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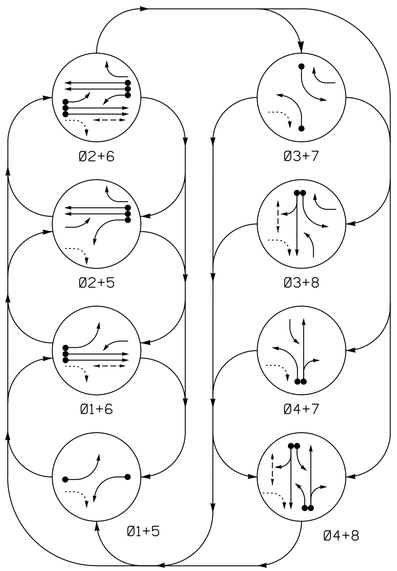
PROJECT REFERENCE NO.	SHEET NO.
U-5738	Sig 7.0

8 Phase
Fully Actuated
with Emergency Vehicle Preemption
(Salisbury Signal System)

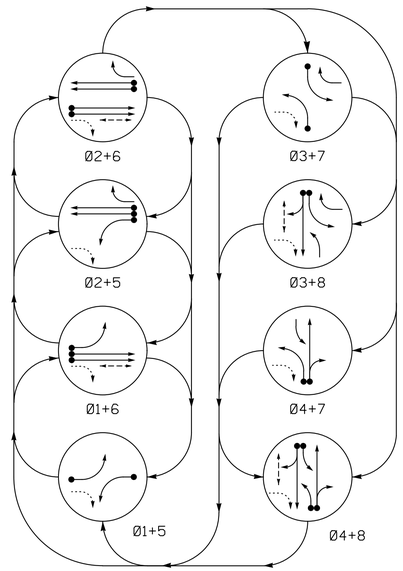
NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
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. Set all detector units to presence mode.
6. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
7. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
8. This intersection features a GPS Emergency Vehicle Preemption system.
9. The Division (City) Traffic Engineer will determine the hours of use for each phasing plan.
10. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.

DEFAULT PHASING DIAGRAM



ALTERNATE PHASING DIAGRAM



DEFAULT PHASING TABLE OF OPERATION

SIGNAL FACE	PHASE 01+5	01+6	02+5	02+6	03+7	03+8	04+7	04+8	PRE3	PRE5	FLASH
11	←—	←—	F Y	F Y	~~R~~	~~R~~	~~R~~	~~R~~	←—	F Y	~~Y~~
21	R	R	G	G	R	R	R	R	R	G	Y
22	R	R	G	G	R/→	R/←	R	R	R	G	Y
31	~~R~~	~~R~~	~~R~~	~~R~~	←—	←—	F Y	F Y	~~R~~	~~R~~	~~R~~
41, 42	R	R	R	R	R	R	G	G	R	R	R
51	←—	F Y	←—	F Y	~~R~~	~~R~~	~~R~~	~~R~~	F Y	←—	~~Y~~
61, 62	R	G	R	G	R	R	R	R	G	R	Y
71	~~R~~	~~R~~	~~R~~	~~R~~	←—	F Y	←—	F Y	~~R~~	~~R~~	~~R~~
81, 82, 83	R	R	R	R	R	G	R	G	R	R	R
P61, P62	DW	W	DW	W	DW	DW	DW	DW	DW	DW	DRK
P81, P82	DW	DW	DW	DW	DW	W	DW	W	DW	DW	DRK

ALTERNATE PHASING TABLE OF OPERATION

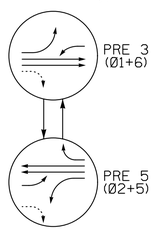
SIGNAL FACE	PHASE 01+5	01+6	02+5	02+6	03+7	03+8	04+7	04+8	PRE3	PRE5	FLASH
11	←—	←—	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	←—	~~R~~	~~Y~~
21	R	R	G	G	R	R	R	R	R	G	Y
22	R	R	G	G	R/→	R/←	R	R	R	G	Y
31	~~R~~	~~R~~	~~R~~	~~R~~	←—	←—	F Y	F Y	~~R~~	~~R~~	~~R~~
41, 42	R	R	R	R	R	R	G	G	R	R	R
51	←—	~~R~~	←—	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	←—	~~Y~~
61, 62	R	G	R	G	R	R	R	R	G	R	Y
71	~~R~~	~~R~~	~~R~~	~~R~~	←—	F Y	←—	F Y	~~R~~	~~R~~	~~R~~
81, 82, 83	R	R	R	R	R	G	R	G	R	R	R
P61, P62	DW	W	DW	W	DW	DW	DW	DW	DW	DW	DRK
P81, P82	DW	DW	DW	DW	DW	W	DW	W	DW	DW	DRK

SIGNAL FACE I.D.

All Heads L.E.D.

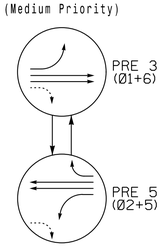
DEFAULT PHASING EV PREEMPT PHASES

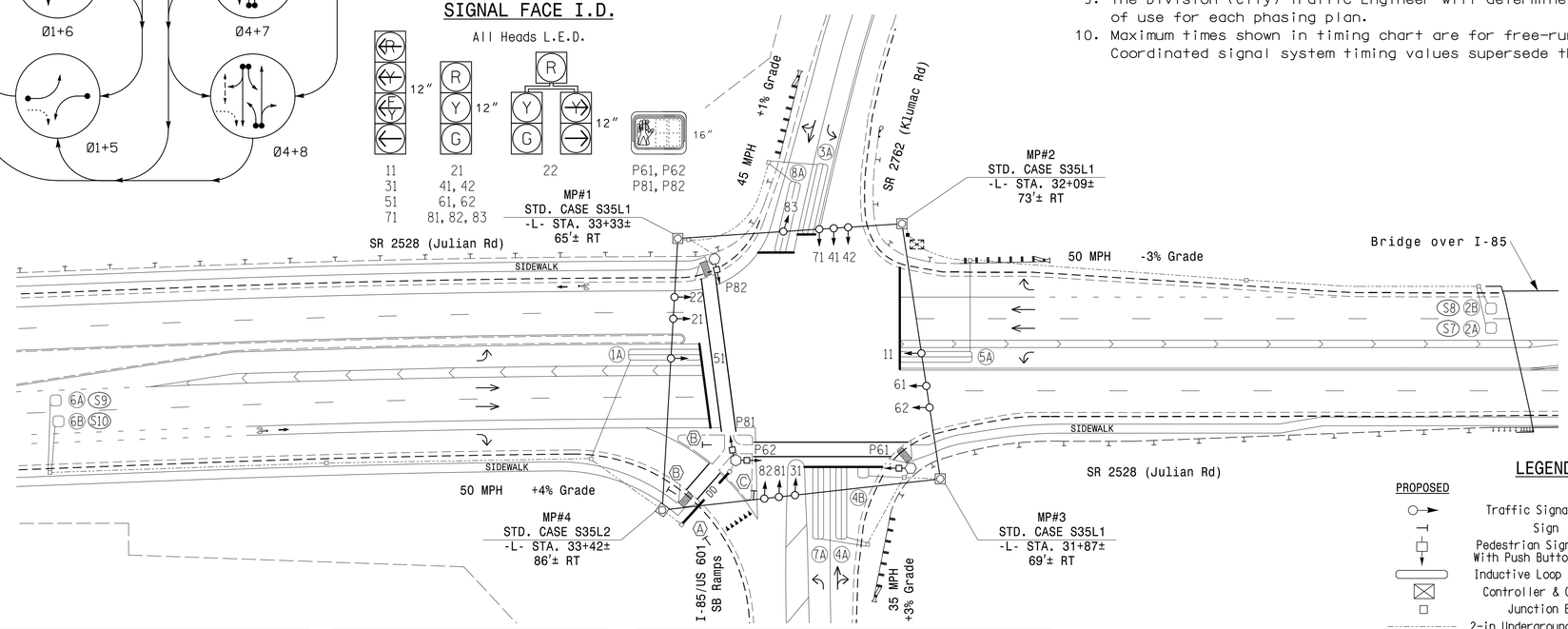
(Medium Priority)



ALTERNATE PHASING EV PREEMPT PHASES

(Medium Priority)





PHASING DIAGRAM DETECTION LEGEND

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

LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
DD	Directional Drill	N/A
N/A	Right of Way	
	Directional Arrow	
	Metal Strain Pole	
	Type II Signal Pedestal	
N/A	Curb Ramp	
N/A	Guardrail	
A	"YIELD" Sign (R1-2)	A
B	Pedestrian Warning Sign (W11-2) w/ Diagonal Arrow Plaque (W16-7P)	B
C	Right "TURNING VEHICLES" Yield "TO" Pedestrians Sign (R10-15R)	C

OASIS 2070 TIMING CHART

FEATURE	PHASE 1	2	3	4	5	6	7	8
Min Green 1 *	7	14	7	7	7	14	7	7
Extension 1 *	2.0	6.0	2.0	2.0	2.0	6.0	2.0	2.0
Max Green 1 *	25	90	20	35	25	90	20	35
Yellow Clearance	3.0	5.1	3.0	4.4	3.0	5.1	3.0	4.4
Red Clearance	2.8	1.4	2.9	2.5	2.9	1.4	3.2	2.5
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk 1 *	-	-	-	-	-	7	-	7
Don't Walk 1	-	-	-	-	-	19	-	22
Seconds Per Actuation *	-	1.5	-	-	-	1.5	-	-
Max Variable Initial *	-	37	-	-	-	40	-	-
Time Before Reduction *	-	15	-	-	-	15	-	-
Time To Reduce *	-	30	-	-	-	30	-	-
Minimum Gap	-	3.0	-	-	-	3.0	-	-
Recall Mode	-	MIN RECALL	-	-	-	MIN RECALL	-	-
Vehicle Call Memory	-	YELLOW	-	-	-	YELLOW	-	-
Dual Entry	-	-	-	ON	-	-	-	ON
Simultaneous Gap	ON	ON	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.

OASIS 2070 EV PREEMPT

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

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

OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

INDUCTIVE LOOPS					DETECTOR PROGRAMMING						
LOOP	SIZE (FT)	DISTANCE FROM STOP LINE (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
1A	6X40	0	2-4-2	Y	1	Y	Y	-	-	*15	-	Y
					#6	Y	Y	Y	-	3	-	Y
2A/S7	6X6	325	4	Y	2	Y	Y	-	-	-	Y	Y
2B/S8	6X6	325	4	Y	2	Y	Y	-	-	-	Y	Y
3A	6X40	0	2-4-2	Y	3	Y	Y	-	-	15	-	Y
					8	Y	Y	-	-	3	-	Y
4A	6X40	0	2-4-2	Y	4	Y	Y	-	-	10	-	Y
4B	6X6	0	4	Y	4	Y	Y	-	-	15	-	Y
5A	6X40	0	2-4-2	Y	5	Y	Y	-	-	**15	-	Y
					#2	Y	Y	Y	-	3	-	Y
6A/S9	6X6	355	6	Y	6	Y	Y	-	-	-	Y	Y
6B/S10	6X6	355	6	Y	6	Y	Y	-	-	-	Y	Y
7A	6X40	0	2-4-2	Y	7	Y	Y	-	-	15	-	Y
					4	Y	Y	-	-	-	-	Y
8A	6X40	0	2-4-2	Y	8	Y	Y	-	-	10	-	Y

* Disable delay during Alternate Phasing Operation.
** Reduce delay to 3 seconds during Alternate Phasing Operation.
\# Disable Phase Call for Loop during Alternate Phasing Operation.

PREPARED IN THE OFFICE OF:
Accelerate Engineering, PLLC
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NC License No. P-1442

Signal Upgrade - Final Design

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

SCALE 1" = 40' (0 – 40)

SR 2528 (Julian Rd) at I-85/US 601 SB Ramps and SR 2762 (Klumac Rd)

Division 9 Rowan County Salisbury

PLAN DATE: November 2021 REVIEWED BY: B. Phillips
PREPARED BY: Z. "Gavin" Teng REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 032179 ENGINEER HAOLONG TENG

DocuSigned by: Haolong Teng 12/3/2021
SIGNATURE DATE

SIG. INVENTORY NO. 09-0991

$$$$$SYSTIME$$$$
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