PHASING DIAGRAM

02+6
04+8
02+5

SIGNAL FACE I.D.

All Heads L.E.D.

TABLE OF OPERATION

SIGNAL FACE	PHASE			
	025	026	048	FACE
21,22	G	G	R	Y
41,42	R	R	G	R
51	←F, ←Y, ←R, ←Y			
61,62	R	G	R	Y
81,82	R	R	G	R
P21,P22	W	W	DW	DRK
P61,P62	DW	W	DW	DRK
P81,P82	DW	DW	W	DRK

51 — R,Y,F,← (12")
21,22 / 41,42 / 61,62 / 81,82 — R,Y,G (12")
P21,P22 / P61,P62 / P81,P82 (16")

MAXTIME DETECTOR INSTALLATION CHART

	DETECTOR				PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOP LINE (FT)	TURNS	NEW LOOP	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL DELAY DURING GREEN	NEW CARD
2A *	EXIST	70	EXIST	-	2	-	-	X	-	X	-
4A	6X60	+30	2-4-2	-	4	10.0	-	X	-	X	-
5A	6X40	0	2-4-2	X	5	15.0	-	X	-	X	-
					2	-	-	X	-	X	-
6A	6X6	70	4	X	6	-	-	X	-	X	-
6B	6X6	70	4	X	6	-	-	X	-	X	-
8A	6X60	+5	3	-	8	10.0	-	X	-	X	-

* Microwave Detection Zone

3 Phase
Fully Actuated
D13-22_Asheville

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. Enable Backup Prevention programming for phase 2 to allow the controller to clear from phase 02+6 to phase 02+5 by progressing through an all red display.
4. Set all detector units to presence mode.
5. In the event of loop replacement, refer to the current ITS and Signals Design Manual and submit a Plan of Record to the Signal Design Section.
6. Disconnect existing pushbuttons for pedestrian signal heads P21 and P22.
7. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls for phase 8.
8. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
9. See Pavement Marking Plans for proposed crosswalk locations.
10. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
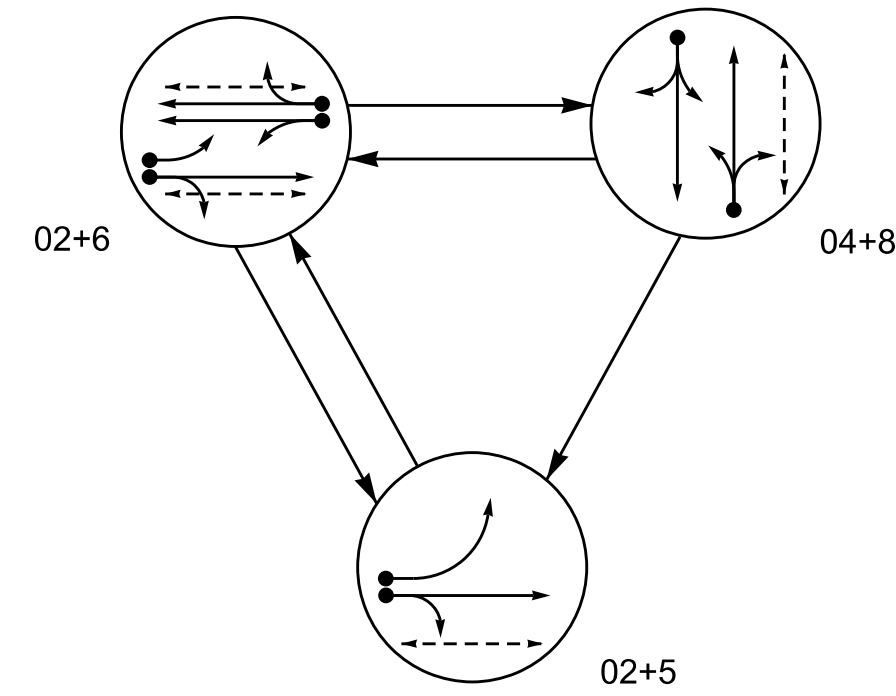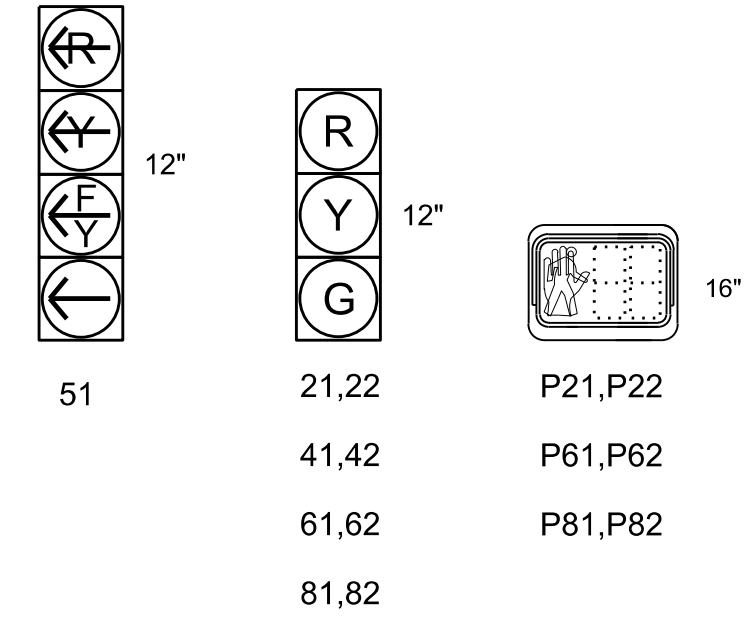
PHASING DIAGRAM DETECTION LEGEND

- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

MAXTIME TIMING CHART

FEATURE	PHASE				
	2	4	5	6	8
Walk *	14	-	-	14	14
Ped Clear	11	-	-	10	13
Min Green *	10	7	7	10	7
Passage *	3.0	2.0	2.0	3.0	2.0
Max 1 *	60	25	20	60	25
Yellow Change	3.0	3.0	3.0	3.0	3.0
Red Clear	3.3	3.6	2.5	3.3	3.6
Red Revert	5.0	2.0	2.0	2.0	2.0
Added Initial *	-	-	-	-	-
Maximum Initial *	-	-	-	-	-
Time Before Reduction *	-	-	-	-	-
Time To Reduce *	-	-	-	-	-
Minimum Gap	-	-	-	-	-
Advance Walk	7	-	-	7	7
Non Lock Detector	-	X	X	-	X
Vehicle Recall	PED RECALL	-	-	PED RECALL	-
Dual Entry	-	X	-	-	X
Actuated Rest in Walk	X	-	-	X	-
Simultaneous Start	-	X	-	-	X
Ped Recycle	-	X	-	X	-

* These values may be field adjusted. Do not adjust Min Green and Passage times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.
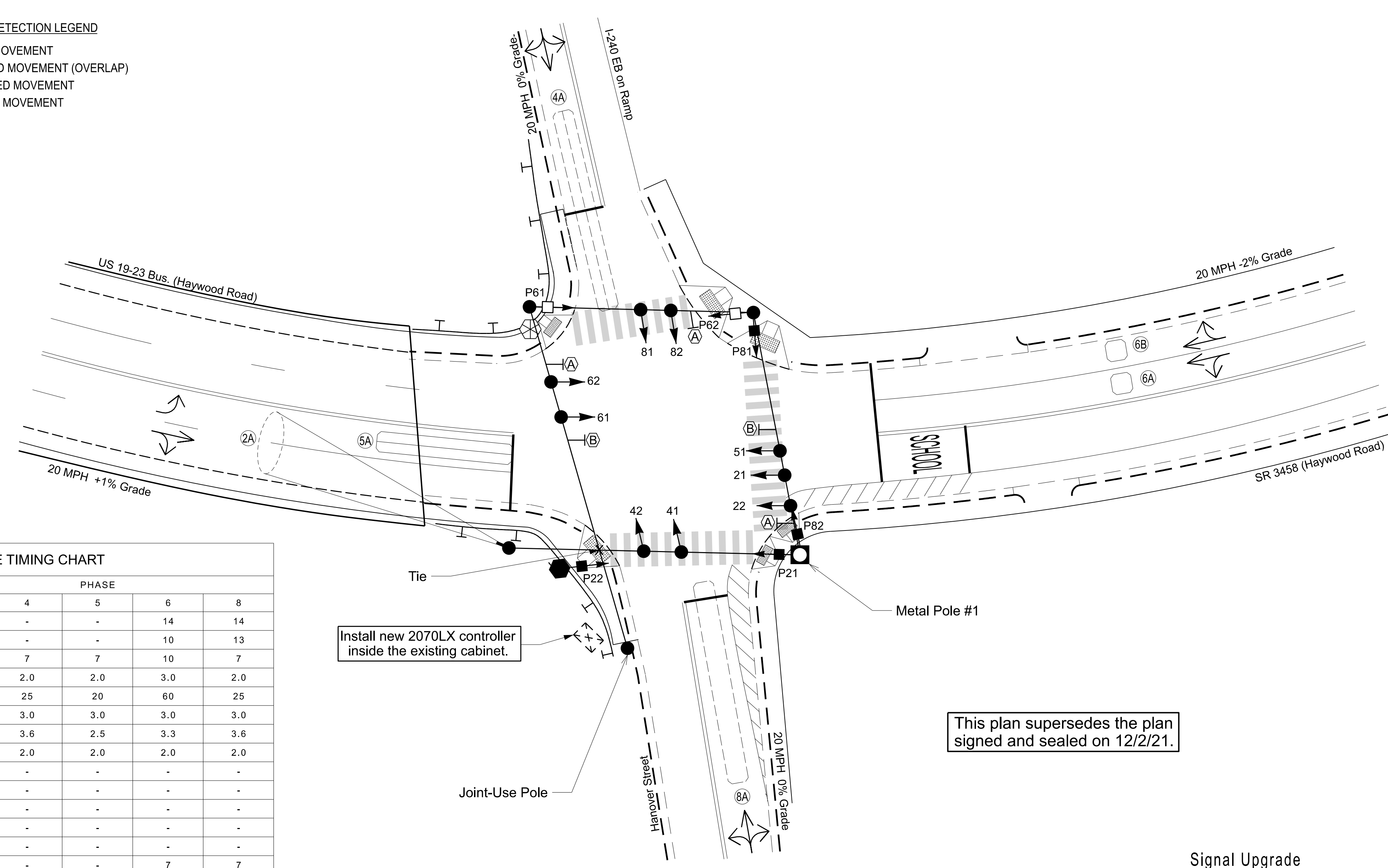
Install new 2070LX controller inside the existing cabinet.

This plan supersedes the plan signed and sealed on 12/2/21.

Metal Pole #1

Joint-Use Pole

Tie

I-240 EB on Ramp
20 MPH 0% Grade
US 19-23 Bus. (Haywood Road)
20 MPH +1% Grade
20 MPH -2% Grade
SR 3458 (Haywood Road)
Hanover Street
20 MPH 0% Grade

SIGNALS

LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
X-UC	2-in Underground Conduit	UC
N/A	Right of Way	
	Directional Arrow	
N/A	Curb Ramp	
	Metal Strain Pole	
	Type II Signal Pedestal	
	Type I Pushbutton Post	
(A)	Right "TURNING VEHICLES" Yield "TO" Pedestrians Sign (R10-14L)	(A)
(B)	Left "TURNING VEHICLES" Yield "TO" Pedestrians Sign (R10-15L)	(B)
	Detection Zone	

Signal Upgrade

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL
NORTH CAROLINA
PROFESSIONAL
SEAL
043914
ENGINEER
RICHARD N ZINSER

DocuSigned by: R. Nicholas Zinser 02/09/2024
F138897347224BF
DATE

SCALE
0   20
1"=20'

REVISIONS | INIT. | DATE

SIG. INVENTORY NO.   13-0218