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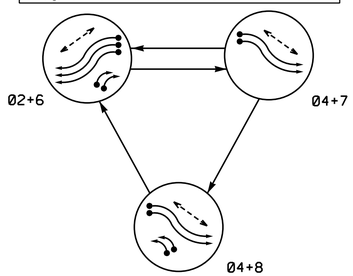
PROJECT REFERENCE NO.	SHEET NO.
I-5714 / U-5114	Sig. 19.0

PHASING DIAGRAM

Program all phases for "Red Rest".



PHASING DIAGRAM DETECTION LEGEND

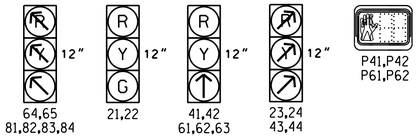
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE 02+6	PHASE 04+7	PHASE 04+8	FLASH
21,22	G	R	R	R
23,24	↗	↗̸	↗̸	↗̸
41,42	R	↑	↑	R
43,44	↗̸	↗	↗	↗̸
61,62,63	↑	R	R	R
64,65	↖	↖̸	↖̸	↖̸
81,82,83,84	↖̸	↖̸	↖	↖̸
P41,P42	DW	W	W	DRK
P61,P62	W	DW	DW	DRK

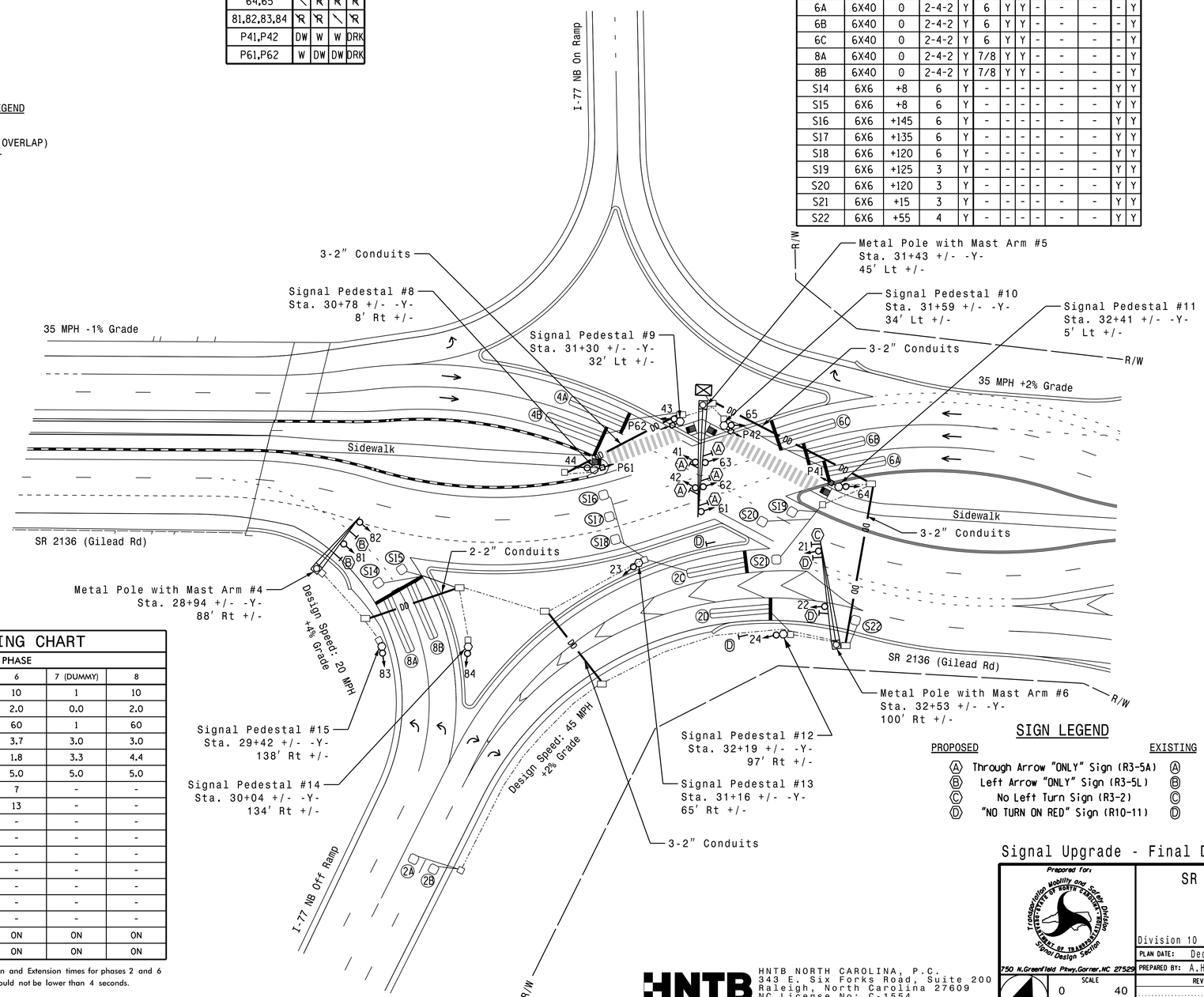
SIGNAL FACE I.D.

All Heads L.E.D.



OASIS 2070E 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
2A	6X6	300	6	Y	2	-	Y	-	2.4	-	-	Y
2B	6X6	300	6	Y	2	-	Y	-	2.4	-	-	Y
2C	6X40	0	2-4-2	Y	2	Y	Y	-	-	-	-	Y
2D	6X40	0	2-4-2	Y	2	Y	Y	-	-	-	-	Y
4A	6X40	0	2-4-2	Y	4	Y	Y	-	-	-	-	Y
4B	6X40	0	2-4-2	Y	4	Y	Y	-	-	-	-	Y
6A	6X40	0	2-4-2	Y	6	Y	Y	-	-	-	-	Y
6B	6X40	0	2-4-2	Y	6	Y	Y	-	-	-	-	Y
6C	6X40	0	2-4-2	Y	6	Y	Y	-	-	-	-	Y
8A	6X40	0	2-4-2	Y	7/8	Y	Y	-	-	-	-	Y
8B	6X40	0	2-4-2	Y	7/8	Y	Y	-	-	-	-	Y
S14	6X6	+8	6	Y	-	-	-	-	-	-	Y	Y
S15	6X6	+8	6	Y	-	-	-	-	-	-	Y	Y
S16	6X6	+145	6	Y	-	-	-	-	-	-	Y	Y
S17	6X6	+135	6	Y	-	-	-	-	-	-	Y	Y
S18	6X6	+120	6	Y	-	-	-	-	-	-	Y	Y
S19	6X6	+125	3	Y	-	-	-	-	-	-	Y	Y
S20	6X6	+120	3	Y	-	-	-	-	-	-	Y	Y
S21	6X6	+15	3	Y	-	-	-	-	-	-	Y	Y
S22	6X6	+55	4	Y	-	-	-	-	-	-	Y	Y



OASIS 2070E TIMING CHART

FEATURE	PHASE 2	PHASE 4	PHASE 6	PHASE 7 (DUMMY)	PHASE 8
Min Green 1 *	10	10	10	1	10
Extension 1 *	2.0	2.0	2.0	0.0	2.0
Max Green 1 *	60	60	60	1	60
Yellow Clearance	4.3	3.9	3.7	3.0	3.0
Red Clearance	1.0	3.5	1.8	3.3	4.4
Red Revert	5.0	5.0	5.0	5.0	5.0
Walk 1 *	-	7	7	-	-
Don't Walk 1	-	18	13	-	-
Seconds Per Actuation *	-	-	-	-	-
Max Variable Initial *	-	-	-	-	-
Time Before Reduction *	-	-	-	-	-
Time To Reduce *	-	-	-	-	-
Minimum Gap	-	-	-	-	-
Recall Mode	-	-	-	-	-
Vehicle Call Memory	-	-	-	-	-
Dual Entry	ON	ON	ON	ON	ON
Simultaneous Gap	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.

3 Phase
Fully Actuated
Gilead Road Closed Loop 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. Omit phase 8 during phase 2+6 on.
4. Program controller to clear from phase 2+6 to phase 8 by progressing through phase 7.
5. Omit phase 7 during phase 8 on.
6. Phase 7 provides red clearance time for vehicles traveling Westbound on Gilead Rd.
7. Set all detector units to presence mode.
8. Program all phases for "Red Rest".
9. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
10. The cabinet should be designed to include Auxiliary Output file for future use.
11. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
12. Program pedestrian heads to countdown the flashing "DON'T WALK" time only.
13. All pedestrian pushbuttons shall be located in the field by the Division Traffic Engineer before installation.
14. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
15. Closed loop system data: Controller Asset #1619

LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
	Over-sized Junction Box	
	2-in Underground Conduit	
N/A	Right of Way	
	Directional Arrow	
	Directional Drill	N/A
	Metal Pole with Mastarm	
	Type II Signal Pedestal	
	Wheelchair Ramp	
	Concrete Barrier	N/A

SIGN LEGEND

PROPOSED		EXISTING
A	Through Arrow "ONLY" Sign (R3-5A)	A
B	Left Arrow "ONLY" Sign (R3-5L)	B
C	No Left Turn Sign (R3-2)	C
D	"NO TURN ON RED" Sign (R10-11)	D

Signal Upgrade - Final Design

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

SR 2136 (Gilead Road) at I-77 NB Ramps

Division 10 Mecklenburg Co. Huntersville

PLAN DATE: December 2017 REVIEWED BY: A.D. Klinksiek

PREPARED BY: A.H. Thornburg REVIEWED BY: N.R. Simmons

SCALE 0 40 1"=40'

REVISIONS	INIT.	DATE

SEAL: NORTH CAROLINA PROFESSIONAL SEAL 031464 ENGINEER NATASHA R. SIMMONS

DocuSigned by: Natasha R. Simmons 4/23/2018

SIGNATURE DATE

SIG. INVENTORY NO. 10-1619

HNTB NORTH CAROLINA, P.C.
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