

PROJECT REFERENCE NO.	SHEET NO.
U-5789	Sig 4.0

OASIS 2070 LOOP & DETECTOR INSTALLATION CHART											
INDUCTIVE LOOPS				DETECTOR PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP NEW CARD
1A	*	0	*	Y	1	Y	Y	-	-	15*	- *
1B	*	0	*	Y	6*	Y	Y	-	-	-	- *
3A	*	0	*	Y	3	Y	Y	-	-	3	- *
3B	*	0	*	Y	3	Y	Y	-	-	-	- *
4A	*	0	*	Y	4	Y	Y	-	-	3	- *
5A	*	0	*	Y	5	Y	Y	-	-	15*	- *
5B	*	0	*	Y	2*	Y	Y	-	-	-	- *
5B	*	0	*	Y	5	Y	Y	-	-	15	- *

* Disable Delay During Alternate Phasing Operation.
Disable Phase call for loop during Alternate Phasing Operation.

* Multizone Microwave Detection

MICROWAVE DETECTION				
FUNCTION	Sensor 1 (2A)		Sensor 2 (6A)	
Channel	1		1	
Phase	2		6	
Direction of Travel	EB		WB	
Type	PRIORITY		PRIORITY	
Level	2	QUEUE	2	QUEUE
Discovery Zone(ft)	<750		<750	
Detection ZoneRange(ft)	600-100	150-100	600-100	150-100
Enable Speed	Y	Y	Y	Y
Speed Range (mph)	35-100	1-35	35-100	1-35
Enable Estimated Time of Arrival	Y	N	Y	N
Estimated Time of Arrival (sec)	2.5-5.5	-	2.5-5.5	-

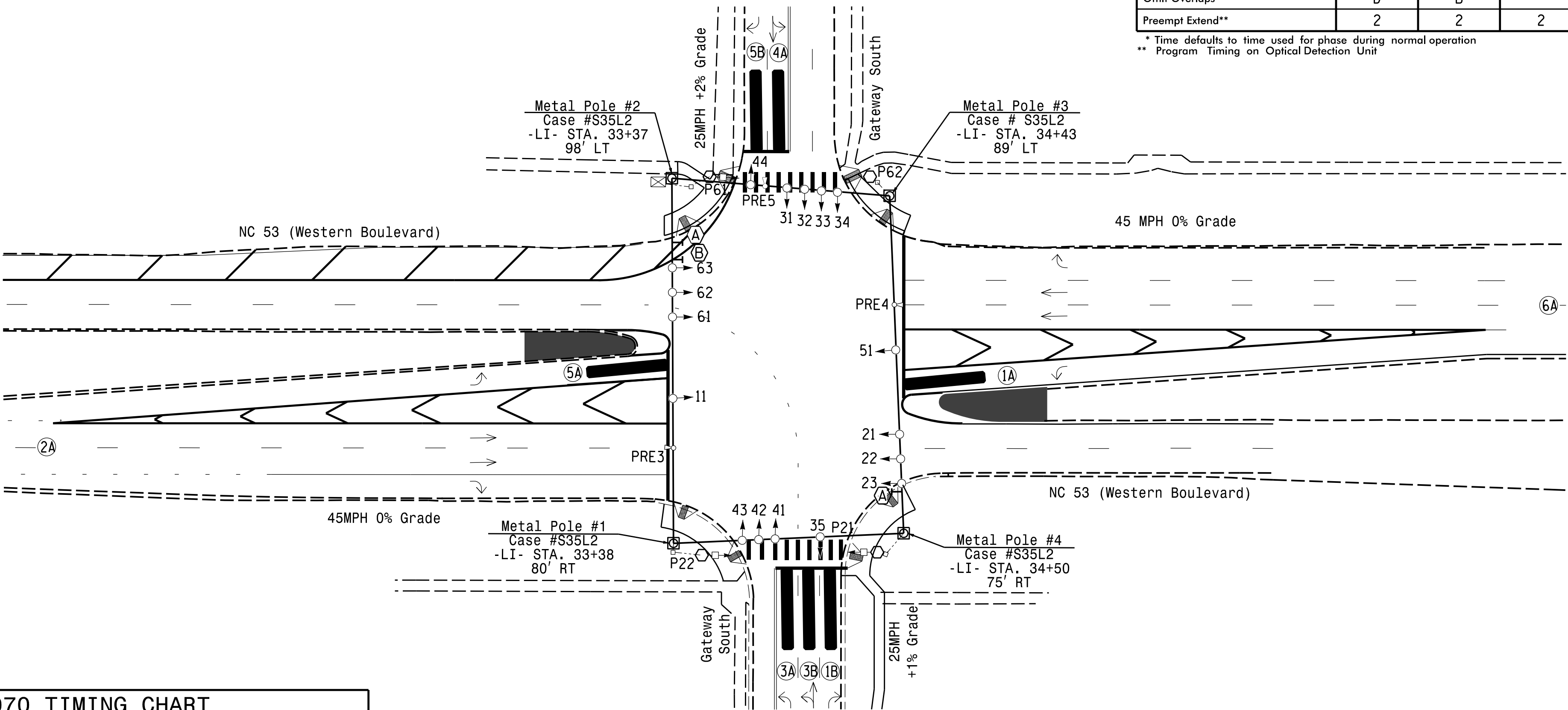
OASIS 2070 EV PREEMPT			
FUNCTION	PRE 3	PRE 4	PRE 5
Interval 1 – Dwell Green	255	255	255
Interval 1 – Dwell Yellow	0.0*	0.0*	0.0*
Interval 1 – Dwell Red	0.0*	0.0*	0.0*
Interval 5 – Exit Green	1	1	1
Interval 5 – Yellow	0.0	0.0	0.0
Interval 5 – Red	0.0	0.0	0.0
Exit Phase(s)	2+6	2+6	4
Priority	Medium	Medium	Medium
Delay Time	0.0	0.0	0.0
Min Green Before Pre	1	1	1
Ped Clear Before Pre	0 *	0 *	0 *
Yellow Clear Before Pre	0.0*	0.0*	0.0*
Red Clear Before Pre	0.0*	0.0*	0.0*
Dwell Min Time	12	12	7
Dwell Max Time (Minutes)	2	2	2
Enable Backup Protection	N	N	N
Ped Clear Through Yellow	Y	Y	Y
Omit Overlaps	D	B	-
Preempt Extend**	2	2	2

* Time defaults to time used for phase during normal operation
** Program Timing on Optical Detection Unit

6 Phase
Fully Actuated
w/ EV Preempt
Jacksonville Signal System

NOTES

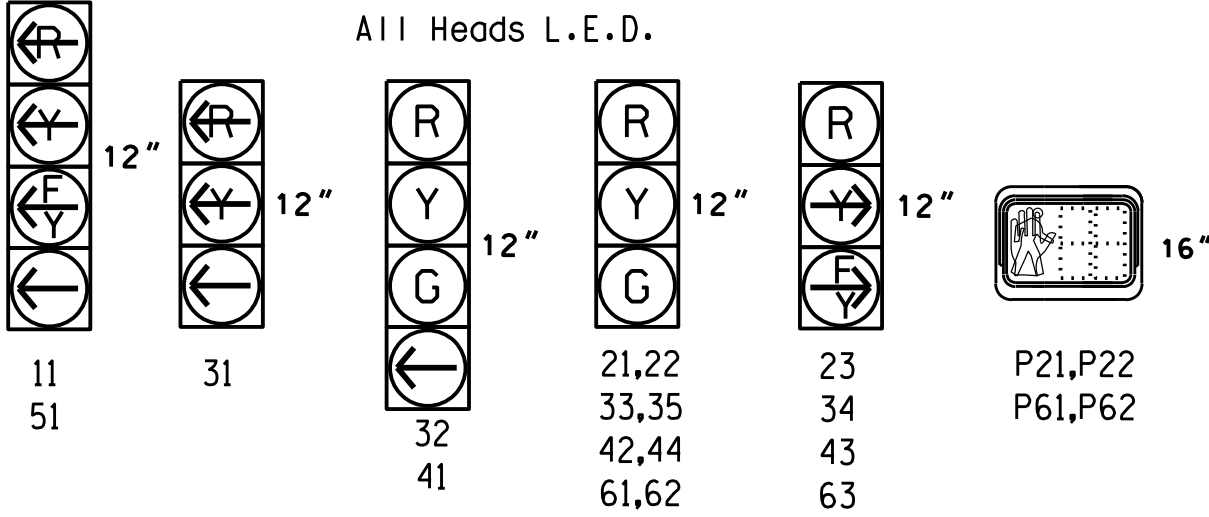
- Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specifications for Roads and Structures" dated January 2024.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 1 and/or phase 5 may be lagged.
- The order of phase 3 and phase 4 may be reversed.
- Set all detector units to presence mode.
- Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
- Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
- Program pedestrian heads to countdown the flashing "Don't Walk" time only.
- This intersection features an optical preemption system. Shown locations of optical detectors are conceptual only.
- This intersection features a GPS preemption system.
- This intersection uses multi-zone microwave detection. Install detectors according to the manufacturer's instructions to achieve the desired detection.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
- Closed loop system data: Asset #0896.



OASIS 2070 TIMING CHART						
FEATURE	PHASE					
	1	2	3	4	5	6
Min Green 1 *	7	12	7	7	7	12
Extension 1 *	2.0	2.0	2.0	2.0	2.0	2.0
Max Green 1 *	20	90	30	30	20	90
Yellow Clearance	3.0	4.5	3.1	3.1	3.0	4.5
Red Clearance	3.3	1.9	4.1	4.1	3.4	1.9
Walk 1 *	-	13	-	-	-	12
Don't Walk 1	-	11	-	-	-	11
Advanced Walk	-	6	-	-	-	5
Seconds Per Actuation *	-	-	-	-	-	-
Max Variable Initial *	-	-	-	-	-	-
Time Before Reduction *	-	-	-	-	-	-
Time To Reduce *	-	-	-	-	-	-
Minimum Gap	-	-	-	-	-	-
Recall Mode	-	MIN RECALL	-	-	-	MIN RECALL
Vehicle Call Memory	-	YELLOW	-	-	-	YELLOW
Dual Entry	-	-	-	-	-	-
Simultaneous Gap	ON	ON	ON	ON	ON	ON

* 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 FACE I.D.

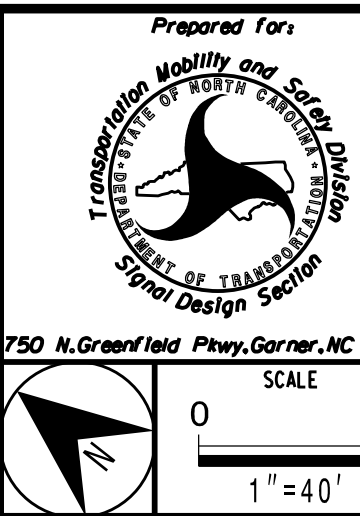


PROPOSED		EXISTING
	Traffic Signal Head	
	Pedestrian Signal Head With Push Button & Sign	
	Optical Detector	
	Metal Strain Pole	
	Inductive Loop Detector	
	Non-Intrusive Detection Zone	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
	Right of Way	
	Directional Arrow	
	Wheelchair Ramp	
	Type II Signal Pedestal	
	Turning Traffic "Yield" to "Pedestrians Sign (R10-15R)	
	Right Arrow "Only" Sign (R3-5R)	

Signal Upgrade - Final Design - Sheet 1 of 2

Project #: 230907

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NCBELS FIRM LICENSE NO. C-2622



NC 53 (Western Boulevard)
at
Gateway South

Division 3 Onslow County Jacksonville
PLAN DATE: May 2025 REVIEWED BY: D. Bennett
PREPARED BY: B. Dowell REVIEWED BY:

REVISIONS	INIT.	DATE

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

SEAL

SEAL
020608
ENGINEER
DONALD R. BENNETT
Signed By: Donald R. Bennett
JCES3701D4D84FC...

7/2/2025

SIGNATURE DATE
SIG. INVENTORY NO. 03-0896