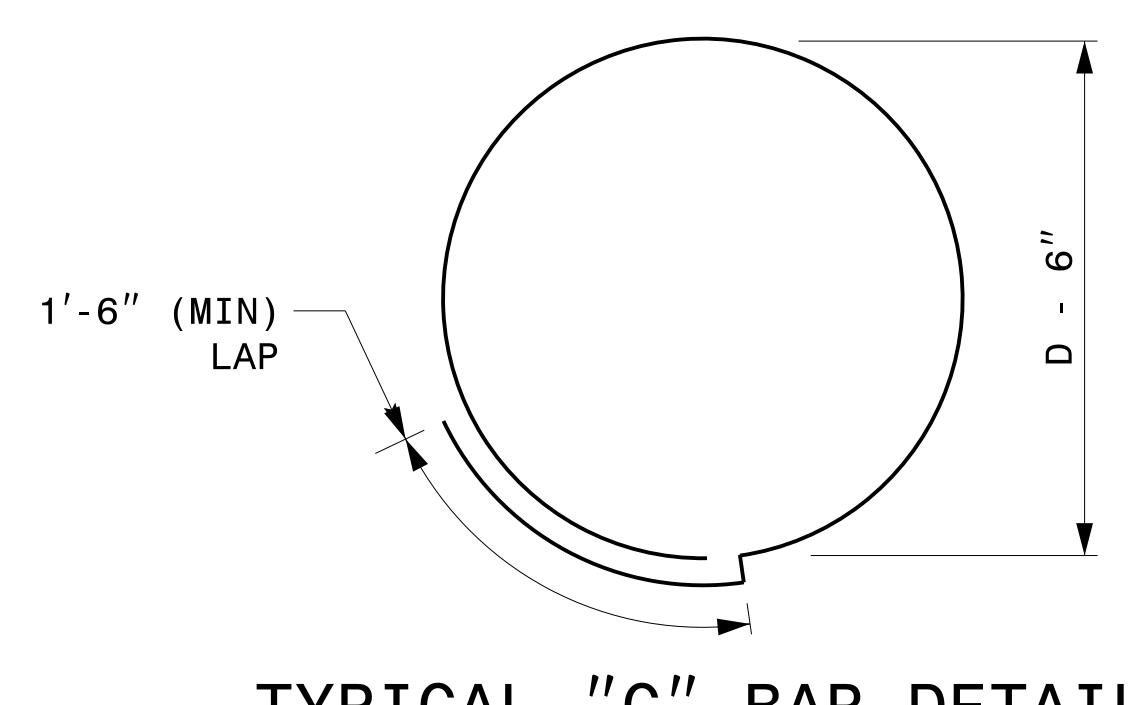
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66:TS&SUITS Signals Structures\*Drawings\*2024 Metal Pole Std Drawings for LRFDS2024 Sig.M7 Std. Construction Details-Strain Poles.dgn



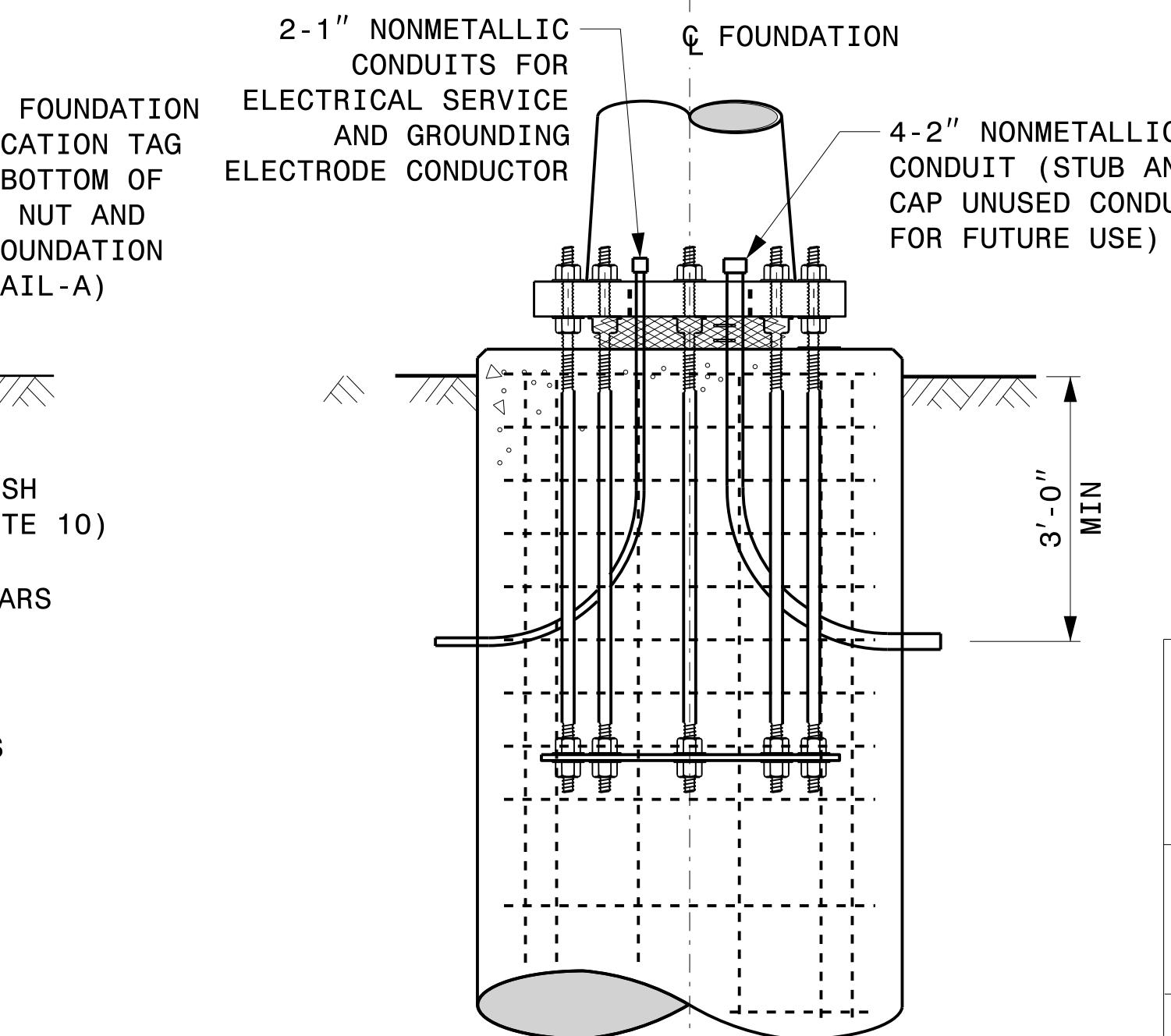
## CONCRETE SHAFT ELEVATION



## SECTION A-A



## TYPICAL "C" BAR DETAIL



# TYPICAL FOUNDATION CONDUIT DETAILS

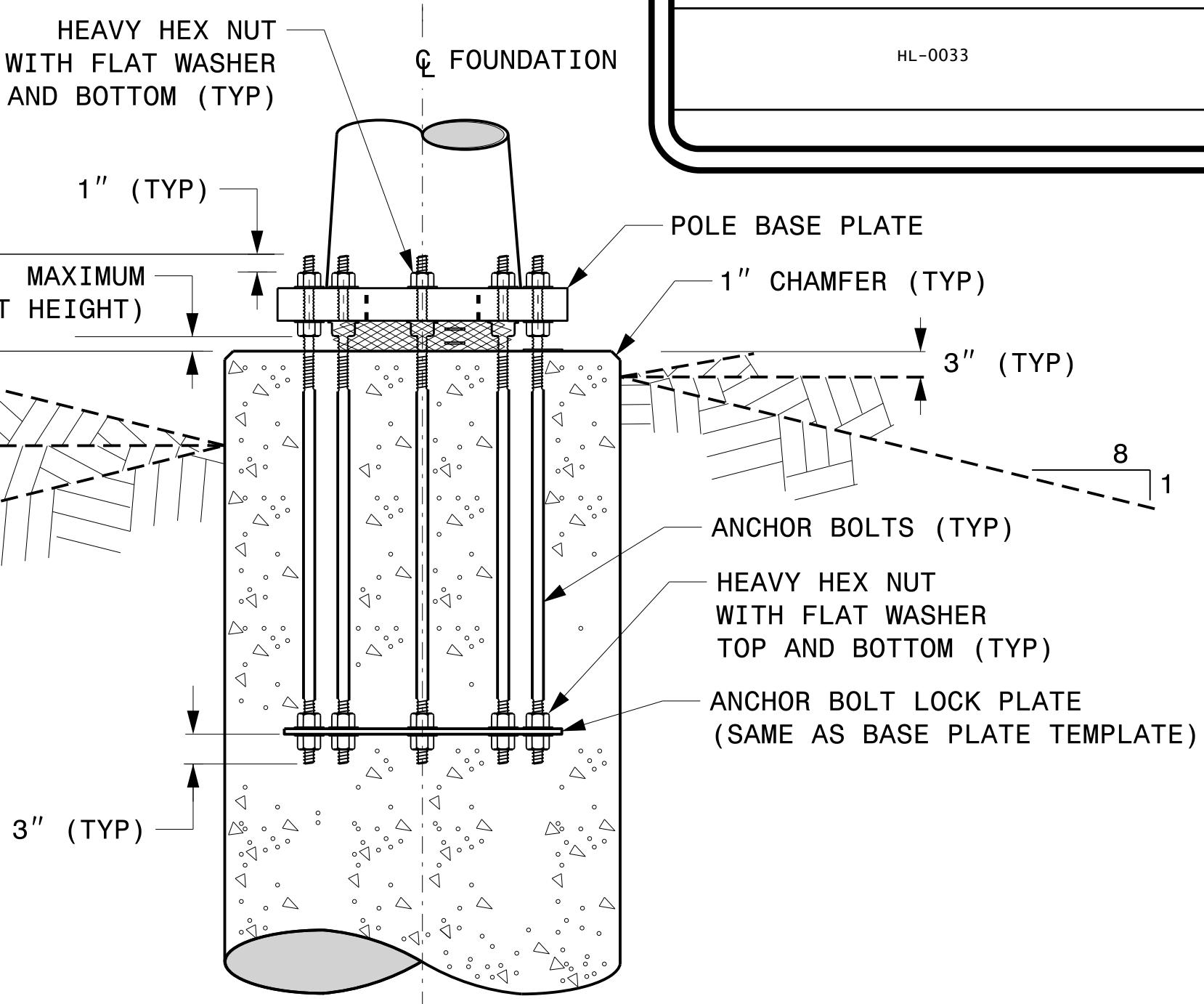
## GENERAL NOTES

1. IF ACTUAL SUBSURFACE CONDITIONS DIFFER SIGNIFICANTLY FROM BORING DATA, CONTACT THE ENGINEER BEFORE EXCAVATING OR PLACING CONCRETE.
2. CIRCULAR TIE REINFORCING RINGS MAY BE VERTICALLY ADJUSTED BY +/- 3" AT A DEPTH BETWEEN 2'-0" AND 3'-0" TO FACILITATE THE INSTALLATION OF ELECTRICAL CONDUIT ENTERING IN THE CAGE.
3. FOR STANDARD FOUNDATIONS, SEE SHEET SIG. M8 FOR DETAILS. VERTICAL REINFORCING BARS (V1) MAY BE HORIZONTALLY ADJUSTED BY +/- 3" TO FACILITATE THE INSTALLATION OF ELECTRICAL CONDUIT ENTERING INTO THE CAGE.
4. PROVIDE 2" TO 5" FOUNDATION PROJECTION ABOVE GROUND LEVEL, DEPENDING ON THE GROUND SLOPE.
5. UNLESS OTHERWISE SHOWN, FOUNDATION DESIGNS ARE BASED ON NON-SLOPING LEVEL GROUND SURFACES WITH SLOPE RATIOS OF 8:1 (H:V) OR FLATTER. IF ACTUAL GROUND LINE SLOPES ARE STEEPER, CONTACT THE ENGINEER BEFORE EXCAVATING OR PLACING CONCRETE.
6. CONSTRUCT FOUNDATIONS IN ACCORDANCE WITH NCDOT STANDARD PROVISIONS SP09 R005- FOUNDATIONS AND ANCHOR ROD ASSEMBLIES FOR METAL POLES. ALL APPLICABLE 2024 NCDOT STANDARD SPECIFICATIONS ARE REFERENCED IN THIS PROVISION. REFER TO THE NCDOT RESOURCES/SPECIFICATIONS PAGE LOCATED ON THE CONNECT NCDOT WEBSITE.  
<https://connect.ncdot.gov/resources/Specifications and Special Provisions.aspx>
7. USE AIR ENTRAINED AA CONCRETE MIX WITH A COMPRESSION STRENGTH OF  $f'_c=4500$  psi (MIN) AFTER 28 DAYS.
8. USE ASTM A615 GRADE 60 DEFORMED BARS FOR ALL REINFORCING STEEL. MAINTAIN AT LEAST 3" COVER ON ALL REINFORCEMENT.
9. LOCATE IDENTIFICATION TAG ON TOP OF THE FOUNDATION, DIRECTLY ABOVE THE CONDUIT'S ENTRY POINT.
10. PROVIDE TWO LAYERS OF 4 MESH GALVANIZED WELDED 23 GAUGE (0.025) 6" WIDE AROUND PIPES UNDER THE BASE PLATE AND SECURE IT WITH TIES IF NECESSARY.
11. PREFERRED LOCATION FOR THE I.D. TAG IS AS SHOWN IN DETAIL-A: DIRECTLY ABOVE THE CONDUIT ENTERING THE FOUNDATION.

**REINFORCING STEEL TABLE  
FOR STANDARD  
DRILL PIER SHAFT  
(4'-0" DIAMETER)**

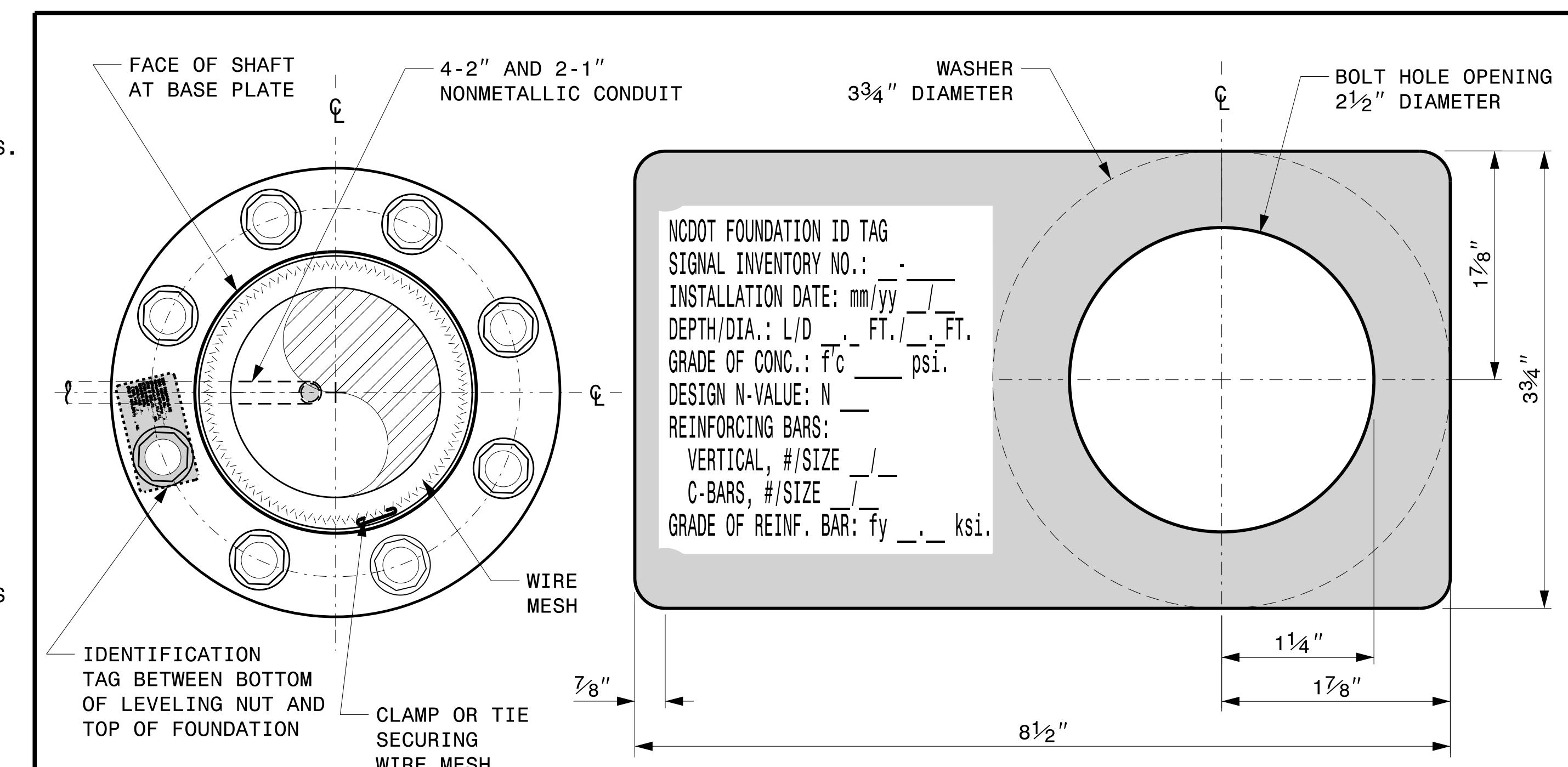
\* SEE NOTE 2  
\*\* SEE NOTE 3

\*\* SEE NOTE

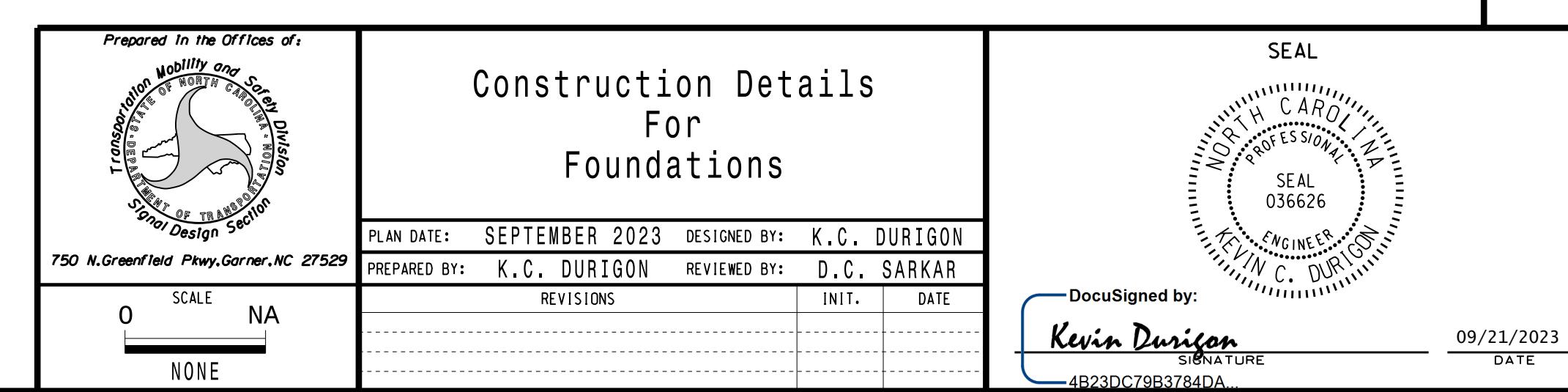


# TYPICAL FOUNDATION ANCHOR BOLT DETAILS

(REINFORCING CAGE NOT SHOWN FOR CLARITY)



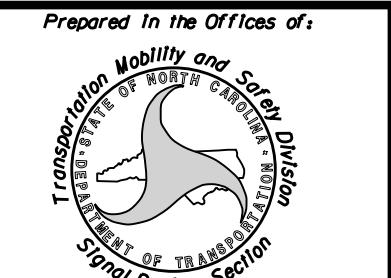
# CONCRETE FOUNDATION IDENTIFICATION TAG DETAILS



# SOIL CONDITION

STANDARD STRAIN POLES					STANDARD FOUNDATIONS 48" Diameter Drilled Pier Length (L) - Feet							Reinforcement				
Case No.	Pole Height (Ft.)	Base Plate BC (In.)	Reactions at the Pole Base			Clay			Sand			Longitudinal		Stirrups		
			Axial (kip)	Shear (kip)	Moment (ft-kip)	Medium N-Value 4-8	Stiff N-Value 9-15	Very Stiff N-Value 16-30	Hard N-Value >30	Loose N-Value 4-10	Medium N-Value 11-30	Dense N-Value >30	Bar Size (#)	Quantity (ea.)	Bar Size (#)	Spacing (in.)
S26L1	26	22	2	9	210	19.5	12.5	9	6.5	15.5	14.5	13	8	12	4	12
S26L2	26	23	2	10	240	19.5	12	9	6.5	15.5	14.5	13	8	12	4	12
S26L3	26	25	2	11	260	20.5	12	10	8	16	15	13	8	12	4	12
S30L1	30	22	2	9	230	19	11	9	7	15.5	14	12.5	8	12	4	12
S30L2	30	23	2	10	270	20	12	10	8	16	14.5	13	8	12	4	12
S30L3	30	25	2	11	290	21	12	10	8	17	15	13.5	8	12	4	12
S30H1	30	25	3	13	355	23	13	11	9	18	16.5	14.5	8	12	4	12
S30H2	30	29	3	15	405	25	14	11	9	19	17.5	15.5	8	14	4	12
S30H3	30	29	3	16	430	26	15	12	9	20	18	16	8	14	4	6
S35L1	35	22	3	8	260	19.5	12	10	8	15.5	14.5	13	8	12	4	12
S35L2	35	23	3	10	300	21	12	10	8	16.5	15	13.5	8	12	4	12
S35L3	35	25	3	10	320	21.5	13	10	8	17	15.5	14	8	12	4	12
S35H1	35	25	3	12	390	23.5	14	11	9	18	17	15	8	14	4	12
S35H2	35	29	4	14	460	26	15	12	9	20	18	16	8	14	4	6
S35H3	35	29	4	16	495	28.5	15	13.5	10	21.5	19	17	8	14	4	6

48" DIAMETER FOUNDATION CONCRETE VOLUME (CUBIC YARDS) = (0.465) x DRILLED PIER LENGTH

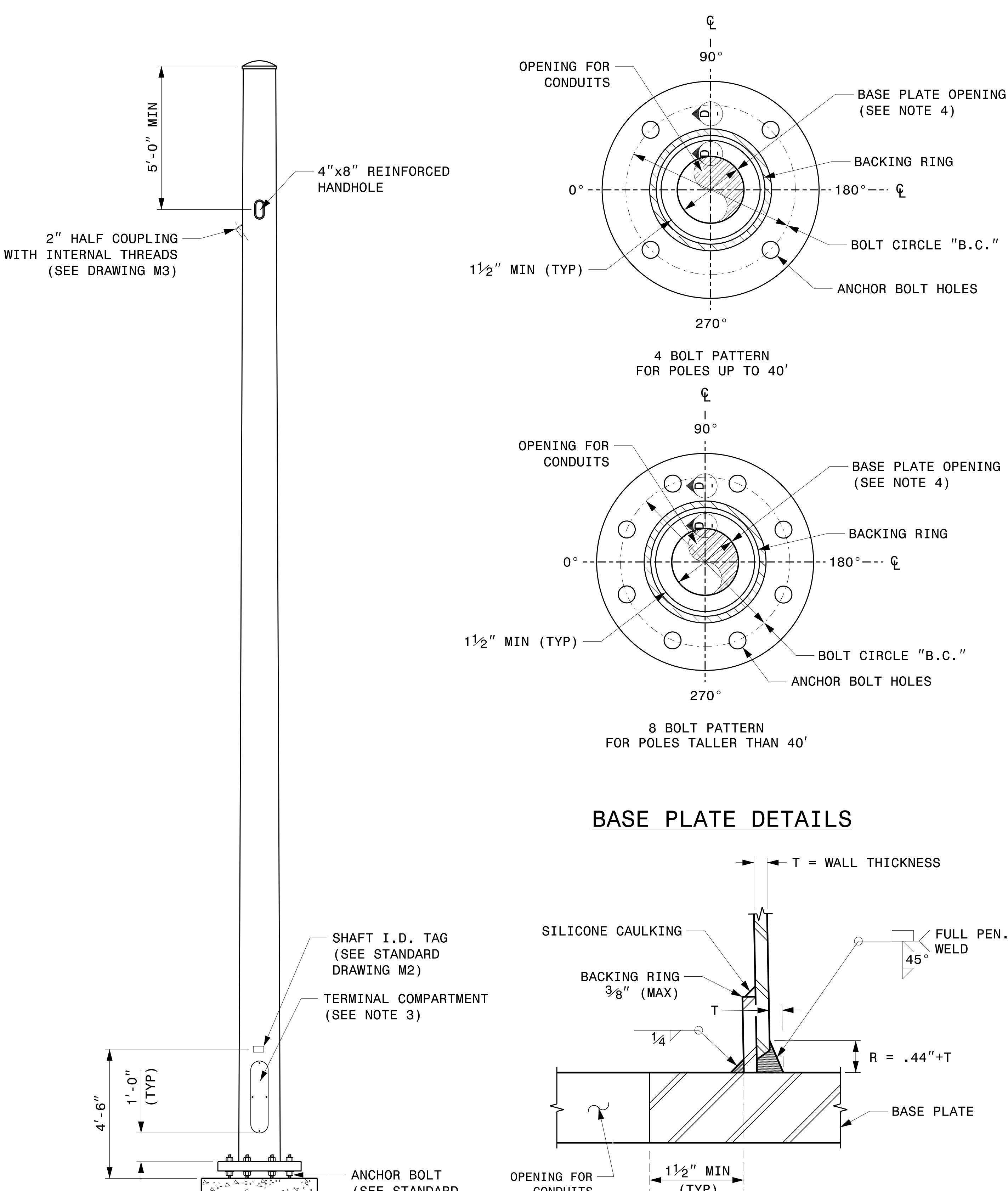
 Prepared In the Offices of: <b>TRANSPORTATION MOBILITY AND SAFETY DIVISION</b> <b>STATE OF NORTH CAROLINA</b> <b>750 N. Greenfield Pkwy, Garner, NC 27529</b>		Standard Strain Pole Foundation for All Soil Conditions		
		PLAN DATE: SEPTEMBER 2023	DESIGNED BY: K.C. DURIGON	
PREPARED BY: K.C. DURIGON		REVIEWED BY: D.C. SARKAR		
SCALE	NA	INIT.	DATE	
0	NA			
REVISIONS				
NONE				



DocuSigned by:  
**Kevin Durigon**  
 Signature  
 4B23DC79B3784DA

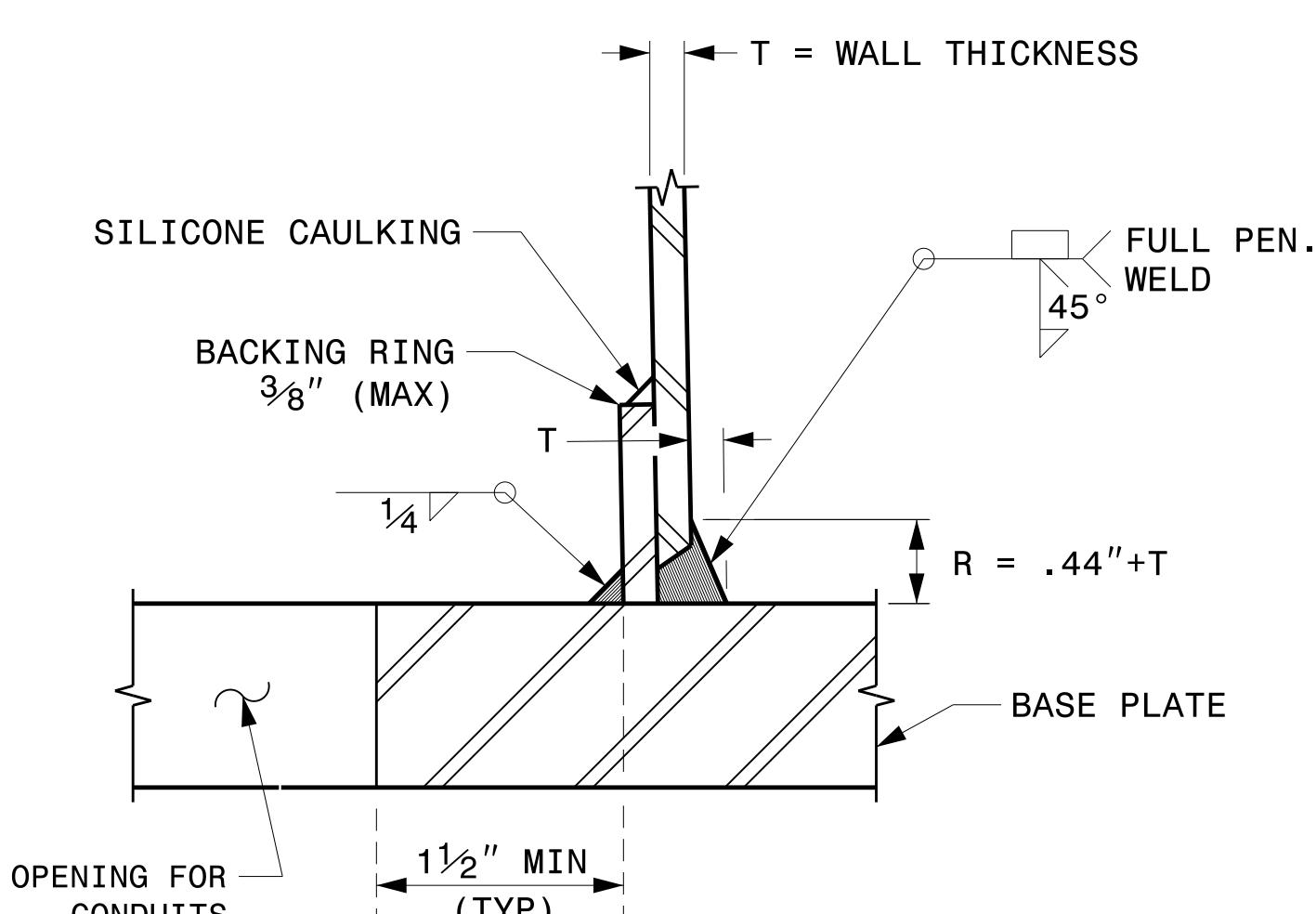
# Fabrication Details – CCTV Camera Poles

PROJECT I.D. NO. SHEET NO.  
HL-0033 Sig.M9



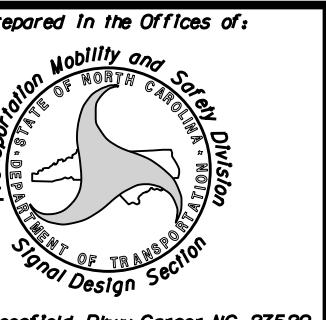
CCTV CAMERA POLE  
(NOT TO SCALE)

SECTION D-D  
(POLE ATTACHMENT TO BASE PLATE)  
FULL-PENETRATION  
GROOVE WELD DETAIL



## NOTES:

1. THIS DRAWING PROVIDES BASIC DETAILS FOR CCTV POLES. PROJECT REQUIREMENTS MAY REQUIRE SPECIAL FACTORY PREPS THAT ARE NOT SHOWN ON THESE DETAILS.
2. DETAILS FOR INTERNAL CAMERA LOWERING SYSTEMS ARE NOT SHOWN.
3. POLE MOUNTED CABINETS MAY REQUIRE MODIFICATIONS TO THE LOWER HANDHOLE OPENING TO MOUNT CABINETS. 4" X 8" REINFORCED HANDHOLES ARE ACCEPTABLE OPTIONS, AND MAY BE PREFERRED.
4. OPENING IN POLE BASE SHALL BE EQUAL TO POLE BASE INSIDE DIAMETER MINUS 3 1/2" BUT SHALL NOT BE LESS THAN 8 1/2".
5. USE COMPACT SECTION CRITERIA D/T RATIO PER AASHTO LTS-LRFD 1ST EDITION SECTION 5.7.2.

 <p>Prepared In the Offices of: Transportation Mobility and Safety Division Second Floor Design Section 750 N. Greenfield Pkwy, Garner, NC 27529</p>	Typical Fabrication Details For CCTV Poles		
	PLAN DATE: SEPTEMBER 2023	DESIGNED BY: K.C. DURIGON	PREPARED BY: K.C. DURIGON
SCALE: 0	NA	REVISIONS: NONE	INIT. DATE: 09/21/2023

DocuSigned by: **Kevin Durigon** SIGNATURE: 4B23DC79B3784DA... DATE: 09/21/2023

SEAL  
036626  
NORTH CAROLINA  
PROFESSIONAL  
ENGINEER  
KEVIN C. DURIGON

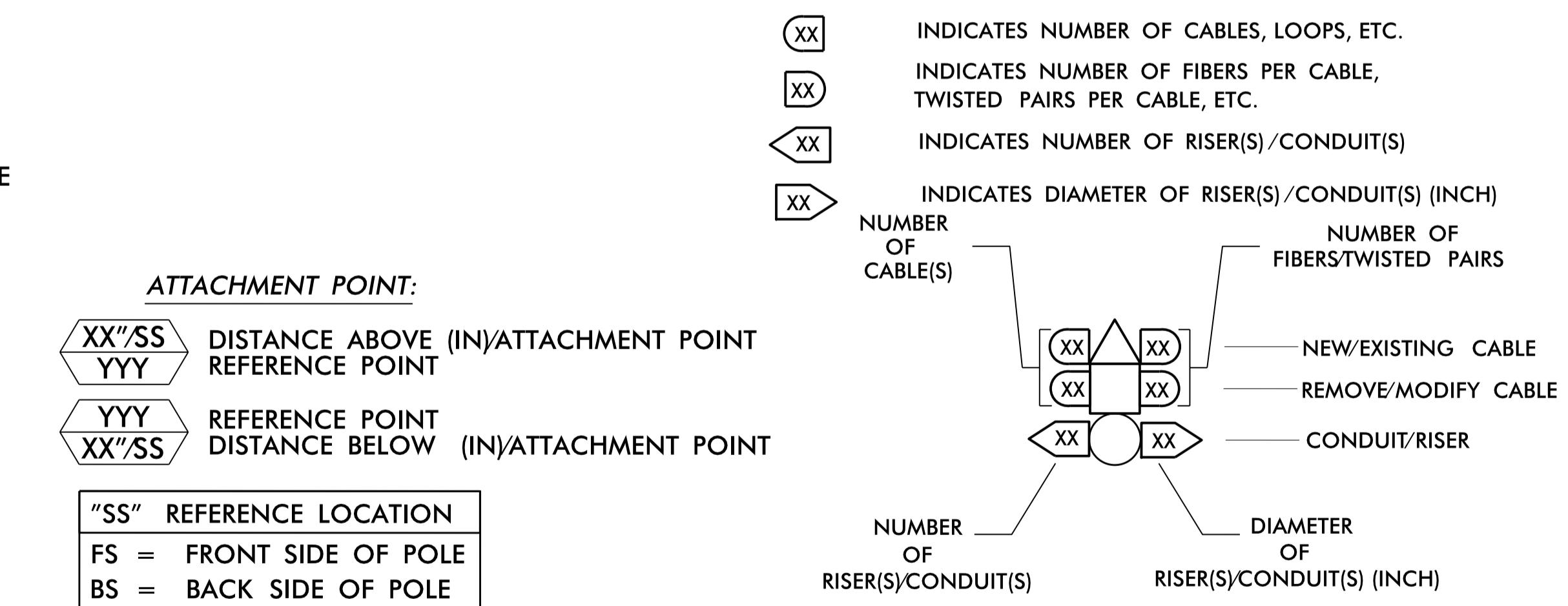
- 1 INSTALL COAX CABLE
- 2 INSTALL ETHERNET CABLE
- 3 EXISTING ETHERNET (OR COAX) CABLE
- 4 INSTALL SMFO CABLE
- 5 EXISTING SMFO CABLE
- 6 INSTALL FIBER OPTIC DROP CABLE
- 7 INSTALL TRACER WIRE
- 8 TRENCH
- 9 INSTALL PVC CONDUIT
- 10 INSTALL RIGID, GALVANIZED STEEL CONDUIT
- 11 INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
- 12 INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC CABLE SEAL
- 13 INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
- 14 INSTALL POLYETHYLENE CONDUIT
- 15 DIRECTIONAL DRILL CONDUIT
- 16 BORE AND JACK CONDUIT
- 17 INSTALL CABLE(S) IN EXISTING CONDUIT
- 18 INSTALL CABLE(S) IN NEW CONDUIT
- 19 INSTALL CABLE(S) IN EXISTING RISER
- 20 INSTALL CABLE(S) IN NEW RISER
- 21 INSTALL CABLE(S) IN EXISTING CONDUIT STUB-OUTS
- 22 INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
- 23 INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
- 24 INSTALL NEW CONDUIT INTO EXISTING POLE MOUNTED CABINET
- 25 INSTALL NEW RISER INTO EXISTING POLE MOUNTED CABINET
- 26 INSTALL NEW ETHERNET EDGE SWITCH
- 27 INSTALL NEW FIBER OPTIC TRANSCEIVER
- 28 INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS AND FUSION SPLICE CABLE IN CABINET
- 29 INSTALL UNDERGROUND SPLICE ENCLOSURE
- 30 INSTALL AERIAL SPLICE ENCLOSURE
- 31 MODIFY EXISTING INTERCONNECT CENTER /SPLICE ENCLOSURE
- 32 INSTALL POLE MOUNTED SPLICE CABINET
- 33 INSTALL BASE MOUNTED SPLICE CABINET

- 34 INSTALL CABINET FOUNDATION
- 35 INSTALL CCTV CAMERA POLE MOUNTED CABINET
- 36 INSTALL CCTV CAMERA ASSEMBLY
- 37 INSTALL CCTV CAMERA WOOD POLE
- 38 INSTALL CCTV CAMERA METAL POLE AND FOUNDATION
- 39 INSTALL JUNCTION BOX
- 40A INSTALL OVERSIZED JUNCTION BOX
- 40B INSTALL SPECIAL OVERSIZED JUNCTION BOX (36" x 24" x 24")
- 41 REMOVE EXISTING JUNCTION BOX
- 42 INSTALL WOOD POLE
- 43 REMOVE EXISTING WOOD POLE
- 44 INSTALL AERIAL GUY ASSEMBLY
- 45 INSTALL STANDARD GUY ASSEMBLY
- 46 INSTALL SIDEWALK GUY ASSEMBLY
- 47 INSTALL MESSENGER CABLE
- 48A REMOVE EXISTING COMMUNICATIONS AND MESSENGER CABLE
- 48B REMOVE EXISTING COMMUNICATIONS CABLE
- 49 BACK PULL EXISTING COMMUNICATIONS CABLE
- 50 INSTALL CELL MODEM AND ANTENNA
- 51 INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
- 52A INSTALL DELINEATOR MARKER
- 52B INSTALL JUNCTION BOX MARKER
- 53A STORE 20 FEET OF COMMUNICATIONS CABLE
- 53B STORE 50 FEET OF EACH COMMUNICATIONS CABLE
- 54 LASH CABLE(S) TO EXISTING COMMUNICATIONS CABLE
- 55 LASH CABLE(S) TO EXISTING MESSENGER CABLE
- 56 LASH CABLE(S) TO NEW MESSENGER CABLE
- 57 MODIFY EXISTING ELECTRICAL SERVICE
- 58 INSTALL NEW ELECTRICAL SERVICE
- 59 INSTALL NEW EQUIPMENT CABINET DISCONNECT
- 60 BOND TRACER WIRE TO EQUIPMENT GROUND BUS
- 61 DO NOT BOND TRACER WIRE TO EQUIPMENT GROUND BUS
- 62 BOND RISER AND MESSENGER CABLE TO POLE GROUND
- 63 BOND RISER TO POLE GROUND
- 64 BOND MESSENGER CABLE TO POLE GROUND
- 65 INSTALL HEAT SHRINK TUBING RETROFIT KIT
- 66 INSTALL MOLDABLE DUCT SEAL
- 67 SLACK SPAN

LEGEND	
FO	NEW FIBER OPTIC COMMUNICATIONS CABLE
EXI	EXISTING COMMUNICATIONS CABLE
REM	EXISTING COMMUNICATIONS CABLE TO BE REMOVED
-----	NEW AERIAL GUY ASSEMBLY
.....	NEW CONDUIT
.......	EXISTING CONDUIT
DD	NEW DIRECTIONAL DRILLED CONDUIT

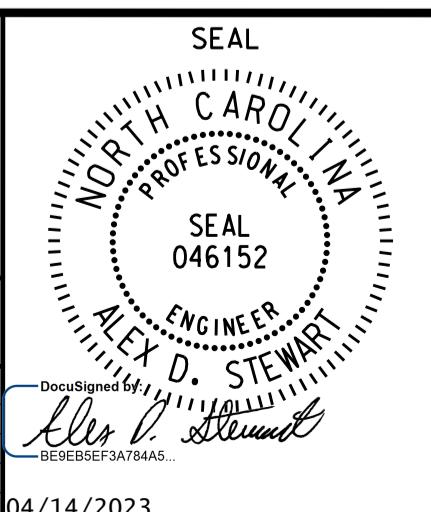
NEW	EXISTING
	OVERSIZED JUNCTION BOX
	WOOD POLE
	AERIAL SPLICE ENCLOSURE
	UNDERGROUND SPLICE ENCLOSURE
	METAL POLE
	CCTV ASSEMBLY
	STANDARD GUY ASSEMBLY
	SIDEWALK GUY ASSEMBLY
	CABLE STORAGE RACKS (SNOW SHOES)
	SIGNAL/EQUIPMENT CABINET
	SPICE CABINET
	FLAT PANEL ANTENNA (SINGLE)
	YAGI ANTENNA (DOUBLE) FOR REPEATER OPERATION
	YAGI ANTENNA (SINGLE)
	OMNI ANTENNA
	SIGNAL POLE
	XX-XXXX SIGNAL INVENTORY NUMBER

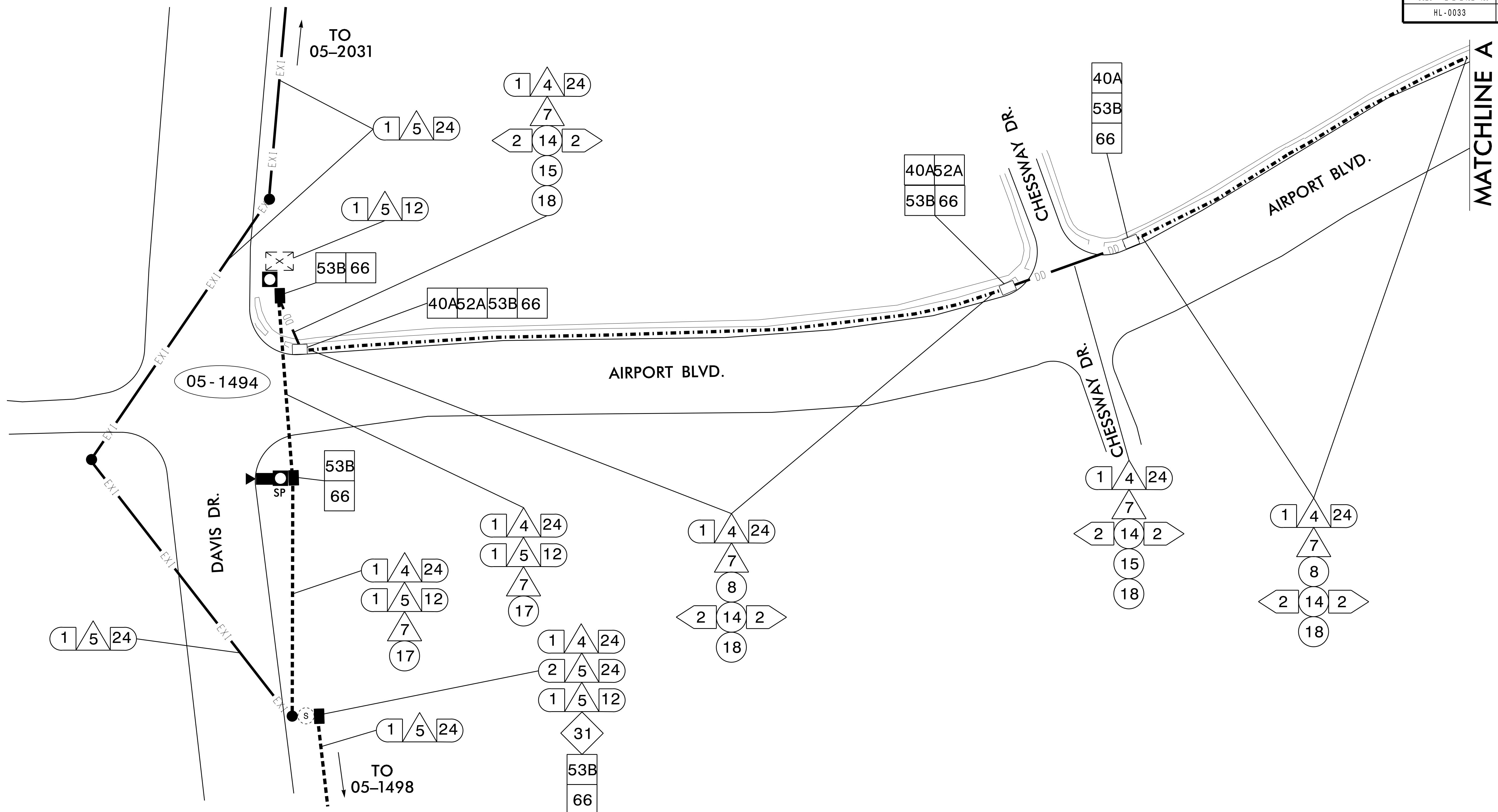
#### CONSTRUCTION NOTE SYMBOL KEY



DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

Prepared in the Offices of: 	CONSTRUCTION NOTES										
DIVISION 05 WAKE MORRISVILLE											
PLAN DATE: MARCH 2023	REVIEWED BY:	999BBBEEF705A9A	04/14/2023								
PREPARED BY: H. T. BERGREN, EI	REVISIONS INIT. DATE										
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04/14/2023											



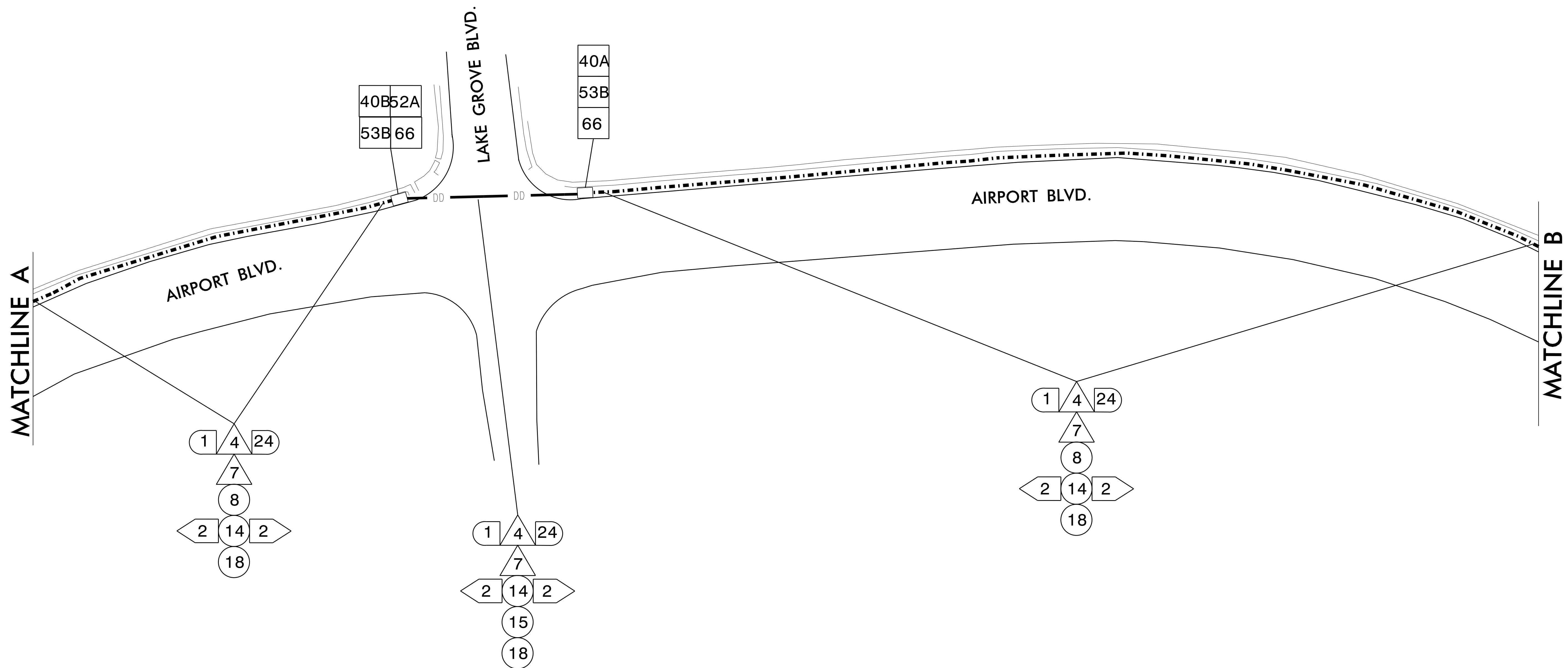


NOTES:

1. FIVE (5) DAYS PRIOR TO BEGINNING WORK ON THE SIGNAL SYSTEM, CONTACT THE TOWN OF CARY TRANSPORTATION PROJECT MANAGER AT (919) 469-4203 TO ARRANGE FOR THE TOWN OF CARY TRANSPORTATION PROGRAM MANAGER TO PROGRAM THE NEW FIELD ETHERNET SWITCHES WITH THE NECESSARY NETWORK CONFIGURATION DATA, INCLUDING BUT NOT LIMITED TO: THE PROJECT IP ADDRESS, DEFAULT GATEWAY, SUBNET MASK AND VLAN ID INFORMATION. NOTIFY THE TOWN OF CARY TRANSPORTATION PROGRAM MANAGER AFTER ALL WORK IS PERFORMED TO ENSURE THAT ALL FIBER CIRCUITS ARE FUNCTIONING PROPERLY. WORK IS NOT COMPLETE UNTIL THE SIGNAL SYSTEM IS BACK UP AND OPERATIONAL.
2. CONTRACTOR TO RECORD EXISTING SPLICING ARRANGEMENT FOR COMPARISON TO THE SUPPLIED SPLICING DETAILS. IF DISCREPANCIES EXIST, CONTACT THE ENGINEER TO DETERMINE HOW TO PROCEED WITH RESPLICING. PROVIDE AS-BUILT PLANS TO THE ENGINEER IF FINAL SPLICING ARRANGEMENT DIFFERS FROM THE SUPPLIED SPLICING DETAILS.

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

<p>Prepared in the Offices of Town of Cary Transportation, Mobility and Safety Department Town of Cary, North Carolina Transportation, Mobility and Safety Department</p> <p>250 N. Greenfield Pkwy., Garner, NC 27529</p>	SIGNAL SYSTEM - TOWN OF CARY COMMUNICATIONS CABLE AND CONDUIT ROUTING PLANS		<p>SEAL 046152</p> <p>ALEX D. STEWART ENGINEER</p> <p>DocSigned by: <i>Elis V. Stewart</i> RECEIVED BY: <i>Elis V. Stewart</i></p> <p>04/14/2023</p>
	DIVISION 05	WAKE	
PLAN DATE:	MARCH 2023	REVIEWED BY:	<i>Elis V. Stewart</i>
PREPARED BY:	H.T. BERGGREN, EI	9998887705A9A	
SCALE:	0	N/A	
REVISIONS:	INIT.:	DATE:	
<p>.....</p> <p>.....</p>			



## NOTES:

NOTES:

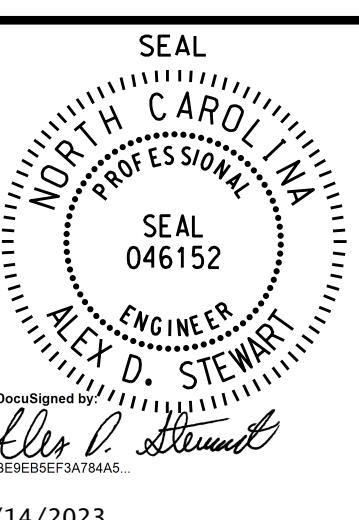
1. FIVE (5) DAYS PRIOR TO BEGINNING WORK ON THE SIGNAL SYSTEM, CONTACT THE TOWN OF CARY TRANSPORTATION PROJECT MANAGER AT (919) 469-4203 TO ARRANGE FOR THE TOWN OF CARY TRANSPORTATION PROGRAM MANAGER TO PROGRAM THE NEW FIELD ETHERNET SWITCHES WITH THE NECESSARY NETWORK CONFIGURATION DATA, INCLUDING BUT NOT LIMITED TO: THE PROJECT IP ADDRESS, DEFAULT GATEWAY, SUBNET MASK AND VLAN ID INFORMATION. NOTIFY THE TOWN OF CARY TRANSPORTATION PROGRAM MANAGER AFTER ALL WORK IS PERFORMED TO ENSURE THAT ALL FIBER CIRCUITS ARE FUNCTIONING PROPERLY. 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.

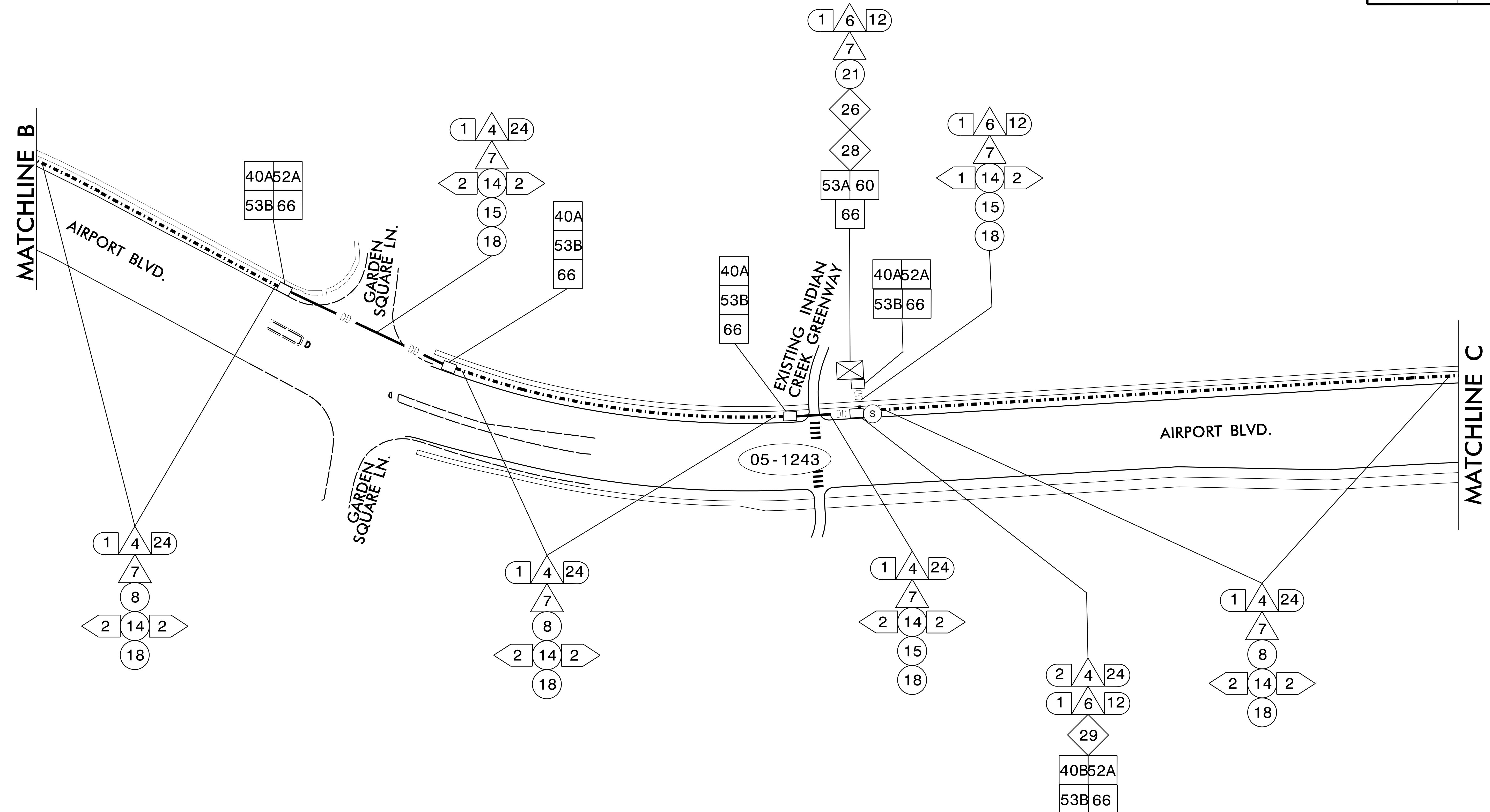
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UNLESS ALL SIGNATURES COMPLETED**



# SIGNAL SYSTEM - TOWN OF CARY COMMUNICATIONS CABLE AND CONDUIT ROUTING PLANS

DIVISION 05		WAKE	MORRISVILLE
DocuSigned by:			
PLAN DATE:	MARCH 2023	REVIEWED BY:	Green, Gregg A.
PREPARED BY: H. T. BERGGREN, EI		99F8BBEF705A4FA...	



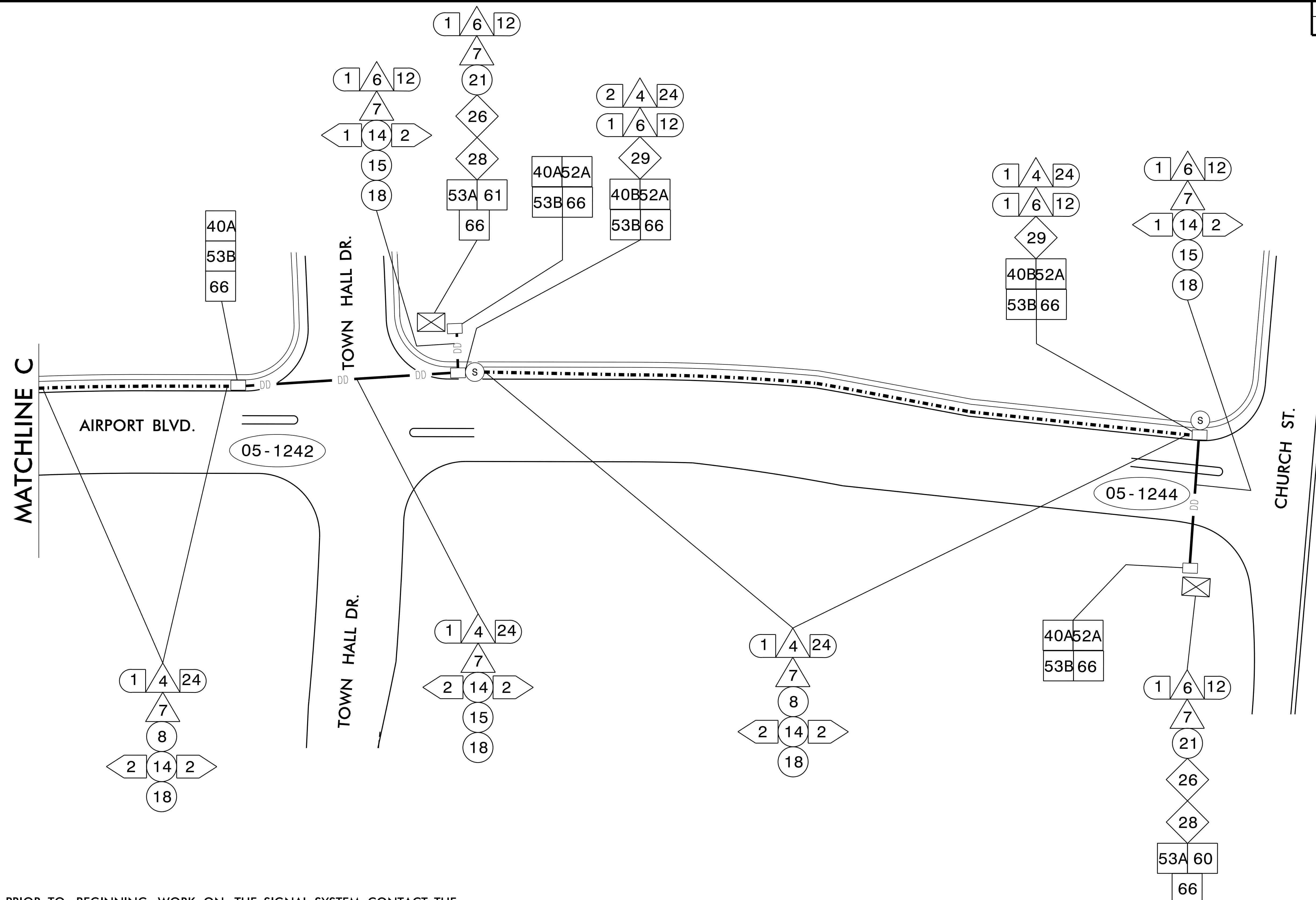


NOTES:

1. FIVE (5) DAYS PRIOR TO BEGINNING WORK ON THE SIGNAL SYSTEM, CONTACT THE TOWN OF CARY TRANSPORTATION PROJECT MANAGER AT (919) 469-4203 TO ARRANGE FOR THE TOWN OF CARY TRANSPORTATION PROGRAM MANAGER TO PROGRAM THE NEW FIELD ETHERNET SWITCHES WITH THE NECESSARY NETWORK CONFIGURATION DATA, INCLUDING BUT NOT LIMITED TO: THE PROJECT IP ADDRESS, DEFAULT GATEWAY, SUBNET MASK AND VLAN ID INFORMATION. NOTIFY THE TOWN OF CARY TRANSPORTATION PROGRAM MANAGER AFTER ALL WORK IS PERFORMED TO ENSURE THAT ALL FIBER CIRCUITS ARE FUNCTIONING PROPERLY. WORK IS NOT COMPLETE UNTIL THE SIGNAL SYSTEM IS BACK UP AND OPERATIONAL.
2. CONTRACTOR TO RECORD EXISTING SPLICING ARRANGEMENT FOR COMPARISON TO THE SUPPLIED SPLICING DETAILS. IF DISCREPANCIES EXIST, CONTACT THE ENGINEER TO DETERMINE HOW TO PROCEED WITH RESPLICING. PROVIDE AS-BUILT PLANS TO THE ENGINEER IF FINAL SPLICING ARRANGEMENT DIFFERS FROM THE SUPPLIED SPLICING DETAILS.

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

<p>Prepared in the Offices of Town of Cary Transportation, Mobility and Safety Department Engineering and Transportation Systems Section</p> <p>750 N. Greenfield Pkwy., Garner, NC 27529</p>		<p>SIGNAL SYSTEM - TOWN OF CARY COMMUNICATIONS CABLE AND CONDUIT ROUTING PLANS</p> <p>DIVISION 05 WAKE MORRISVILLE</p> <p>PLAN DATE: OCTOBER 2025 REVIEWED BY: <i>Green, Greg L.</i> PREPARED BY: H.T. BERGGREN, EI</p>		<p>SEAL NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042578 MATTHEW T. CARLISLE ENGINEER SIGNATURE: <i>Matthew T. Carlisle</i> DATE: 10/09/2025</p>
<p>0 N/A N/A</p>		<p>SCALE N/A</p>	<p>INIT. DATE</p>	
<p>REVISIONS</p>				
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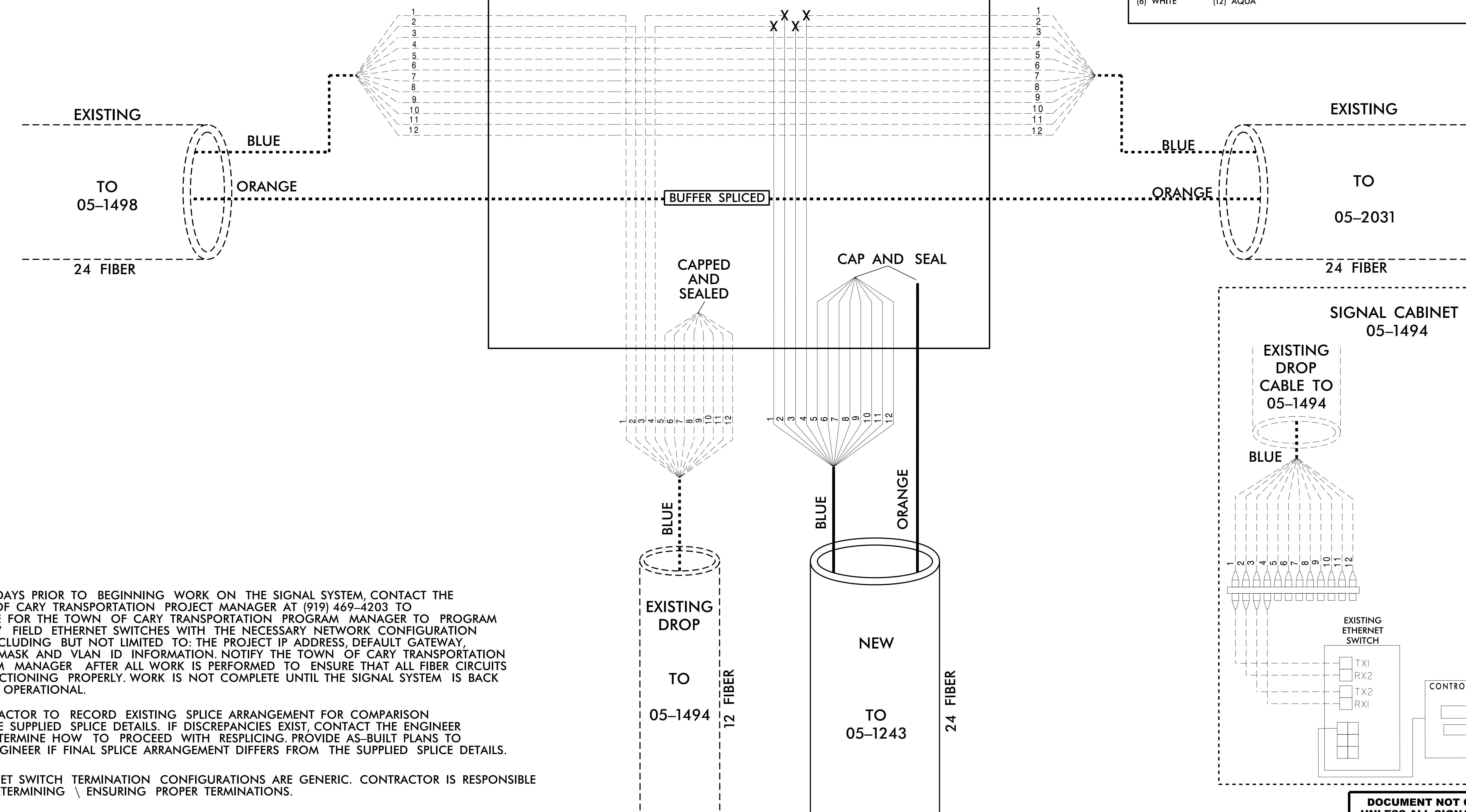
1. FIVE (5) DAYS PRIOR TO BEGINNING WORK ON THE SIGNAL SYSTEM, CONTACT THE TOWN OF CARY TRANSPORTATION PROJECT MANAGER AT (919) 469-4203 TO ARRANGE FOR THE TOWN OF CARY TRANSPORTATION PROGRAM MANAGER TO PROGRAM THE NEW FIELD ETHERNET SWITCHES WITH THE NECESSARY NETWORK CONFIGURATION DATA, INCLUDING BUT NOT LIMITED TO: THE PROJECT IP ADDRESS, DEFAULT GATEWAY, SUBNET MASK AND VLAN ID INFORMATION. NOTIFY THE TOWN OF CARY TRANSPORTATION PROGRAM MANAGER AFTER ALL WORK IS PERFORMED TO ENSURE THAT ALL FIBER CIRCUITS ARE FUNCTIONING PROPERLY. WORK IS NOT COMPLETE UNTIL THE SIGNAL SYSTEM IS BACK UP AND OPERATIONAL.
2. CONTRACTOR TO RECORD EXISTING SPLICING ARRANGEMENT FOR COMPARISON TO THE SUPPLIED SPLICING DETAILS. IF DISCREPANCIES EXIST, CONTACT THE ENGINEER TO DETERMINE HOW TO PROCEED WITH RESPLICING. PROVIDE AS-BUILT PLANS TO THE ENGINEER IF FINAL SPLICING ARRANGEMENT DIFFERS FROM THE SUPPLIED SPLICING DETAILS.

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

 <i>Prepared in the Offices of Transportation, Mobility and Safety, Cary, North Carolina Town of Cary Transportation System</i>		SIGNAL SYSTEM - TOWN OF CARY COMMUNICATIONS CABLE AND CONDUIT ROUTING PLANS		 SEAL 046152 NORTH CAROLINA PROFESSIONAL SEAL 046152  H.T. BERGGREN, EI PREPARED BY: H.T. BERGGREN, EI PLAN DATE: MARCH 2023 REVIEWED BY: <i>Eric, Greg, I.</i> 99F888E705A9A 04/14/2023	
 <i>Prepared in the Offices of Transportation, Mobility and Safety, Cary, North Carolina Town of Cary Transportation System</i>		DIVISION 05 WAKE MORRISVILLE		 SEAL 046152 NORTH CAROLINA PROFESSIONAL SEAL 046152  ALEX D. STEWART REESESBEF3A784A5 04/14/2023	
 0 N/A N/A		SCALE REVISED BY: DATE: 04/14/2023		REVISIONS INIT. DATE: 04/14/2023	

EXISTING UNDERGROUND  
SPLICE ENCLOSURE  
SOUTH OF SIN #05-1494 ON THE  
EAST SIDE ALONG DAVIS DR.

MODIFY EXISTING SPLICE ENCLOSURE



NOTES:

- 1) FIVE (5) DAYS PRIOR TO BEGINNING WORK ON THE SIGNAL SYSTEM, CONTACT THE TOWN OF CARY TRANSPORTATION PROJECT MANAGER AT (919) 469-4203 TO ARRANGE FOR THE TOWN OF CARY TRANSPORTATION PROGRAM MANAGER TO PROGRAM THE NEW FIELD ETHERNET SWITCHES WITH THE NECESSARY NETWORK CONFIGURATION DATA, INCLUDING BUT NOT LIMITED TO: THE PROJECT IP ADDRESS, DEFAULT GATEWAY, SUBNET MASK AND VLAN ID INFORMATION. NOTIFY THE TOWN OF CARY TRANSPORTATION PROGRAM MANAGER AFTER ALL WORK IS PERFORMED TO ENSURE THAT ALL FIBER CIRCUITS ARE FUNCTIONING PROPERLY. 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 \ ENSURING PROPER TERMINATIONS.
- 4) INCLUDE ON THE COVER OF EACH SPLICE TRAY THE FOLLOWING: REFERENCE SECTION 1731 "FIBER OPTIC SPLICE ENCLOSURE"
  - 1) SPLICE LOCATION
  - 2) DATE
  - 3) COMPANY NAME
  - 4) NAME OF INDIVIDUAL PERFORMING THE SPLICING

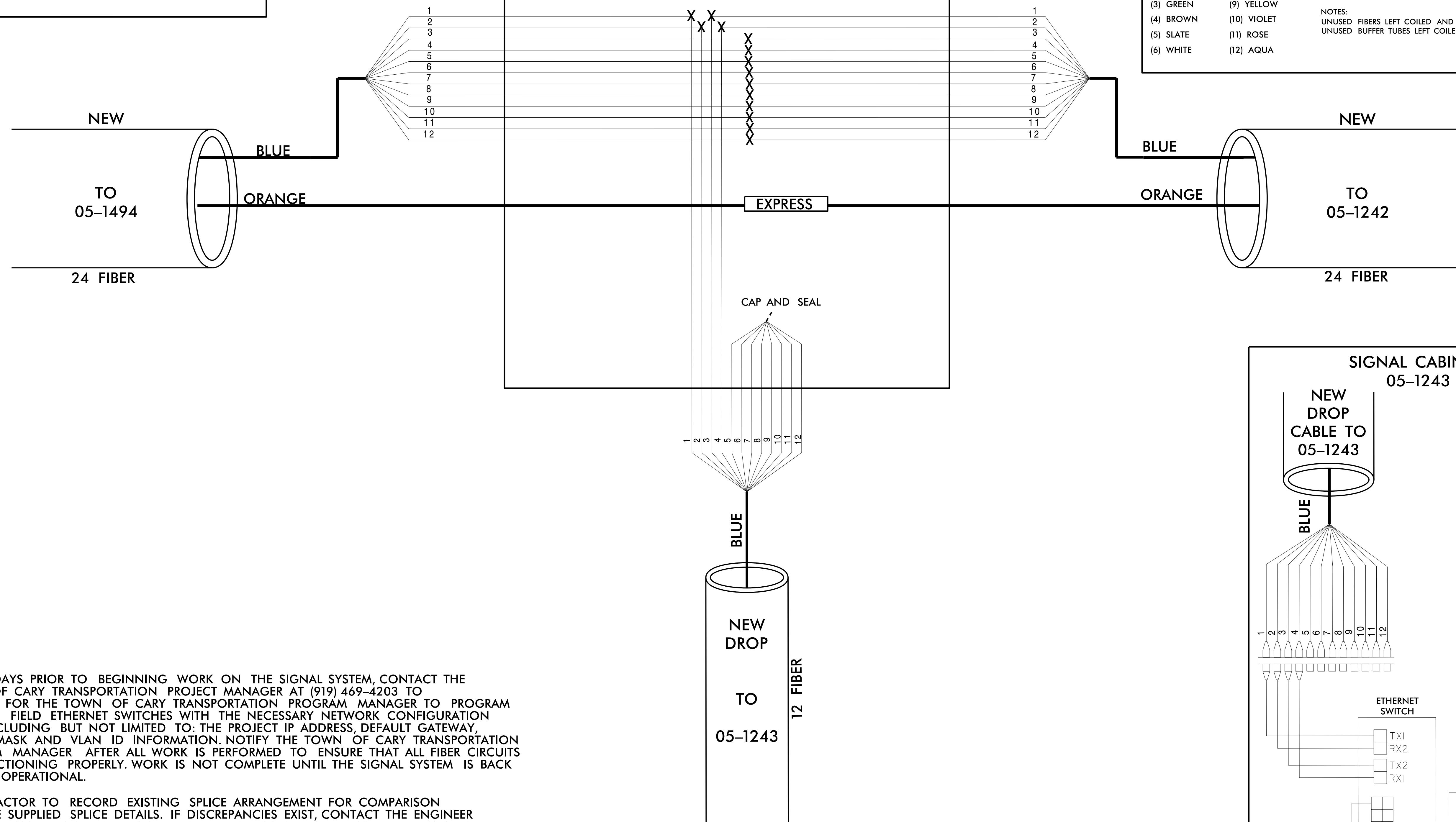
PRIOR TO INSTALLING THE COVER ON THE SPLICE TRAY TAKE A DIGITAL PHOTOGRAPH SHOWING THE SPLICE TRAY AND INFORMATION SHOWN ABOVE (1-4) AND SUBMIT PHOTOGRAPH ALONG WITH OTDR TEST RESULTS.

 Prepared in the Offices of Town of Cary Transportation, Mobility and Safety Division Department of Transportation System Services		SIGNAL SYSTEM - TOWN OF CARY SPLICE PLANS		
		DIVISION 05	WAKE	MORRISVILLE
PLAN DATE: MARCH 2023		REVIEWED BY: <i>Greg L.</i>	99F888E705A9A	
PREPARED BY: H.T. BERGGREN, EI				
		REVISIONS	INIT.	DATE
		0	N/A	
		N/A		
		04/14/2023		

SEAL  
NORTH CAROLINA  
PROFESSIONAL  
SEAL  
046152

ALEX D. STEWART  
ELECTRICAL ENGINEER  
RECEIVED BY: *Elis D. Stewart*  
04/14/2023

NEW UNDERGROUND  
SPLICE ENCLOSURE AT  
INDIAN CREEK GREENWAY AND  
AIRPORT BLVD. SIN #05-1243



NOTES:

- 1) FIVE (5) DAYS PRIOR TO BEGINNING WORK ON THE SIGNAL SYSTEM, CONTACT THE TOWN OF CARY TRANSPORTATION PROJECT MANAGER AT (919) 469-4203 TO ARRANGE FOR THE TOWN OF CARY TRANSPORTATION PROGRAM MANAGER TO PROGRAM THE NEW FIELD ETHERNET SWITCHES WITH THE NECESSARY NETWORK CONFIGURATION DATA, INCLUDING BUT NOT LIMITED TO: THE PROJECT IP ADDRESS, DEFAULT GATEWAY, SUBNET MASK AND VLAN ID INFORMATION. NOTIFY THE TOWN OF CARY TRANSPORTATION PROGRAM MANAGER AFTER ALL WORK IS PERFORMED TO ENSURE THAT ALL FIBER CIRCUITS ARE FUNCTIONING PROPERLY. WORK IS NOT COMPLETE UNTIL THE SIGNAL SYSTEM IS BACK UP AND OPERATIONAL.
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2) DATE  
3) COMPANY NAME  
4) NAME OF INDIVIDUAL PERFORMING THE SPLICING

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DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

Prepared in the Offices of  
Town of Cary  
Transportation, Mobility and Safety Division  
Transportation Systems Section

250 N. Greenfield Plaza, Garner, NC 27529

SIGNAL SYSTEM - TOWN OF CARY  
SPLICE PLAN

DIVISION 05 WAKE MORRISVILLE

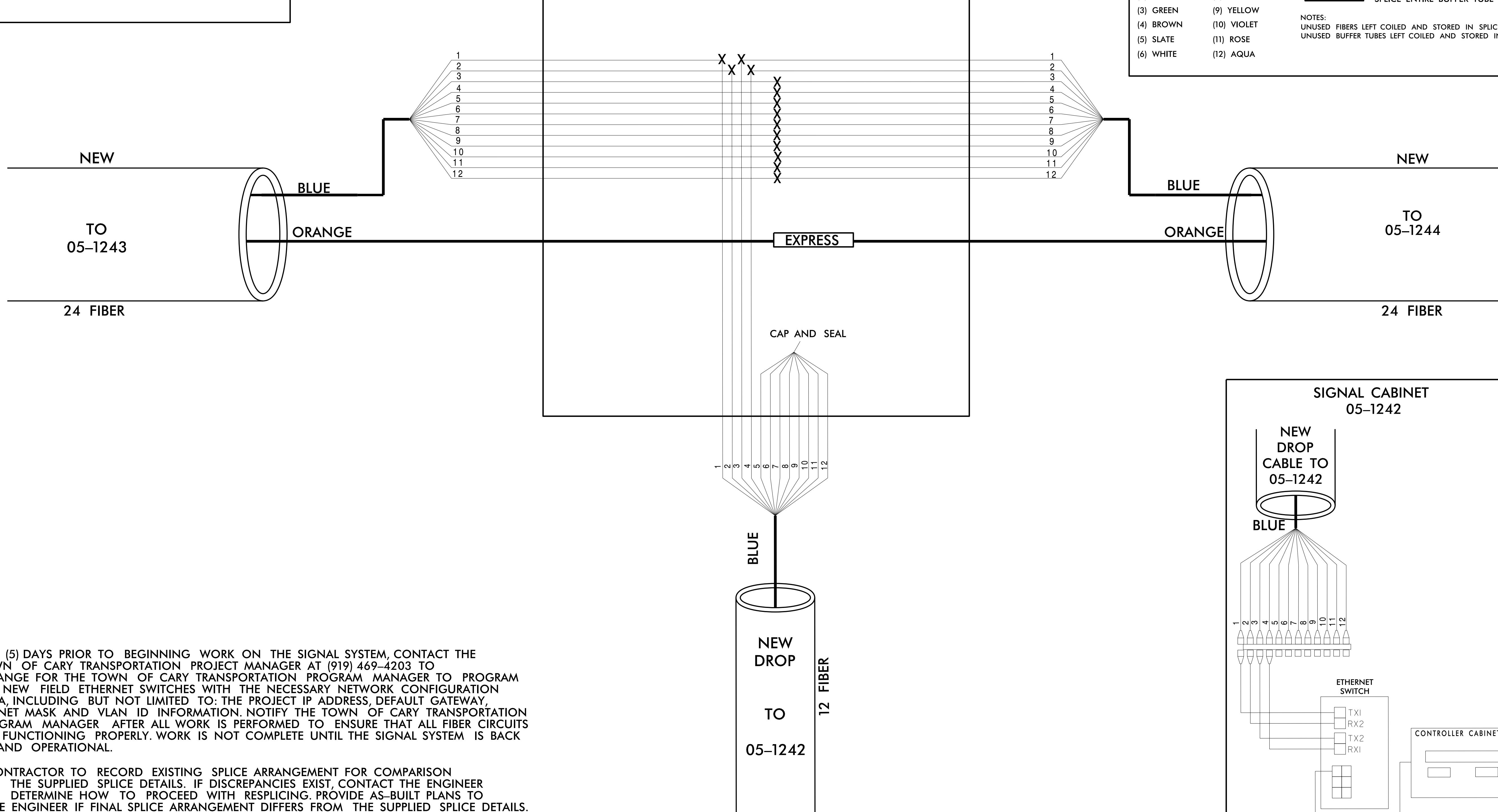
PLAN DATE: MARCH 2023 REVIEWED BY: *Chris, Greg L.*

PREPARED BY: H.T. BERGGREN, EI *99F888EFT05A9A*

REVISIONS	INIT.	DATE
0	N/A	
N/A		

SEAL  
NORTH CAROLINA  
PROFESSIONAL  
ENGINEER  
ALEX D. STEWART  
RECEIVED BY: *Alex D. Stewart*  
04/14/2023

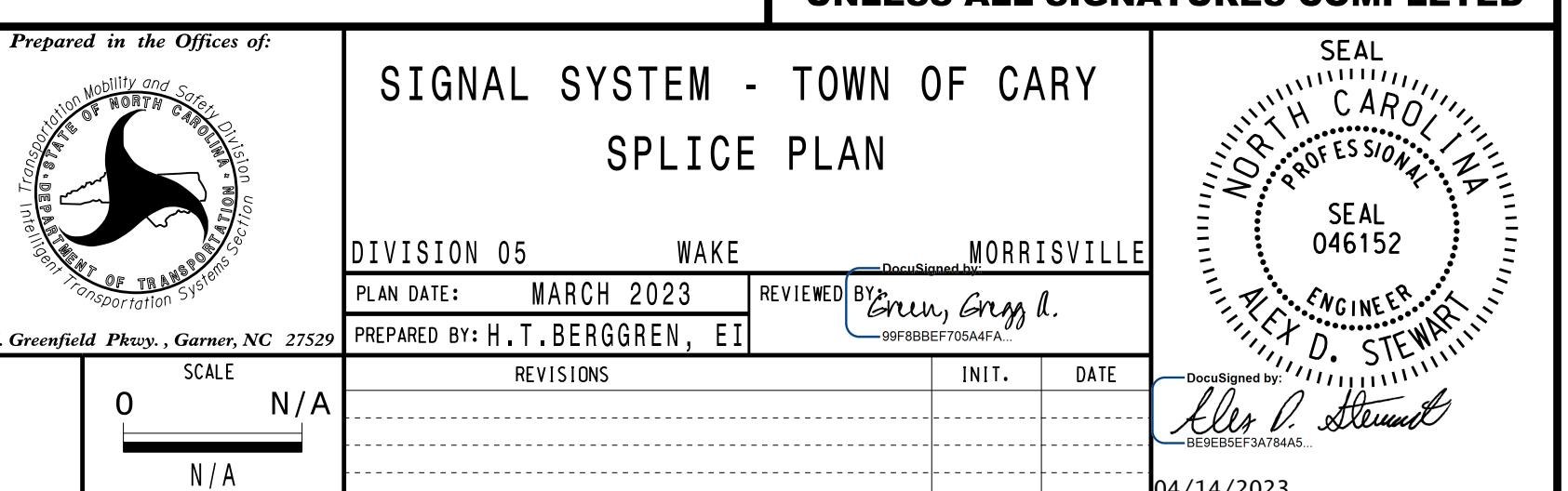
**NEW UNDERGROUND  
SPLICE ENCLOSURE AT  
TOWN HALL DR. AND  
AIRPORT BLVD. SIN #05-1242**



NOTES:

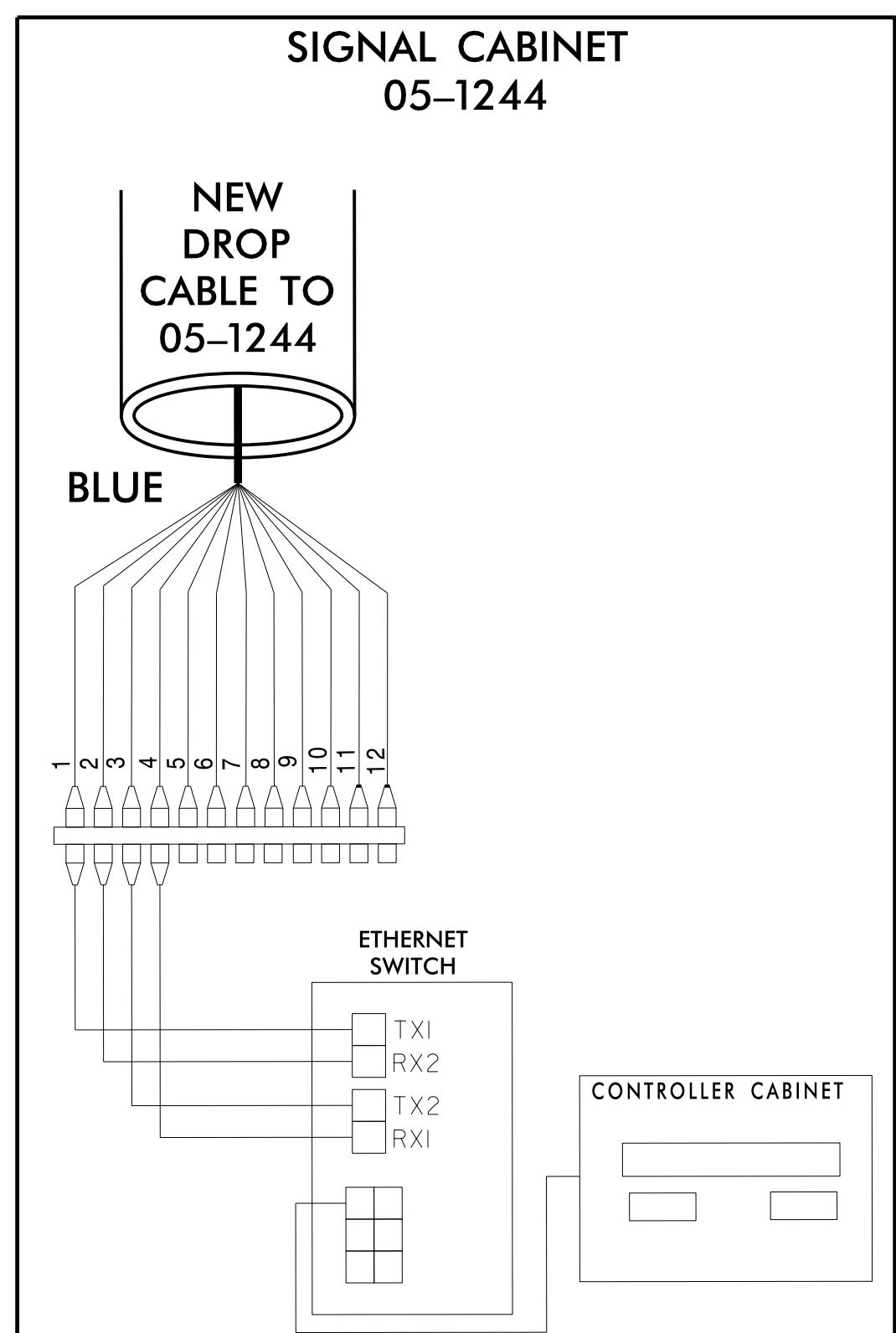
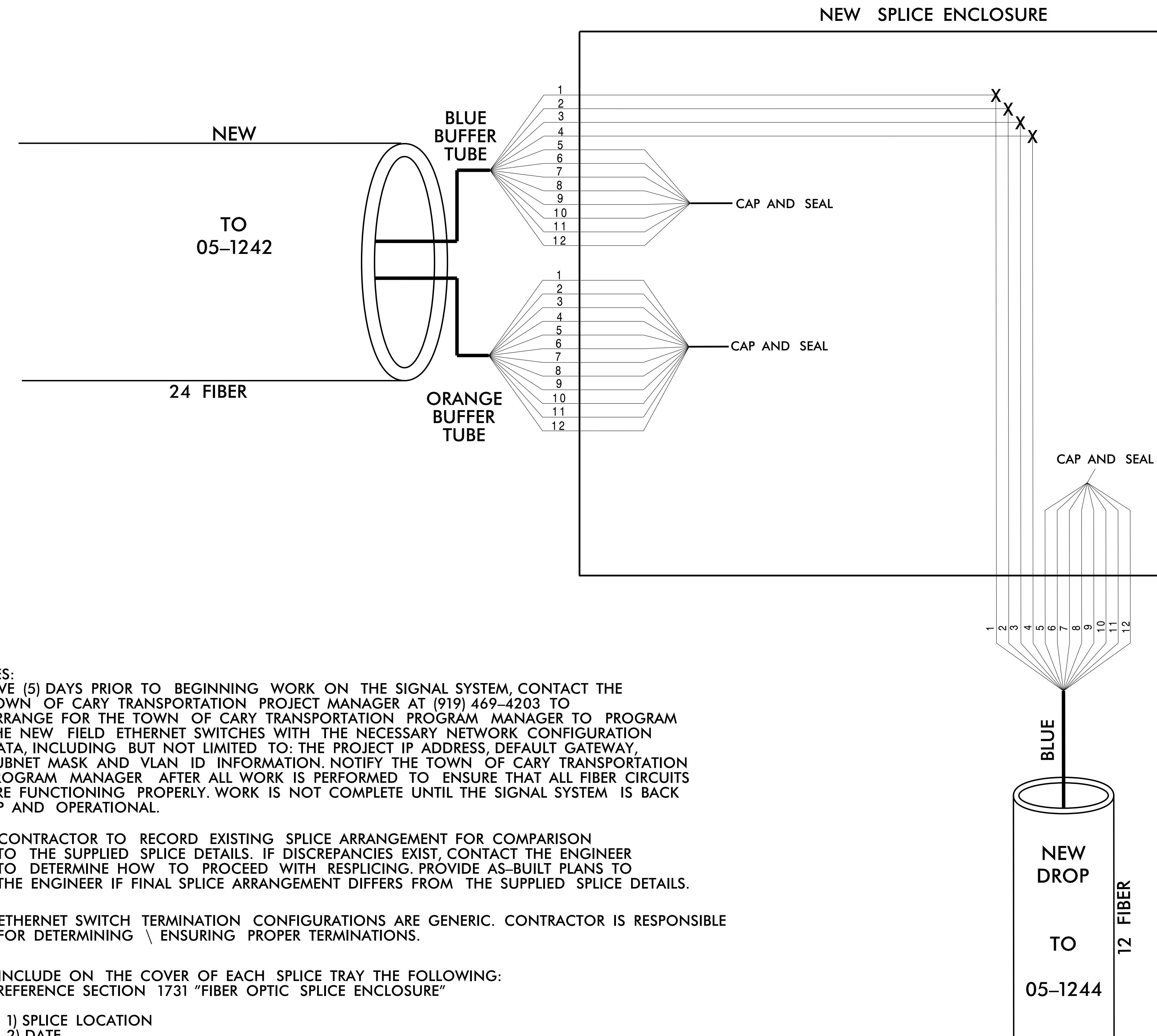
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PRIOR TO INSTALLING THE COVER ON THE SPLICING TRAY TAKE A DIGITAL PHOTOGRAPH SHOWING THE SPLICING TRAY AND INFORMATION SHOWN ABOVE (1-4) AND SUBMIT PHOTOGRAPH ALONG WITH OTDR TEST RESULTS



NEW UNDERGROUND  
SPLICE ENCLOSURE AT  
CHURCH ST. AND  
AIRPORT BLVD. SIN #05-1244

COLOR CODE		LEGEND
TIA/EIA 598-C		X - FUSION SPLICE INDIVIDUAL FIBER
(1) BLUE	(7) RED	EXPRESS - EXPRESS ENTIRE BUFFER TUBE
(2) ORANGE	(8) BLACK	BUFFER SPLICE - SPLICE ENTIRE BUFFER TUBE
(3) GREEN	(9) YELLOW	
(4) BROWN	(10) VIOLET	NOTES: UNUSED FIBERS LEFT COILED AND STORED IN SPLICE TRAY.
(5) SLATE	(11) ROSE	UNUSED BUFFER TUBES LEFT COILED AND STORED IN SPLICE TRAY.
(6) WHITE	(12) AQUA	



Prepared in the Offices of		DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
		SIGNAL SYSTEM - TOWN OF CARY SPLICE PLAN	
DIVISION 05 WAKE MORRISVILLE		SEAL 046152	
PLAN DATE: MARCH 2023 REVIEWED BY: <i>Greg L.</i> PREPARED BY: H.T. BERGGREN, EI 99F888E705A9A		Doc Signed by: <i>Alex D. Stewart</i> RECEIVED 03/14/2023 04/14/2023	
0	SCALE N/A	REVISIONS	INIT. DATE
N/A		N/A	