PROJECT REFERENCE NO.	SHEET NO.
U-6105	SIG. 1.0

DEFAULT PHASING DIAGRAM

DEFAULT PHASING TABLE OF OPERATION

SIGNAL FACE	1+5	1+6	2+5	2+6	3+7	3+8	4+7	4+8	FLASH
11	←	←	FY	FY	↲	↲	↲R	↲R	←R
21,22	R	R	G	G	R	R	R	R	R
31	↲R	↲R	↲R	↲R	←	←	FY	FY	↲R
41,42	R	R	R	R	R	R	G	G	R
43	FY	FY	FY	FY	R	R	R	R	FY
51	↲	↲	↲R	↲R	↲R	↲R	↲R	↲R	↲R
61,62,63	R	G	R	G	R	R	R	R	R
71	↲R	↲R	↲R	↲R	←	←	FY	FY	↲R
81,82	R	R	R	R	R	G	R	G	R
P61,P62	DW	W	DW	W	DW	DW	DW	DW	DRK

ALTERNATE PHASING DIAGRAM

ALTERNATE PHASING TABLE OF OPERATION

SIGNAL FACE	1+5	1+6	2+5	2+6	3+7	3+8	4+7	4+8	FLASH
11	←	←	↲R	↲R	↲R	↲R	↲R	↲R	←R
21,22	R	R	G	G	R	R	R	R	R
31	↲R	↲R	↲R	↲R	←	←	FY	FY	↲R
41,42	R	R	R	R	R	R	G	G	R
43	FY	FY	↲R	↲R	R	R	R	R	↲R
51	↲	↲	↲R	↲R	↲R	↲R	↲R	↲R	↲R
61,62,63	R	G	R	G	R	R	R	R	R
71	↲R	↲R	↲R	↲R	←	←	FY	FY	↲R
81,82	R	R	R	R	R	G	R	G	R
P61,P62	DW	W	DW	W	DW	DW	DW	DW	DRK

MAXTIME DETECTOR INSTALLATION CHART

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	X	1	15.0*	-		X		X	-
					6#	3.0	-		X		X	X
2A	6X6	300	6	X	2	-	-		X	X	X	-
3A	6X40	0	2-4-2	X	3	15.0	-		X		X	-
					8	3.0	-		X		X	X
4A	6X40	0	2-4-2	X	4	-	-		X		X	-
5A	6X40	0	2-4-2	X	5	15.0	-		X		X	-
					2#	3.0	-		X		X	X
5B	6X40	0	2-4-2	-	5	15.0			X		X	-
6A	6X6	300	EXIST	-	6	-	-		X	X	X	-
7A	6X40	0	2-4-2	-	7	15.0	-		X		X	-
					4	3.0	-		X		X	X
10A	6X40	0	2-4-2	X	8	10.0	-		X		X	X

* Reduce Delay to 3 seconds during Alternate Phasing operation.
\# Disable Phase call for loop during Alternate Phasing operation.

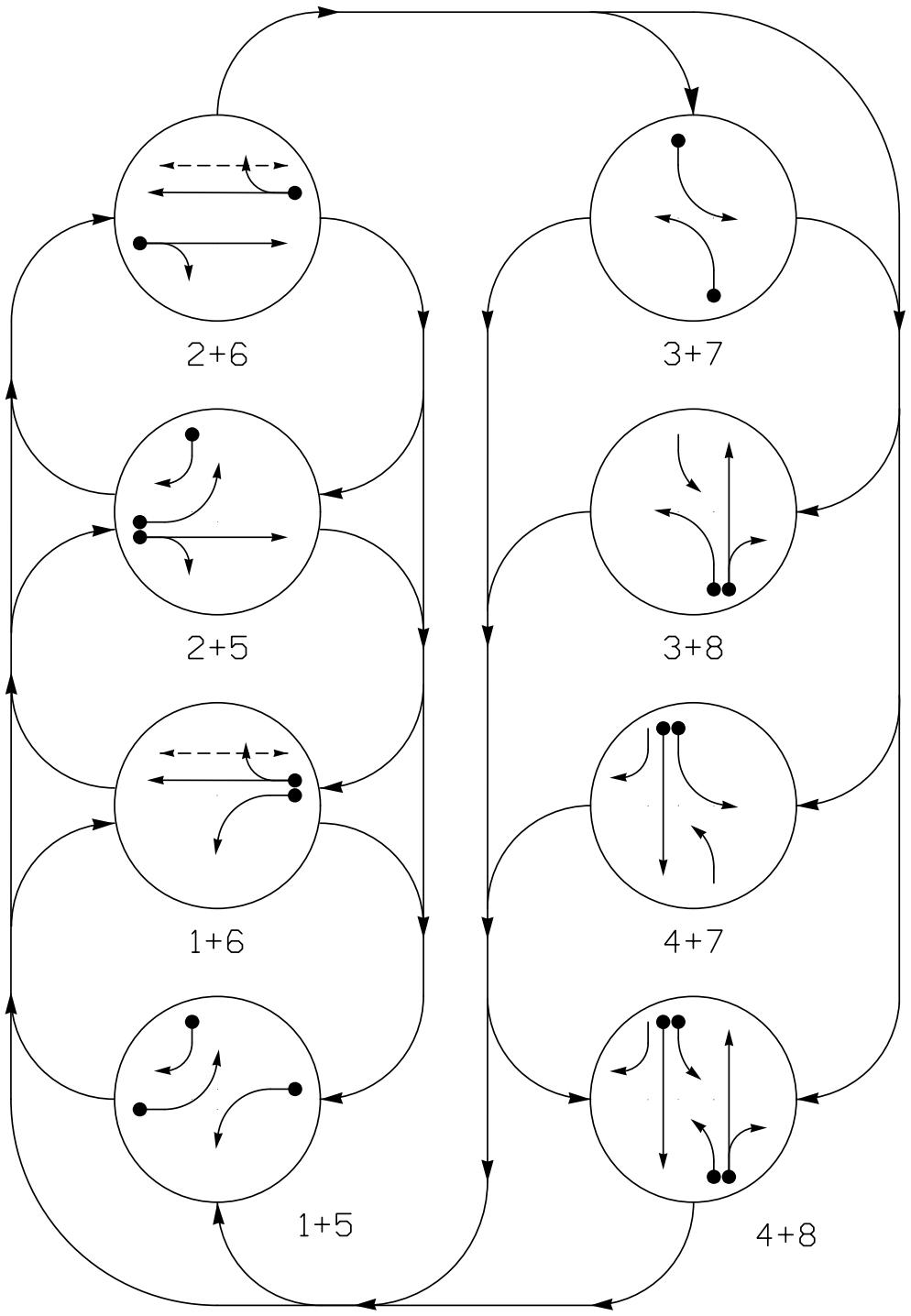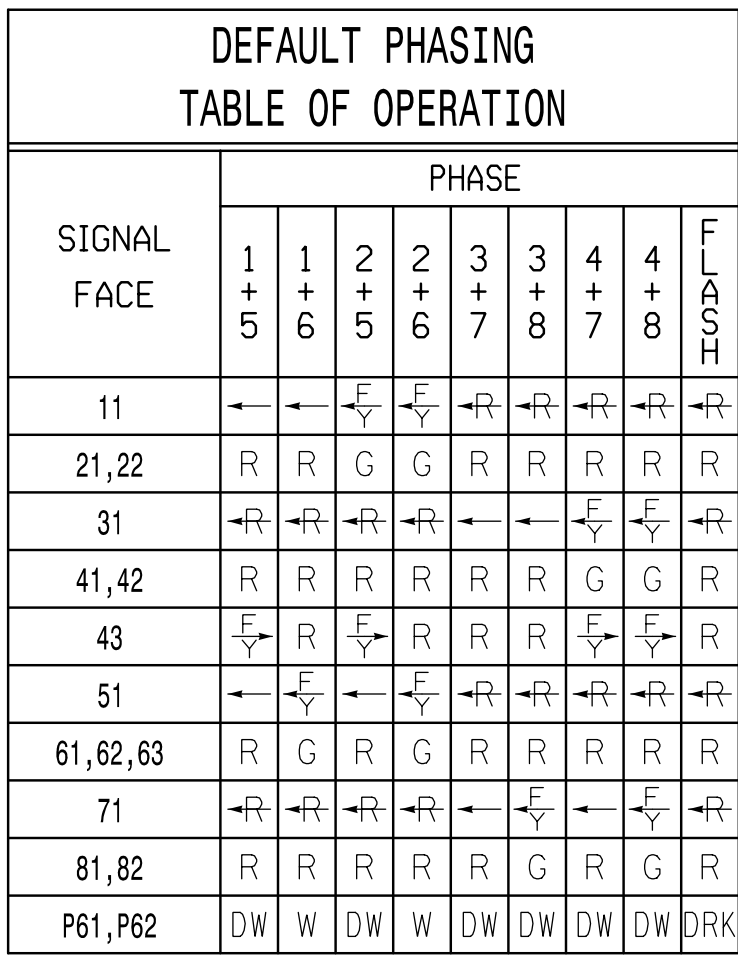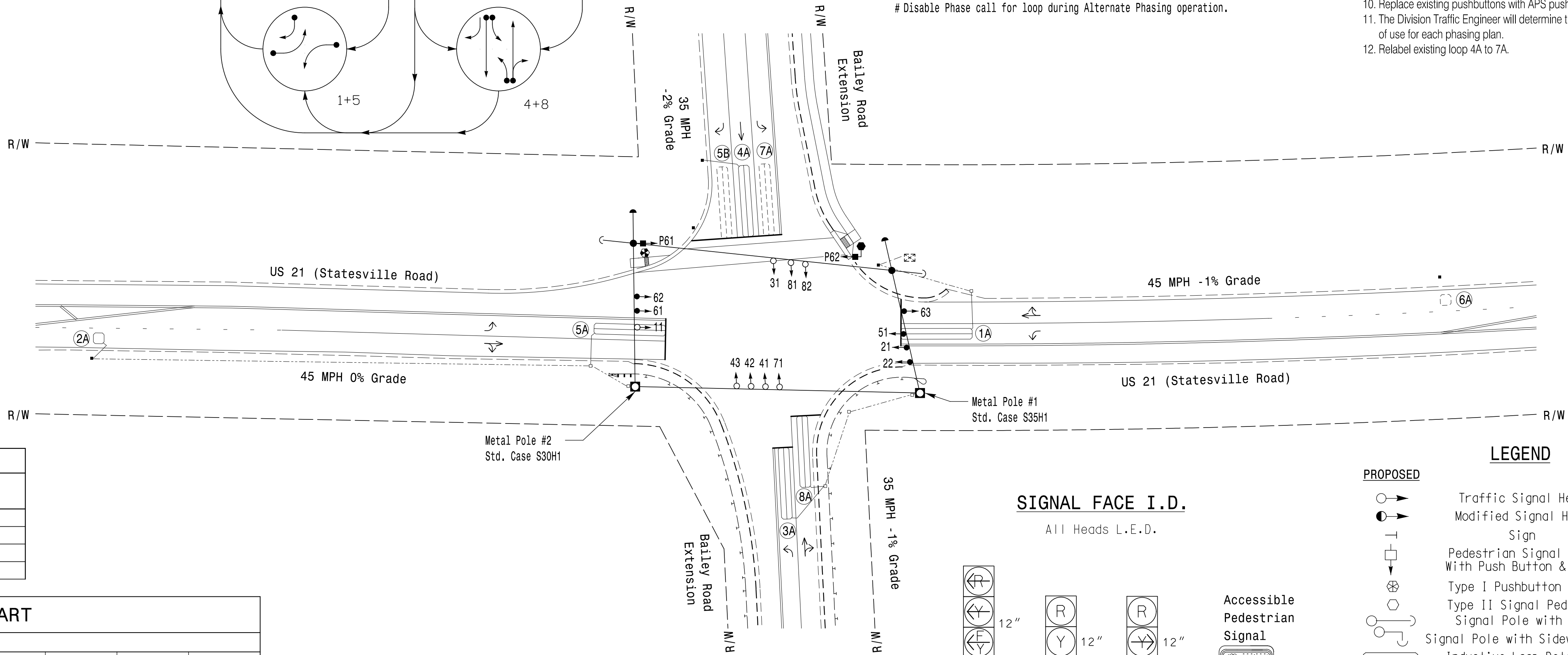## 8 Phase Fully Actuated w/ Alternate Phasing Isolated

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.
5. Program phase 4 and phase 8 for dual entry.
6. 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" time only.
9. This intersection features accessible pedestrian signals utilizing percussive tone walk indications and/or speech messages.
10. Replace existing pushbuttons with APS pushbuttons.
11. The Division Traffic Engineer will determine the hours of use for each phasing plan.
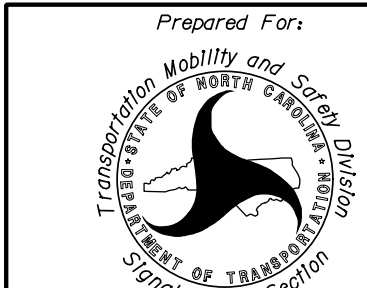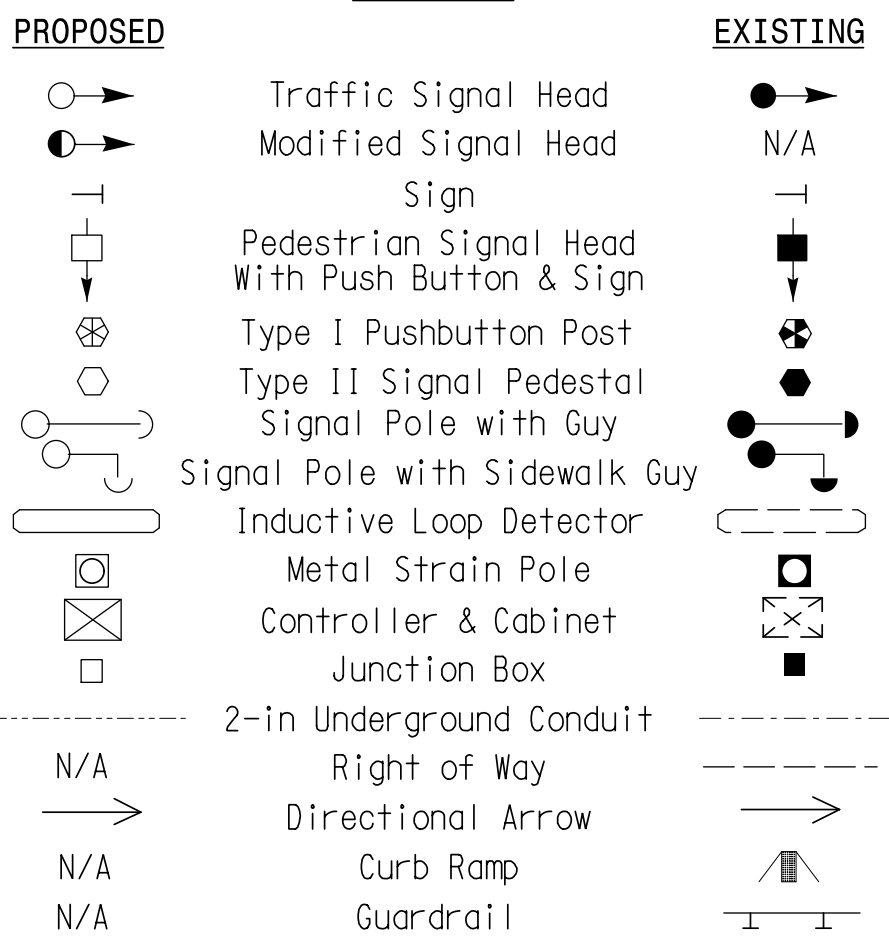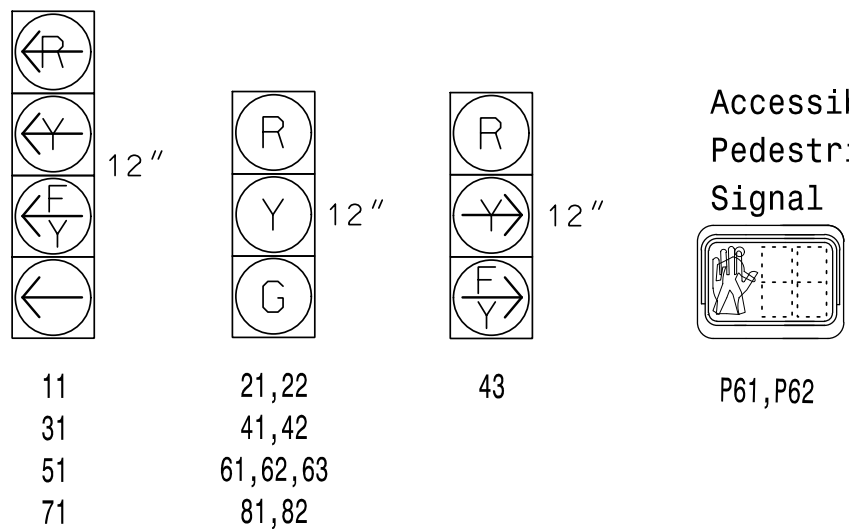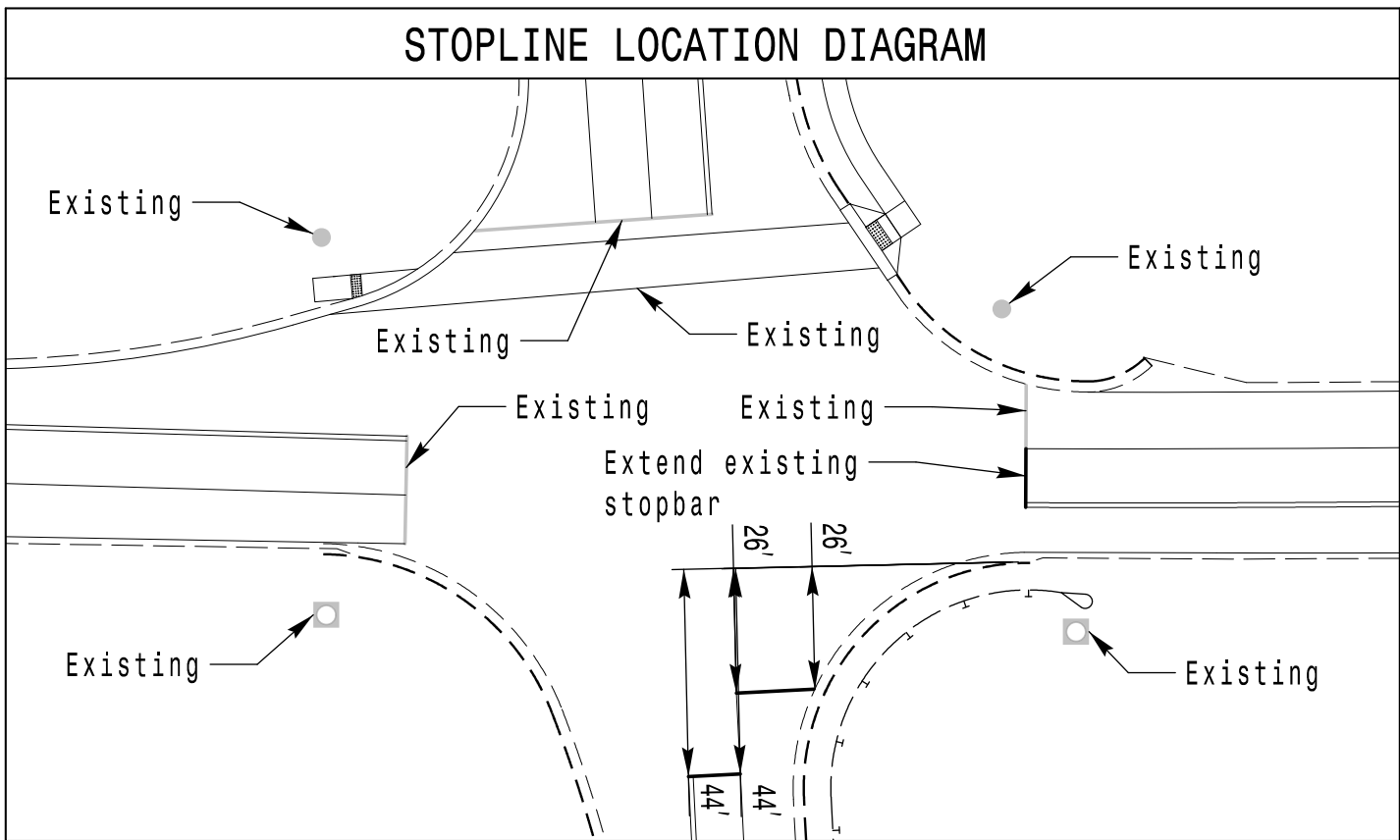12. Relabel existing loop 4A to 7A.

PHASING DIAGRAM DETECTION LEGEND

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

ACCESSIBLE PEDESTRIAN SIGNAL OPERATION

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

MAXTIME TIMING CHART

FEATURE	PHASE 1	2	3	4	5	6	7	8
Walk *	–	–	–	–	–	7	–	–
Ped Clear	–	–	–	–	–	27	–	–
Min Green *	7	12	7	7	7	12	7	7
Passage *	2.0	6.0	2.0	2.0	2.0	6.0	2.0	2.0
Max 1 *	20	90	20	30	20	90	20	30
Yellow Change	3.0	4.6	3.0	4.0	3.0	4.6	3.0	4.0
Red Clear	2.8	1.6	2.9	2.0	2.8	1.6	2.4	2.0
Added Initial *	–	2.5	–	–	–	2.5	–	–
Maximum Initial *	–	34	–	–	–	34	–	–
Time Before Reduction *	–	15	–	–	–	15	–	–
Time To Reduce *	–	30	–	–	–	30	–	–
Minimum Gap *	–	3.0	–	–	–	3.0	–	–
Advance Walk	–	–	–	–	–	7	–	–
Non Lock Detector	X	–	X	X	X	–	X	X
Vehicle Recall	–	MIN RECALL	–	–	–	MIN RECALL	–	–
Dual Entry	–	–	–	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.

STOPLINE LOCATION DIAGRAM

SIGNAL FACE I.D.

All Heads L.E.D.

12"	12"	12"	Accessible Pedestrian Signal 16"
11 31 51 71	21,22 41,42 61,62,63 81,82	43	P61,P62

LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Type I Pushbutton Post	
	Type II Signal Pedestal	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Inductive Loop Detector	
	Metal Strain Pole	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way	
N/A	Directional Arrow	
N/A	Curb Ramp	
	Guardrail	

Plan area

US 21 (Statesville Road)
Bailey Road Extension
35 MPH -2% Grade
45 MPH -1% Grade
45 MPH 0% Grade
35 MPH -1% Grade
Metal Pole #1 Std. Case S35H1
Metal Pole #2 Std. Case S30H1
R/W

Signal Upgrade

US 21 (Statesville Road) at Bailey Road Extension

Division 10	Mecklenburg County	Cornelius
PLAN DATE: April 2024	REVIEWED BY: MC Burke	
PREPARED BY: EE Dogbe	REVIEWED BY: SL Phillips	

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL 032607

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS	INIT.	DATE

6/3/2024
SIG. INVENTORY NO. 10-2507

SCALE 0 40
1"=40'