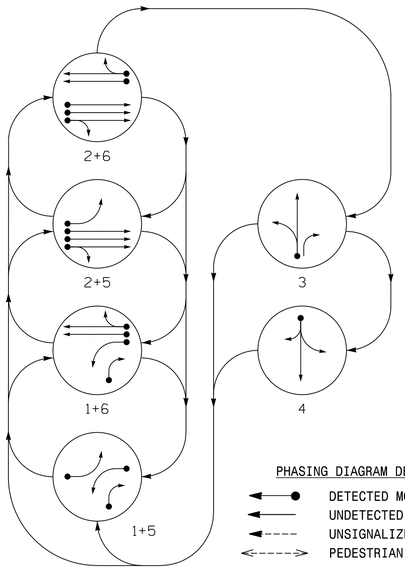
PROJECT REFERENCE NO.	SHEET NO.
B-6051/U-6143	Sig. 4.0

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

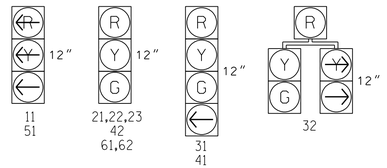
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE 1+5	1+6	2+5	2+6	3	4	FLASH
11	←	←	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
21,22,23	R	R	G	G	R	R	R
31	R	R	R	R	G ←	R	R
32	R ↗	R ↗	R	R	G	R	R
41	R	R	R	R	R	G ←	R
42	R	R	R	R	R	G	R
51	←	~~R~~	←	~~R~~	~~R~~	~~R~~	~~R~~
61,62	R	G	R	G	R	R	R

SIGNAL FACE I.D.

All Heads L.E.D.



MAXTIME DETECTOR INSTALLATION CHART

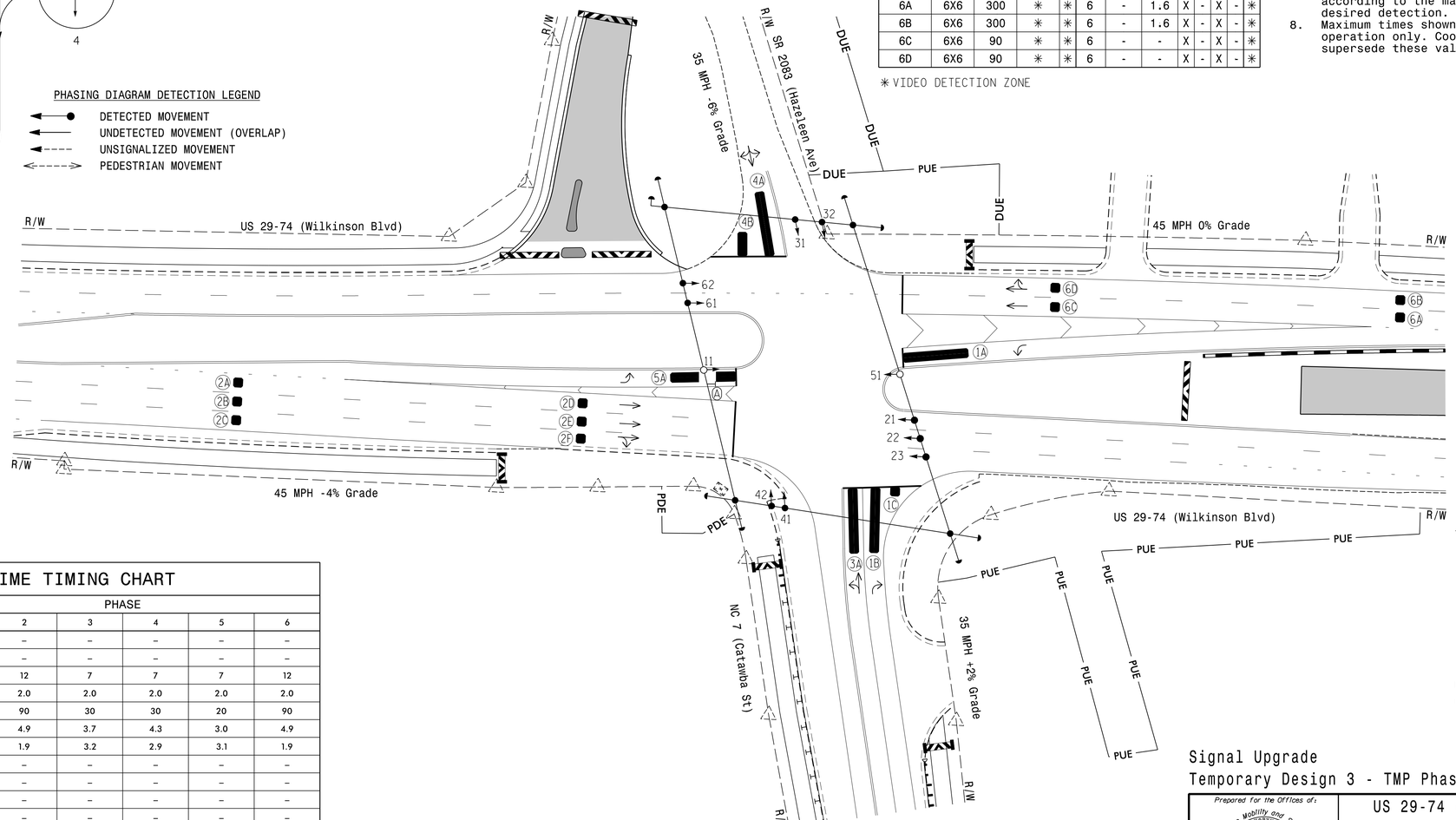
DETECTOR					PROGRAMMING							
ZONE	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	DELAY DURING GREEN	NEW CARD
1A	6X40	0	✳	✳	1	-	-	X	-	X	-	✳
1B	6X40	0	✳	✳	1	15.0	-	X	-	X	-	✳
1C	6X6	0	✳	✳	1	15.0	-	X	-	X	-	✳
2A	6X6	300	✳	✳	2	-	1.6	X	-	X	-	✳
2B	6X6	300	✳	✳	2	-	1.6	X	-	X	-	✳
2C	6X6	300	✳	✳	2	-	1.6	X	-	X	-	✳
2D	6X6	90	✳	✳	2	-	-	X	-	X	-	✳
2E	6X6	90	✳	✳	2	-	-	X	-	X	-	✳
2F	6X6	90	✳	✳	2	-	-	X	-	X	-	✳
3A	6X40	0	✳	✳	3	3.0	-	X	-	X	-	✳
4A	6X40	0	✳	✳	4	10.0	-	X	-	X	-	✳
4B	6X15	0	✳	✳	4	10.0	-	X	-	X	-	✳
5A	6X40	0	✳	✳	5	-	-	X	-	X	-	✳
6A	6X6	300	✳	✳	6	-	1.6	X	-	X	-	✳
6B	6X6	300	✳	✳	6	-	1.6	X	-	X	-	✳
6C	6X6	90	✳	✳	6	-	-	X	-	X	-	✳
6D	6X6	90	✳	✳	6	-	-	X	-	X	-	✳

✳VIDEO DETECTION ZONE

6 Phase
Fully Actuated
(Belmont Signal System)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specification 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. Reposition existing signal heads numbered 61 and 62.
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.



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	
— PUE —	Utility Easment	— PUE —
— PDE —	Drainage Easment	— PDE —
N/A	Guardrail	
	Construction Zone	
	Non-Intrusive Detection Zone	
	Pedestrian Barricade	
	Barricade	
	Portable Concrete Barrier	
Ⓐ	"U-TURN YIELD TO RIGHT TURN" Sign (R10-16)	Ⓐ

MAXTIME TIMING CHART

FEATURE	PHASE 1	2	3	4	5	6
Walk *	–	–	–	–	–	–
Ped Clear	–	–	–	–	–	–
Min Green *	7	12	7	7	7	12
Passage *	2.0	2.0	2.0	2.0	2.0	2.0
Max 1 *	20	90	30	30	20	90
Yellow Change	3.0	4.9	3.7	4.3	3.0	4.9
Red Clear	2.9	1.9	3.2	2.9	3.1	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 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.

Signal Upgrade
Temporary Design 3 - TMP Phase II Steps 1-2

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

SCALE 0 40 1"=40'

US 29-74 (Wilkinson Blvd)
at
NC 7 (Catawba St)/
SR 2083 (Hazeleen Avenue)

Division 12 Gaston County Belmont

PLAN DATE: August 2025 REVIEWED BY: DT Sears
PREPARED BY: WP Erickson-Jones REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 044558 ENGINEER DAVID T SEARS

DocuSigned by: David T Sears
069183F2E5741E...
SIGNATURE 8/1/2025 DATE

SIG. INVENTORY NO. 12-0997T3

8/1/2025
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dsears