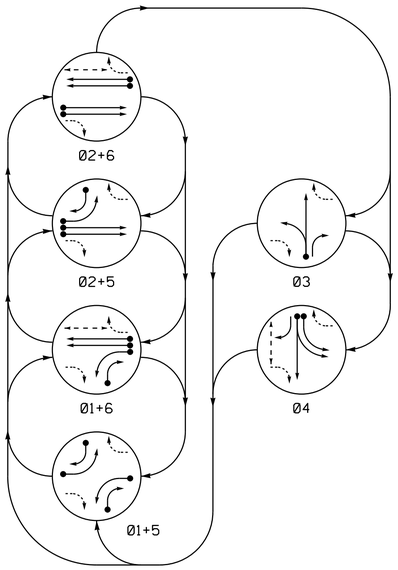
PROJECT REFERENCE NO.	SHEET NO.
U-6036	Sig 3.0

6 Phase
Fully Actuated
Isolated

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

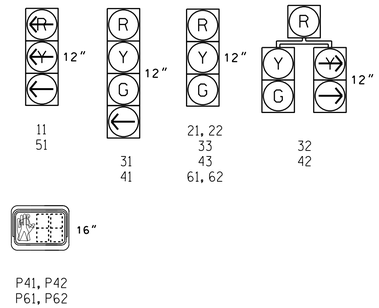
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE 01+5	01+6	02+5	02+6	03	04	FLASH
11	←	←	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
21, 22	R	R	G	G	R	R	Y
31	R	R	R	R	G ←	R	R
32	R/←	R/←	R	R	G	R	R
33	R	R	R	R	G	R	R
41	R	R	R	R	G ←	R	R
42	R/←	R	R/←	R	R	G	R
43	R	R	R	R	R	G	R
51	←	~~R~~	←	~~R~~	~~R~~	~~R~~	~~R~~
61, 62	R	G	R	G	R	R	Y
P41, P42	DW	DW	DW	DW	DW	W	DRK
P61, P62	DW	W	DW	W	DW	DW	DRK

SIGNAL FACE I.D.

All Heads L.E.D.



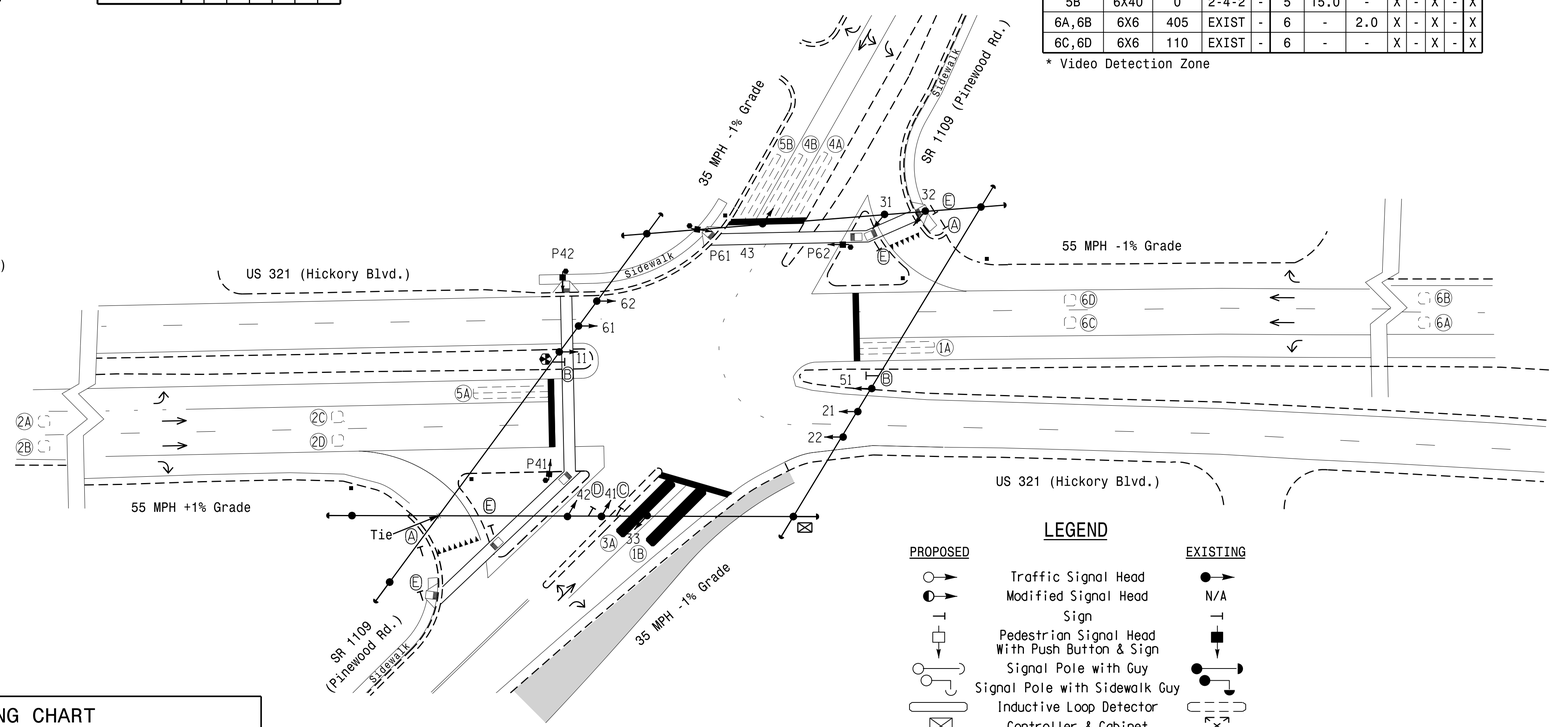
MAXTIME DETECTOR INSTALLATION CHART

DETECTOR					PROGRAMMING						
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	DELAY DURING GREEN	NEW CARD
1A	6X40	0	2-4-2	-	1	-	-	X	-	X	-	X
1B*	6X40	0	*	*	1	15.0	-	X	-	X	-	-
2A	6X6	405	EXIST	-	2	-	2.0	X	-	X	-	X
2B	6X6	405	EXIST	-	2	-	2.0	X	-	X	-	X
2C,2D	6X6	110	EXIST	-	2	-	-	X	-	X	-	X
3A*	6X40	0	*	*	3	-	-	X	-	X	-	-
4A	6X40	0	2-4-2	-	4	-	-	X	-	X	-	X
4B	6X40	0	2-4-2	-	4	-	-	X	-	X	-	X
5A	6X40	0	2-4-2	-	5	-	-	X	-	X	-	X
5B	6X40	0	2-4-2	-	5	15.0	-	X	-	X	-	X
6A,6B	6X6	405	EXIST	-	6	-	2.0	X	-	X	-	X
6C,6D	6X6	110	EXIST	-	6	-	-	X	-	X	-	X

* Video Detection Zone

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2024, "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. The cabinet should be designed to include an Auxiliary Output file for future use.
8. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
9. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
10. Pavement markings are existing.
11. This intersection uses video detection. Install detectors according to the manufacturer's instructions to achieve the desired detection.



This plan supersedes the plan signed and sealed on 9/22/21.

LEGEND

PROPOSED		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	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way	
	Directional Arrow	
	Type I Pushbutton Post	
	Type II Signal Pedestal	
N/A	Curb Ramp	
	Video Detection Zone	N/A
	Construction Area	
Ⓐ	"YIELD" Sign (R1-2)	Ⓐ
Ⓑ	"U-TURN YIELD TO RIGHT TURN" Sign (R10-16)	Ⓑ
Ⓒ	Left Turn Only Sign (R3-5L)	Ⓒ
Ⓓ	Left/Straight Arrow Sign (R3-6L)	Ⓓ
Ⓔ	Pedestrian Sign (W11-2) and Diagonal Downward Arrow (W16-7p)	Ⓔ

MAXTIME TIMING CHART

FEATURE	PHASE 1	2	3	4	5	6
Walk *	–	–	–	7	–	7
Ped Clear *	–	–	–	24	–	17
Min Green *	7	14	7	7	7	14
Passage *	2.0	2.0	2.0	2.0	2.0	2.0
Max 1 *	15	75	30	30	15	75
Yellow Change	3.0	5.3	3.9	3.9	3.0	5.3
Red Clear	4.0	1.9	3.0	3.1	4.4	1.9
Added Initial *	–	–	–	–	–	–
Maximum Initial *	–	–	–	–	–	–
Time Before Reduction *	–	–	–	–	–	–
Time To Reduce *	–	–	–	–	–	–
Minimum Gap	–	–	–	–	–	–
Advance Walk	–	–	–	–	–	–
Non Lock Detector	X	–	X	X	X	–
Vehicle Recall	–	MIN RECALL	–	–	–	MIN RECALL
Dual Entry	–	–	–	–	–	–

* 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.

Signal Upgrade-Temporary Design

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared for: Transportation Mobility and Safety Division, Signal Design Section, Department of Transportation, State of North Carolina
750 N.Greenfield Pkwy,Garner,NC 27529

US 321 (Hickory Blvd.) at SR 1109 (Pinewood Rd.)

Division 11 Caldwell County Granite Falls

PLAN DATE: August 2023 REVIEWED BY: R.N. Zinser
PREPARED BY: T.A. Kenion REVIEWED BY:

SCALE 0 40' 1"=40'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 043914 ENGINEER RICHARD N. ZINSER

DocuSigned by: R. Nicholas Zinser E13B8D7A4722A8F 12/04/2023 DATE

SIG. INVENTORY NO. 11-0082T

04-DEC-2023 09:37
R:\Traffic\Signals\Signal Design Section\Western Region\Div-11\U-6036\2023-04\11-0082\temp. 1 Design\11008271_sig_dsn_2023rmsd.dgn
tkenion