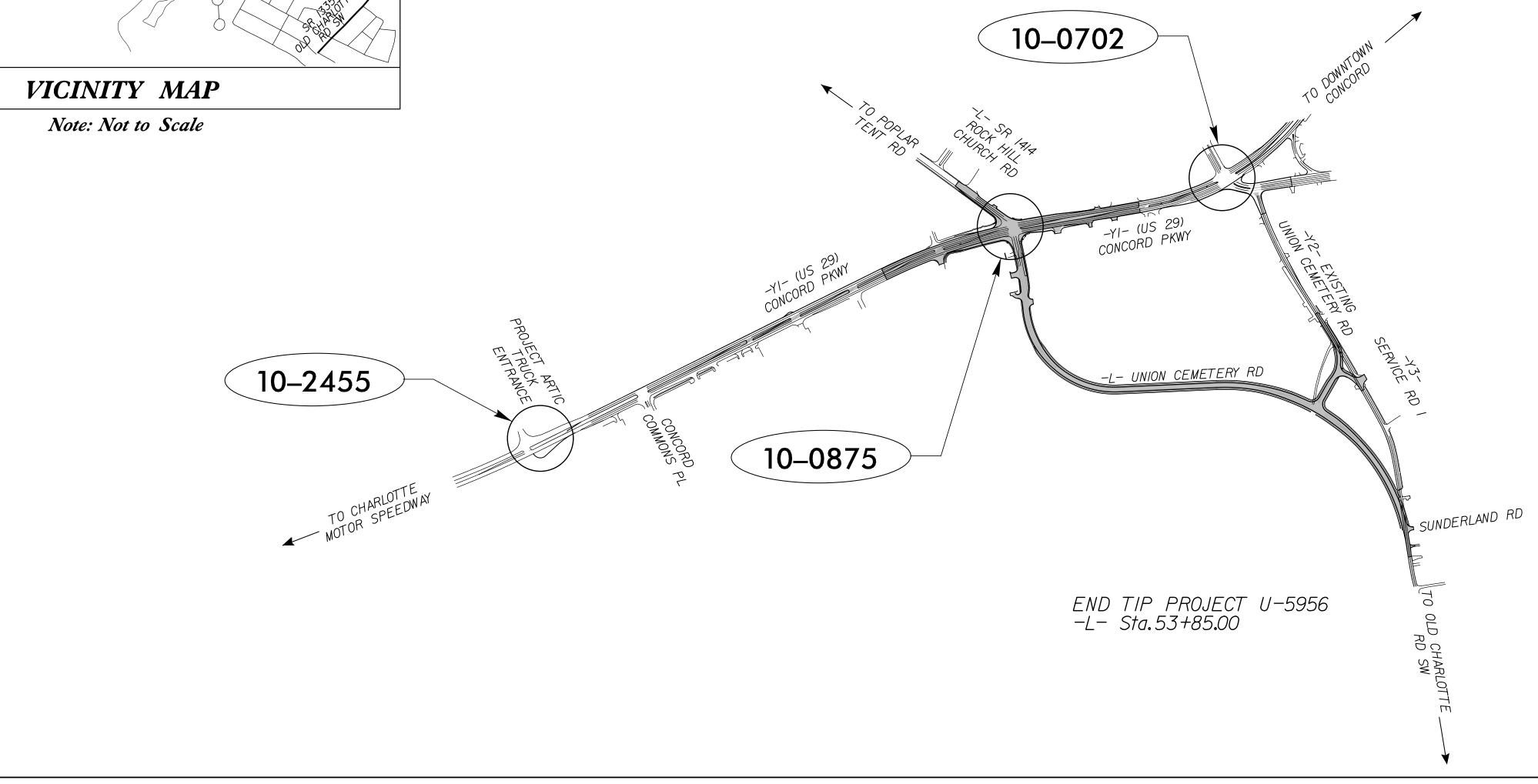
STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

Project No. Sheet No. *U-5956* Sig. 1.0

CABARRUS COUNTY

LOCATION: REALIGN UNION CEMETERY ROAD TO INTERSECT US 29 AT ROCK HILL CHURCH ROAD AND CONSTRUCT IMPROVEMENTS ALONG US 29 FROM 0.6 MILE WEST OF ROCK HILL CHURCH ROAD TO JUST EAST OF ROCK HILL CHURCH ROAD

TYPE OF WORK: TRAFFIC SIGNALS AND COMMUNICATION PLANS



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

Sheet #	Reference #
$\overline{Sig. 1.0}$	
Sig. 2.0-2.3	10-2455
Sig. 3.0-6.3	10-0875
Sig. 7.0-7.2	10-0702
SCP 1-4	

Index of Plans Location/Description

Concord

BEGIN PROJECT

END PROJECT

Pop. 79,973

US 29 (Concord Parkway South) at Project Artic Truck Entrance US 29 (Concord Parkway South) at Rock Hill Church Road/Union Cemetery Road US 29 (Concord Parkway South) at SR 1002(Cabarrus Avenue)/The Village Shopping Center

Signal Communication and Splice Plans

Gregg Green

TSMO SIGNAL CONTACT:

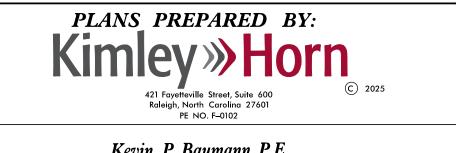
R. Nicholas Zinser, P.E.

Keith M. Mims, P.E.

SIGNAL EQUIPMENT DESIGN ENGINEER

WESTERN REGION SIGNALS ENGINEER

SIGNAL COMMUNICATION ENGINEER

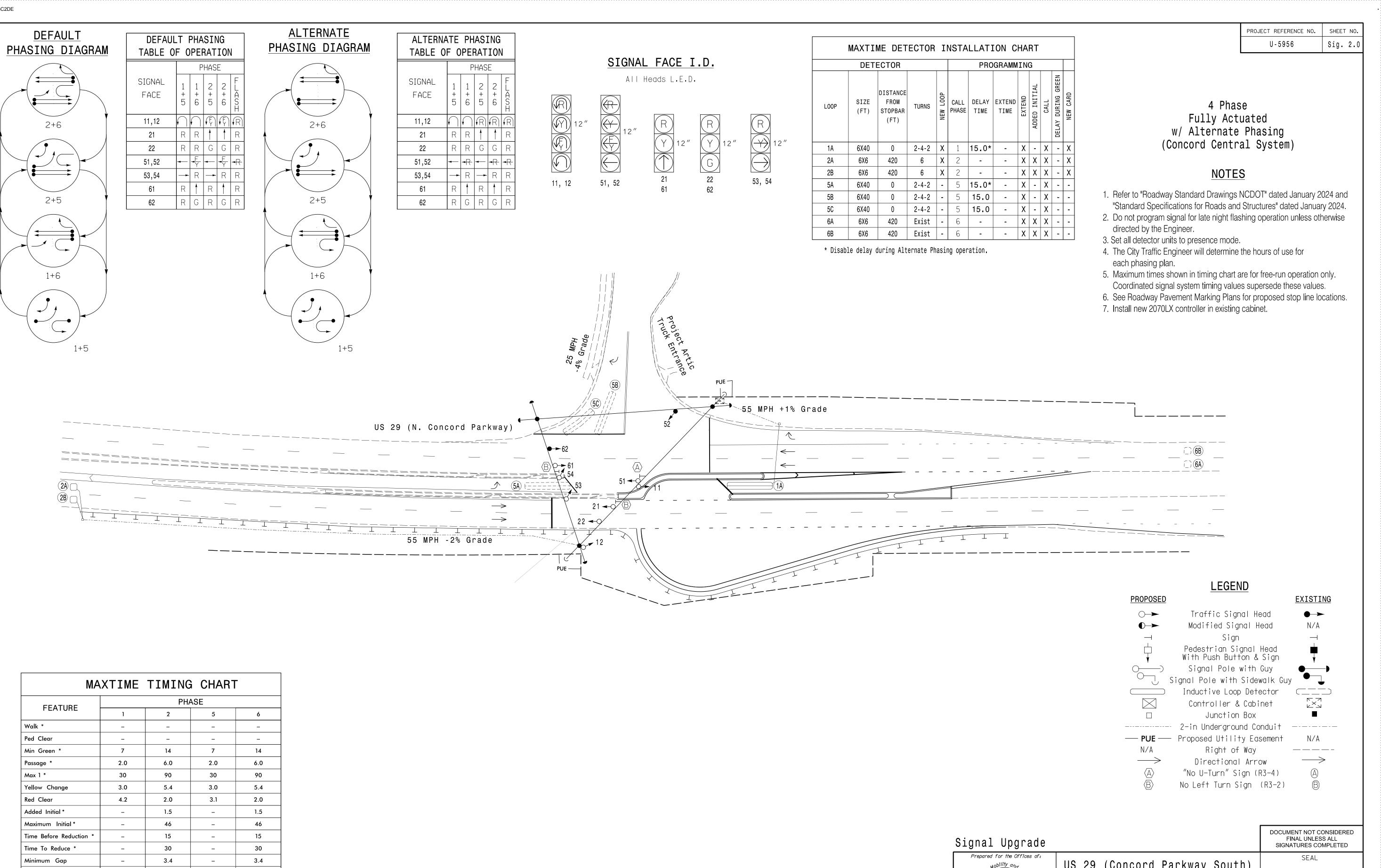


Kevin P. Baumann, P.E. TRAFFIC SIGNAL ENGINEER

8/21/2025 **P.E. SIGNATURE**:



750 N.Greenfield Pkwy,Garner,NC 27529



* 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.

MIN RECALL

MIN RECALL

Χ

PLANS PREPARED IN THE OFFICE OF: NC License #F-0102 421 Fayetteville Street, Suite 600

Raleigh, NC 27601

US 29 (Concord Parkway South) Project Artic Truck Entrance

Division 10 Cabarrus County PLAN DATE: February 2025 REVIEWED BY: KP Baumann

INIT. DATE 1"=40'

SEAL 044434

Walk *

Ped Clear

Min Green

Passage *

Red Clear

Advance Walk

Vehicle Recall

Dual Entry

Non Lock Detector

(remove jumpers and set switches as shown)

ON OFF WD ENABLE ⟨\

□ RP DISABLE

WD 1.0 SEC

⊢RF SSM

├-FYA 1-9 FYA 3-10 ⊢FYA 5-11 ___FYA 7-12 -

= DENOTES POSITION

OF SWITCH

ST DC

FS = FLASH SENSE ST = STOP TIME

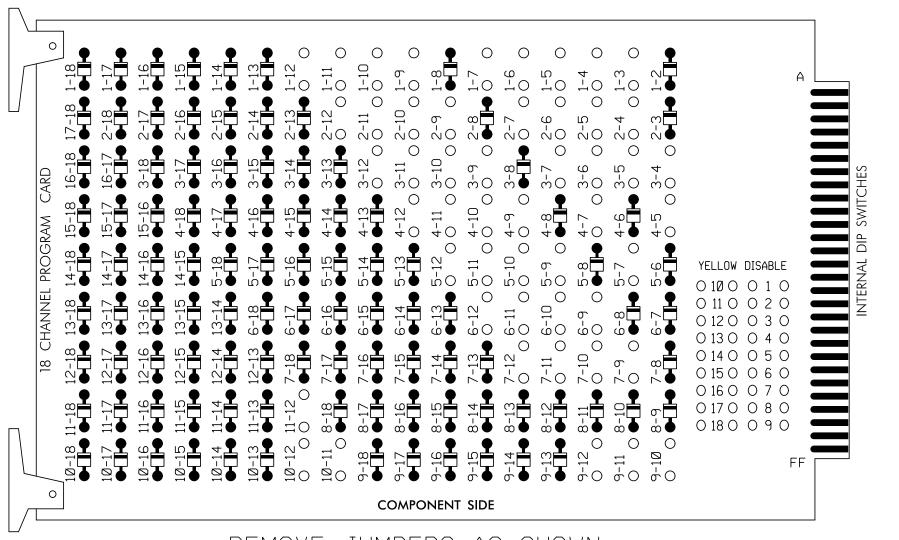
— GY ENABLE

-SF#1 POLARITY 🗔

∐⊢FYA COMPACT—

SW2

REMOVE DIODE JUMPERS I-3, I-4, I-5, I-6, I-7, I-9, I-10, I-11, I-12, 2-4, 2-5, 2-6, 2-7, 2-9, 2-10, 2-11, 2-12, 3-4, 3-5, 3-6, 3-7, 3-9, 3-10, 3-11, 3-12, 4-5, 4-7, 4-9, 4-10, 4-11, 4-12, 5-7, 5-9, 5-10, 5-11, 5-12, 6-9, 6-10, 6-11, 6-12, 7-9, 7-10, 7-11, 7-12, 9-10, 9-11, 9-12, 10-11, 10-12, AND II-12



REMOVE JUMPERS AS SHOWN

NOTES:

FILE

FILE

USED

- 1. Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
- 2. Ensure jumpers SEL2-SEL5 and SEL9 are present on the monitor board.
- 3. Ensure that Red Enable is active at all times during normal operation.

INPUT FILE POSITION LAYOUT

7 8 9 10 11 12 13 14

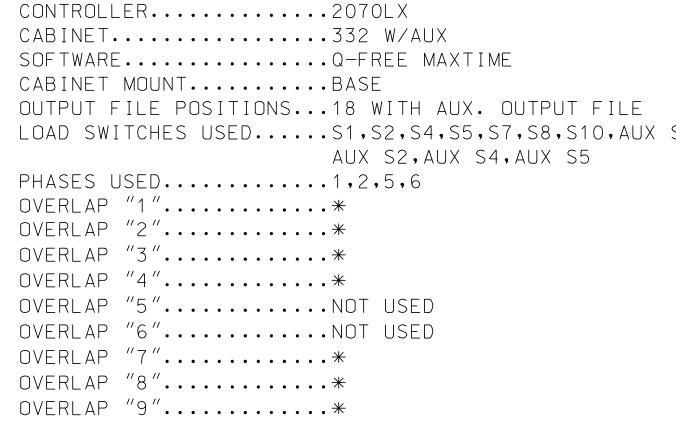
(front view)

4. Integrate monitor with Ethernet network in cabinet.

NOTES

- 1. To prevent "flash-conflict" problems, insert red flash program blocks for all vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the Signal Plans.
- 2. Program controller to start up in phase 2 Green No Walk and phase 6 Green No Walk.
- 3. The cabinet and controller are part of the Concord Central System.

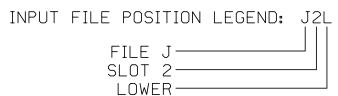
EQUIPMENT INFORMATION



INPUT FILE CONNECTION & PROGRAMMING CHART

LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	INPUT POINT	DETECTOR NO.	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	DELAY DURING GREEN
1A	TB2-1,2	I1U	56	18	1★	1	15.0		Х		Χ	
2A	TB2-5,6	I2U	39	1	2	2			Х	Х	Х	
2B	TB2-7,8	I2L	43	5	3	2			Х	Х	Х	
5A	TB3-1,2	J1U	55	17	15★	5	15.0		Х		Х	
5B	TB5-9,10	J6U	42	4	22	5	15.0		Х		Х	
5C	TB5-11,12	J6L	46	8	23	5	15.0		Х		Х	
6A	TB3-5,6	J2U	40	2	16	6			Х	Х	Х	
6B	TB3-7,8	J2L	44	6	1.7	6			X	Х	Х	

★ See the Vehicle Detector Setup Programming Detail for Alternate Phasing



CONTROLLER2070LX
CABINET
SOFTWAREQ-FREE MAXTIME
CABINET MOUNTBASE
OUTPUT FILE POSITIONS18 WITH AUX. OUTPUT FILE
LOAD SWITCHES USEDS1,S2,S4,S5,S7,S8,S10,AUX S1, AUX S2,AUX S4,AUX S5
PHASES USED
OVERLAP "1"*
OVERLAP "2"*
OVERLAP "3"*
OVERLAP "4"*
OVERLAP "5"NOT USED
OVERLAP "6"NOT USED
OVERLAP "7"*
OVERLAP "8"*

* See overlap programming detail on sheet 2

LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	INPUT POINT	DETECTOR NO.	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	DELAY DURING GREEN	
1A	TB2-1,2	I1U	56	18	1★	1	15.0		Х		Χ		
2A	TB2-5,6	I2U	39	1	2	2			Х	Χ	Χ		
2B	TB2-7,8	I2L	43	5	3	2			Х	Χ	Χ		
5A	TB3-1,2	J1U	55	17	15★	5	15.0		Х		Χ		
5B	TB5-9,10	J6U	42	4	22	5	15.0		Х		Χ		
5C	TB5-11,12	J6L	46	8	23	5	15.0		Х		Χ		
6A	TB3-5,6	J2U	40	2	16	6			Х	Χ	Χ		
6B	TB3-7,8	J2L	44	6	17	6			Х	Χ	Χ		
		· · · · · · · · · · · · · · · · · · ·											

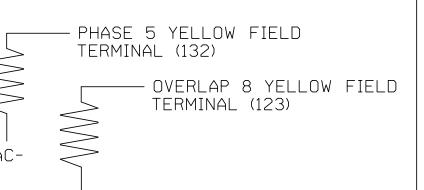
LOAD RESISTOR INSTALLATION DETAIL

(install resistors as shown below)

PHASE 1 YELLOW FIELD TERMINAL (126) - OVERLAP 7 YELLOW FIELD TERMINAL (117)

ACCEPTABLE VALUES VALUE (ohms) WATTAGE 1.5K - 1.9K 25W (min) 2.ØK - 3.ØK | 1ØW (mın)

EX.: 1A, 2A, ETC. = LOOP NO.'S



PLANS PREPARED IN THE OFFICE OF: **Kimley** » Horn NC License #F-0102 421 Fayetteville Street, Suite 600 750 N.Greenfield Pkwy,Garner,NC 27529 Raleigh, NC 27601 (919) 677-2000

Sig 2.1 U-5956

PROJECT REFERENCE NO.

	SIGNAL HEAD HOOK-UP CHART																			
LOAD SWITCH NO.	S1	S	2	S3	S4	S5	S6	S7	S	8	S9	S1Ø	S11	S12	AUX S1	AUX S2	AUX S3	AUX S4	AUX S5	AUX S6
CMU CHANNEL NO.	1	á	2	13	3	4	14	5	(5	15	7	8	16	9	1Ø	17	11	12	18
PHASE	1	,	2	2 PED	OL7	OL9	4 PED	5	(5	6 PED	OL8	8	8 PED	OL1	OL2	0L5	OL3	OL4	OL6
SIGNAL HEAD NO.	11	21	22	NU	12	53 , 54	NU	★ 51	61	62	NU	★ 52	NU	NU	11	12	NU	★ 51	★ 52	NU
RED		128	128			1Ø1			134	134										
YELLOW	*	129	129		*			*	135	135		*								
GREEN			13Ø							136										
RED ARROW															A121	A124		A114	A1Ø1	
YELLOW ARROW						10/2									A122	A125		A115	A1Ø2	
FLASHING YELLOW ARROW															A123	A126		A116	A1Ø3	
GREEN ARROW	127	13Ø			118	1Ø3		133	136			124								

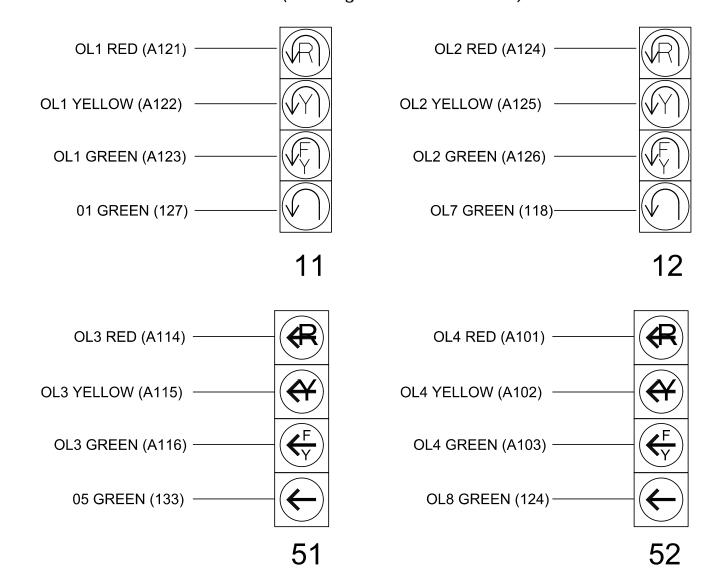
NU = Not Used

- * Denotes install load resistor. See load resistor installation detail this sheet.
- ★ See pictorial of head wiring in detail this sheet.

NOTE: Load Switches S4, S5, and S10 require special output remapping. See sheet 3 of this electrical detail for instructions.

FYA SIGNAL WIRING DETAIL

(wire signal heads as shown)



THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 10-2455 DESIGNED: February 2025 SEALED: Ø8-21-2025 REVISED: N/A

Electrical Detail - Sheet 1 of 3

ELECTRICAL AND PROGRAMMING US 29 (Concord Parkway South) Prepared for the Offices of: Project Artic Truck Entrance Cabarrus County ivision 10

PLAN DATE: February 2025 REVIEWED BY: KP Baumann PREPARED BY: SP Pennington | REVIEWED BY: REVISIONS INIT. DATE

044434

SIG. INVENTORY NO. 10-2455

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

MAXTIME OVERLAP PROGRAMMING DETAIL FOR DEFAULT PHASING

Front Panel

Main Menu >Controller >Overlap >Overlap Parameters/Overlap Timings

Web Interface

Home >Controller >Overlap Configuration >Overlaps

Overlap Plan 1

Overlap	1	2	3	4	7	8	9
Туре	FYA 4 - Section	Normal	Normal	Normal			
Included Phases	2	2	6	6	1	5	5
Modifier Phases	1	1	5	5	P.	4	4
Modifier Overlaps	÷	4	4	±	ů.	4	4
Trail Green	0	0	0	0	0	0	0
Trail Yellow	0.0	0.0	0.0	0:0	0:0	0.0	0.0
Trail Red	0.0	0.0	0.0	0.0	0:0	0.0	0.0

MAXTIME OVERLAP PROGRAMMING DETAIL FOR ALTERNATE PHASING

Front Panel

Main Menu >Controller >Overlap >Overlap Parameters/Overlap Timings

Web Interface

Home >Controller >Overlap Configuration >Overlaps

In the table view of the web interface, right click on "Overlap" in the top left corner of the table. Copy the entire contents of Overlap Plan 1. Paste Overlap Plan 1 into Overlap Plan 2. Modify Overlap Plan 2 as shown below and save changes.

Overlap Plan 2

Overlap	1	2	3	4	7	8	9
Туре	FYA 4 - Section	Normal	Normal	Normal			
Included Phases	<u>-</u>	<u>-</u>	<u>-</u>	÷	1	5	5
Modifier Phases	1	1	5	5	÷	÷	-
Modifier Overlaps	<u>-</u>	-	-	<u> </u>	4	4	-
Trail Green	0	0	0	0	0	0	0
Trail Yellow	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trail Red	0:0	0.0	0:0	0.0	0.0	0.0	0.0

NOTICE INCLUDED PHASES

MAXTIME DETECTOR PROGRAMMING DETAIL FOR ALTERNATE PHASING LOOPS 1A & 5A

Front Panel

Main Menu >Controller >Detector >Veh Det Plans

Web Interface

Home >Controller >Detector Configuration >Vehicle Detectors

In the table view of web interface right click on "Detector" in the top left corner of the table. Copy the entire contents of Detector Plan 1. Paste Detector Plan 1 into Detector Plan 2. Modify Detector Plan 2 as shown below and save changes.

Plan 2

Detector	Call Phase	Delay
1	1	0

Detector | Call Phase | Delay 15 5

FLASHER CIRCUIT MODIFICATION DETAIL

IN ORDER TO INSURE THAT SIGNALS FLASH CONCURRENTLY ON THE SAME APPROACH, MAKE THE FOLLOWING FLASHER CIRCUIT CHANGES:

- 1. ON REAR OF PDA REMOVE WIRE FROM TERM. T2-4 AND TERMINATE ON T2-2.
- 2. ON REAR OF PDA REMOVE WIRE FROM TERM, T2-5 AND TERMINATE ON T2-3.
- 3. REMOVE FLASHER UNIT 2.

THE CHANGES LISTED ABOVE TIES ALL PHASES AND OVERLAPS TO FLASHER UNIT 1.

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 10-2455 DESIGNED: February 2025 SEALED: Ø8-21-2025 REVISED: N/A

Electrical Detail - Sheet 2 of 3

ELECTRICAL AND PROGRAMMING Prepared for the Offices of:

US 29 (Concord Parkway South) Project Artic Truck Entrance

Cabarrus County PLAN DATE: February 2025 REVIEWED BY: KP Baumann

PREPARED BY: SP Pennington REVIEWED BY: REVISIONS INIT. DATE SEAL 044434

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PLANS PREPARED IN THE OFFICE OF:

Kimley >>> Horn Raleigh, NC 27601 (919) 677-2000

NC License #F-0102 421 Fayetteville Street, Suite 600

750 N.Greenfield Pkwy, Garner, NC 27529

PROJECT REFERENCE NO. Sig 2.3 U-5956

MAXTIME ALTERNATE PHASING ACTIVATION DETAIL

To run alternate phasing, select a Pattern that is programmed to run Overlap Plan 2 and Detector Plan 2. A Pattern can be selected through the scheduler or manually by changing the Operational Mode.

PHASING	OVERLAP PLAN	VEH DET PLAN
ACTIVE PLAN REQUIRED TO RUN DEFAULT PHASING	1	1
ACTIVE PLAN REQUIRED TO RUN ALTERNATE PHASING	2	2

ALTERNATE PHASING CHANGE SUMMARY

THE FOLLOWING IS A SUMMARY OF WHAT TAKES PLACE WHEN OVERLAP PLAN 2 AND VEHICLE DETECTOR PLAN 2 ACTIVATE TO CALL THE "ALTERNATE PHASING":

OVERLAP PLAN 2: Modifies overlap included phases

for heads 11, 12, 51, and 52 to run protected turns only.

VEH DET PLAN 2: Reduces delay time for phase 1

call on loop 1A to 0 seconds.

VEH DET PLAN 2: Reduces delay time for phase 5

call on loop 5A to 0 seconds.

OUTPUT CHANNEL CONFIGURATION

Front Panel

Main Menu >Controller >More>Channels>Channels Config

Web Interface

Home >Controller >Advanced IO>Channels>Channels Configuration

Channel Configuration

NOTICE OVERLAP 7 ASSIGNED TO CHANNEL 3 NOTICE OVERLAP 9 ■ ASSIGNED TO CHANNEL 4 NOTICE OVERLAP 8 ASSIGNED TO CHANNEL 7 ■

Channel	Control Type	Control Source	Flash Yellow	Flash Red	Flash Alt	MMU Channe
1	Phase Vehicle	1	·	Х	X	1
2	Phase Vehicle	2		Х		2
3	Overlap	7		Х	Χ	3
4	Overlap	9	·	Х		4
5	Phase Vehicle	5	·	Х	·	5
6	Phase Vehicle	6		Х	Χ	6
7	Overlap	8	·	Х	·	7
8	Phase Vehicle	8	·	Х	Χ	8
9	Overlap	1		Х	Χ	9
10	Overlap	2	·	Х	Х	10
11	Overlap	3	·	Х	·	11
12	Overlap	4	·	Х		12
13	Phase Ped	2	·			13
14	Phase Ped	4	·			14
15	Phase Ped	6		·	·	15
16	Phase Ped	8			·	16
17	Overlap	5		Х	Χ	17
18	Overlap	6	·	Χ		18

NOTICE: FLASH RED

MAXTIME ALTERNATE PHASING PATTERN PROGRAMMING DETAIL

Front Panel

Main Menu >Controller >Coordination >Patterns

Web Interface

Home >Controller >Coordination >Patterns

Pattern Parameters

tttorri i ara		
Pattern	Veh Det Plan	Overlap Plan
*	2	2

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

MAXTIME STARTUP AND SOFTWARE FLASH PROGRAMMING DETAIL

Front Panel

Main Menu >Controller >Unit

Web Interface

Home >Controller >Unit

Modify parameters as shown below and save changes.

Start Up Parameters

StartUp Clearance Hold

Unit Flash Parameters All Red Flash Exit Time 6

> THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 10-2455 DESIGNED: February 2025 SEALED: Ø8-21-2025 REVISED: N/A

Electrical Detail - Sheet 3 of 3

ELECTRICAL AND PROGRAMMING Prepared for the Offices of:

US 29 (Concord Parkway South) Project Artic Truck Entrance

Cabarrus County ivision 10 PLAN DATE: February 2025 REVIEWED BY: KP Baumann

REVISIONS INIT. DATE SEAL 044434

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PLANS PREPARED IN THE OFFICE OF:

Kimley >>> Horn NC License #F-0102 421 Fayetteville Street, Suite 600 Raleigh, NC 27601 750 N.Greenfield Pkwy, Garner, NC 27529 (919) 677-2000

PREPARED BY: SP Pennington REVIEWED BY:

- | X | X | X | - |

- XXXX-

- X - X - .

- | X | - | X | - |

- | X | - | X | - |

- X - X - -

- | X | X | X | - | -

6 Phase Fully Actuated (Concord Central System)

NOTES

- 1. Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specifications for Roads and Structures" dated January 2024.
- 2. Do not program signal for late night flashing operation unless otherwise
- directed by the Engineer.
- 3. Phase 1 and/or phase 5 may be lagged. 4. The order of phase 3 and phase 4 may be reversed.
- 5. Set all detector units to presence mode.
- 6. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
- 7. This intersection uses video detection. Install detectors according to the manufacturer's instructions to achieve the desired detection.
- 8. Maximum times shown in timing chart are for free-run operation only.
- Coordinated signal system timing values supersede these values. 9. See Roadway Traffic Control Plans for proposed stop line locations.

MAXTIME DETECTOR INSTALLATION CHART ZONES PROGRAMMING S CALL DELAY EXTEND SIZE FROM TURNS ZONE (FT) STOPBAR ≥ PHASE TIME TIME 1A | 6X40 | 0 | * | X | 1 | - | - | X | - | X | - | 300 | * | X | 2 | -6 X 6 6X6 | 300 | * | X | 2 | - | 2[.]B * X 3 5.0 6X40 0 * X 4 3.0 \star $X \mid 4 \mid 10.0 \mid$ 5 A * | X | 5 | - | 6 X 4 0 0

 $6X6 \mid 300 \mid * \mid X \mid 6 \mid - \mid$

6X6 | 300 | * | X | 6 | - | - | X | X | X | - | -

* Video Detection Zone

1+5	
G DIAGRAM DETECTION LEGE	<u>ND</u>
DETECTED MOVEMENT UNDETECTED MOVEMENT (OV UNSIGNALIZED MOVEMENT PEDESTRIAN MOVEMENT	ERLAP)

PHASING DIAGRAM

PHASING DIAGRAM DETECTION LEGEND

 \leftarrow --> PEDESTRIAN MOVEMENT

2+5

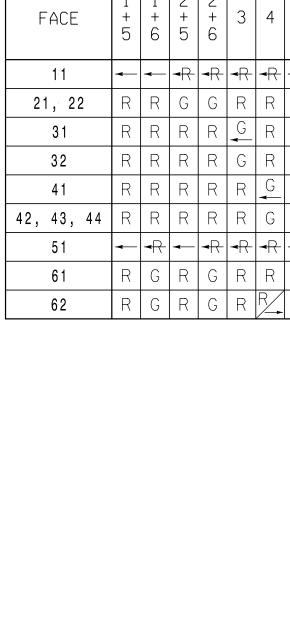


TABLE OF OPERATION

SIGNAL

PHASE

12"	R Y 12	" R 12"	R Y G	,,,
11 51	3 1 4 1	21, 22 32	62	
		42, 43, 44 61		

SIGNAL FACE I.D.

All Heads L.E.D.

STA: 40+35 - Y1 - Q8 Q1 48 Q1 A A A A A A A A A A A A A A A A A A	—————————————————————————————————————
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	51 - 0
2A	41B

	MAX	TIME T	[MING (CHART		
FEATURE			PHA	ASE		
FEATURE	1	2	3	4	5	6
Walk *	_	_	_	-	_	_
Ped Clear	_	_	_	_	_	_
Min Green *	7	12	7	7	7	12
Passage *	2.0	6.0	2.0	2.0	2.0	6.0
Max 1 *	15	120	15	40	20	120
Yellow Change	3.0	4.7	3.8	4.5	3.0	4.7
Red Clear	2.9	1.5	2.4	2.4	2.4	1.5
Added Initial *	_	1.5	_	-	-	1.5
Maximum Initial *	_	34	_	_	_	34
Time Before Reduction *	_	15	_	_	_	15
Time To Reduce *	_	30	_	_	_	30
Minimum Gap	_	3.0	_	_	_	3.0
Advance Walk	_	_	_	_	_	_
Non Lock Detector	Х	_	Х	Х	Х	_
Vehicle Recall	_	MIN RECALL	_	-	_	MIN RECALL
Dual Entry	_	_	_	_	_	_

* 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.

<u>PROPOSED</u> **EXISTING** Traffic Signal Head **-**Modified Signal Head N/A Sign Pedestrian Signal Head With Push Button & Sign Signal Pole with Guy Signal Pole with Sidewalk Guy Non-Intrusive Detection Area Controller & Cabinet Junction Box 2-in Underground Conduit N/A Right of Way Permanent Maintenance --- PME --Easement Directional Arrow Construction Zone Street Name Sign (D3-1) Left Arrow "ONLY" Sign (R3-5L) Dual Turn and Through Arrow Sign (R3-19)

SEAL

LEGEND

Signal Upgrade - Temporary Design 1 TMP Phase 1 PLANS PREPARED IN THE OFFICE OF:

1 " = 50'

NC License #F-0102

(919) 677-2000

421 Fayetteville Street, Suite 600 Raleigh, NC 27601

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED US 29 (Concord Parkway South)

SR 1414 (Rock Hill Church Road) and Honda Cars of Concord

Division 10 Cabarrus County Kimley Horn

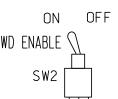
750 N. Greenfield Pkwy, Garner, NC 27529

PLAN DATE: February 2025 MEVIEWED BY:

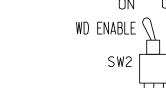
PREPARED BY: SP Pennington REVIEWED BY: PLAN DATE: February 2025 REVIEWED BY: KP Baumann INIT. DATE ____5DC709A86BCB447... SIG. INVENTORY NO. 10-0875T

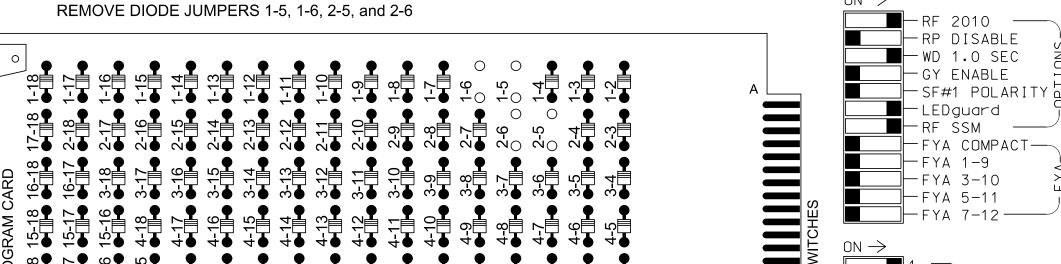
18 CHANNEL IP CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)



ST = STOP TIME





REMOVE JUMPERS AS SHOWN

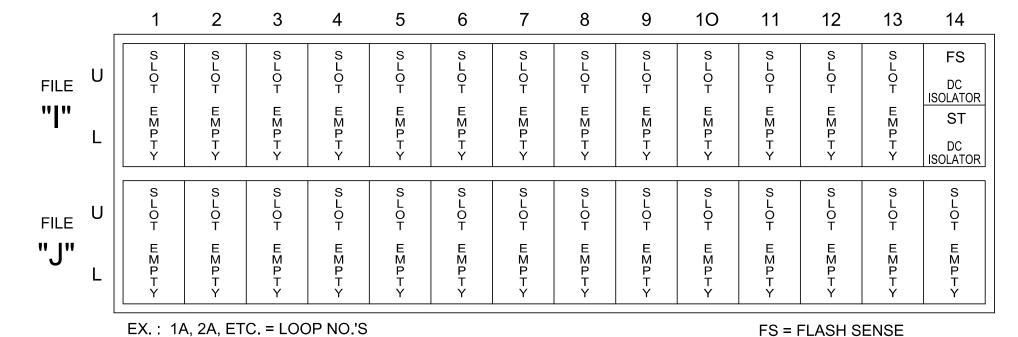
COMPONENT SIDE

NOTES:

- 1. Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
- 2. Ensure jumpers SEL2-SEL5 and SEL9 are present on the monitor board.
- 3. Ensure that Red Enable is active at all times during normal operation.
- 4. Integrate monitor with Ethernet network in cabinet.

INPUT FILE POSITION LAYOUT

(front view)



SPECIAL DETECTOR NOTE

Install a video detection system for vehicle detection. Perform installation according to manufacturer's directions and NCDOT engineer -approved mounting locations to accomplish the detection schemes shown on the Signal Design Plans.

NOTES

- To prevent "flash-conflict" problems, insert red flash program blocks for all vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the Signal Plans.
- 2. Program controller to start up in phase 2 Green No Walk and phase 6 Green No Walk.
 - The cabinet and controller are part of the Concord Central

EQUIPMENT INFORMATION

CONTROLLER2070LX	
CABINET	
SOFTWAREQ-FREE MAXTIME	
CABINET MOUNTBASE	
OUTPUT FILE POSITIONS18 WITH AUX. OUTPUT FILE	<u>-</u>
LOAD SWITCHES USEDS1,S2,S4,S5,S7,S8	
PHASES USED	
OVERLAP "1"NOT USED	
OVERLAP "2"NOT USED	
OVERLAP "3"NOT USED	
OVERLAP "4"NOT USED	

PROJECT REFERENCE NO. U-5956 Sig 3 1

				SI	GN/	۱ علا	HEA	DΗ	00	K-L	IP C	HA	RT								
LOAD SWITCH NO.	S1	S2	S3	S	64		S5		S6	S7	S8	S9	S10	S11	S12	AUX S1	AUX S2	AUX S3	AUX S4	AUX S5	AUX S6
CMU CHANNEL NO.	1	2	13	,	3		4		14	5	6	15	7	8	16	9	10	17	11	12	18
PHASE	1	2	2 PED	;	3		4		4 PED	5	6	6 PED	7	8	8 PED	OL1	OL2	SPARE	OL3	OL4	SPARE
SIGNAL HEAD NO.	11	21,22	NU	31	32	41	42,43 44	62	NU	51	61,62	ŊU	NU	NU	NU	NU	NU	NU	NU	NU	NU
RED		128		116	116	101	101				134										
YELLOW		129		117	117	102	102				135										
GREEN		130		118	118	103	103				136										
RED ARROW	125									131											
YELLOW ARROW	126							102		132											
FLASHING YELLOW ARROW																					
GREEN ARROW	127			118		103		103		133											

NU = Not Used

MAXTIME STARTUP AND SOFTWARE FLASH PROGRAMMING DETAIL

Front Panel Main Menu >Controller >Unit

Web Interface Home >Controller >Unit

Modify parameters as shown below and save changes.

Start Up Parameters

Unit Flash Parameters

All Red Flash Exit Time StartUp Clearance Hold

OUTPUT CHANNEL CONFIGURATION

Front Panel

DENOTES POSITION

OF SWITCH

Main Menu >Controller >More>Channels>Channels Config

Web Interface

Home >Controller >Advanced IO>Channels>Channel Configuration Channel Configuration

Channel	Control Type	Control Source	Flash Yellow	Flash Red	Flash Alt	MMU Channel
1	Phase Vehicle	1		Х	Х	1
2	Phase Vehicle	2		X		2
3	Phase Vehicle	3		X	Χ	3
4	Phase Vehicle	4		X		4
5	Phase Vehicle	5		X		5
6	Phase Vehicle	6		Χ	Χ	6
7	Phase Vehicle	7		X		7
8	Phase Vehicle	8		X	Χ	8
9	Overlap	1		Х	Х	9
10	Overlap	2		X	Χ	10
11	Overlap	3		X		11
12	Overlap	4		Х		12
13	Phase Ped	2				13
14	Phase Ped	4				14
15	Phase Ped	6				15
16	Phase Ped	8				16
17	Overlap	5		Х	Х	17
18	Overlap	6		Χ		18

NOTICE: FLASH RED

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 10-0875T1 DESIGNED: February 2025

PLANS PREPARED IN THE OFFICE OF: **Kimley** » Horn NC License #F-0102 421 Fayetteville Street, Suite 600 750 N.Greenfield Pkwy,Garner,NC 27529 Raleigh, NC 27601

Electrical Detail - Temporary Design 1

ELECTRICAL AND PROGRAMMING US 29 (Concord Parkway South) DETAILS FOR: SR 1414 (Rock Hill Church Road) and Honda Cars of Concord

Cabarrus County ivision 10 Concord PLAN DATE: February 2025 REVIEWED BY: KP Baumann

REVISIONS INIT. DATE

SEAL 044434 SIG. INVENTORY NO. 10-0875T1

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PREPARED BY: SP Pennington REVIEWED BY:

SEALED: Ø8-21-2025 REVISED: N/A

PHASING DIAGRAM

PHASING DIAGRAM DETECTION LEGEND

DETECTED MOVEMENT

 \leftarrow --> PEDESTRIAN MOVEMENT

UNSIGNALIZED MOVEMENT

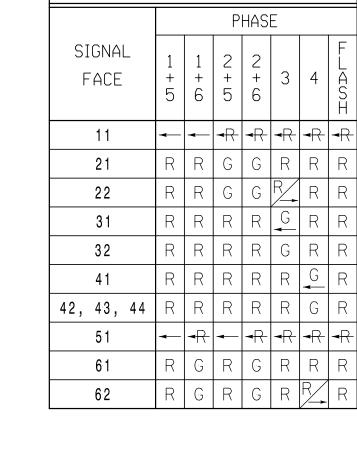
UNDETECTED MOVEMENT (OVERLAP)

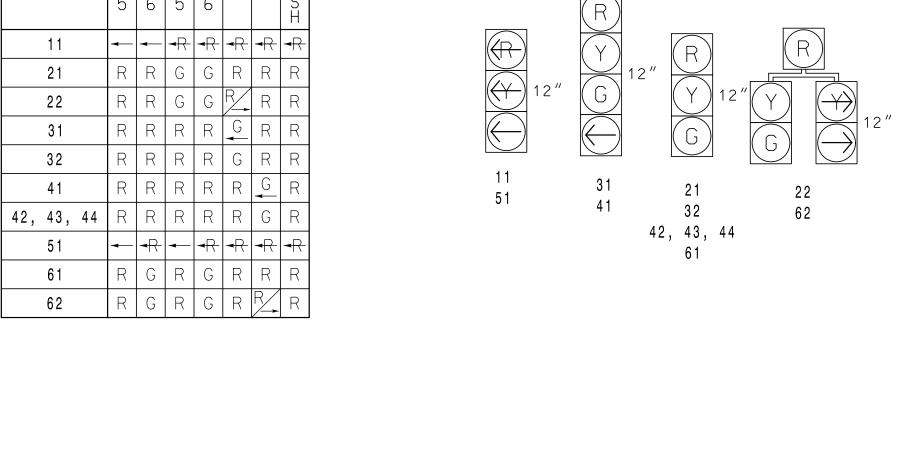
6 Phase Fully Actuated (Concord Central System)

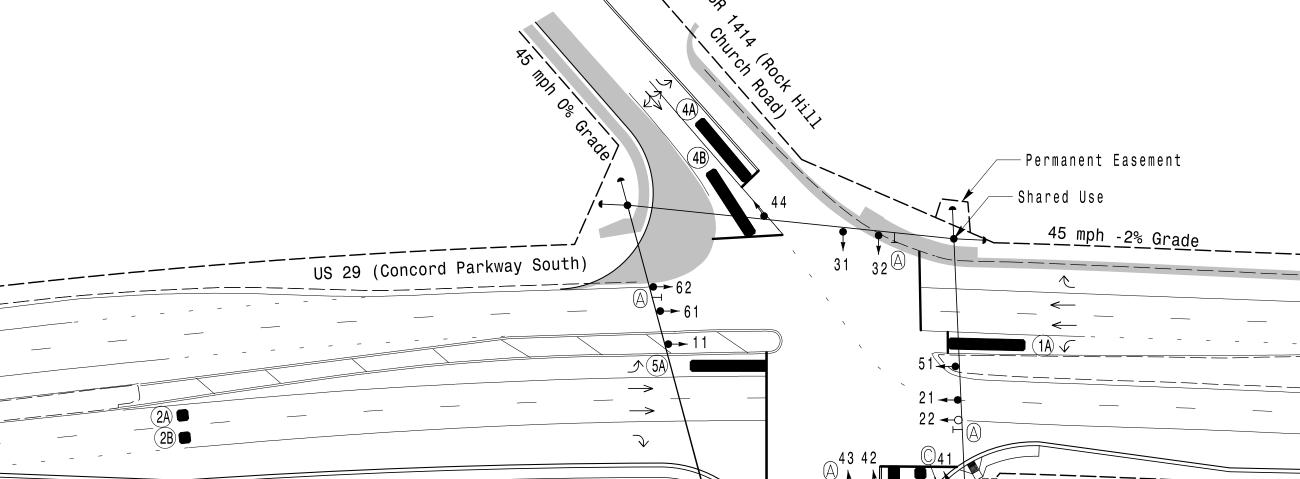
NOTES

- 1. Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specifications for Roads and Structures" dated January 2024.
- 2. Do not program signal for late night flashing operation unless otherwise
- directed by the Engineer.
- 3. Phase 1 and/or phase 5 may be lagged.
- 4. The order of phase 3 and phase 4 may be reversed. 5. Reposition existing signal heads 21, 31, 32, 42, and 43.
- 6. Set all detector units to presence mode.
- 7. This intersection uses video detection. Install detectors according to the manufacturer's instructions to achieve the desired detection. 8. Maximum times shown in timing chart are for free-run operation only.
- Coordinated signal system timing values supersede these values.
- 9. See Roadway Traffic Control Plans for proposed stop line locations.

TABLE	OF	OF OPERATION								
		PHASE								
SIGNAL FACE	1 + 5	1 + 6	2 + 5	2 + 6	3	4	FLANT			
1:1	-	-	- R			-R	+			
21	R	R	G	G	R	R	R			
22	R	R	G	G	R/	R	R			
31	R	R	R	R	G	R	R			
3.2	R	R	R	R	G	R	R			
41	R	R	R	R	R	G	R			
2, 43, 44	R	R	R	R	R	G	R			
5 1	-	-R	-	-R	-R	-R	▼ R			
61	R	G	R	G	R	R	R			







ES MAIN CONTRACTOR TO CARLOS AND CARLOS AND CONTRACTOR TO CARLOS AND CA	Permanent Easement
US 29 (Concord Parkway South)	Shared Use 45 mph -2% Grade 31 32 (6B)
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	1A) (1A) (5) (6A) (5) (1A) (7) (7) (1A) (7) (7) (1A) (7) (7) (7) (7) (7) (7) (7) (7) (7) (7
Honda Cars of Concord	US 29 (Concord Parkway South) ———————————————————————————————————

	MAX	TIME T	IMING (CHART						
EEATURE		PHASE								
FEATURE	1	2	3	4	5	6				
Walk *	_	_	_	-	_	_				
Ped Clear	_	_	_	-	_	_				
Min Green *	7	12	7	7	7	12				
Passage *	2.0	6.0	2.0	2.0	2.0	6.0				
Max 1 *	15	120	15	40	20	120				
Yellow Change	3.0	4.7	3.8	4.5	3.0	4.7				
Red Clear	2.4	1.5	2.6	2.4	2.6	1.5				
Added Initial *	_	1.5	_	-	_	1.5				
Maximum Initial *	_	34	_	-	_	34				
Time Before Reduction *	_	15	_	_	_	15				
Time To Reduce *	_	30	_	_	_	30				
Minimum Gap	_	3.0	_	-	_	3.0				
Advance Walk	_	_	_	-	_	_				
Non Lock Detector	Х	_	Х	Х	Х	_				
Vehicle Recall	_	MIN RECALL	_	_	_	MIN RECA				

* 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.

<u>PROPOSED</u> **EXISTING** Traffic Signal Head **●** Modified Signal Head N/A Sign Pedestrian Signal Head With Push Button & Sign Signal Pole with Guy Signal Pole with Sidewalk Guy Non-Intrusive Detection Area Controller & Cabinet Junction Box 2-in Underground Conduit N/A Right of Way Permanent Maintenance -- - PME --Easement Directional Arrow Construction Zone Street Name Sign (D3-1) Left Arrow "ONLY" Sign (R3-5L) Dual Turn and Through Arrow Sign (R3-19) N/A Curb Ramp

LEGEND

Signal Upgrade - Temporary Design 2 TMP Phase 2



1 "=50'

PLANS PREPARED IN THE OFFICE OF:

421 Fayetteville Street, Suite 600 Raleigh, NC 27601

NC License #F-0102

(919) 677-2000

MAXTIME DETECTOR INSTALLATION CHART

1A | 6X40 | 0 | * |-| 1 | - | - | X|-| X|-|

0 * X 3 15.0

* |- | 4 | 3.0

6X6 | 300 | * | - | 6 | - | - | X | X | X | - | -

6X6 | 300 | * | - | 6 | - | - | X | X | X | - | -

- 2 -

- 3 5.0

TURNS

6X6 | 300 | * | - | 2 | - |

PROGRAMMING

NO CALL DELAY EXTEND SINI ON SALE OF S

|- | 4 | 10.0 | - | X | - | X | - |

- | X | X | X | - |

- | X | X | X | - |

- | X | - | X | - | -

- | X | - | X | - |

- | X | - | X | - |

- X - X - .

ZONES

SIZE

6 X 6

6 X 4 0

6 X 4 0

st Video Detection Zone

ZONE

2[.]B

4 A

4 B

6∙A

FROM

300

(FT) STOPBAR

US 29 (Concord Parkway South) and Honda Cars of Concord

SR 1414 (Rock Hill Church Road) Division 10 Cabarrus County Kimley Horn

750 N. Greenfield Pkwy, Garner, NC 27529

PLAN DATE: February 2025 | REVIEWED BY:

PREPARED BY: SP Pennington | REVIEWED BY: PLAN DATE: February 2025 REVIEWED BY: KP Baumann

SEAL 044434 INIT. DATE 8/21/2025 DATE ____5DC709A86BCB447...

SIG. INVENTORY NO. 10-0875T

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL
SIGNATURES COMPLETED

Dual Entry

18 CHANNEL IP CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)

REMOVE DIODE JUMPERS 1-5, 1-6, 2-5, and 2-6 -RP DISABLE - WD 1.0 SEC SF#1 POLARITY D -FYA 5-11 ├─ FYA 7-12 ----

INPUT FILE POSITION LAYOUT

(front view)

1 2 3 4 5 6 7 8 9 10 11 12 13 14

SPECIAL DETECTOR NOTE

ON OFF

WD ENABLE \

REMOVE JUMPERS AS SHOWN

COMPONENT SIDE

NOTES:

"J"

- 1. Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
- 2. Ensure jumpers SEL2-SEL5 and SEL9 are present on the monitor board.
- 3. Ensure that Red Enable is active at all times during normal operation.
- 4. Integrate monitor with Ethernet network in cabinet.

EX.: 1A, 2A, ETC. = LOOP NO.'S

NOTES

- 2. Program controller to start up in phase 2 Green No Walk and phase 6 Green No Walk.
- 3. The cabinet and controller are part of the Concord Central

EQUIPMENT INFORMATION

CONTROLLER.......2070LX SOFTWARE.....Q-FREE MAXTIME

CABINET MOUNT.....BASE

OUTPUT FILE POSITIONS...18 WITH AUX. OUTPUT FILE LOAD SWITCHES USED.....S1,S2,S4,S5,S7,S8

OVERLAP "1".....NOT USED OVERLAP "2".....NOT USED

OVERLAP "3".....NOT USED OVERLAP "4".....NOT USED

- 1. To prevent "flash-conflict" problems, insert red flash program blocks for all vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the Signal Plans.

LOAD SWITCH NO S1 | S2 | S3 CMU CHANNEL 2 | 13 16 | 9 | 10 | 17 | 11 | 12 | 8 8 OL1 OL2 SPARE OL3 OL4 SPARE 2 PED PHASE 11 21,22 NU 22 31 32 HEAD NO. 116 | 116 | 101 | 101 RED | 117 | 117 | 102 | 102 | 135 129 YELLOW 136 118 | 118 | 103 | 103 GREEN 130 RED ARROW 131 YELLOW 102 132 117 ARROW FLASHING YELLOW ARROW GREEN 103 127 118 | 118 103 133

SIGNAL HEAD HOOK-UP CHART

NU = Not Used

ARROW

OUTPUT CHANNEL CONFIGURATION

Front Panel

= DENOTES POSITION

DC ISOLATOR

ST

FS = FLASH SENSE ST = STOP TIME

OF SWITCH

Main Menu >Controller >More>Channels>Channels Config

Web Interface

Home >Controller >Advanced IO>Channels>Channel Configuration Channel Configuration

Channel	Control Type	Control Source	Flash Yellow	Flash Red	Flash Alt	MMU Channel
1	Phase Vehicle	1		Χ	Χ	1
2	Phase Vehicle	2		Χ		2
3	Phase Vehicle	3		Х	Χ	3
4	Phase Vehicle	4		Х		4
5	Phase Vehicle	5		Х		5
6	Phase Vehicle	6		Х	Х	6
7	Phase Vehicle	7		Х		7
8	Phase Vehicle	8		Х	Х	8
9	Overlap	1		Х	Х	9
10	Overlap	2		Х	Х	10
11	Overlap	3		Х		11
12	Overlap	4		Х		12
13	Phase Ped	2				13
14	Phase Ped	4				14
15	Phase Ped	6				15
16	Phase Ped	8				16
17	Overlap	5		Х	Х	17
18	Overlap	6		Χ		18

NOTICE: FLASH RED

MAXTIME STARTUP AND SOFTWARE FLASH PROGRAMMING DETAIL

Front Panel Main Menu >Controller >Unit

Web Interface Home >Controller >Unit

Modify parameters as shown below and save changes.

Start Up Parameters

StartUp Clearance Hold

Unit Flash Parameters All Red Flash Exit Time

PROJECT REFERENCE NO.

U-5956

Sig 4 1

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 10-0875T2 DESIGNED: February 2025 SEALED: Ø8-21-2025 REVISED: N/A

Electrical Detail - Temporary Design 2

DETAILS FOR:

ELECTRICAL AND PROGRAMMING

US 29 (Concord Parkway South) SR 1414 (Rock Hill Church Road) and Honda Cars of Concord

Cabarrus County ivision 10 Concord PLAN DATE: February 2025 REVIEWED BY: KP Baumann

PREPARED BY: SP Pennington | REVIEWED BY: REVISIONS INIT. DATE

SIGNATURES COMPLETED 044434

SIG. INVENTORY NO. 10-0875T2

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL

PLANS PREPARED IN THE OFFICE OF: **Kimley** » Horn NC License #F-0102 421 Fayetteville Street, Suite 600 750 N.Greenfield Pkwy,Garner,NC 27529

Raleigh, NC 27601 (919) 677-2000

Install a video detection system for vehicle detection. Perform installation according to manufacturer's directions and NCDOT engineer -approved mounting locations to accomplish the detection schemes shown on the Signal Design Plans.

PHASING DIAGRAM DETECTION LEGEND

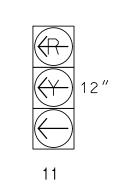
DETECTED MOVEMENT

UNDETECTED MOVEMENT (OVERLAP) UNSIGNALIZED MOVEMENT

←──> PEDESTRIAN MOVEMENT

SIGNAL FACE I.D.

All Heads L.E.D.



51

71, 72

TABLE OF OPERATION

SIGNAL

FACE

1:1

2.1

2.2

3 1

41, 43

42

51

61

6.2

71, 72

8 1

8.2

P21, P22

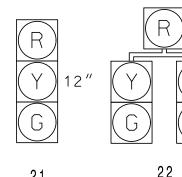
PHASE

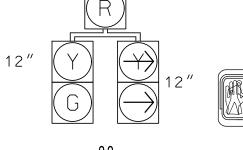
DW DW W W DW DW DW DW DR

Χ

MIN RECALL

P61, P62 DW W DW W DW DW DW DW DF





<i>II</i>	1	6″	

			16″	
P	21.	P22		

P21, P22 P61, P62

	Z0	NES			PRO	GRAMM	IN	G				
ZONE	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW ZONE	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	DELAY DURING GREEN	NEW CARD
1 A	6 X 4 0	0	*	<u>-</u>	1	<u>-</u>	<u>-</u>	Χ	<u>-</u>	Χ		-
1·B	6 X 4 0	0	*	Χ	8	15.0	-	Χ	_	Χ	ı	_
2 A	6 X 6	300	*	-	2	-	-	Χ	Χ	Χ	-	-
2 B	6 X 6	300	*	-	2	-	-	Χ	Χ	Χ		-
3 A	6 X 4 0	0	*	Χ	3	3.0	<u>-</u>	Χ	-	Χ	-	-
4 A	6 X 4 0	0	*	Χ	4	<u>-</u>	<u>-</u>	Χ	÷	Χ	-	_
5 [.] A	6 X 4 0	0	*	-	5	-	-	Χ	-	Χ	-	-
5 [.] B	6 X 4 0	0	*	Χ	5	15.0	-	Χ	_	Χ	-	-
5·C	6 X 6	0	*	Χ	5	15.0	-	Χ	-	Χ	-	-
6 A	6 X 6	300	*	-	6	_	_	X	Χ	Χ	-	-
6 B	6 X 6	300	*	-	6	<u>-</u>	<u> </u>	Χ	Χ	Χ	ı	_

* | X | 7 | 3.0 | - | X | - | X | - | ·

* | X | 8 | - | - | X | - | X | - | -

- | X | - | X | - | -

MAXTIME DETECTOR INSTALLATION CHART

st Video Detection Zone

8·B* 5 X 6

* | X | 8 | - |

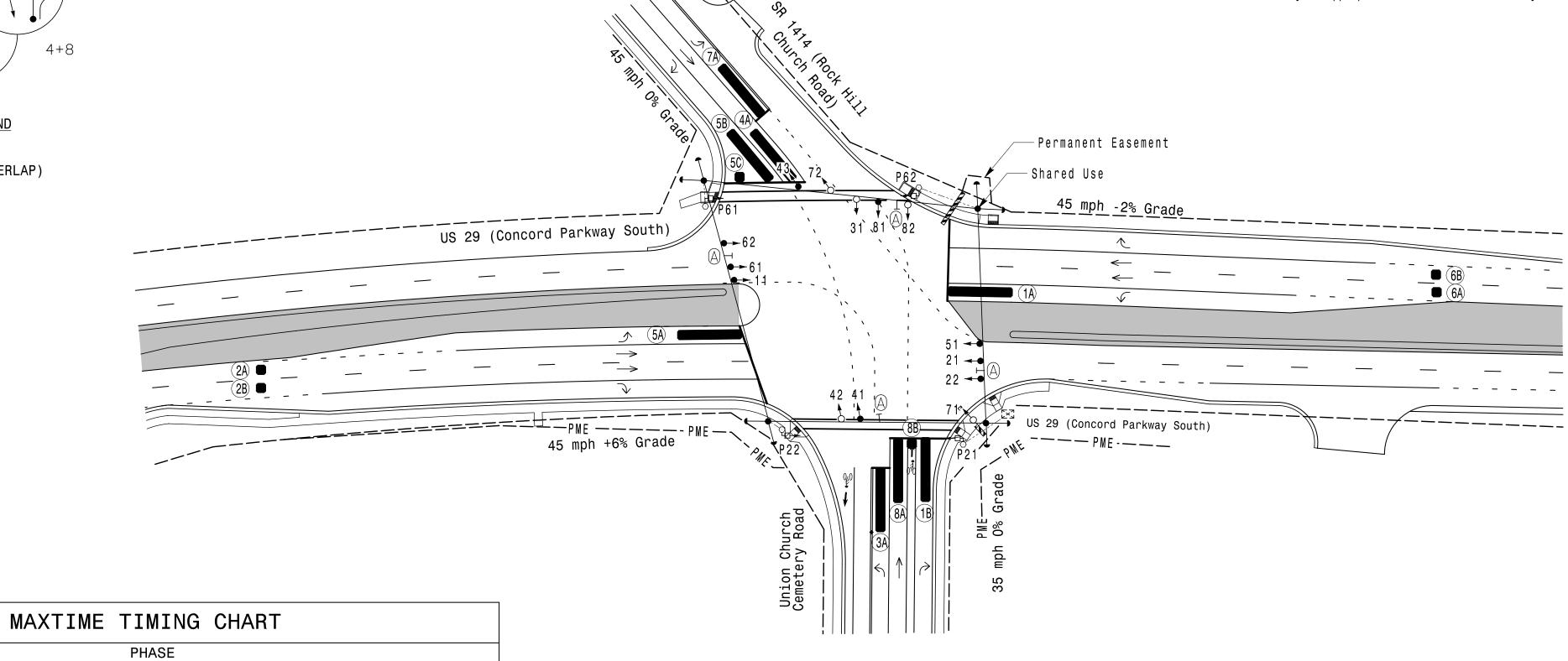
PROJECT REFERENCE NO. SHEET NO. U-5956 | Sig. 5.0

8 Phase Fully Actuated (Concord Central System)

NOTES

- 1. Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and
- "Standard Specifications for Roads and Structures" dated January 2024. 2. Do not program signal for late night flashing operation unless otherwise
- directed by the Engineer.
- 3. Phase 1 and/or phase 5 may be lagged. 4. Phase 3 and/or phase 7 may be lagged.
- 6. Reposition all existing signal heads.
- time only.
- 9. This intersection uses video detection. Install detectors according to
- 10. Maximum times shown in timing chart are for free-run operation only.

- 12. See Roadway Traffic Control Plans for proposed stop line and crosswalk locations



LEGEND

PROPOSED <u>EXISTING</u> Traffic Signal Head Modified Signal Head Pedestrian Signal Head With Push Button & Sign Type II Signal Pedestal Signal Pole with Guy Signal Pole with Sidewalk Guy Controller & Cabinet Junction Box 2-in Underground Conduit N/A Right of Way Permanent Maintenance -- PME --Easement Directional Arrow Construction Zone

FEATURE 2 7 14 Ped Clear 24 28 12 12 7 Min Green * 2.0 6.0 2.0 2.0 2.0 2.0 2.0 Passage 20 120 20 20 120 20 40 3.0 4.7 Yellow Change 3.0 4.5 3.0 4.7 3.0 4.5 3.3 1.9 3.9 3.0 3.5 1.9 3.0 Red Clear 4.6 1.5 1.5 Added Initial * 34 Maximum Initial * Time Before Reduction 15 15 30 30 Time To Reduce * 3.0 Minimum Gap 7 Advance Walk

_

MIN RECALL

Signal Upgrade - Temporary Design 3 TMP Phase 3



US 29 (Concord Parkway South) SR 1414 (Rock Hill Church Road)

and Union Church Cemetery Road Division 10 Cabarrus County

____5DC709A86BCB447...

Non Lock Detector

Vehicle Recall

Dual Entry

5. Set all detector units to presence mode.

7. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls. 8. Program pedestrian heads to countdown the flashing "Don't Walk"

the manufacturer's instructions to achieve the desired detection.

Coordinated signal system timing values supersede these values. 11. Renumber existing signal heads 32, 42, and 44 to 81, 41, and 43.

Street Name Sign (D3-1)

FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL

PLAN DATE: February 2025 REVIEWED BY: KP Baumann 750 N.Greenfield Pkwy, Garner, NC 27529 PREPARED BY: SP Pennington REVIEWED BY: INIT. DATE

Kimley » Horn NC License #F-0102

421 Fayetteville Street, Suite 600 Raleigh, NC 27601

PLANS PREPARED IN THE OFFICE OF:

(919) 677-2000

1 "=50'

8/21/2025 SIG. INVENTORY NO. 10-0875T

^{*} Set sensitivity to apporpriate level to detect a bicycle

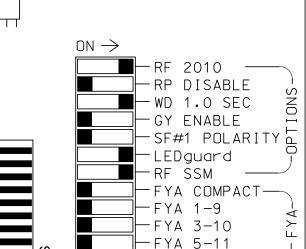
(remove jumpers and set switches as shown)

REMOVE DIODE JUMPERS 1-5, 1-6, 1-15, 2-5, 2-6, 2-13, 2-15, 3-7, 3-8,

4-7, 4-8, 5-13, 6-13, 6-15 and 13-15

WD ENABLE 📏

ON OFF



──FYA 7-12 ----

= DENOTES POSITION

OF SWITCH

the output file. The installer shall verify that signal heads flash in accordance with the Signal Plans. 2. Program controller to start up in phase 2 Green No Walk and

To prevent "flash-conflict" problems, insert red flash

NOTES

program blocks for all vehicle load switches in

phase 6 Green No Walk.

3. The cabinet and controller are part of the Concord Central System.

PROJECT REFERENCE NO.

U-5956 Sig 5.1

							SIC	SNA	AL H	ΙEΑ	DΗ	100	K-U	P C	HA	RT							
LOAD SWITCH N	10.	· S	1 -	S2	S3	S	64	S5 ·	S6	9	S7	S8	S9	· S	10	S11	S12	AUX S1	AUX S2	AUX S3	AUX S4	AUX S5	AUX S6
CMU CHANNE NO.	EL	. •	1	2	13	;	3	4	14		5	6	15		7	8	16	9	10	17	11	12	18
PHASE		. •	1	2	2 PED	,	3	4	4 PED		5	6	6 PED		7	8	8 PED	OL1	OL2	SPARE	OL3	OL4	SPARE
SIGNAL HEAD NO		11	82	21,22	P21, P22	22	31	41,42 43	ŊU	42	51	61,62	P61, P62	71,72	62	81,82	NU	NU	NU	NU	NU	NU	NU
RED				128				101				134				107							
YELLOW	V			129				102				135				108							
GREEN				130				103				136				109							
RED ARROW		125					116				131			122									
YELLOW ARROW		126	126			117	117			132	132			123	123								
FLASHING YELLOW ARROW																							
GREEN ARROW		127	127			118	118			133	133			124	124								
*		·			113		·						119			·							
Ķ					115		,						121										

★See pictorial of head wiring in detail this sheet.

EQUIPMENT INFORMATION

CONTROLLER.....2070LX SOFTWARE.....Q-FREE MAXTIME

CABINET MOUNT.....BASE

OUTPUT FILE POSITIONS...18 WITH AUX. OUTPUT FILE LOAD SWITCHES USED......S1,S2,S3,S4,S5,S7,S8,S9,S10, | NU = Not Used

OVERLAP "1".....NOT USED OVERLAP "2".....NOT USED OVERLAP "3".....NOT USED OVERLAP "4".....NOT USED

NOTES:

1. Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.

REMOVE JUMPERS AS SHOWN

- 2. Ensure jumpers SEL2-SEL5 and SEL9 are present on the monitor board.
- 3. Ensure that Red Enable is active at all times during normal operation.

COMPONENT SIDE

4. Integrate monitor with Ethernet network in cabinet.

INPUT FILE POSITION LAYOUT

(front view)

_	1	2	3	4	5	6	7	8	9	10	11	12	13	14
FILE U	S L O T	Ø2 PED	DC	DC										
" " _	E M P T Y	NOT USED	NOT USED	ST DC ISOLATOR										
FILE U "J" L	S L O T E M P T Y	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	S L O T E M P T Y	S L O T E M P T Y	S L O T E M P T Y	S L O T E M P T Y	SLOT EMPTY	S L O T E M P T Y	S L O T E M P T Y	S L O T E M P T Y

EX.: 1A, 2A, ETC. = LOOP NO.'S

FS = FLASH SENSE ST = STOP TIME

INPUT FILE CONNECTION & PROGRAMMING CHART

LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	INPUT POINT	DETECTOR NO.	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	DELAY DURING GREEN
PED PUSH BUTTONS												
P21,P22	TB8-4,6	I12U	67	33	2	PED 2	NOTE:					
P61;P62	TB8-7,9	I13U	68	34	6	PED 6		. DC ISOLAT T FILE SLOT				
							I12 AND		J			

INPUT FILE POSITION LEGEND: J2L FILE J — SLOT 2 — LOWER -

SPECIAL DETECTOR NOTE

Install a video detection system for vehicle detection. Perform installation according to manufacturer's directions and NCDOT engineer -approved mounting locations to accomplish the detection schemes shown on the Signal Design Plans.

COUNTDOWN PEDESTRIAN SIGNAL OPERATION

Countdown Ped Signals are required to display timing only during Ped Clearance Interval. Consult Ped Signal Module user's manual for instructions on selecting this feature.

| Electrical Detail - Temporary Design 3

ELECTRICAL AND PROGRAMMING DETAILS FOR:

US 29 (Concord Parkway South) SR 1414 (Rock Hill Church Road)

Cabarrus County ivision 10 PLAN DATE: February 2025 REVIEWED BY: KP Baumann

PREPARED BY: SP Pennington | REVIEWED BY: REVISIONS INIT. DATE

044434

PLANS PREPARED IN THE OFFICE OF: **Kimley** » Horr NC License #F-0102 421 Fayetteville Street, Suite 600 Raleigh, NC 27601

(919) 677-2000

750 N.Greenfield Pkwy,Garner,NC 27529

Sheet 1 of 2

and Union Church Cemetery Road

THIS ELECTRICAL DETAIL IS FOR

THE SIGNAL DESIGN: 10-0875T3

DESIGNED: February 2025

SEALED: Ø8-21-2025

REVISED: N/A

SIG. INVENTORY NO. 10-0875T3

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL

SIGNATURES COMPLETED

ROJECT REFERENCE NO.	SHEET NO.
U-5956	Sig 5.2

OUTPUT CHANNEL CONFIGURATION

Front Panel

Main Menu >Controller >More>Channels>Channels Config

Web Interface

Home >Controller >Advanced IO>Channels>Channel Configuration Channel Configuration

Oriani	lei Comiguratio	71.1				
Channel	Control Type	Control Source	Flash Yellow	Flash Red	Flash Alt	MMU Channel
1	Phase Vehicle	1		Х	Х	1
2	Phase Vehicle	2		Х		2
3	Phase Vehicle	3		Х	Х	3
4	Phase Vehicle	4		Х		4
5	Phase Vehicle	5		Х		5
6	Phase Vehicle	6		Х	X	6
7	Phase Vehicle	7		Х		7
8	Phase Vehicle	8		Х	Х	8
9	Overlap	1		Х	Х	9
10	Overlap	2		Х	Х	10
11	Overlap	3		Х		11
12	Overlap	4		Х		12
13	Phase Ped	2				13
14	Phase Ped	4				14
15	Phase Ped	6				15
16	Phase Ped	8				16
17	Overlap	5		Х	Х	17
18	Overlap	6		X		18

NOTICE: FLASH RED

MAXTIME STARTUP AND SOFTWARE FLASH PROGRAMMING DETAIL

Front Panel

Main Menu >Controller >Unit

Web Interface

Home >Controller >Unit

Modify parameters as shown below and save changes.

Start Up Parameters

Unit Flash Parameters

StartUp Clearance Hold

All Red Flash Exit Time 6

> THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 10-0875T3 DESIGNED: February 2025 SEALED: Ø8-21-2Ø25 REVISED: N/A

Electrical Detail - Temporary Design 3 Sheet 2 of 2

ELECTRICAL AND PROGRAMMING DETAILS FOR:

US 29 (Concord Parkway South) SR 1414 (Rock Hill Church Road) and Union Church Cemetery Road

Division 10 Cabarrus County Concor PLAN DATE: February 2025 REVIEWED BY: KP Baumann

PREPARED BY: SP Pennington REVIEWED BY: REVISIONS INIT. DATE

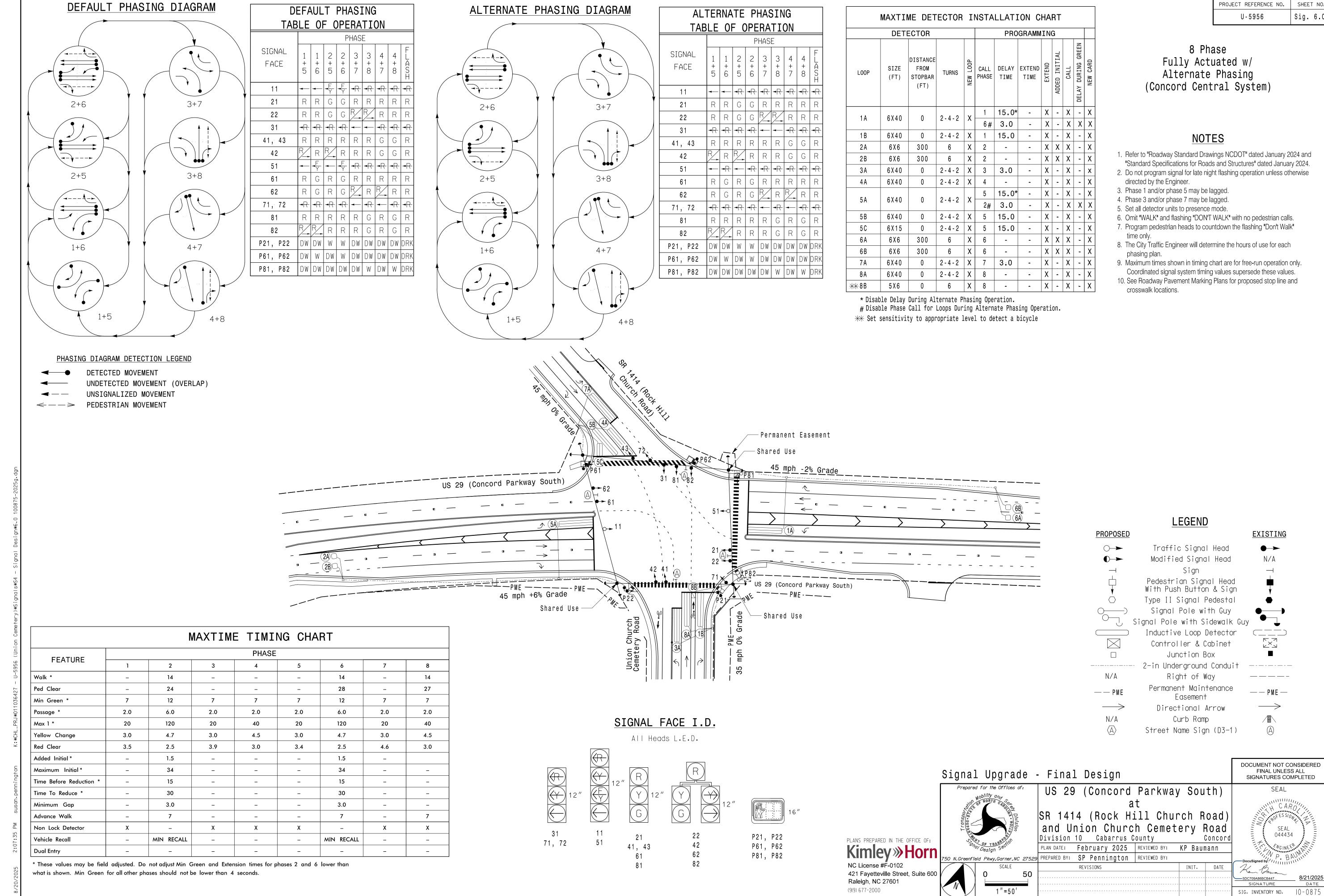
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PLANS PREPARED IN THE OFFICE OF:

Kimley >>> Horn

NC License #F-0102 421 Fayetteville Street, Suite 600 Raleigh, NC 27601 750 N.Greenfield Pkwy,Garner,NC 27529 (919) 677-2000

SIG. INVENTORY NO. 10-0875T3



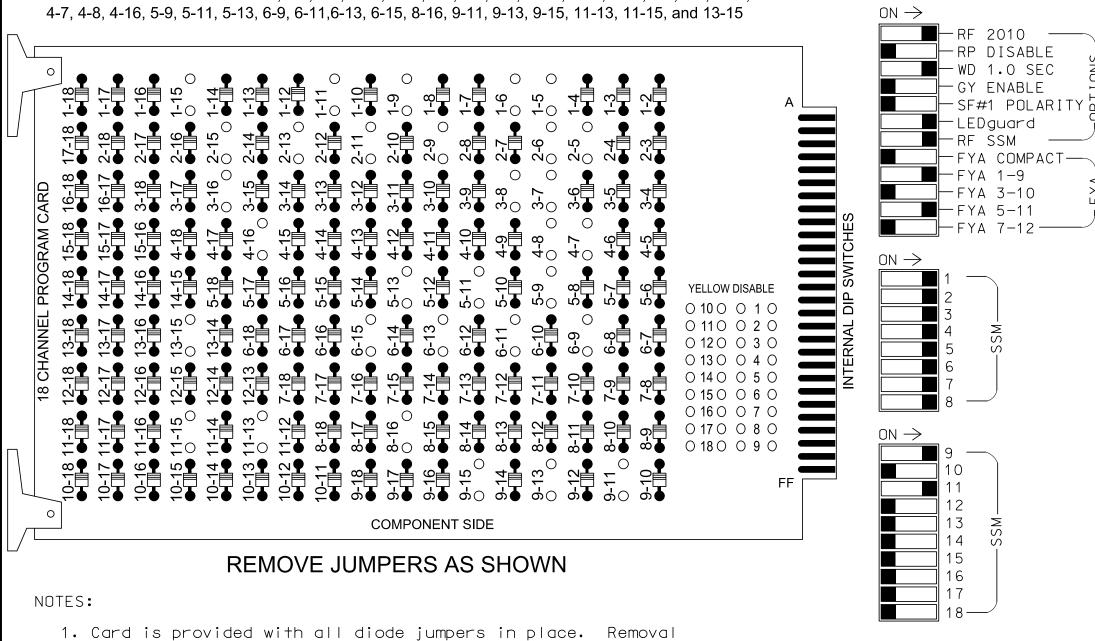
SHEET NO.

18 CHANNEL IP CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)

ON OFF
WD ENABLE \\
SW2

REMOVE DIODE JUMPERS 1-5, 1-6, 1-9, 1-11, 1-15, 2-5, 2-6, 2-9, 2-11, 2-13, 2-15, 3-7, 3-8, 3-16,



of any jumper allows its channels to run concurrently.

4. Integrate monitor with Ethernet network in cabinet.

2. Ensure jumpers SEL2-SEL5 and SEL9 are present on the monitor board.

3. Ensure that Red Enable is active at all times during normal operation.

NOTES

- 1. To prevent "flash-conflict" problems, insert red flash program blocks for all vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the Signal Plans.
- 2. Program controller to start up in phase 2 Green No Walk and phase 6 Green No Walk.
- 3. The cabinet and controller are part of the Concord Central System.

EQUIPMENT INFORMATION

CABINET MOUNT.....BASE

OUTPUT FILE POSITIONS...18 WITH AUX. OUTPUT FILE LOAD SWITCHES USED......S1,S2,S3,S4,S5,S7,S8,S9,S10,

\$11,\$12,AUX \$1,AUX \$4 PHASES USED.....1,2,2PED,3,4,5,6,6PED,7,8,8PED

OVERLAP "1".....*

OVERLAP "2".....NOT USED

OVERLAP "3"....*

OVERLAP "4".....NOT USED

* See overlap programming detail on sheet 3.

PROJECT REFERENCE NO. SHEET NO. U-5956 Sig 6.1

						SIC	SNA	AL H	IEA	DΗ	00	K-U	PC	CHA	RT							
LOAD SWITCH NO.	S	61	S2	S3	5	64	S5	S6	5	67	S8	S9	S	10	S11	S12	AUX S1	AUX S2	AUX S3	AUX S4	AUX S5	AUX S6
CMU CHANNEL NO.		1	2	13		3	4	14		5	6	15		7	8	16	9	10	17	11	12	18
PHASE		1	2	2 PED		3	4	4 PED		5	6	6 PED		7	8	8 PED	OL1	OL2	SPARE	OL3	OL4	SPARE
SIGNAL HEAD NO.	11 [*]	82	21,22	P21, P22	22	31	41,42 43	NU	42	51 [★]	61,62	P61, P62	62	71,72	81,82	P81, P82	1:1*	NU	NU	51 [★]	NU	NU
RED	*		128				101			*	134				107							
YELLOW			129				102				135				108							
GREEN			130				103				136				109							
RED ARROW						116								122			A121			A114		
YELLOW ARROW		126			117	117			132				123	123			A122			A115		
FLASHING YELLOW ARROW		٠															A123			A116		
GREEN ARROW	127	127			118	118			133	133			124	124								
*				113			·	·				119				110						
Κ̈́				115								121				112						

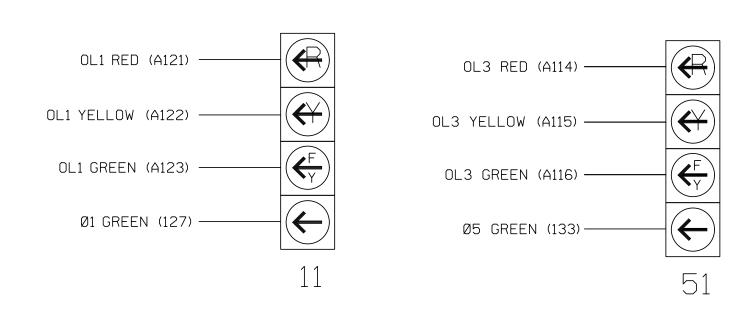
NU = Not Used

★ See pictorial of head wiring in detail this sheet.

★ Denotes install load resistor. See load resistor installation detail this sheet.

FYA SIGNAL WIRING DETAIL

(wire signal heads as shown)



(wire signal neads as s

INPUT FILE POSITION LAYOUT

(front view)

	_	1	2	3	4	5	6	7	8	9	10	11	12	13	14
		Ø 1	Ø 1	Ø 2	S L	Ø 3	Ø 4	S L	S L	S L	S L	S L	Ø2 PED	Ø6 PED	FS
ILE	U	1A	1B	2A	O T	3A	4A	O T	O T	O T	O T	O T	DC ISOLATOR	DC ISOLATOR	DC ISOLATOR
"	,	NOT	NOT	Ø 2	E M P	NOT	NOT	E M P	E M P	E M P	E M P	E M P	NOT	Ø8 PED	ST
		USED	USED	2B	T Y	USED	USED	T Y	T Y	T Y	T Y	T Y	USED	DC ISOLATOR	DC ISOLATOR
		Ø 5	Ø 5	Ø 6	S	Ø 7	Ø 8	S	S	S	S	S	S	S	S
ILE	U	5A	, 5B	^ 6A	Ą	7A	, 8A	Š T	, P	ŎŢ	Ŏ T	Ŏ T	þ Ť	, P	후
J"		NOT	Ø 5	Ø 6	E M P	NOT	Ø 8	E M	E M P	E M P	E M	E M	E M	E M	E M
	L	USED	5C	6B	T Y	USED	8B	T Y	T Y	T Y	T Y	T Y	T Y	T Y	T

EX.: 1A, 2A, ETC. = LOOP NO.'S

FS = FLASH SENSE ST = STOP TIME

= DENOTES POSITION

OF SWITCH

INPUT FILE CONNECTION & PROGRAMMING CHART

LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	INPUT POINT	DETECTOR NO.	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	DELAY DURING GREEN
4.0	TD0 4 0	1411	FC	18	1 ★	1	15.0		Х		Х	
1A	TB2-1,2	I1U	56	-	29★	6	3.0		Х		Х	Х
1B	TB2-5,6	I2U	39	1	2	1	15.0		Х		Х	
2A	TB2-9,10	I3U	63	29	4	2			Х	Х	Х	
2B	TB2-11,12	I3L	76	42	5	2			Х	Х	Х	
3A	TB4-5,6	I5U	58	20	7	3	3.0		Х		Х	
4A	TB4-9,10	I6U	41	3	8	4			Х		Х	
5A	TD2 1 2	1411	55	17	15★	5	15.0		Х		Х	
) OA	TB3-1,2	J1U	55	-	31★	2	3.0		Х		Х	Х
5B	TB3-5,6	J2U	40	2	16	5	15.0		Х		Х	
5C	TB3-7,8	J2L	44	6	17	5	15.0		Х		Х	
6A	TB3-9,10	J3U	64	30	18	6			Х	Х	Х	
6B	TB3-11,12	J3L	77	43	19	6			X	Х	Χ	
7A	TB5-5,6	J5U	57	19	21	7	3.0		Х		Х	
8A	TB5-9,10	J6U	42	4	22	8			Х		Х	
8B	TB5-11,12	J6L	46	8	23	8			Х		Х	
PED PUSH BUTTONS												
P21,P22	TB8-4,6	I12U	67	33	2	PED 2	NOTE:					
P61;P62	TB8-7,9	I13U	68	34	6	PED 6	INSTALL	. DC ISOLAT FFILE SLOT	TORS			
P81;P82	TB8-8,9	I13L	70	36	8	PED 8	I12 AND	113.	J			

★ For the detectors to work as shown on the signal design plan, see the Vehicle Detector Setup Programming Detail for Alternate Phasing on short?

INPUT FILE POSITION LEGEND: J2L

FILE J

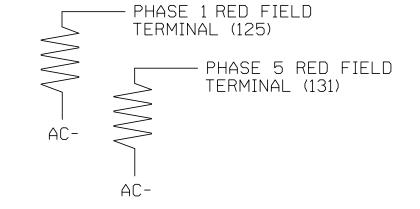
SLOT 2

LOWER

LOAD RESISTOR INSTALLATION DETAIL

(install resistors as shown below)

ACCEPTABLEVALUESVALUE (ohms)WATTAGE1.5K - 1.9K25W (min)2.ØK - 3.ØK1ØW (min)



COUNTDOWN PEDESTRIAN SIGNAL OPERATION

Countdown Ped Signals are required to display timing only during Ped Clearance Interval. Consult Ped Signal Module user's manual for instructions on selecting this feature.

PLANS PREPARED IN THE OFFICE OF:

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Prepared for the Offices of:

Prepared for the Offices of:

Nobility and Signal Management

And Programming DETAILS FOR:

Prepared for the Offices of:

750 N.Greenfield Pkwy, Garner, NC 27529

Electrical Detail - Final Design Sheet 1 of 3 ELECTRICAL AND PROGRAMMING DETAILS FOR: US 29 (Concord Parkway South)

at

SR 1414 (Rock Hill Church Road)

and Union Church Cemetery Road

Division 10 Cabarrus County Concor PLAN DATE: February 2025 REVIEWED BY: KP Baumann

PREPARED BY: SP Pennington REVIEWED BY:

REVISIONS INIT. DATE

SEAL

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SIG. INVENTORY NO. 10-0875

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

THIS ELECTRICAL DETAIL IS FOR

THE SIGNAL DESIGN: 10-0875

DESIGNED: February 2025

SEALED: Ø8-21-2025

REVISED: N/A

ROJECT REFERENCE NO.	SHEET NO.
U - 5956	Sig 6.2

OUTPUT CHANNEL CONFIGURATION

Front Panel

Main Menu >Controller >More>Channels>Channels Config

Web Interface

Home >Controller >Advanced IO>Channels>Channel Configuration Channel Configuration

Channel	Control Type	Control Source	Flash Yellow	Flash Red	Flash Alt	MMU Channel
1	Phase Vehicle	1		Х	Х	1
2	Phase Vehicle	2		X		2
3	Phase Vehicle	3		Х	Х	3
4	Phase Vehicle	4		X		4
5	Phase Vehicle	5		X		5
6	Phase Vehicle	6		X	Х	6
7	Phase Vehicle	7		X		7
8	Phase Vehicle	8		X	Х	8
9	Overlap	1		X	Х	9
10	Overlap	2		X	X	10
11	Overlap	3		X		11
12	Overlap	4		X		12
13	Phase Ped	2				13
14	Phase Ped	4				14
15	Phase Ped	6				15
16	Phase Ped	8				16
17	Overlap	5		X	Х	17
18	Overlap	6		X		18

NOTICE: FLASH RED

MAXTIME STARTUP AND SOFTWARE FLASH PROGRAMMING DETAIL

Front Panel

Main Menu >Controller >Unit

Web Interface

Home >Controller >Unit

Modify parameters as shown below and save changes.

Start Up Parameters

Unit Flash Parameters

StartUp Clearance Hold

All Red Flash Exit Time 6

> THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 10-0875 DESIGNED: February 2025 SEALED: Ø8-21-2Ø25 REVISED: N/A

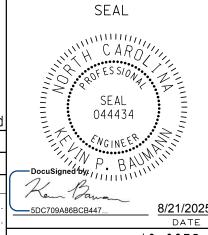
Electrical Detail - Final Design Sheet 2 of 3

ELECTRICAL AND PROGRAMMING DETAILS FOR:

US 29 (Concord Parkway South) SR 1414 (Rock Hill Church Road) and Union Church Cemetery Road

Division 10 Cabarrus County Concor PLAN DATE: February 2025 REVIEWED BY: KP Baumann PREPARED BY: SP Pennington REVIEWED BY:

REVISIONS INIT. DATE



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PLANS PREPARED IN THE OFFICE OF:

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750 N.Greenfield Pkwy,Garner,NC 27529

Main Menu >Controller >Overlap >Overlap Parameters/Overlap Timings

Web Interface

Home >Controller >Overlap Configuration >Overlaps

Overlap Plan 1

1	3
FYA 4 - Section	FYA 4 - Section
2	6
1	5
=	•
0	0
0.0	0.0
0.0	0.0
	2 1 - 0 0.0

MAXTIME OVERLAP PROGRAMMING DETAIL FOR ALTERNATE PHASING

Front Panel

Main Menu >Controller >Overlap >Overlap Parameters/Overlap Timings

Web Interface

Home >Controller >Overlap Configuration >Overlaps

In the table view of the web interface, right click on "Overlap" in the top left corner of the table. Copy the entire contents of Overlap Plan 1. Paste Overlap Plan 1 into Overlap Plan 2. Modify Overlap Plan 2 as shown below and save changes.

Overlap Plan 2

1	3
FYA 4 - Section	FYA 4 - Section
<u>-</u>	4
1	5
<u>-</u>	4
0	0
0.0	0.0
0.0	0.0

NOTICE INCLUDED

MAXTIME ALTERNATE PHASING PATTERN PROGRAMMING DETAIL

Front Panel

Main Menu >Controller >Coordination >Patterns

Web Interface

Home >Controller >Coordination >Patterns

Pattern Parameters

attern i arameters										
Pattern	Veh Det Plan	Overlap Plan								
*	2	2								

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

MAXTIME DETECTOR PROGRAMMING DETAIL FOR ALTERNATE PHASING LOOPS 1A & 5A

Front Panel

Main Menu >Controller >Detector >Veh Det Plans

Web Interface

Home >Controller >Detector Configuration >Vehicle Detectors

In the table view of web interface right click on "Detector" in the top left corner of the table. Copy the entire contents of Detector Plan 1. Paste Detector Plan 1 into Detector Plan 2. Modify Detector Plan 2 as shown below and save changes.

Plan 2

	Detector	Call Phase	Delay
Α	1	1	0
	29	0	3

Detector Call Phase Delay 5A 15 5 31 0

PROJECT REFERENCE NO. Sig 6.3 U-5956

MAXTIME ALTERNATE PHASING ACTIVATION DETAIL

To run alternate phasing, select a Pattern that is programmed to run Overlap Plan 2 and Detector Plan 2. A Pattern can be selected through the scheduler or manually by changing the Operational Mode.

OVERLAP PLAN	VEH DET PLAN
1	1
2	2
	OVERLAP PLAN 1 2

ALTERNATE PHASING CHANGE SUMMARY

THE FOLLOWING IS A SUMMARY OF WHAT TAKES PLACE WHEN OVERLAP 2 AND VEHICLE DETECTOR PLAN 2 ACTIVATE TO CALL THE "ALTERNATE PHASING":

OVERLAP PLAN 2: Modifies overlap included 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.

> THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 10-0875 DESIGNED: February 2025 SEALED: Ø8-21-2025 REVISED: N/A

Electrical Detail - Final Design Sheet 3 of 3

ELECTRICAL AND PROGRAMMING DETAILS FOR:

US 29 (Concord Parkway South) SR 1414 (Rock Hill Church Road) and Union Church Cemetery Road

Cabarrus County ivision 10 PLAN DATE: February 2025 REVIEWED BY: KP Baumann

PREPARED BY: SP Pennington | REVIEWED BY: REVISIONS INIT. DATE SIG. INVENTORY NO. 10-0875

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL

SIGNATURES COMPLETED

PLANS PREPARED IN THE OFFICE OF: Raleigh, NC 27601 (919) 677-2000

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PROJECT REFERENCE NO. | SHEET NO. Sig. 7.0 U-5956

6 Phase Fully Actuated (Concord Central System)

NOTES

- 1. Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specifications for Roads and Structures" dated January 2024.
- 2. Do not program signal for late night flashing operation unless otherwise
- directed by the Engineer.
- 3. Phase 1 and/or phase 5 may be lagged.
- 4. The order of phase 3 and phase 4 may be reversed. 5. Set all detector units to presence mode.
- 6. Pavement markings are existing.
- 7. Maximum times shown in timing chart are for free-run operation only.
- Coordinated signal system timing values supersede these values.

LEGEND

Traffic Signal Head

Modified Signal Head

Sign

Pedestrian Signal Head With Push Button & Sign

Signal Pole with Guy

Signal Pole with Sidewalk Guy Inductive Loop Detector

Controller & Cabinet

Junction Box

- 8. Renumber existing loops and signal heads to match phasing
- scheme shown. 9. Install new 2070LX controller in existing cabinet.

	DETI	ECTOR			PROGRAMMING							
L00P	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	DELAY DURING GREEN	NEW CARD
1 A	6 X 4 0	0	2 - 4 - 2	-	1	-	-	Χ	-	Χ	-	-
2·A	6 X 6	300	Exist	_	2	-	_	Χ	Х	Χ	_	_
2·B	6 X 6	300	Exist	-	2	1	<u>-</u>	Χ	X	Χ	_	_
3 A	6 X 4 0	0	2 - 4 - 2	Χ	3	•	-	Χ	-	Χ	<u>-</u>	_
3 B	6 X 4 0	0	2 - 4 - 2	Χ	3	5.0	-	Χ	-	Χ	<u>-</u>	_
3·C	6 X 1 5	0	2 - 4 - 2	Х	3	15.0	<u>-</u>	Χ	-	Χ	<u>-</u>	-
4 A	6 X 4 0	0	2 - 4 - 2	-	4	-	-	Χ	-	Χ	-	_
4 B	6 X 4 0	0	2 - 4 - 2	_	4	4	-	Χ	_	Χ	_	_
5 A	6 X 4 0	0	2 - 4 - 2	-	5	-	<u>-</u>	Χ	-	Χ	_	_
5 B	6 X 4 0	0	2 - 4 - 2	-	5	15.0	-	Χ	-	Χ	-	_
6 A	6 X 6	300	Exist	-	6	-	<u>-</u>	Χ	Χ	Χ	<u>-</u>	<u>-</u>
6·B	6 X 6	300	Exist	_	6	-	-	Χ	Χ	Χ	_	_

MAXTIME DETECTOR INSTALLATION CHART

1+6 DETECTED MOVEMENT UNDETECTED MOVEMENT (OVERLAP) UNSIGNALIZED MOVEMENT

PHASING DIAGRAM

PHASING DIAGRAM DETECTION LEGEND

 $<\!\!--\!\!>$ PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL

FACE

11

21, 22

23, 24

31

3.2

41

42

51

61

62

PHASE

US 29 (Concord Parkway South)

SIGNAL FACE I.D.

All Heads L.E.D.

21, 22

23, 24

62

US 29 (Concord Parkway South)

45 MPH 0% Grade

45 MPH -1% Grade

	MA	XTIME	TIMING	CHART									
FEATURE	PHASE												
FEATURE	1	2	3	4	5	6							
Walk *	_	_	_	_	_	_							
Ped Clear	_	_	_	_	_	_							
Min Green *	7	12	7	7	7	12							
Passage *	2.0	6.0	2.0	2.0	2.0	6.0							
Max 1 *	20	90	35	20	20	90							
Yellow Change	3.0	4.6	3.9	3.4	3.0	4.6							
Red Clear	2.9	1.8	2.9	2.8	3.3	1.8							
Added Initial *	_	15	_	_	_	15							
Maximum Initial *	_	34	_	_	_	34							
Time Before Reduction *	_	15	_	_	_	15							
Time To Reduce *	_	30	_	_	_	30							
Minimum Gap	_	3.0	_	_	_	3.0							
Advance Walk	_	_	-	_	-	_							

* 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

2-in Underground Conduit Right of Way \longrightarrow Directional Arrow Street Name Sign "RIGHT TURN YIELD TO U-TURN" Sign (R10-30A) "NO TURN ON RED" Sign (R10-11) Left Arrow "ONLY" Sign (R3-5L) Right Arrow "ONLY" Sign (R3-5R) Through Arrow "ONLY" Sign (R3-5A) Combined Left, Through and Right Arrow Sign No U-Turn Sign (R3-4) DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

<u>PROPOSED</u>

Signal Upgrade

PLANS PREPARED IN THE OFFICE OF:

421 Fayetteville Street, Suite 600

NC License #F-0102

Raleigh, NC 27601

US 29 (Concord Parkway South) SR 1002 (Cabarrus Avenue)/ The Village Shopping Center

Division 10 Cabarrus County PLAN DATE: February 2025 REVIEWED BY: KP Baumann

Kimley >>> Horn

750 N. Greenfield Pkwy, Garner, NC 27529 PREPARED BY: SP Pennington REVIEWED BY: INIT. DATE 1"=40'

SEAL SEAL 044434

SIG. INVENTORY NO.

10-0702

EXISTING

●→

N/A

Non Lock Detector

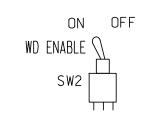
Vehicle Recall

Dual Entry

MIN RECALL MIN RECALL

18 CHANNEL IP CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)



-RF 2010 ----- RP DISABLE

— FYA COMPACT—

├─ WD 1.0 SEC -GY ENABLE -SF#1 POLARIT

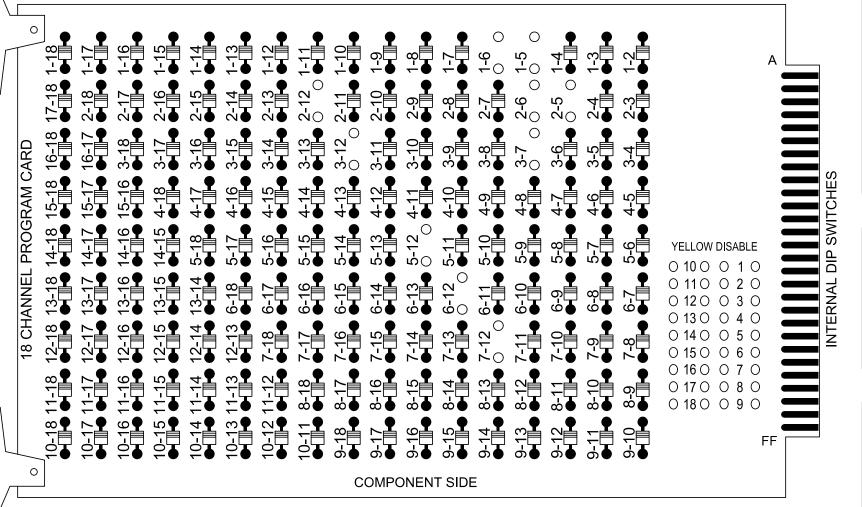
■ RF ŠSM

___⊢FYA 5-11 ──FYA 7-12 ──

= DENOTES POSITION

OF SWITCH

REMOVE DIODE JUMPERS 1-5, 1-6, 2-5, 2-6, 2-12, 3-7, 3-12, 5-12, 6-12, AND 7-12



REMOVE JUMPERS AS SHOWN

NOTES:

- 1. Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
- 2. Ensure jumpers SEL2-SEL5 and SEL9 are present on the monitor board.
- 3. Ensure that Red Enable is active at all times during normal operation.
- 4. Integrate monitor with Ethernet network in cabinet.

NOTES

- 1. To prevent "flash-conflict" problems, insert red flash program blocks for all vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the signal plan.
- 2. Program controller to start up in phase 2 Green No Walk and 6 Green No Walk.
- 3. The cabinet and controller are part of the Concord Central System.

EQUIPMENT INFORMATION

CONTROLLER
OUTPUT FILE POSITIONS18 WITH AUX. OUTPUT FILE
LOAD SWITCHES USEDS1,S2,S4,S5,S7,S8,S10,AUX S5
PHASES USED
OVERLAP "1"NOT USED
OVERLAP "2"NOT USED
OVERLAP "3"NOT USED
OVERLAP "4"*
OVERLAP "5"NOT USED
OVERLAP "6"NOT USED
OVERLAP "7"*

* See overlap programming detail on this sheet.

PROJECT REFERENCE NO. U-5956 Sig 7.1

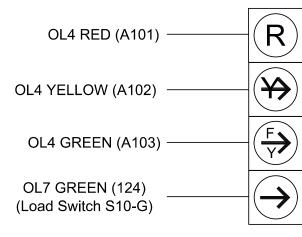
					SI	GNA	AL H	ΙEΑ	DΗ	00	K-L	IP C	HA	RT								
LOAD SWITCH NO.	S1	S2	S3	S	64		S5		S6	S	7	S8	S9	S10	S11	S12	AUX S1	AUX S2	AUX S3	AUX S4	AUX S5	AUX S6
CMU CHANNEL NO.	1	2	13	,	3		4		14	Ę	5	6	15	7	8	16	9	10	17	11	12	18
PHASE	1	2	2 PED	,	3		4		4 PED	5	5	6	6 PED	OL7	8	8 PED	OL1	OL2	SPARE	OL3	OL4	SPARE
SIGNAL HEAD NO	11	21,22	NU	31	32	41	42	62	NU	42	51	61,62	NU	2 3,24	NU	NU	NU	NU	NU	NU	± 23,24	NU
RED		128		116	116	101	101					134									A101	
YELLOW		129		117	117	102	102					135		*								
GREEN		130		118	118	103	103					136										
RED ARROW	125										131											
YELLOW ARROW	126							102		132	132										A102	
FLASHING YELLOW ARROW																					A103	
GREEN ARROW	127			118		103		103		133	133			124								

NU = Not Used

- ★See pictorial of head wiring in detail this sheet.
- *Denotes install load resistor. See load resistor installation detail this sheet.

FYA SIGNAL WIRING DETAIL

(wire signal heads as shown)



23,24

INPUT FILE POSITION LAYOUT

(front view)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.1	Ø 1	Ø 2	SLI	SL	S	S	Ø 4	S	S	S	S	S	S	FS
FILE U	1A	2A	JO T	ŌT	ÖT	Ö	4A	Ō	Ö	Ď T	D T	Ö	P P	DC ISOLATOR
"I" ,	NOT	Ø 2	ШΣΩ	EΣo	E M P	E M P	Ø 4	E M P	E M P	E M	E M P	E M P	E M	ST
L	USED	2B	T Y	T Y	T Y	T Y	4B	T Y	T	T Y	T Y	T	T	DC ISOLATOR
	S	Ø 5	Ø 6	S	S	S	Ø 8	S	Ø 8	S	S	S	S	S
FILE U	D T	, 5A	, 6A	LOT.	D T	D T	3A	Ď T	3C	Ö T	P P	P T	, p	D T
٦J" ₋	E M	Ø 5	Ø 6	ĿΣo	E M	E M P	Ø 8	E M P	NOT	E M P	E M P	E M P	E M	E M P
L	TY	5B	6B	T	T	TY	3B	T Y	USED	T Y	T	TY	T	T
	Y			T Y	Ĭ I	Ϊ́Τ	3B		USED	Т Ү		1 1	T Y	

EX.: 1A, 2A, ETC. = LOOP NO.'S

FS = FLASH SENSE ST = STOP TIME

INPUT FILE CONNECTION & PROGRAMMING CHART

LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	INPUT POINT	DETECTOR NO.	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	DELAY DURING GREEN
1A	TB2-1,2	I1U	56	18	1	1			Х		Х	
2A	TB2-5,6	I2U	39	1	2	2			Х	Χ	Х	
2B	TB2-7,8	I2L	43	5	3	2			Х	Х	Х	
3A	TB7-1,2	J7U	66	32	24	3			Х		Х	
3B	TB7-3,4	J7L	79	45	25	3	5.0		Х		Χ	
3C	TB7-9,10	J9U	59	21	27	3	15.0		Х		Х	
4A	TB6-1,2	I7U	65	31	10	4			Х		Х	
4B	TB6-3,4	I7L	78	44	11	4			Х		Χ	
5A	TB3-5,6	J2U	40	2	16	5			Х		Χ	
5B	TB3-7,8	J2L	44	6	17	5	15.0		Х		Х	
6A	TB3-9,10	J3U	64	30	18	6			Х	Χ	Х	
6B	TB3-11,12	J3L	7:7	43	19	6			Х	Χ	Х	

INPUT FILE POSITION LEGEND: J2L FILE J — SLOT 2-LOWER -

OVERLAP PROGRAMMING

Front Panel

Main Menu > Controller > Overlap > Overlap Parameters / Overlap Timings

Web Interface

Home >Controller >Overlap Configuration >Overlaps

Overlap Plan 1

4	7				
FYA 4 - Section	NORMAL				
2	3				
3	4				
4	4				
0	0				
0.0	0.0				
0.0	0:0				
	2 3 - 0 0.0				

LOAD RESISTOR INSTALLATION DETAIL

(install resistor as shown)

OVERLAP 7 YELLOW FIELD TERMINAL (123) ACCEPTABLE VALUES VALUE (ohms) WATTAGE 1.5K - 1.9K 25W (min) 2.ØK - 3.ØK | 1ØW (mın)

- PHASE 3 YELLOW FIELD TERMINAL (117) REMOVE!!!

Electrical Detail Sheet 1 of 2 ELECTRICAL AND PROGRAMMING

750 N.Greenfield Pkwy,Garner,NC 27529

DETAILS FOR: Prepared for the Offices of: ivision 10 REVISIONS

US 29 (Concord Parkway South) SR 1002 (Cabarrus Avenue)/

The Village Shopping Center Cabarrus County PLAN DATE: February 2025 REVIEWED BY: KP Baumann

> PREPARED BY: SP Pennington REVIEWED BY: INIT. DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED 044434 SIG. INVENTORY NO. 10-0702

THIS ELECTRICAL DETAIL IS FOR

THE SIGNAL DESIGN: 10-0702

DESIGNED: February 2025

SEALED: Ø8-21-2Ø25

REVISED: N/A

PLANS PREPARED IN THE OFFICE OF: **Kimley Morn** NC License #F-0102 421 Fayetteville Street, Suite 600 Raleigh, NC 27601

(919) 677-2000

ROJECT REFERENCE NO.	SHEET NO.
U - 5956	Sig 7.2

OUTPUT CHANNEL CONFIGURATION

Front Panel

Main Menu >Controller >More>Channels>Channels Config

Web Interface

NOTICE OVERLAP 7

ASSIGNED TO

CHANNEL 7

Home >Controller >Advanced IO>Channels>Channel Configuration **Channel Configuration**

	Channel	Control Type	Control Source	Flash Yellow	Flash Red	Flash Alt	MMU Channel
*	1	Phase Vehicle	1		Х	Х	1
	2	Phase Vehicle	2		Х		2
	3	Phase Vehicle	3		Х	Х	3
	4	Phase Vehicle	4		Х		4
	5	Phase Vehicle	5		Х		5
	6	Phase Vehicle	6		Х	Х	6
	7	Overlap	7		Х		7
	8	Phase Vehicle	8		Х	Х	8
	9	Overlap	1		Х	Х	9
	10	Overlap	2		Х	Х	10
	11	Overlap	3		Х		11
	12	Overlap	4		Х		12
	13	Phase Ped	2				13
	14	Phase Ped	4				14
	15	Phase Ped	6				15
	16	Phase Ped	8				16
	17	Overlap	5		Χ	Χ	17
	18	Overlap	6		Х		18

NOTICE: FLASH RED

MAXTIME STARTUP AND SOFTWARE FLASH PROGRAMMING DETAIL

Front Panel

Main Menu >Controller >Unit

Web Interface

Home >Controller >Unit

Modify parameters as shown below and save changes.

Start Up Parameters

Unit Flash Parameters

6

StartUp Clearance Hold All Red Flash Exit Time

> THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 10-0702 DESIGNED: February 2025 SEALED: Ø8-21-2Ø25 REVISED: N/A

Electrical Detail Sheet 2 of 2

ELECTRICAL AND PROGRAMMING DETAILS FOR: Prepared for the Offices of:

US 29 (Concord Parkway South) SR 1002 (Cabarrus Avenue)/ The Village Shopping Center

Division 10 Cabarrus County Concor

PREPARED BY: SP Pennington REVIEWED BY: REVISIONS INIT. DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PLANS PREPARED IN THE OFFICE OF:

Kimley >>> Horn NC License #F-0102 421 Fayetteville Street, Suite 600 Raleigh, NC 27601 (919) 677-2000

750 N.Greenfield Pkwy,Garner,NC 27529

INSTALL ETHERNET CABLE

EXISTING ETHERNET (OR COAX) CABLE

INSTALL SMFO CABLE

EXISTING SMFO CABLE

INSTALL FIBER OPTIC DROP CABLE ASSEMBLY

INSTALL TRACER WIRE

TRENCH 8

INSTALL PVC CONDUIT

INSTALL RIGID, GALVANIZED STEEL CONDUIT

INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD

INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC CABLE SEAL

INSTALL OUTER-DUCT POLYETHYLENE CONDUIT

INSTALL POLYETHYLENE CONDUIT

DIRECTIONAL DRILL CONDUIT

BORE AND JACK CONDUIT

INSTALL CABLE(S) IN EXISTING CONDUIT

INSTALL CABLE(S) IN NEW CONDUIT

INSTALL CABLE(S) IN EXISTING RISER

INSTALL CABLE(S) IN NEW RISER

INSTALL CABLE(S) IN EXISTING CONDUIT STUB-OUTS 21

INSTALL NEW CONDUIT INTO EXISTING CABINET BASE **(22**) (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)

INSTALL NEW RISER INTO EXISTING CABINET BASE (23) (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)

(24) INSTALL NEW CONDUIT INTO BASE MOUNTED CABINET

(25) INSTALL NEW RISER INTO BASE MOUNTED CABINET

INSTALL NEW ETHERNET EDGE SWITCH

INSTALL NEW FIBER OPTIC TRANSCEIVER

INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS AND FUSION SPLICE CABLE IN CABINET

INSTALL UNDERGROUND SPLICE ENCLOSURE

(30) INSTALL AERIAL SPLICE ENCLOSURE

MODIFY EXISTING INTERCONNECT CENTER /SPLICE ENCLOSURE

INSTALL POLE MOUNTED SPLICE CABINET

INSTALL BASE MOUNTED SPLICE CABINET

INSTALL CABINET FOUNDATION

INSTALL CCTV CAMERA POLE MOUNTED CABINET

INSTALL CCTV CAMERA ASSEMBLY

INSTALL CCTV CAMERA WOOD POLE

INSTALL CCTV CAMERA METAL POLE AND FOUNDATION

INSTALL JUNCTION BOX

INSTALL OVERSIZED JUNCTION BOX

INSTALL SPECIAL OVERSIZED JUNCTION BOX (36" x 24" x 24")

REMOVE EXISTING JUNCTION BOX

INSTALL WOOD POLE

REMOVE EXISTING WOOD POLE

INSTALL AERIAL GUY ASSEMBLY

INSTALL STANDARD GUY ASSEMBLY

INSTALL SIDEWALK GUY ASSEMBLY

INSTALL MESSENGER CABLE

REMOVE EXISTING COMMUNICATIONS AND MESSENGER CABLE

REMOVE EXISTING COMMUNICATIONS CABLE

BACK PULL EXISTING COMMUNICATIONS CABLE

INSTALL CELL MODEM AND ANTENNA

INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE

INSTALL DELINEATOR MARKER

INSTALL JUNCTION BOX MARKER

STORE 20 FEET OF COMMUNICATIONS CABLE

STORE 50 FEET OF EACH COMMUNICATIONS CABLE

LASH CABLE(S) TO EXISTING COMMUNICATIONS CABLE

LASH CABLE(S) TO EXISTING MESSENGER CABLE

LASH CABLE(S) TO NEW MESSENGER CABLE

MODIFY EXISTING ELECTRICAL SERVICE

INSTALL NEW ELECTRICAL SERVICE

INSTALL NEW EQUIPMENT CABINET DISCONNECT

BOND TRACER WIRE TO EQUIPMENT GROUND BUS

DO NOT BOND TRACER WIRE TO

EQUIPMENT GROUND BUS

BOND RISER AND MESSENGER CABLE TO POLE GROUND

BOND RISER TO POLE GROUND

BOND MESSENGER CABLE TO POLE GROUND

INSTALL HEAT SHRINK TUBING RETROFIT KIT

INSTALL MOLDABLE DUCT SEAL

SLACK SPAN

ATTACHMENT POINT:

XX"/SS DISTANCE ABOVE (IN)/ATTACHMENT POINT REFERENCE POINT

XX-XXXX

NEW

REFERENCE POINT XX"/SS / DISTANCE BELOW (IN)/ATTACHMENT POINT

PLANS PREPARED IN THE OFFICE OF:

NC License #F-0102

Raleigh, NC 27601

(919) 677-2000

Kimley»Horn

421 Fayetteville Street, Suite 600

"SS" REFERENCE LOCATION FS = FRONT SIDE OF POLEBS = BACK SIDE OF POLE

TWISTED PAIRS PER CABLE, ETC.

LEGEND

NEW CONDUIT

EXISTING CONDUIT

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

SPLICE CABINET

FLAT PANEL ANTENNA (SINGLE)

YAGI ANTENNA (DOUBLE) FOR REPEATER OPERATION

YAGI ANTENNA (SINGLE)

OMNI ANTENNA

SIGNAL POLE

SIGNAL INVENTORY NUMBER

NEW FIBER OPTIC COMMUNICATIONS CABLE

EXISTING COMMUNICATIONS CABLE

NEW DIRECTIONAL DRILLED CONDUIT

NEW AERIAL GUY ASSEMBLY

INDICATES NUMBER OF RISER(S)/CONDUIT(S)

XX-XXXX

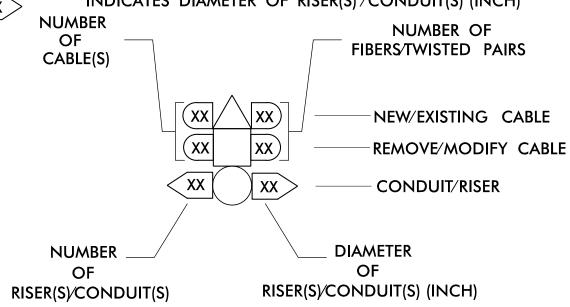
CONSTRUCTION NOTE SYMBOLOGY KEY

INDICATES NUMBER OF CABLES, LOOPS, ETC.

INDICATES NUMBER OF FIBERS PER CABLE,

EXISTING

XX INDICATES DIAMETER OF RISER(S)/CONDUIT(S) (INCH) NUMBER NUMBER OF



Prepared for the Offices of:

CITY OF CONCORD SIGNAL SYSTEM Construction Notes and Legend

Division 10 Cabarrus County PLAN DATE: February 2025 REVIEWED BY: KW Smith

Concord 750 N. Greenfield Pkwy., Garner, NC 27529 PREPARED BY: SP Pennington REVIEWED BY: REVISIONS INIT. DATE

kevin Smith

8/21/2025 DATE SIGNATURE CADD Filename:

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL

SIGNATURES COMPLETED

SEAL

SEAL 030472

PROJECT REFERENCE NO. SCP-2 U-5956

kevin Smith

CADD Filename:

SIGNATURE

8/21/2025 DATE

INIT. DATE

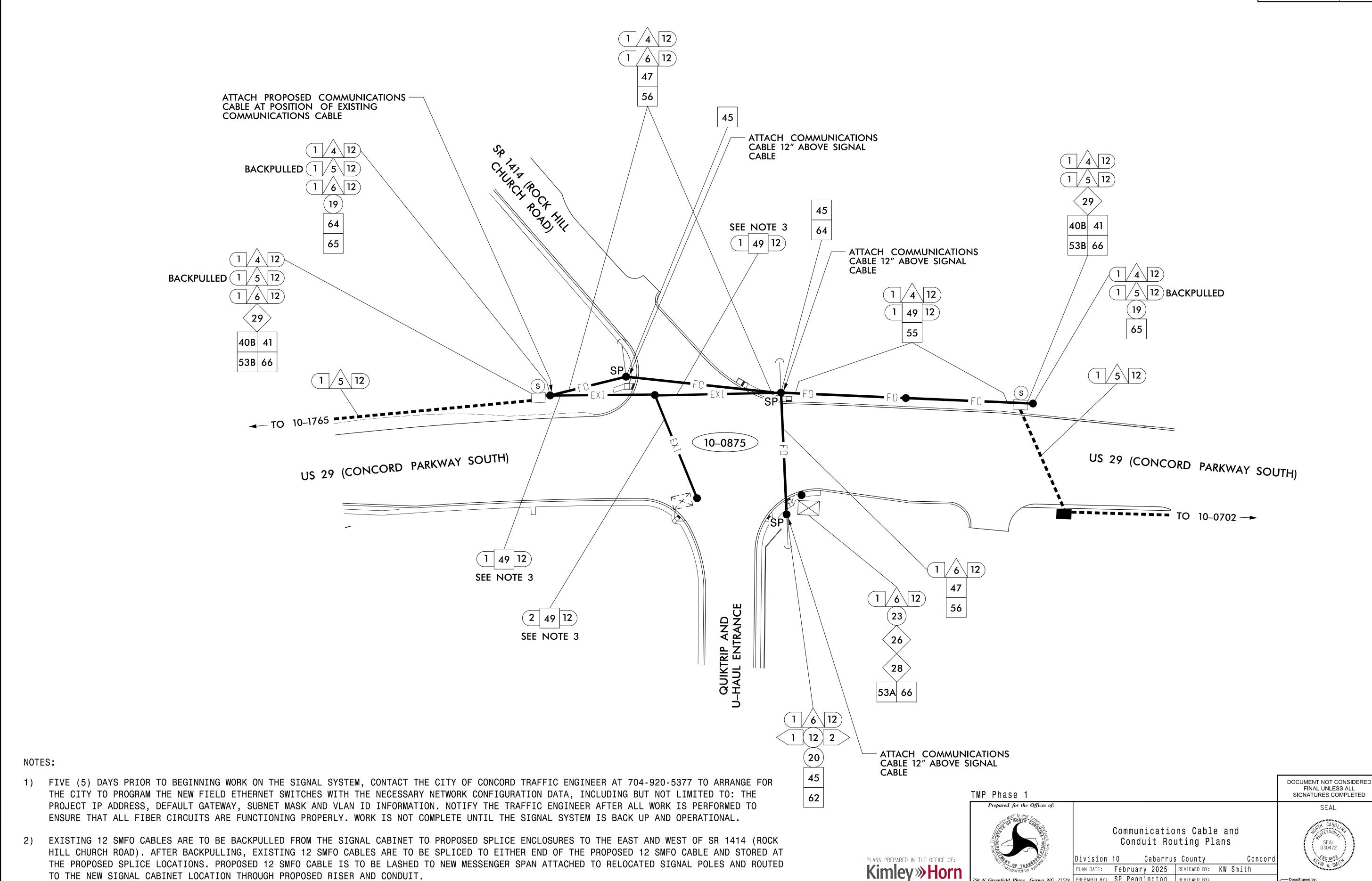
750 N. Greenfield Pkwy., Garner, NC 27529 PREPARED BY: SP Pennington REVIEWED BY:

N.T.S.

NC License #F-0102

(919) 677-2000

421 Fayetteville Street, Suite 600 Raleigh, NC 27601



TO THE NEW SIGNAL CABINET LOCATION THROUGH PROPOSED RISER AND CONDUIT.

REMOVE EXISTING MESSENGER CABLE AFTER BACKPULLING COMMUNICATIONS CABLES TO NEW SPLICE ENCLOSURES.

PROJECT REFERENCE NO. U-5956 SCP-3

COLOR CODE TIA/EIA 598-C

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

(3) GREEN (9) YELLOW (4) BROWN (10) VIOLET (5) SLATE (11) ROSE

(12) AQUA

NEW CABLE TO

SPLICE ENCLOSURE ON

US 29 (CONCORD

PARKWAY SOUTH) EAST OF

SR 1414 (ROCK HILL

CHURCH ROAD)

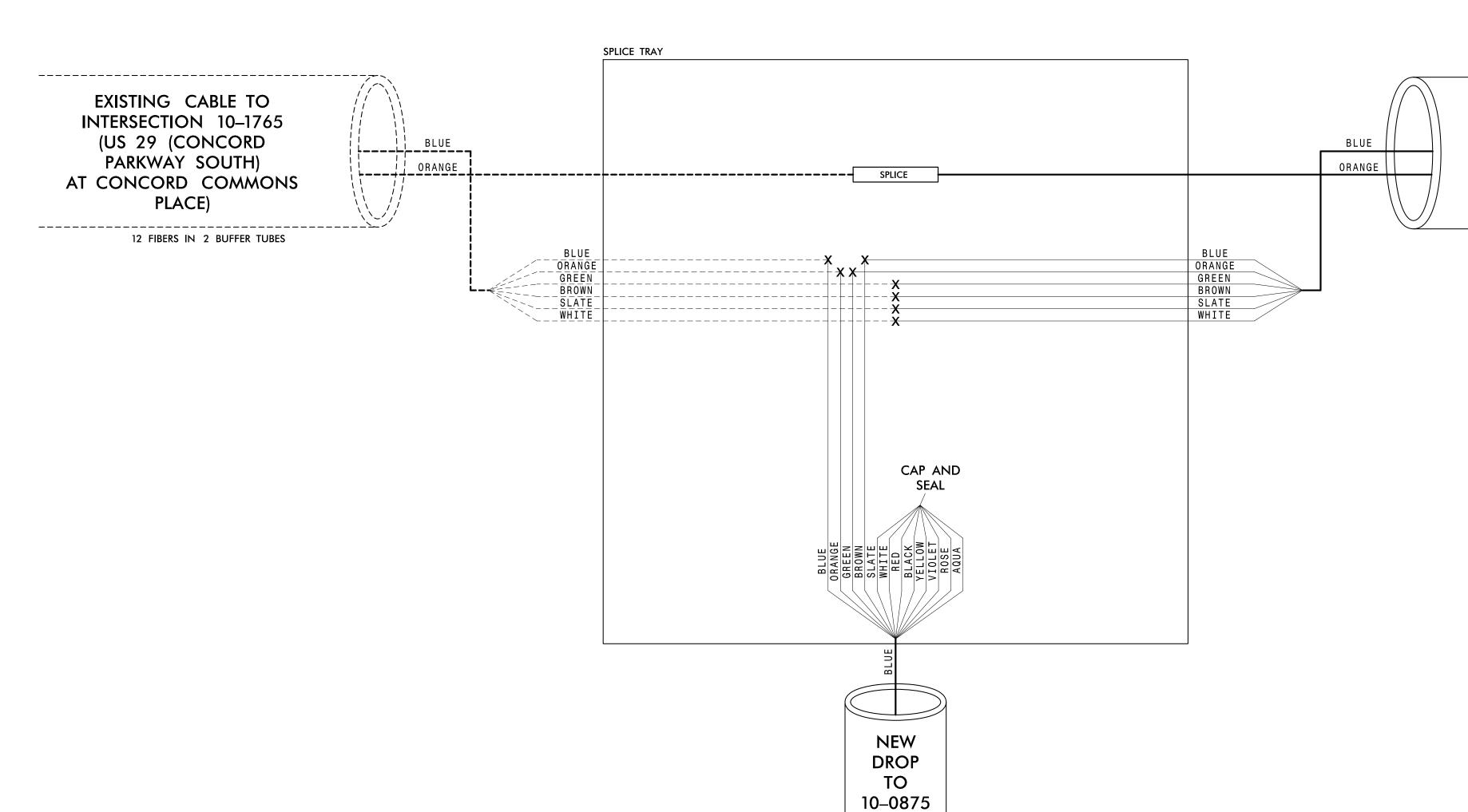
12 FIBERS IN 2 BUFFER TUBES

LEGEND

X – FUSION SPLICE INDIVIDUAL FIBER

O - EXISTING SPLICE

EXPRESS ENTIRE BUFFER TUBE SPLICE ENTIRE BUFFER TUBE OR MAINTAIN IF EXISTING EXPRESSED



NOTES:

1) FIVE (5) DAYS PRIOR TO BEGINNING WORK ON THE SIGNAL SYSTEM, CONTACT THE CITY OF CONCORD TRAFFIC ENGINEER AT 704-920-5377 TO ARRANGE FOR THE CITY 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 INFORMATION. NOTIFY THE TRAFFIC ENGINEER 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.

NEW UNDERGROUND SPLICE ENCLOSURE AT

SR 1414 (ROCK HILL CHURCH ROAD)/QUIKTRIP

US 29 (CONCORD PARKWAY SOUTH) AT

AND U-HAUL ENTRANCE

(SIG ID 10-0875)

- 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.

PLANS PREPARED IN THE OFFICE OF: Kimley»Horn NC License #F-0102 421 Fayetteville Street, Suite 600 Raleigh, NC 27601 (919) 677-2000

TMP Phase 1 750 N. Greenfield Pkwy., Garner, NC 27529 PREPARED BY: SP Pennington REVIEWED BY:

CITY OF CONCORD SIGNAL SYSTEM Splice Detail

Division 10 Cabarrus County Concord PLAN DATE: February 2025 REVIEWED BY: KW Smith

INIT. DATE

kevin Smith

CABLE TO 10-0875

NEW

DROP

SWITCH

GIGE SWITCH

CABINET AT INTERSECTION 10-0875

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

2070 CONTROLLER

SEAL 030472

8/21/2025 DATE

PROJECT REFERENCE NO. U-5956 SCP-4

IF EXISTING EXPRESSED

NEW UNDERGROUND SPLICE ENCLOSURE ON US 29 (CONCORD PARKWAY SOUTH) EAST OF SR 1414 (ROCK HILL CHURCH ROAD)

LEGEND COLOR CODE TIA/EIA 598-C X – FUSION SPLICE INDIVIDUAL FIBER O – EXISTING SPLICE (1) BLUE (7) RED (2) ORANGE (8) BLACK EXPRESS ENTIRE BUFFER TUBE (3) GREEN (9) YELLOW SPLICE ENTIRE BUFFER TUBE OR MAINTAIN

(10) VIOLET

(11) ROSE

(12) AQUA

(4) BROWN

(5) SLATE

(6) WHITE

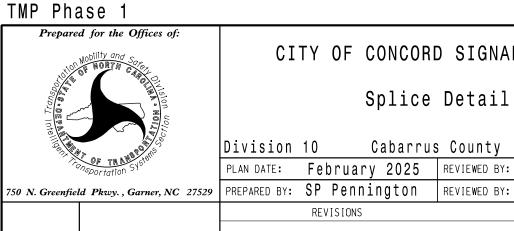
SPLICE TRAY EXISTING CABLE TO NEW CABLE TO INTERSECTION 10–0702 INTERSECTION 10–0875 (US 29 (CONCORD PARKWAY SOUTH) AT SR (US 29 (CONCORD PARKWAY SOUTH) 1002 (CABARRUS AVENUE)/SR 1375 (UNION ORANGE ORANGE! AT SR 1414 (ROCK HILL CHURCH ROAD)/ CEMETARY ROAD) AND THE VILLAGE QUIKTRIP AND U-HAUL ENTRANCE) SHOPPING CENTRE ENTRANCE) 12 FIBERS IN 2 BUFFER TUBES 12 FIBERS IN 2 BUFFER TUBES

NOTES:

- 1) FIVE (5) DAYS PRIOR TO BEGINNING WORK ON THE SIGNAL SYSTEM, CONTACT THE CITY OF CONCORD TRAFFIC ENGINEER AT 704-920-5377 TO ARRANGE FOR THE CITY 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 INFORMATION. NOTIFY THE TRAFFIC ENGINEER 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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 - 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.





FINAL UNLESS ALL SIGNATURES COMPLETED CITY OF CONCORD SIGNAL SYSTEM

Splice Detail

Division 10 Cabarrus County Concord PLAN DATE: February 2025 REVIEWED BY: KW Smith

kevin Smith INIT. DATE 8/21/2025 DATE

DOCUMENT NOT CONSIDERED